GENERAL NOTES

1. APPROVAL OF THESE PLANS BY THE CITY ENGINEER DOES NOT AUTHORIZE ANY WORK TO BE PERFORMED UNTIL A PERMIT HAS BEEN ISSUED.

2. UPON ISSUANCE OF A PERMIT, NO WORK WILL BE PERMITTED ON WEEKENDS OR HOLIDAYS UNLESS APPROVED BY TRAFFIC CONTROL PERMIT FROM THE DEVELOPMENT SERVICES DEPARTMENT.

3. THE APPROVAL OF THIS PLAN OR ISSUANCE OF A PERMIT BY THE CITY OF SAN DIEGO DOES NOT AUTHORIZE THE PERMIT HOLDER OR OWNER TO VIOLATE ANY FEDERAL, STATE OR CITY LAWS, ORDINANCES, REGULATIONS, OR POLICIES.

4. IMPORTANT NOTICE: SECTION 4216 OF THE GOVERNMENT CODE REQUIRES A DIG ALERT IDENTIFICATION NUMBER ISSUED BEFORE A "PERMIT TO EXCAVATE" WILL BE VALID. FOR YOUR DIG ALERT I.D. NUMBER, CALL UNDERGROUND SERVICE ALERT, TOLL FREE (800) 422-4133, TWO DAYS BEFORE YOU DIG.

5. CONTRACTOR SHALL BE RESPONSIBLE FOR POTHOLING AND LOCATING ALL EXISTING UTILITIES THAT CROSS THE PROPOSED TRENCH LINE WHILE MAINTAINING A 1 FOOT VERTICAL CLEARANCE.

6. "PUBLIC IMPROVEMENT SUBJECT TO DESUETUDE OR DAMAGE." IF REPAIR OR REPLACEMENT OF SUCH PUBLIC IMPROVEMENTS IS REQUIRED, CONTRACTOR SHALL OBTAIN THE REQUIRED PERMITS FOR WORK IN THE PUBLIC RIGHT-OF-WAY, SATISFACTORY TO THE PERMIT ISSUING AUTHORITY.

7. DEVIATIONS FROM THESE SIGNED PLANS WILL NOT BE ALLOWED UNLESS A CONSTRUCTION CHANGE IS APPROVED BY THE CITY ENGINEER OR THE CHANGE IS REQUIRED BY THE RESIDENT ENGINEER.

8. CONTRACTOR SHALL REPLACE OR REPAIR ALL TRAFFIC SIGNAL LOOPS, CONDUITS, AND LANE STRIPING DAMAGED DURING CONSTRUCTION.

9. PRIOR TO SITE DISTURBANCE, CONTRACTOR SHALL MAKE ARRANGEMENTS FOR A PRECONSTRUCTION MEETING WITH THE CITY OF SAN DIEGO, CONSTRUCTION MANAGEMENT AND FIELD SERVICES DIVISION (858) 627-3200.

10. CONTRACTOR SHALL ONLY PERFORM SITE SURVEY AND UTILITY MARK OUT SERVICES PRIOR TO THE PRECONSTRUCTION MEETING.

11. CONTRACTOR SHALL IMPLEMENT AN EROSION CONTROL PROGRAM DURING THE PROJECT CONSTRUCTION ACTIVITIES. THE PROGRAM SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS OF THE STATE WATER RESOURCE CONTROL BOARD.

12. CONTRACTOR SHALL HAVE EMERGENCY MATERIAL AND EQUIPMENT ON HAND FOR UNFORESEEN SITUATIONS, SUCH AS DAMAGE TO UNDERGROUND WATER, SEWER, AND STORM DRAIN FACILITIES WHERE FLOW MAY GENERATE EROSION AND SEDIMENT POLLUTION.

13. MANHOLES, VAULTS AND PULL BOX COVERS SHALL BE LABELED WITH THE "NAME OF COMPANY"AND HAVE A SLIP RESISTANT LID WITH A MINIMUM STATIC COEFFICIENT OF FRICTION OF 0.5.

14. AS-BUILT DRAWINGS MUST BE SUBMITTED TO THE RESIDENT ENGINEER PRIOR TO ACCEPTANCE OF THIS PROJECT BY THE CITY OF SAN DIEGO.

15. CONTRACTOR SHALL PROVIDE RED-LINES DRAWINGS IN ACCORDANCE WITH 2-5.4 OF THE WHITEBOOK, "RED-LINES AND RECORD DOCUMENTS.

16. CONTRACTOR SHALL MAINTAIN A MINIMUM OF 1 FOOT VERTICAL SEPARATION TO ALL UTILITIES UNLESS OTHERWISE SPECIFIED ON THE PLANS.

17. CONTRACTOR SHALL REMOVE AND REPLACE ALL UTILITY BOXES SERVING AS HANDHOLES THAT ARE NOT IN "AS-NEW" CONDITION IN PROPOSED SIDEWALK, DAMAGED BOXES, OR THOSE THAT ARE NOT IN COMPLIANCE WITH CURRENT CODE SHALL BE REMOVED AND REPLACED WITH NEW BOXES, INCLUDING WATER, SEWER, TRAFFIC SIGNALS, STREET LIGHTS, DRY UTILITIES-SDG&E, COX, ETC. ALL NEW METAL LIDS SHALL BE SLIP RESISTANT AND INSTALLED FLUSH WITH PROPOSED SIDEWALK GRADE. IF A SLIP RESISTANT METAL LID IS NOT COMMERCIALLY AVAILABLE FOR THAT USE, NEW BOXES AND LIDS SHALL BE INSTALLED.

18. CONTRACTOR SHALL INSTALL CITY APPROVED TEMPORARY VIDEO OR RADAR DETECTION WHEN EXISTING TRAFFIC SIGNAL DETECTION SYSTEMS ARE DAMAGED, DISABLED, OR BECOME INEFFECTIVE DUE TO CONSTRUCTION ACTIVITIES FOR A PERIOD OF GIVE (5) OR MORE DAYS, SATISFACTORY TO THE CITY ENGINEER. THE CONTRACTOR SHALL COMPLETELY REMOVE ALL TEMPORARY TRAFFIC SIGNAL DETECTION EQUIPMENT AND RESTORE/INSTALL A CITY APPROVED PERMANENT VEHICLE DETECTION SYSTEM UPON COMPLETION OF CONSTRUCTION, SATISFACTORY TO THE CITY ENGINEER.

19. PRIOR TO CONSTRUCTION, SURVEY MONUMENTS (HORIZONTAL AND VERTICAL) THAT ARE LOCATED IN THE CONSTRUCTION AREA SHALL BE TIED-OUT AND REFERENCED BY A LAND SURVEYOR.

20. UPON COMPLETION OF CONSTRUCTION, ALL DESTROYED SURVEY MONUMENTS ARE REQUIRED TO BE REPLACED, AND A CORNER RECORD OR RECORD OF SURVEY SHALL BE PREPARED AND FILED WITH THE COUNTY SURVEYOR AS REQUIRED BY THE PROFESSIONAL LAND SURVEYOR ACT, SECTION 8771 OF THE BUSINESS AND PROFESSIONS CODE OF THE STATE OF CALIFORNIA.

GROUND WATER DISCHARGE NOTES *

1. ALL GROUND WATER EXTRACTIONS AND SIMILAR WASTE DISCHARGES TO SURFACE WATERS NOT TRIBUTARY TO THE SAN DIEGO BAY ARE PROHIBITED UNTIL IT CAN BE DEMONSTRATED THAT THE OWNER HAS APPLIED AND OBTAINED AUTHORIZATION FROM THE STATE OF CALIFORNIA VIA AN OFFICIAL "ENROLLMENT LETTER" FROM THE REGIONAL WATER QUALITY CONTROL BOARD IN ACCORDANCE WITH THE TERMS, PROVISIONS AND CONDITIONS OF STATE ORDER NO R9-2015-0013 NPDES CAG919003.

2. THE ESTIMATED MAXIMUM DISCHARGE RATES MUST NOT EXCEED THE LIMITS SET IN THE OFFICIAL "ENROLLMENT LETTER" FROM THE REGIONAL BOARD UNLESS PRIOR NOTIFICATION AND SUBSEQUENT AUTHORIZATION HAS BEEN OBTAINED, AND DISCHARGE OPERATIONS MODIFIED TO ACCOMMODATE THE INCREASED RATES.

3. ALL GROUND WATER EXTRACTIONS AND SIMILAR WASTE DISCHARGES TO SURFACE WATERS TRIBUTARY TO THE SAN DIEGO BAY ARE PROHIBITED UNTIL IT CAN BE DEMONSTRATED THAT THE OWNER HAS APPLIED AND OBTAINED AUTHORIZATION FROM THE STATE OF CALIFORNIA VIA AN OFFICIAL "ENROLLMENT LETTER" FROM THE REGIONAL WATER QUALITY CONTROL BOARD IN ACCORDANCE WITH THE TERMS, PROVISIONS AND CONDITIONS OF STATE ORDER NO R9-2015-0013 NPDES NO. CAG919003.

DECLARATION OF RESPONSIBLE CHARGE

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

I UNDERSTAND THAT THE CHECK OF PROJECT DRAWINGS AND SPECIFICATIONS BY THE CITY OF SAN DIEGO IS CONFINED TO A REVIEW ONLY AND DOES NOT RELIEVE ME, AS ENGINEER OF WORK, OF MY RESPONSIBILITIES FOR PROJECT DESIGN.

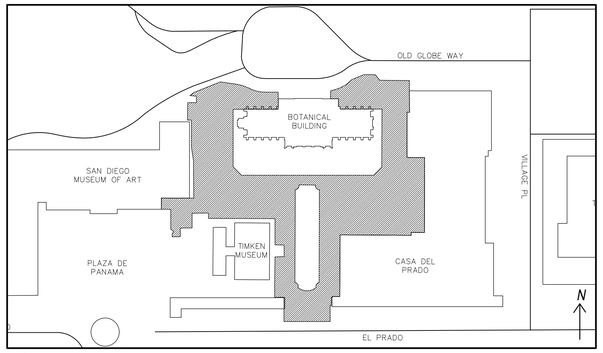
LEIGH KYLE P.L.A. NO. 6137 EXP. 06-30-2025 DATE

CONSTRUCTION CHANGE

CHANGE	BY	AFFECTED OR ADDED SHEET NUMBERS	APPROVED	DATE	PMT NO.	PRJ NO.

IMPROVEMENT PLANS FOR:

BALBOA PARK BOTANICAL BUILDING AND GARDENS PHASE II



VICINITY MAP

MONUMENT PRESERVATION CERTIFICATION

THE PERMITTEE SHALL BE RESPONSIBLE FOR THE COST OF REPLACING ALL SURVEY MONUMENTS DESTROYED BY CONSTRUCTION. IF A VERTICAL CONTROL MONUMENT IS TO BE DISTURBED OR DESTROYED, THE CITY OF SAN DIEGO FIELD SURVEY SECTION SHALL BE NOTIFIED IN WRITING AT LEAST 7 DAYS PRIOR TO DEMOLITION/CONSTRUCTION.

THE TYPE OF CONSTRUCTION WILL NOT AFFECT ANY SURVEY MONUMENTS (THIS LINE IS FOR PROJECTS THAT ARE PROPOSING NO DEMOLITION, TRENCHING, ASSOCIATED WITH A CIP, ETC)

NAME DATE

PRIOR TO PERMIT ISSUANCE, THE PERMITTEE SHALL RETAIN THE SERVICE OF A PROFESSIONAL LAND SURVEYOR OR CIVIL ENGINEER AUTHORIZED TO PRACTICE LAND SURVEYING WHO WILL BE RESPONSIBLE FOR MONUMENT PRESERVATION AND SHALL PROVIDE A CORNER RECORD OR RECORD OF SURVEY TO THE COUNTY SURVEYOR AS REQUIRED BY THE PROFESSIONAL LAND SURVEYORS ACT, IF APPLICABLE. (SECTION 8771 OF THE BUSINESS AND PROFESSIONS CODE OF THE STATE OF CALIFORNIA)

I HAVE INSPECTED THE SITE AND DETERMINED THAT:

- ☒ NO SURVEY MONUMENTS WERE FOUND WITHIN THE LIMITS OF WORK
- ☐ SURVEY MONUMENTS EXISTING IN OR NEAR LIMITS OF WORK WILL BE PROTECTED IN PLACE
- ☐ SURVEY MONUMENTS HAVE BEEN TIED OUT AND A FINAL OR PARCEL MAP WILL BE FILED (NO CORNER RECORD OR RECORD OF SURVEY WILL BE REQUIRED)
- ☐ OTHER AGENCY SURVEY MONUMENT (CORNER RECORD OR RECORD OF SURVEY MAY NOT BE REQUIRED).
- ☐ AGENCY HAS BEEN NOTIFIED OF POSSIBLE MONUMENT DESTRUCTION AND A LETTER PROVIDED TO CITY A PRE-CONSTRUCTION CORNER RECORD (OR RECORD OF SURVEY) FOR SURVEY MONUMENTS FOUND WITHIN THE LIMITS OF WORK HAS BEEN FILED.

CORNER RECORD #_____ OR RECORD OF SURVEY #_____

NAME P.L.S. / R.C.E. NO. XXXXX EXP. XX-XX-XX DATE

POST CONSTRUCTION CORNER RECORD (AS-BUILT ITEM)

- ☐ POST CONSTRUCTION CORNER RECORD FOR SURVEY MONUMENTS DESTROYED DURING CONSTRUCTION AND REPLACED AFTER CONSTRUCTION.

CORNER RECORD #_____ OR RECORD OF SURVEY #_____

NAME P.L.S. / R.C.E. NO. XXXXX EXP. XX-XX-XX DATE

OWNER/APPLICANT

CITY OF SAN DIEGO
525 B STREET, SUITE 750
SAN DIEGO, CALIFORNIA 92101
(619) 533-3450

REFERENCE DRAWINGS

4" SEWER (41947-D), 6" STORM DRAIN (41947-D), 2-1/2" WATER (41947-D), 12" WATER (40041-D), 18" STORM DRAIN (40041-D), 8" SEWER (28573-D), 8" SEWER (20961-D), STORM DRAIN (11772-D), 4" WATER (11657-D), 8" WATER (11657-D)

SITE ADDRESS

BALBOA PARK - BOTANICAL BUILDING
1549 EL PRADO
SAN DIEGO, CA 92101

BENCHMARK

THE BASIS OF ELEVATIONS FOR THIS SURVEY IS THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29) PER CITY OF SAN DIEGO VERTICAL CONTROL NETWORK.
BENCHMARK DESIGNATION: NORTHWEST BRASS PLUG LOCATED AT PARK BLVD & VILLAGE PLACE.
ELEVATION: 284.65 (NGVD29)

EXISTING LEGAL DESCRIPTION

AS STATED ON RECORDED DOCUMENT FOR PROPERTY PROPOSING IMPROVEMENT.

ASSESSORS PARCEL NUMBER

APN 534-450-09

TOPOGRAPHY SOURCE

MICHAEL BAKER INTERNATIONAL
9635 GRANITE RIDGE DR. UNIT 300
SAN DIEGO, CA 92123
PARTIAL GROUND SURVEY
TOPO SOURCE DATE: OCTOBER 14, 2021
ADDITIONAL TOPO SOURCE DATE: JANUARY 12, 2024

CONSTRUCTION STORM WATER PROTECTION NOTES

1. TOTAL SITE DISTURBANCE AREA (ACRES) 0.20 ACRES
   WATERSHED: PUEBLO SAN DIEGO HU/SAN DIEGO BAY WATERSHED
   HYDRAULIC SUB AREA NAME AND NUMBER: LINDBERGH 908.21
2. THE PROJECT SHALL COMPLY WITH THE REQUIREMENTS OF THE
   - ☒ WPCP
     THE PROJECT IS SUBJECT TO MUNICIPAL STORM WATER PERMIT NUMBER R9-2013-0001
     AND SUBSEQUENT AMENDMENTS..
   - ☐ SWPPP
     THE PROJECT IS SUBJECT TO MUNICIPAL STORM WATER PERMIT NUMBER R9-2013-0001
     AND CONSTRUCTION GENERAL PERMIT ORDER NUMBER 2009-009-DWQ AS AMENDED BY ORDER 2010-0014 DWQ AND 2012-0006-DWQ

     TRADITIONAL: RISK LEVEL ☐ 1 ☐ 2 ☐ 3
     LUP RISK LEVEL ☐ 1 ☐ 2 ☐ 3
     WDID NO: _____
3. CONSTRUCTION SITE PRIORITY
   ☐ ASBS ☐ HIGH ☐ MEDIUM ☒ LOW

OCCUPANCY

A-3 Occupancy: Includes use for recreation or amusement (art galleries, museums, etc)

WORK TO BE DONE

THE PUBLIC IMPROVEMENTS SHOWN ON THESE PLANS SHALL BE CONSTRUCTED ACCORDING TO THE FOLLOWING STANDARD SPECIFICATIONS AND STANDARD DRAWINGS OF THE CITY OF SAN DIEGO.

STANDARD SPECIFICATIONS:

DOCUMENT NO.	DESCRIPTION
PWPI010119-01	STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (GREENBOOK), 2021 EDITION
PWPI010119-02	CITY OF SAN DIEGO STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (WHITEBOOK), 2021 EDITION
PWPI010119-04	CITYWIDE COMPUTER AIDED DESIGN AND DRAFTING (CADD) STANDARDS, 2018 EDITION
PWPI060121-10	MANUAL OF TRAFFIC CONTROLS FOR CONSTRUCTION AND MAINTENANCE WORK ZONES, STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION, 2020 EDITION
PWPI030119-05	CALIFORNIA DEPARTMENT OF TRANSPORTATION U.S CUSTOMARY STANDARD SPECIFICATIONS, 2023 EDITION
	ACCESS REGULATIONS, TITLE 24, (2019 EDITION) AND CALIFORNIA STATE ACCESSIBILITY STANDARDS INTERPRETIVE MANUAL (2019 EDITION) PREPARED BY THE OFFICE OF THE STATE ARCHITECT AND THE DEPARTMENT OF REHABILITATION.
	AMERICANS WITH DISABILITIES ACT REGULATION: TITLE II REGULATIONS 28 CFR PART 35 AND 35.151. INCLUDING THE 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN (APPENDIX A OF 28 CFR PART 36) AND THE PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG).

STANDARD DRAWINGS:

DOCUMENT NO.	DESCRIPTION
PWPI010119-03	CITY OF SAN DIEGO STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION, 2021 EDITION
PWPI030119-06	CALIFORNIA DEPARTMENT OF TRANSPORTATION U.S CUSTOMARY STANDARD PLANS, 2023 EDITION

PROPOSED IMPROVEMENTS:

IMPROVEMENTS:	DESCRIPTION
PERGOLA	BUILDING SQ. FOOTAGE - 685 SQ. FT.

APPLICABLE STANDARD DRAWINGS AND SPECIFICATIONS

GREENBOOK - STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION INCLUDING THE CITY OF SAN DIEGO "WHITEBOOK" SUPPLEMENT TO THE GREENBOOK (CURRENT EDITION).

CITY OF SAN DIEGO STANDARD DRAWINGS (CURRENT EDITION).

AMERICAN WITH DISABILITIES ACT (ADA), TITLE II REGULATIONS 28 CFR PART 35 AND 35, 151, INCLUDING THE 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN, (APPENDIX A OF 28 CFR PART 36) (ADAS);

THE STATE OF CALIFORNIA CODE OF REGULATIONS (COR), INCLUDING THE CURRENT CALIFORNIA BUILDING CODE (CBC) AND THE CURRENT CALIFORNIA ACCESS COMPLIANCE REFERENCE MANUAL; AND THE CITY OF SAN DIEGO ACCESS MEMOS.

MANUAL OF TRAFFIC CONTROLS FOR CONSTRUCTION AND MAINTENANCE WORK ZONES, STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION (CURRENT EDITION).

NOTE: THE MOST CURRENT EDITIONS OF THE PRECEDING DOCUMENTS SHALL BE USED, WHERE ONE OR MORE SETS OF SPECIFICATIONS OR DRAWINGS ARE APPLICABLE, THE MORE RESTRICTIVE SHALL TAKE PRECEDENCE. FOR EXAMPLE, WHEN A CONFLICT EXISTS BETWEEN THE ADAS AND CBC, DEVELOPER SHALL COMPLY WITH THE MOST RESTRICTIVE REQUIREMENT (I.E., THAT WHICH PROVIDES THE MOST ACCESS).

PRIVATE CONTRACT

SPURLOCK
LANDSCAPE ARCHITECTS
2122 Hancock Street
San Diego, California 92110
619.681.0090
spurlock-land.com

WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2
TITLE SHEET

CONSULTANT
COMPANY ADDRESS: SPURLOCK LANDSCAPE ARCHITECTS, 2122 HANCOCK ST, SAN DIEGO, CA 92110
COMPANY PHONE NUMBER: 619-681-0090
COMPANY EMAIL DATE OF: AARMOUR@SPURLOCK-LAND.COM
SIGNING:
LICENSED LANDSCAPE ARCHITECT LEIGH KYLE - 6137 STATE OF CALIFORNIA
Signature
06/30/25
Renewal Date
11/01/24
Date

SPEC. NO

The City of SAN DIEGO
FOR CITY APPROVAL

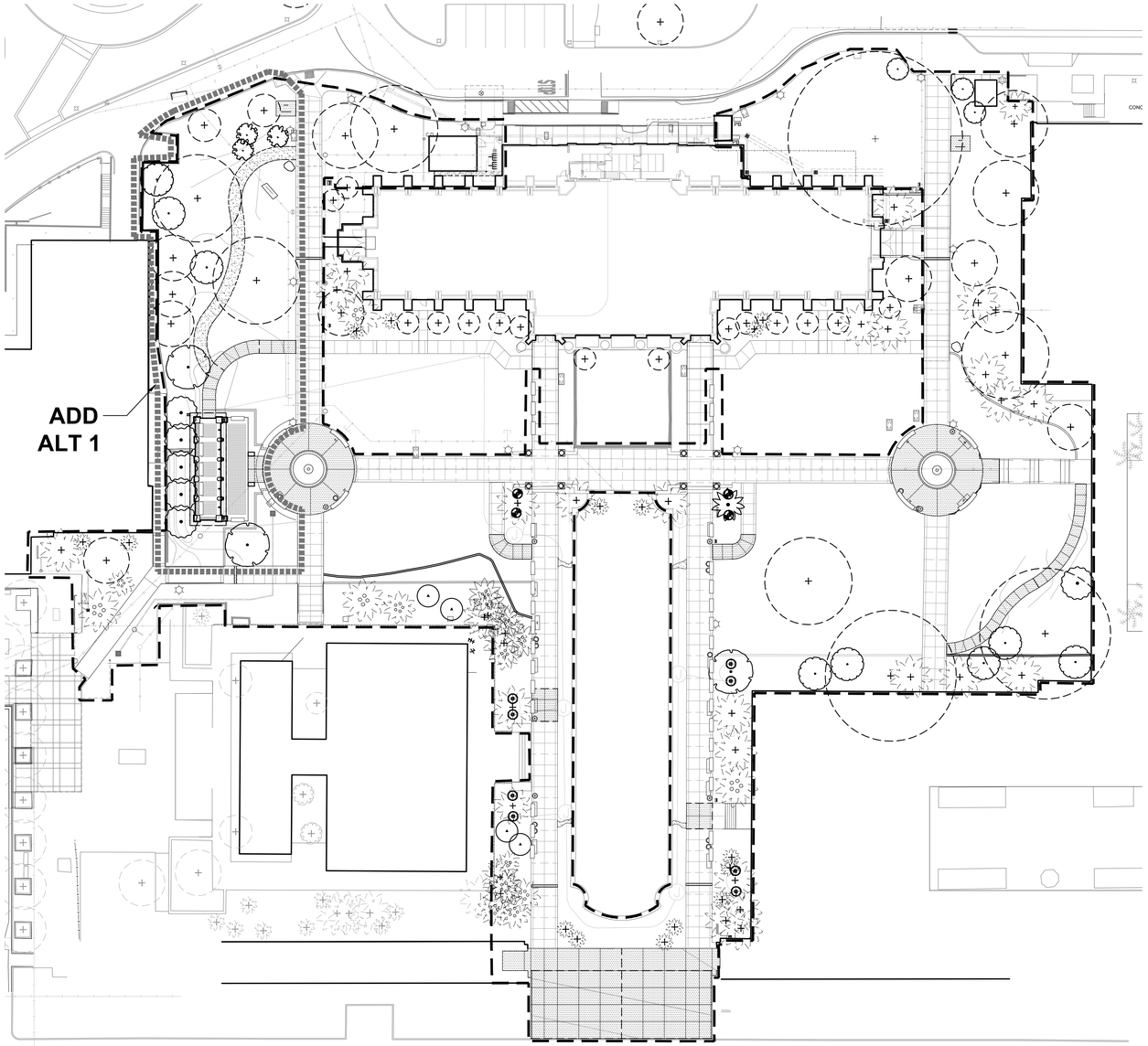
DEVELOPMENT SERVICES DEPARTMENT
SHEET 1 OF 61 SHEETS

APPROVED:
FOR CITY ENGINEER DATE

DESCRIPTION	BY	APPROVED	DATE
ORIGINAL	SP		
AS BUILTS			

CONTRACTOR DATE STARTED
INSPECTOR DATE COMPLETED

PMT NO.
PRJ NO. 1119957
1847-6266 NAD83 COORDINATES
207-1706 LAMBERT COORDINATES
DRAWING NO. T101
XXXX- 1 - D



#	SHEET NUMBER	SHEET NAME
	GENERAL	
1	T101	TITLE SHEET
2	T102	SHEET INDEX & NOTES & ADD ALTERNATES PLAN
	CIVIL	
3	G002	BMP MAP FOR STANDARD DEVELOPMENT PROJECTS
4,5	C001–C002	DEMOLITION PLAN
6,7	C003–C004	GRADING PLAN
8	C005	EROSION CONTROL PLAN
9	C006	EROSION CONTROL NOTES
10	C007	STANDARD DRAWINGS
	LANDSCAPE	
11	L100	TREE PROTECTION PLAN
12	L101	HARDSCAPE PLAN
13	L101A	HARDSCAPE LAYOUT
14	L102	HARDSCAPE PLAN
15	L102A	HARDSCAPE LAYOUT
16	L103	HARDSCAPE PLAN
17	L103A	HARDSCAPE LAYOUT
18	L104	HARSDCAPE LEGEND
19	L105	HARDSCAPE DETAILS
20	L106	HARDSCAPE DETAILS
	ARCHITECTURE	
21	AG–01	COVER SHEET
22	AG–02	GENERAL NOTES
23	AG–03	ABBREVIATIONS AND SYMBOLS
24	AS–101	OVERALL SITE PLAN
25	AS–102	ENLARGED SITE PLAN
26	AS–103	SITE SECTIONS
27	A–101	FLOOR PLAN
28	A–102	REFLECTED CEILING PLAN
29	A–201	ELEVATIONS
30	A–202	ELEVATIONS
31	A–203	ENLARGED COLUMN 1
32	A–204	ENLARGED COLUMN 2
33	A–205	ENLARGED COLUMN 3
34	A–301	SECTIONS
35	A–302	ENLARGED SECTIONS
36	A–701	PERGOLA ISOMETRIC
37	A–702	PERGOLA ISOMETRIC
38	AD–701	TYPICAL CONCRETE DETAILS
39	AD–801	TYPICAL WOOD DETAILS
40	AD–901	TYPICAL HANDRAIL DETAILS
41	AD–902	TYPICAL STAIR DETAILS
	STRUCTURAL	
42	S001	GENERAL STRUCTURAL NOTES
43	S002	GENERAL STRUCTURAL NOTES
44	S003	GENERAL STRUCTURAL NOTES
45	S004	GENERAL STRUCTURAL NOTES
46	S005	GENERAL STRUCTURAL NOTES
47	SS100	SITE PLAN
48	S101	FOUNDATION PLAN
49	S102	FOOTING PLAN
50	S103	ROOF FRAMING PLAN
51	S301	SECTIONS
52	S302	SECTIONS
53	S501	FOUNDATION DETAILS
54	S502	FOUNDATION DETAILS
55	S600	TYPICAL CONCRETE DETAILS
56	S801	STEEL AND CONCRETE DETAILS
57	S901	WOOD DETAILS
	ELECTRICAL	
58	EL–1	TITLE SHEET
59	EL–2	LIGHTING PLAN
60	EL–3	ELECTRICAL DETAILS
61	EL–4	LIGHTING CONCEPT

CONSTRUCTION INSPECTION STAGES AND INSPECTION TEAM:

INSPECTION TEAM

A. SITE SUPERINTENDENT (CONTRACTOR'S REPRESENTATIVE)
B. CONTRACTOR(S)
C. FOREVER BALBOA PARK PROJECT MANAGER
D. PARKS AND RECREATION ASSET MANAGER
E. CONSULTANT(S) REPRESENTATIVE
F. BALBOA PARK DISTRICT MANAGER
G. BALBOA PARK HORTICULTURIST
H. PARKS AND RECREATION IRRIGATION SPECIALIST
I. CERTIFIED ACCESS SPECIALIST (CASP) – 3RD PARTY

CONSTRUCTION INSPECTION STAGES (MINIMUM – SEE REFERENCE DOCUMENTS AND SUPPLEMENTAL SPECIFICATIONS FOR ADDITIONAL):

1. *PRE–CONSTRUCTION MEETING*
2. *DEMOLITION MARK–OUT (IF APPLICABLE)*
3. *PROTECTION OF EXISTING PLANT MATERIALS.*
4. *ROUGH GRADING*
5. *HARDSCAPE AT TIME OF FINISHED STAKING AND LAYOUT.*
6. *FINISH GRADING*
7. *90–DAY PLANT MAINTENANCE PERIOD (DEVELOP PUNCH LIST AND SUBMIT RED–LINE AS–BUILTS).*
8. *FINAL WALK–THROUGH, ACCEPTANCE BY THE CITY. CONTRACTOR TO SUBMIT FINAL APPROVED AS–BUILT DRAWINGS TO THE CITY.*

ADD ALTERNATE 1:

BASE SCOPE:
NO IMPROVEMENTS IN CLOUDED AREA EXCEPT: ELECTRICAL CONDUIT AND PULL BOXES NEAR PROPOSED PERGOLA. SEE SHEET EL-2.

ADD ALT 1:
ALL SCOPE WITHIN CLOUDED AREA INCLUDES ALL DISCIPLINES.

CONSTRUCTION CHANGE

CHANGE	BY	AFFECTED OR ADDED SHEET NUMBERS	APPROVED	DATE	PMT NO.	PRJ NO.

SPURLOCK
LANDSCAPE ARCHITECTS
2122 Hancock Street
San Diego, California 92110
619.681.0090
spurlock-land.com

WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

PRIVATE CONTRACT

PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2
SHEET INDEX & NOTES & ADD ALTERNATES PLAN

CONSULTANT

COMPANY ADDRESS: SPURLOCK LANDSCAPE ARCHITECTS, 2122 HANCOCK ST, SAN DIEGO, CA 92110
COMPANY PHONE NUMBER: 619-681-0090
COMPANY EMAIL DATE OF: AARMOUR@SPURLOCK-LAND.COM
SIGNING:

LICENSED LANDSCAPE ARCHITECT
LEIGH KYLE – 6173
STATE OF CALIFORNIA
Signature
06/30/25
Renewal Date
11/01/24
Date

SPEC. NO

The City of SAN DIEGO
FOR CITY APPROVAL

DEVELOPMENT SERVICES DEPARTMENT
SHEET 2 OF 61 SHEETS

APPROVED:
FOR CITY ENGINEER — DATE

DESCRIPTION	BY	APPROVED	DATE
ORIGINAL	SP		
AS BUILTS			

CONTRACTOR — DATE STARTED
INSPECTOR — DATE COMPLETED

PMT NO.
PRJ NO. 1119957
1847-6266
NAD83 COORDINATES
207-1706
LAMBERT COORDINATES
DRAWING NO. T102
XXXX- 2 - D

SITE DESIGN, SOURCE CONTROL AND POLLUTANT CONTROL POST CONSTRUCTION BMP OPERATION & MAINTENANCE PROCEDURE							
O&M RESPONSIBLE PARTY DESIGNEE: CITY OF SAN DIEGO							
BMP DESCRIPTION	INSPECTION FREQUENCY	MAINTENANCE FREQUENCY	MAINTENANCE METHOD	QUANTITY	INCLUDED IN O&M MANUAL		SHEET NUMBER(S)
SITE DESIGN ELEMENTS					YES	NO	
4.3.5	QUARTERLY	AS-NEEDED	REMOVE TRASH/DEBRIS, FLUSH AND REMOVE FINES SEDIMENT			X	C003 & C004
4.3.7	WEEKLY	AS-NEEDED	MAINTENANCE REQUIREMENTS PER PARK DEPARTMENT SOP			X	C003 & C004
SOURCE CONTROL ELEMENTS					YES	NO	
4.2.1	QUARTERLY	AS-NEEDED	REMOVE TRASH/DEBRIS, REPAIR IRRIGATION AND CONTROL NON-STORMWATER DISCHARGE AS NEEDED			X	C003 & C004
4.2.2	QUARTERLY	AS-NEEDED	RE-STENCIL AS NEEDED			X	C003 & C004
4.2.3	WEEKLY	AS-NEEDED	MAINTAIN COVER FOR STORAGE AREAS			X	C003 & C004
4.2.4	WEEKLY	AS-NEEDED	MAINTAIN COVER FOR STORAGE AREAS			X	C003 & C004
4.2.5	WEEKLY	AS-NEEDED	MAINTAIN COVER FOR STORAGE AREAS			X	C003 & C004
4.2.6	MONTHLY	AS-NEEDED	REMOVE TRASH/DEBRIS MAINTAIN CLEAN PLAZA AND WALKWAYS			X	C003 & C004
POLLUTANT CONTROL BMP(S)					YES	NO	
DESCRIPTION:						X	
HMP FACILITY (IF SEPARATE)					YES	NO	
DESCRIPTION:						X	
HMP EXEMPT							

SOURCE CONTROL BMP CHECKLIST FOR STANDARD PROJECTS	FORM I-4A

ALL DEVELOPMENT PROJECTS MUST IMPLEMENT SOURCE CONTROL BMP'S. REFER TO CHAPTER 4 AND APPENDIX E OF THE BMP DESIGN MANUAL FOR INFORMATION TO IMPLEMENT BMPS SHOWN IN THIS CHECKLIST

NOTE: ALL SELECTED BMPS MUST BE SHOWN ON THE CONSTRUCTION PLANS

SOURCE CONTROL REQUIREMENT	APPLIED?		
4.2.1 PREVENTION OF ILLICIT DISCHARGES INTO THE MS4	☒ YES	☐ NO	☐ N/A
4.2.2 STORM DRAIN STENCILING OR SIGNAGE	☒ YES	☐ NO	☐ N/A
4.2.3 PROTECT OUTDOOR MATERIALS STORAGE AREAS FROM RAINFALL, RUN-ON, RUNOFF, AND WIND DISPERSAL	☒ YES	☐ NO	☐ N/A
4.2.4 PROTECT MATERIALS STORED IN OUTDOOR WORK AREAS FROM RAINFALL, RUN-ON, RUNOFF, AND WIND DISPERSAL	☒ YES	☐ NO	☐ N/A
4.2.5 PROTECT TRASH STORAGE AREAS FROM RAINFALL, RUN-ON, RUNOFF, AND WIND DISPERSAL	☒ YES	☐ NO	☐ N/A
4.2.6 BMPS BASED ON POTENTIAL SOURCES OF RUNOFF POLLUTANTS			
ON-SITE STORM DRAIN INLETS	☐ YES	☐ NO	☒ N/A
INTERIOR FLOOR DRAINS AND ELEVATOR SHAFT SUMP PUMPS	☐ YES	☐ NO	☒ N/A
INTERIOR PARKING GARAGES	☐ YES	☐ NO	☒ N/A
NEED FOR FUTURE INDOOR & STRUCTURAL PEST CONTROL	☒ YES	☐ NO	☐ N/A
LANDSCAPE/OUTDOOR PESTICIDE USE	☒ YES	☐ NO	☐ N/A
POOLS, SPAS, PONDS, DECORATIVE FOUNTAINS, AND OTHER WATER FEATURES	☒ YES	☐ NO	☐ N/A
FOOD SERVICE	☐ YES	☐ NO	☒ N/A
REFUSE AREAS	☐ YES	☐ NO	☒ N/A
INDUSTRIAL PROCESSES	☐ YES	☐ NO	☒ N/A
OUTDOOR STORAGE OF EQUIPMENT OR MATERIALS	☒ YES	☐ NO	☐ N/A
VEHICLE/EQUIPMENT REPAIR AND MAINTENANCE	☐ YES	☐ NO	☒ N/A
FUEL DISPENSING AREA	☐ YES	☐ NO	☒ N/A
LOADING DOCKS	☐ YES	☐ NO	☒ N/A
FIRE SPRINKLER TEST WATER	☐ YES	☐ NO	☒ N/A
MISCELLANEOUS DRAIN OR WASH WATER	☒ YES	☐ NO	☐ N/A
PLAZAS, SIDEWALKS, AND PARKING LOTS	☒ YES	☐ NO	☐ N/A
SC-6A: LARGE TRASH GENERATING FACILITIES	☐ YES	☐ NO	☒ N/A
SC-6B: ANIMAL FACILITIES	☐ YES	☐ NO	☒ N/A
SC-6C: PLANT NURSERIES AND GARDEN CENTERS	☒ YES	☐ NO	☐ N/A
SC-6D: AUTOMOTIVE-RELATED USES	☐ YES	☐ NO	☒ N/A

DISCUSSION / JUSTIFICATION FOR ALL "NO" ANSWERS SHOWN ABOVE:

SITE DESIGN BMP CHECKLIST FOR STANDARD PROJECTS	FORM I-5A

ALL DEVELOPMENT PROJECTS MUST IMPLEMENT SITE DESIGN BMP'S. REFER TO CHAPTER 4 AND APPENDIX E OF THE BMP DESIGN MANUAL FOR INFORMATION TO IMPLEMENT BMPS SHOWN IN THIS CHECKLIST

NOTE: ALL SELECTED BMPS MUST BE SHOWN ON THE CONSTRUCTION PLANS

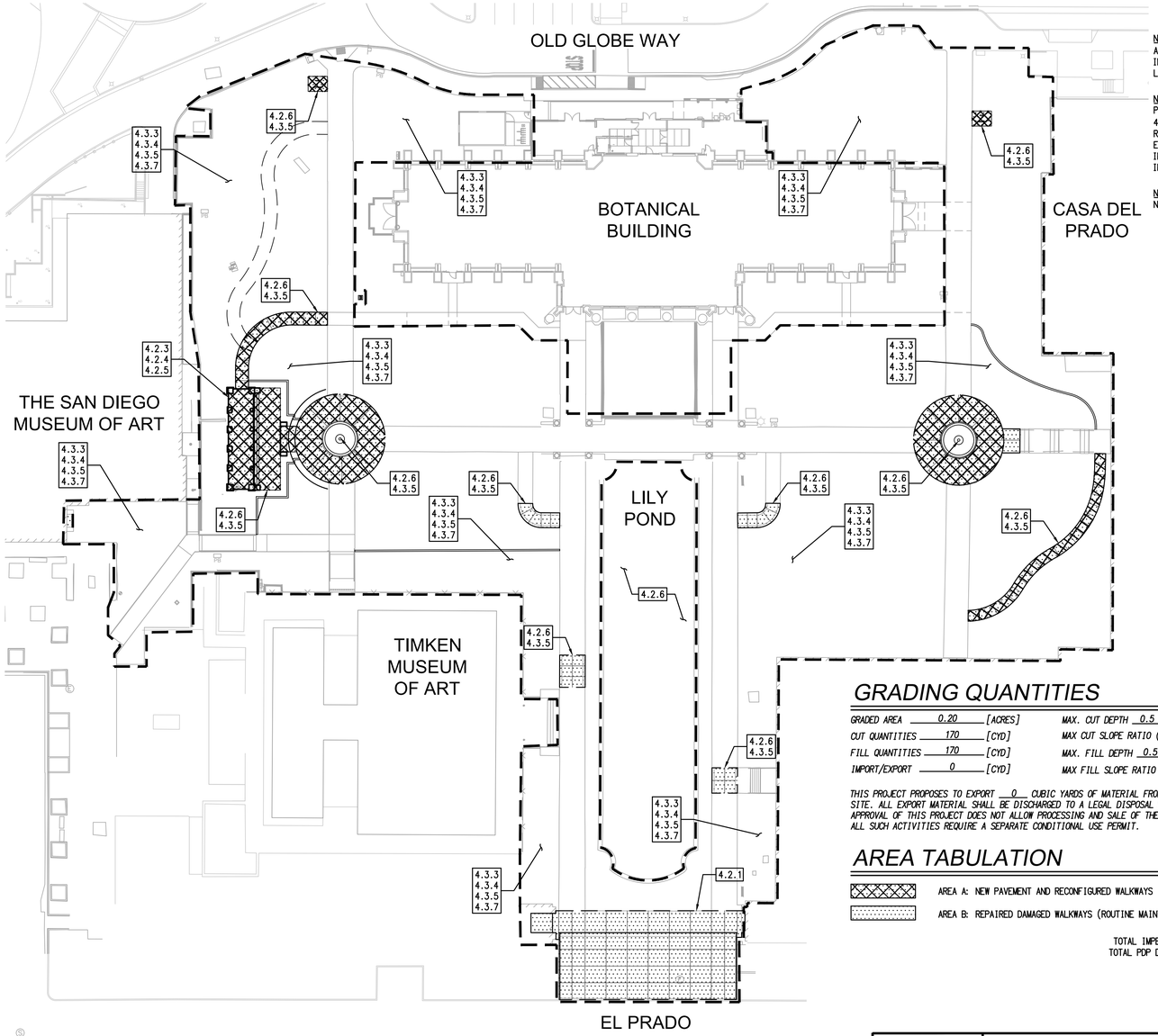
SITE DESIGN REQUIREMENT	APPLIED?		
4.3.1 MAINTAIN NATURAL DRAINAGE PATHWAYS AND HYDROLOGIC FEATURES	☐ YES	☐ NO	☒ N/A
4.3.2 CONSERVE NATURAL AREAS, SOILS, AND VEGETATION	☐ YES	☐ NO	☒ N/A
4.3.3 MINIMIZE IMPERVIOUS AREA	☒ YES	☐ NO	☐ N/A
4.3.4 MINIMIZE SOIL COMPACTION	☒ YES	☐ NO	☐ N/A
4.3.5 IMPERVIOUS AREA DISPERSION	☒ YES	☐ NO	☐ N/A
4.3.6 RUNOFF COLLECTION	☐ YES	☐ NO	☒ N/A
4.3.7 LANDSCAPING WITH NATIVE OR DROUGHT TOLERANT SPECIES	☒ YES	☐ NO	☐ N/A
4.3.8 HARVESTING AND USING PRECIPITATION	☐ YES	☐ NO	☒ N/A

DISCUSSION / JUSTIFICATION FOR ALL "NO" ANSWERS SHOWN ABOVE:

MINIMUM POST-CONSTRUCTION MAINTENANCE PLAN

AT THE COMPLETION OF THE WORK SHOWN, THE FOLLOWING PLAN SHALL BE FOLLOWED TO ENSURE WATER QUALITY CONTROL IS MAINTAINED FOR THE LIFE OF THE PROJECT:

1. STABILIZATION: ALL PLANTED SLOPES AND OTHER VEGETATED AREAS SHALL BE INSPECTED PRIOR TO OCTOBER 1 OF EACH YEAR AND AFTER MAJOR RAINFALL EVENTS (MORE THAN ½ INCH) AND REPAIRED AN REPLANTED AS NEEDED UNTIL A NOTICE OF TERMINATION (NOT) IS FILLED.
2. STRUCTURAL PRACTICES: DESILTING BASINS, DIVERSION DITCHES, DOWNDRAINS, INLETS, OUTLET PROTECTION MEASURES, AND OTHER PERMANENT WATER QUALITY AND SEDIMENT AND EROSION CONTROLS SHALL BE INSPECTED PRIOR TO OCTOBER 1ST OF EACH YEAR AND AFTER MAJOR RAINFALL EVENTS (MORE THAN ½ INCH). REPAIRS AND REPLACEMENTS SHALL BE MADE AS NEEDED AND RECORDED IN THE MAINTENANCE LOG IN PERPETUITY.



BMP SITE MAP

SCALE: 1"=30"

NOTE:
ALL STORM WATER RUNOFF FROM PROPOSED AND/OR REPLACED IMPERVIOUS AREAS SHALL BE ROUTED TO PERVIOUS SURFACES OR LANDSCAPING PRIOR TO REACHING THE PUBLIC DRAIN SYSTEM.

NOTE:
PER CITY OF SAN DIEGO MUNICIPAL CODE SECTIONS 12.0104, 43.0310, 129.0104(a)(4), AND 142.0220, PERMITS ARE REQUIRED TO BE INSPECTED BY CITY INSPECTION STAFF TO ENSURE COMPLIANCE WITH ISSUED CONSTRUCTION PERMIT. THIS INCLUDES, BUT IS NOT LIMITED TO, STORM WATER COMPLIANCE INSPECTION REQUIREMENTS ASSOCIATED WITH EACH PERMIT.

NOTE:
NO WORK WILL BE PERFORMED IN THE RIGHT-OF-WAY.

GRADING QUANTITIES

GRADED AREA 0.20 [ACRES] MAX. CUT DEPTH 0.5 [FT]
CUT QUANTITIES 170 [CYD] MAX CUT SLOPE RATIO (2: 1MAX) 2: 1
FILL QUANTITIES 170 [CYD] MAX. FILL DEPTH 0.5 [FT]
IMPORT/EXPORT 0 [CYD] MAX FILL SLOPE RATIO (2: 1MAX) 2: 1

THIS PROJECT PROPOSES TO EXPORT 0 CUBIC YARDS OF MATERIAL FROM THIS SITE. ALL EXPORT MATERIAL SHALL BE DISCHARGED TO A LEGAL DISPOSAL SITE. THE APPROVAL OF THIS PROJECT DOES NOT ALLOW PROCESSING AND SALE OF THE MATERIAL. ALL SUCH ACTIVITIES REQUIRE A SEPARATE CONDITIONAL USE PERMIT.

AREA TABULATION

AREA A: NEW PAVEMENT AND RECONFIGURED WALKWAYS	4,585 SF
AREA B: REPAIRED DAMAGED WALKWAYS (ROUTINE MAINTENANCE EXEMPTION)	4,315 SF
TOTAL IMPERVIOUS AREA CALC: A + B =	8,900 SF
TOTAL PDP DETERMINATION AREA CALC. =	4,585 SF

PRIVATE CONTRACT

WARNING
0 1/2 1
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PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2

BMP MAP FOR STANDARD DEVELOPMENT PROJECTS

SCALE: 1"=30'

30 15 0 30 60 90
SCALE: 1"=30'

Michael Baker INTERNATIONAL
9635 Granite Ridge Dr. UNIT 300, San Diego, CA 92123
Phone: (858) 614-5000 · MBAKERINTL.COM

CONSULTANT
COMPANY ADDRESS: MICHAEL BAKER INTERNATIONAL, 9635 GRANITE RIDE DR UNIT 300, SAN DIEGO, CA 92123
COMPANY PHONE NUMBER: 858-614-5000
COMPANY EMAIL DATE OF: SCOTTDAVIS@MBAKERINTL.COM
SIGNING:
REGISTERED PROFESSIONAL ENGINEER SCOTT A. DAVIS C 61872281 Exp. 6/30/26 CIVIL STATE OF CALIFORNIA

SPEC. NO

The City of SAN DIEGO
FOR CITY APPROVAL

DEVELOPMENT SERVICES DEPARTMENT
SHEET 3 OF 61 SHEETS

APPROVED:
FOR CITY ENGINEER DATE

DESCRIPTION	BY	APPROVED	DATE
ORIGINAL	MBI		

AS BUILTS
CONTRACTOR DATE STARTED
INSPECTOR DATE COMPLETED

PMT NO.
PRJ NO 1119957
1847-6266 NAD83 COORDINATES
207-1706 LAMBERT COORDINATES
DRAWING NO. G002
XXXX- 3 - D

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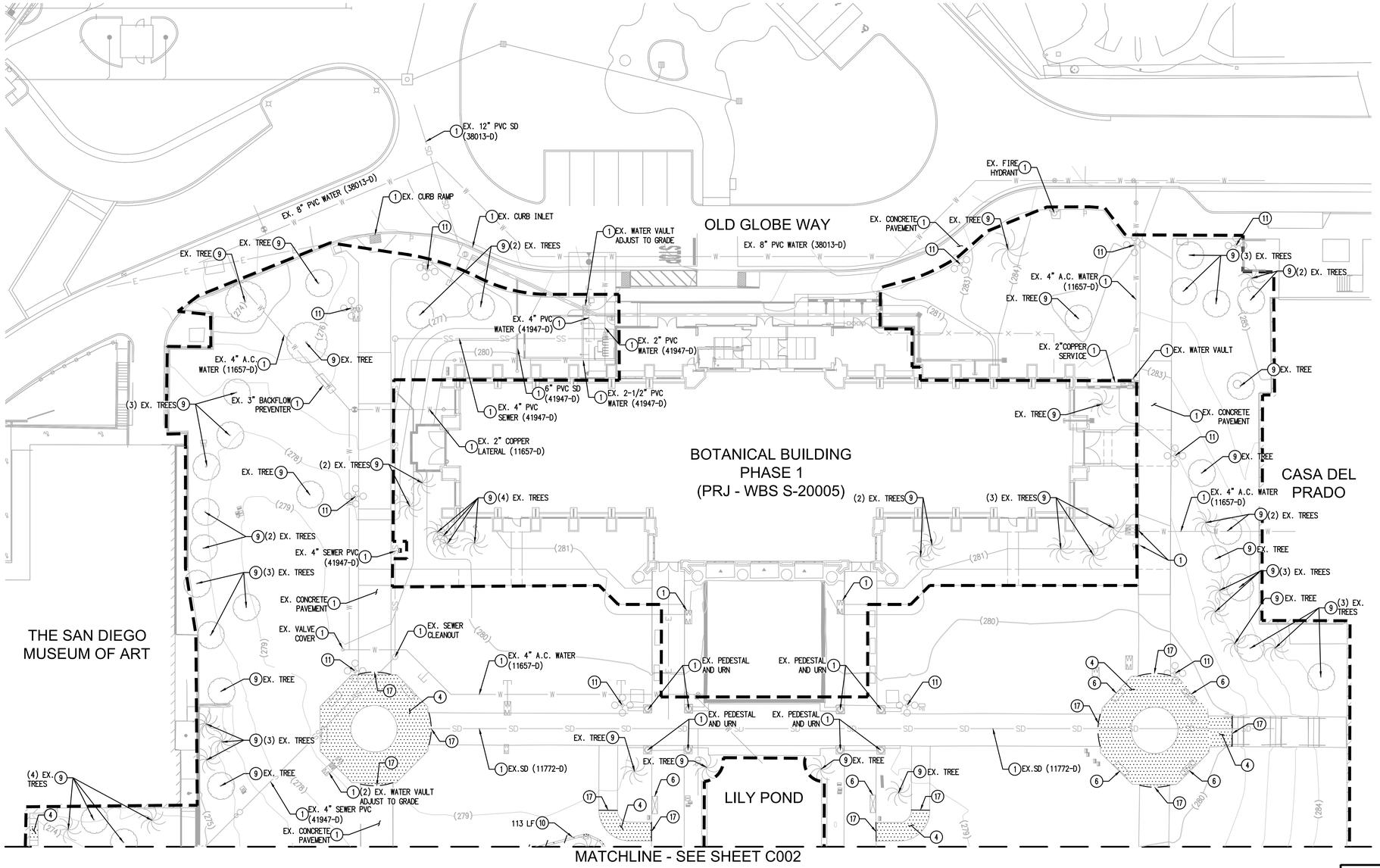

LEGEND

DEMOLITION

- APPROXIMATE LIMITS OF WORK
- PCC PAVEMENT TO BE DEMOLISHED
- PAVEMENT SAWCUT
- EXISTING SITE FEATURE TO BE DEMOLISHED

EXISTING IMPROVEMENTS

- EXISTING CONTOUR — (280)
- EXISTING WATER — W
- EXISTING SEWER — S
- EXISTING TELECOM — T
- EXISTING GAS — G
- EXISTING ELECTRIC — E
- EXISTING STORM DRAIN — SD
- EXISTING CATCH BASIN
- EXISTING FIRE HYDRANT
- EXISTING LIGHT
- EXISTING RETAINING WALL
- EXISTING SEWER MANHOLE — SMH

CONSTRUCTION NOTES

1. PROTECT IN PLACE ITEM AS NOTED
4. SAWCUT, DEMOLISH, AND REMOVE EXISTING PORTLAND CEMENT CONCRETE (PCC) PAVEMENT, INCLUDING BASE MATERIAL, ENTIRELY FROM JOINT TO JOINT
6. REMOVE AND SALVAGE EXISTING BENCH. CONTRACTOR SHALL COORDINATE WITH FOREVER BALBOA PARK
9. REFER TO LANDSCAPE PLAN FOR TREE PROTECTION AND REMOVAL PLAN
10. DEMOLISH AND REMOVE EXISTING CONCRETE MOW CURB
11. PROTECT IN PLACE EXISTING LIGHT POLE AND ASSOCIATED ELECTRICAL LINES TO REMAIN. CONTRACTOR SHALL REMOVE EXISTING ABANDONED IN-GROUND LIGHT FIXTURES AS NEEDED FOR NEW ELECTRICAL CONDUITS
17. SAWCUT LINE

SCALE 1"=20'

20 10 0 20 40 60

SCALE: 1"=20'

GENERAL DEMOLITION NOTES

1. DEMOLISH AND REMOVE ALL EXISTING IMPROVEMENTS WITH THE LIMITS OF WORK UNLESS INDICATED OTHERWISE. KEYNOTES REFER TO TYPICAL ITEMS OF DEMOLITION AND SHOULD NOT BE CONSIDERED ALL-INCLUSIVE.
2. PROTECT IN PLACE ALL EXISTING IMPROVEMENTS, STRUCTURES, AND UNDERGROUND UTILITIES TO REMAIN.
3. PROTECT IN PLACE ALL EXISTING IMPROVEMENTS, STRUCTURES, AND UNDERGROUND UTILITIES OUTSIDE OF THE LIMITS OF WORK UNLESS DIRECTED OTHERWISE.
4. ALL EXISTING IMPROVEMENTS TO REMAIN IN PLACE SHALL BE REPLACED TO CURRENT STANDARDS OR THE SATISFACTION OF THE CITY ENGINEER, IF DAMAGED DURING CONSTRUCTION OPERATIONS.
5. ALL CONCRETE CURB, GUTTER, SIDEWALK, AND PAVEMENT "TO BE DEMOLISHED AND REMOVED" SHALL BE EXTENDED OUT TO THE NEAREST JOINT(S), EDGE(S), OR SCORE MARK(S) TO PROVIDE A SMOOTH AND TRUE EDGE WITH NO SHATTER.
6. WHERE UTILITY TRENCHES CROSS EXISTING HARDSCAPE PAVEMENT, THE PAVEMENT SHALL BE SAWCUT, DEMOLISHED, AND REMOVED ENTIRELY FROM JOINT TO JOINT TO PROVIDE A SMOOTH AND TRUE EDGE WITH NO SHATTER.
7. THE CONTRACTOR SHALL NOTIFY DIG-ALERT (811) AT LEAST TWO DAYS PRIOR TO THE START OF WORK AND MAINTAIN AN ACTIVE DIG TICKET THROUGHOUT THE DURATION OF CONSTRUCTION IN ACCORDANCE WITH CURRENT REGULATION.
8. THE CONTRACTOR SHALL COORDINATE THE SHUTDOWN, DISCONNECTION, AND/OR CAPPING OF EXISTING UTILITIES WITH THE RESPECTIVE UTILITY OWNERS PRIOR TO THE START OF WORK.
9. THE LOCATION AND EXISTENCE OF UNDERGROUND FACILITIES SHOWN ON THE DRAWINGS WERE OBTAINED FROM A SEARCH OF READILY AVAILABLE RECORD DRAWINGS. THE CONTRACTOR SHALL POTHOLE EXISTING UTILITIES AT POINT OF CONNECTIONS AND ALL UTILITY CROSSINGS TO DETERMINE THEIR EXACT LOCATION PRIOR TO THE START OF WORK.
10. COORDINATE THE LOCATION OF ALL UNDERGROUND UTILITIES AND STORM DRAINS WITH NEW TREE LOCATIONS, MECHANICAL/ELECTRICAL FACILITIES, AND OTHER INSTALLATIONS, REFER TO LANDSCAPE, PLUMBING, ARCHITECTURAL, AND ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
11. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
12. FIRE PROTECTION DURING DEMOLITION AND CONSTRUCTION SHALL COMPLY WITH 2022 CALIFORNIA FIRE CODE (CFC).
13. ALL TREES, INCLUDING ROOT STRUCTURES, SHALL BE PRESERVED IN PLACE TO THE FULLEST EXTENT POSSIBLE, UNLESS OTHERWISE SPECIFIED IN CONSTRUCTION DRAWINGS.
14. COORDINATE THE REMOVAL/RELOCATION AND THE PROTECTION OF EXISTING IRRIGATION LINES.

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WARNING
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PRIVATE CONTRACT

PLANS FOR THE CONSTRUCTION OF BOTANICAL BUILDING AND GARDENS PHASE 2

DEMOLITION PLAN

CONSULTANT	SPEC. NO	The City of SAN DIEGO	DEVELOPMENT SERVICES DEPARTMENT SHEET 4 OF 61 SHEETS	PMT NO.
COMPANY ADDRESS: MICHAEL BAKER INTERNATIONAL, 9635 GRANITE RIDE DR UNIT 300, SAN DIEGO, CA 92123 COMPANY PHONE NUMBER: 858-614-5000 COMPANY EMAIL DATE OF: SCOTTDAVIS@MBAKERINTL.COM SIGNING: REGISTERED PROFESSIONAL ENGINEER SCOTT A. DAVIS 087228 Exp. 6/30/26 CIVIL STATE OF CALIFORNIA		FOR CITY APPROVAL	APPROVED: FOR CITY ENGINEER DATE DESCRIPTION / BY / APPROVED / DATE ORIGINAL / MBI AS BUILTS CONTRACTOR DATE STARTED INSPECTOR DATE COMPLETED	PRJ NO 1119957 1847-6266 NAD83 COORDINATES 207-1706 LAMBERT COORDINATES DRAWING NO. XXXX- 4 - D C001

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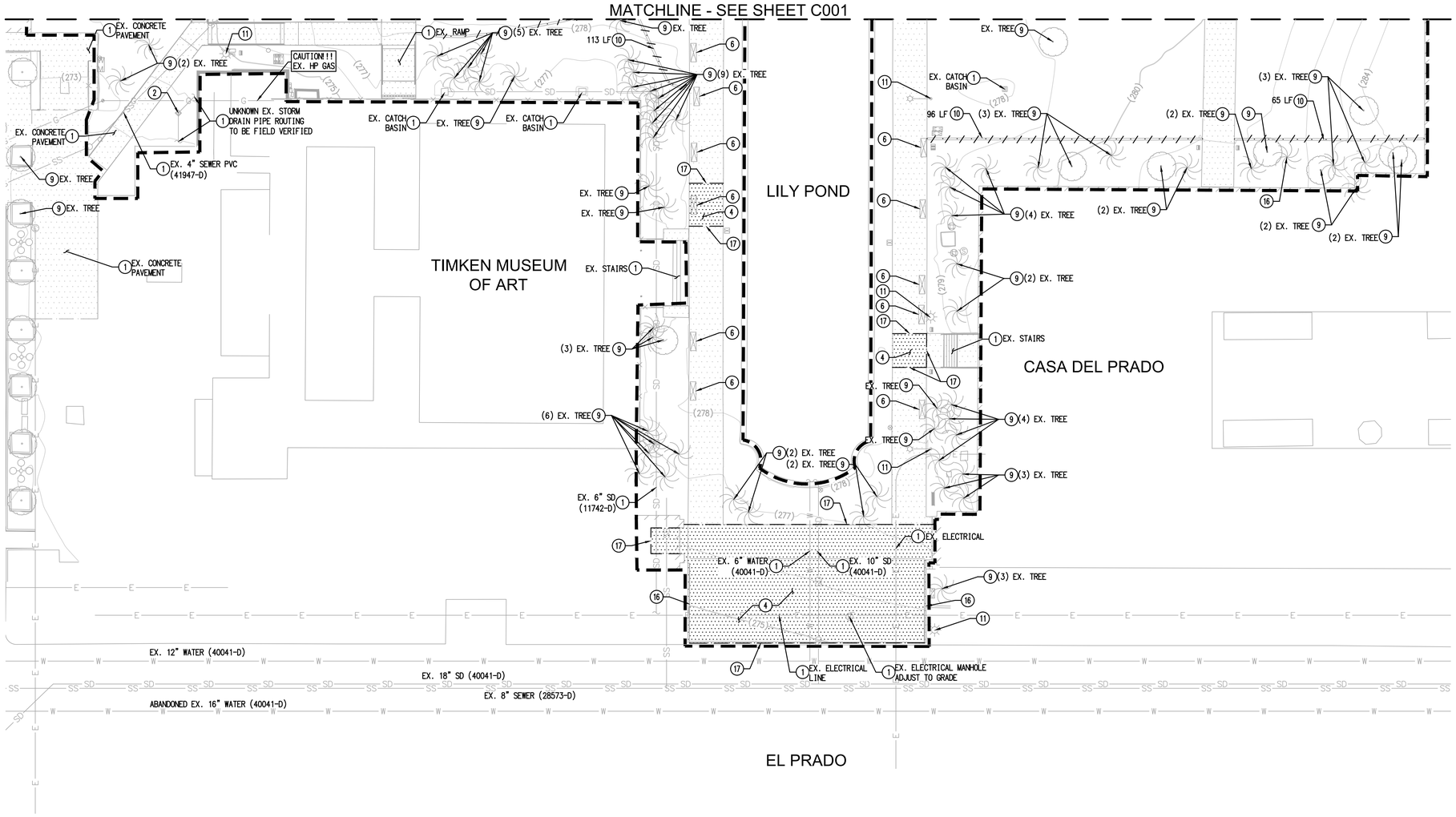

LEGEND

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- PAVEMENT SAWCUT
- EXISTING SITE FEATURE TO BE DEMOLISHHED

EXISTING IMPROVEMENTS

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- EXISTING FIRE HYDRANT
- EXISTING LIGHT
- EXISTING RETAINING WALL
- EXISTING SEWER MANHOLE — SMH

CONSTRUCTION NOTES

1. PROTECT IN PLACE ITEM AS NOTED
2. DEMOLISH AND RELOCATE EXISTING STORM DRAIN STRUCTURE PER GRADING PLAN SHEET C004
4. SAWCUT, DEMOLISH, AND REMOVE EXISTING PORTLAND CEMENT CONCRETE (PCC) PAVEMENT, INCLUDING BASE MATERIAL, ENTIRELY FROM JOINT TO JOINT
6. REMOVE AND SALVAGE EXISTING BENCH. CONTRACTOR SHALL COORDINATE WITH FOREVER BALBOA PARK
9. REFER TO LANDSCAPE PLAN FOR TREE PROTECTION AND REMOVAL PLAN
10. DEMOLISH AND REMOVE EXISTING CONCRETE MOW CURB
11. PROTECT IN PLACE EXISTING LIGHT POLE AND ASSOCIATED ELECTRICAL LINES TO REMAIN. CONTRACTOR SHALL REMOVE EXISTING ABANDONED IN-GROUND LIGHT FIXTURES AS NEEDED FOR NEW ELECTRICAL CONDUITS
16. DEMO EXISTING CONCRETE CURB
17. SAWCUT LINE

SCALE 1"=20'

20 10 0 20 40 60

SCALE: 1"=20'

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14. COORDINATE THE REMOVAL/RELOCATION AND THE PROTECTION OF EXISTING IRRIGATION LINES.

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PLANS FOR THE CONSTRUCTION OF BOTANICAL BUILDING AND GARDENS PHASE 2

DEMOLITION PLAN

CONSULTANT	SPEC. NO	The City of SAN DIEGO	DEVELOPMENT SERVICES DEPARTMENT SHEET 5 OF 61 SHEETS	PMT NO.
COMPANY ADDRESS: MICHAEL BAKER INTERNATIONAL, 9635 GRANITE RIDE DR UNIT 300, SAN DIEGO, CA 92123 COMPANY PHONE NUMBER: 858-614-5000 COMPANY EMAIL DATE OF: SCOTTDAVIS@MBAKERINTL.COM SIGNING: REGISTERED PROFESSIONAL ENGINEER SCOTT A. DAVIS No. 72281 Exp. 6/30/26 CIVIL STATE OF CALIFORNIA		FOR CITY APPROVAL	APPROVED: FOR CITY ENGINEER DATE	PRJ NO 1119957

DESCRIPTION	BY	APPROVED	DATE
ORIGINAL	MBI		
AS BUILTS			

CONTRACTOR ____ DATE STARTED ____
INSPECTOR ____ DATE COMPLETED ____

1847-6266
NAD83 COORDINATES

207-1706
LAMBERT COORDINATES

DRAWING NO. XXXX- 5 - D

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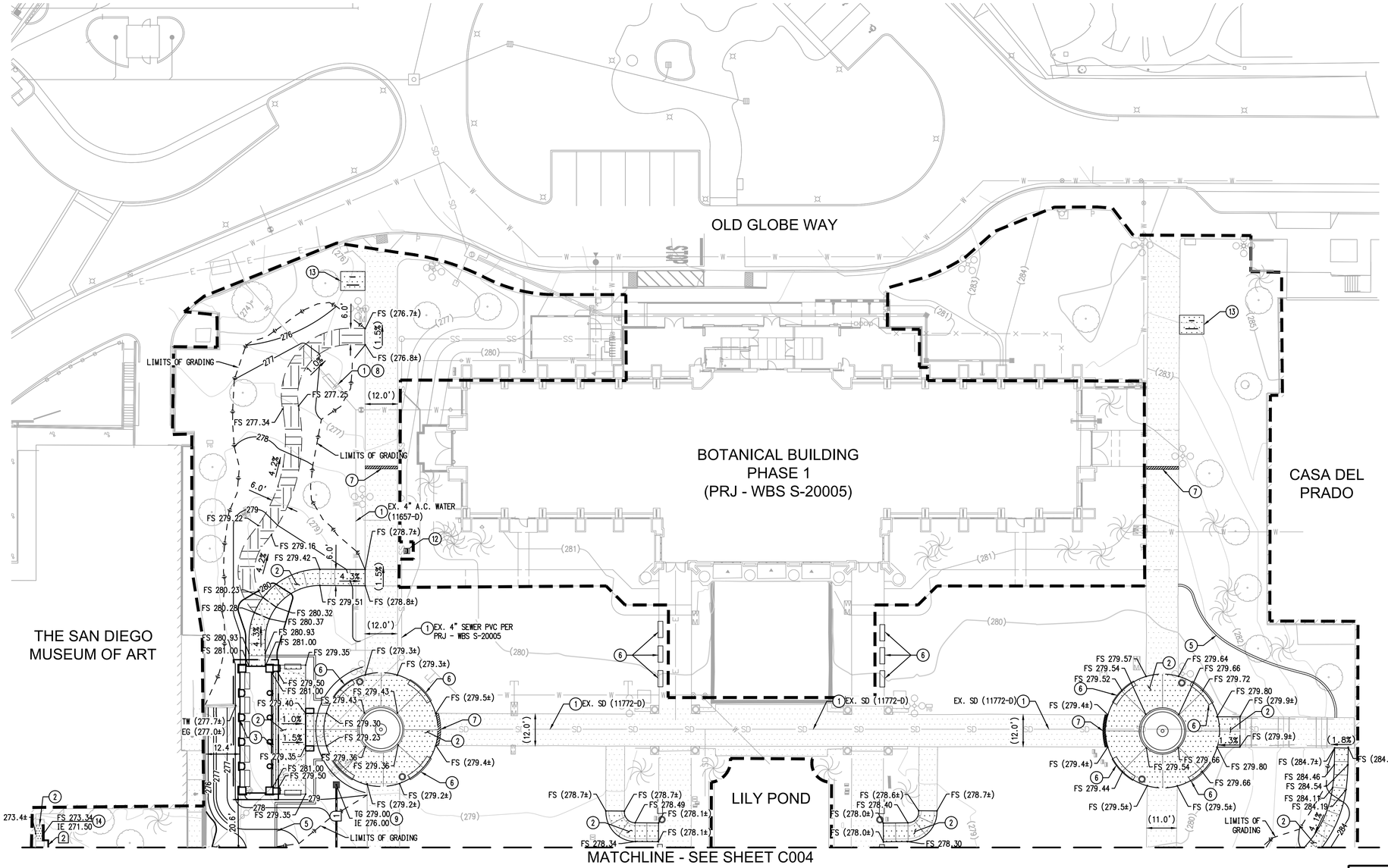


LEGEND

PROPOSED IMPROVEMENTS

IMPROVEMENT	STANDARD DWGS.	SYMBOL
RIGHT OF WAY LINE		
FINISH CONTOUR		280
TOP OF CURB ELEVATION		TC 280.50
APPROXIMATE LIMITS OF WORK		
PAVEMENT SAWCUT		
LIMITS OF GRADING		
CONCRETE WALKWAY	G-10,SDG-109,SDG-155	
DECOMPOSED GRANITE (DG)		
PROPOSED STORM DRAIN		
PROPOSED CATCH BASIN		

STORM DRAIN DATA TABLE

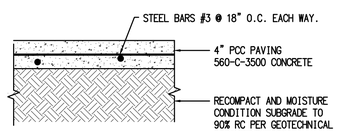
NO	BEARING/DELTA	LENGTH	SLOPE %	SIZE/TYPE
1	N 00°00'00" E	23.13'	6.7%	6" SDR-35 PVC
2	N 00°00'00" E	5.00'	-	4" SDR-35 PVC

CONSTRUCTION NOTES

1. PROTECT IN PLACE ITEM AS NOTED
2. PROPOSED PORTLAND CEMENT CONCRETE PAVEMENT PER DETAIL 1, SHEET C003. REFER TO LANDSCAPE DRAWINGS FOR CONCRETE FINISH AND PAVEMENT CONTROL JOINTS
3. CONSTRUCT PERGOLA PER STRUCTURAL AND ARCHITECTURAL DRAWINGS
5. CONSTRUCT CONCRETE MOW CURB PER LANDSCAPE DRAWINGS
6. INSTALL NEW BENCH PER LANDSCAPE DRAWINGS
7. INSTALL NEW RECOGNITION BAND PER LANDSCAPE DRAWINGS
8. PROVIDE STAINLESS STEEL ENCLOSURE FOR EXISTING 3" BACKFLOW PREVENTER PER SDW-156
9. CONSTRUCT 12" PRECAST CATCH BASIN PER DETAIL 3, SHEET C004
12. INSTALL NEW IRRIGATION CONTROLLER PAD AND PEDESTAL PER LANDSCAPE DRAWINGS
13. CONSTRUCT BIKE RACKS PER LANDSCAPE PLANS
14. INSTALL 6" WIDE TRENCH DRAIN (NDS OR APPROVED EQUAL)

ACCESSIBILITY NOTES

1. COMPLY WITH THE REQUIREMENTS OF THE CALIFORNIA BUILDING CODE (2022 CBC) FOR ALL SITE IMPROVEMENTS.
2. MAXIMUM CROSS SLOPE ON WALKWAYS SHALL BE 1.5% AND 4.5% RUNNING SLOPE FOR CONSTRUCTION TOLERANCE.
3. NO CHANGES IN LEVEL GREATER THAN 1/2" SHALL BE ALLOWED WITHOUT A RAMP. CHANGES IN LEVEL BETWEEN 1/4" AND 1/2" SHALL BE BEVELED WITH A SLOPE NO GREATER THAN 1:2.
4. CATCH BASIN AND DRAIN INLET GRATES SHALL HAVE SPACES NO GREATER THAN 1/2" WIDE IN ALL DIRECTIONS. IF GRATING HAVE ELONGATED OPENINGS, THEY SHALL BE PLACED SO THE LONG DIMENSION IS PERPENDICULAR TO THE DOMINANT DIRECTION OF TRAVEL.
5. CURB RAMPS SHALL BE REQUIRED WHENEVER ACCESSIBLE ACCESS ROUTES CROSS A CURB.
6. ALL STAIRS SHALL HAVE A 2" WIDE SLIP RESISTANT, CONTRASTING COLOR STRIPE (FULL WIDTH OF STAIRS) AND DETECTABLE WARNING, 1" MAXIMUM FROM NOSING ON ALL TREADS.
7. ALL PAVEMENT CROSS SLOPES (SLOPES PERPENDICULAR TO THE DIRECTION OF TRAVEL) SHALL BE A MAXIMUM OF 2%. ALL RAMPS SHALL HAVE A MAXIMUM SLOPE OF 1 IN 12. ALL LANDINGS AT STAIRS AND RAMPS SHALL HAVE A MAXIMUM SLOPE OF 2.0% (BOTH DIRECTIONS). ALL WALKWAYS SHALL HAVE A MAXIMUM SLOPE LESS THAN 5% IN THE DIRECTION OF TRAVEL. ALL MAXIMUM SLOPES ARE ABSOLUTE AND SUPERSEDE CONSTRUCTION TOLERANCES STATED IN THE PROJECT SPECIFICATION OR ELSEWHERE. THE CONTRACTOR HAS THE OPTION OF ADJUSTING GRADES TO ALLOW FOR CONSTRUCTION TOLERANCE BUT SHALL NOT ADJUST GRADES TO LESS THAN 1% SLOPE OR GREATER THAN 1.5%. THE CONTRACTOR SHALL CONTACT THE ARCHITECT REGARDING ANY GRADE DEVISIONS PRIOR TO CONSTRUCTION OF PAVEMENT AREAS. THE PAVEMENT SLOPES WILL BE REVIEWED AFTER CONSTRUCTION AND PAVEMENT OVER THE MAXIMUM SLOPES SPECIFIED ABOVE SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.



NOTES:
1. CRACK-CONTROL JOINTS SHOULD BE SPACED AT INTERVALS NO GREATER THAN 12 FEET PER GEOTECH RECOMMENDATIONS.

1 **REINFORCED CONCRETE PAVEMENT SECTION**
N.T.S.

SCALE 1"=20'

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

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SPEC. NO

The City of SAN DIEGO
FOR CITY APPROVAL

PRIVATE CONTRACT

WARNING
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PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2

GRADING PLAN

DEVELOPMENT SERVICES DEPARTMENT
SHEET 6 OF 61 SHEETS

APPROVED:
FOR CITY ENGINEER DATE

DESCRIPTION	BY	APPROVED	DATE
ORIGINAL	MBI		

AS BUILTS
CONTRACTOR DATE STARTED
INSPECTOR DATE COMPLETED

PMT NO.
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1847-6266
NAD83 COORDINATES
207-1706
LAMBERT COORDINATES
DRAWING NO. XXXX- 6 - D
C003

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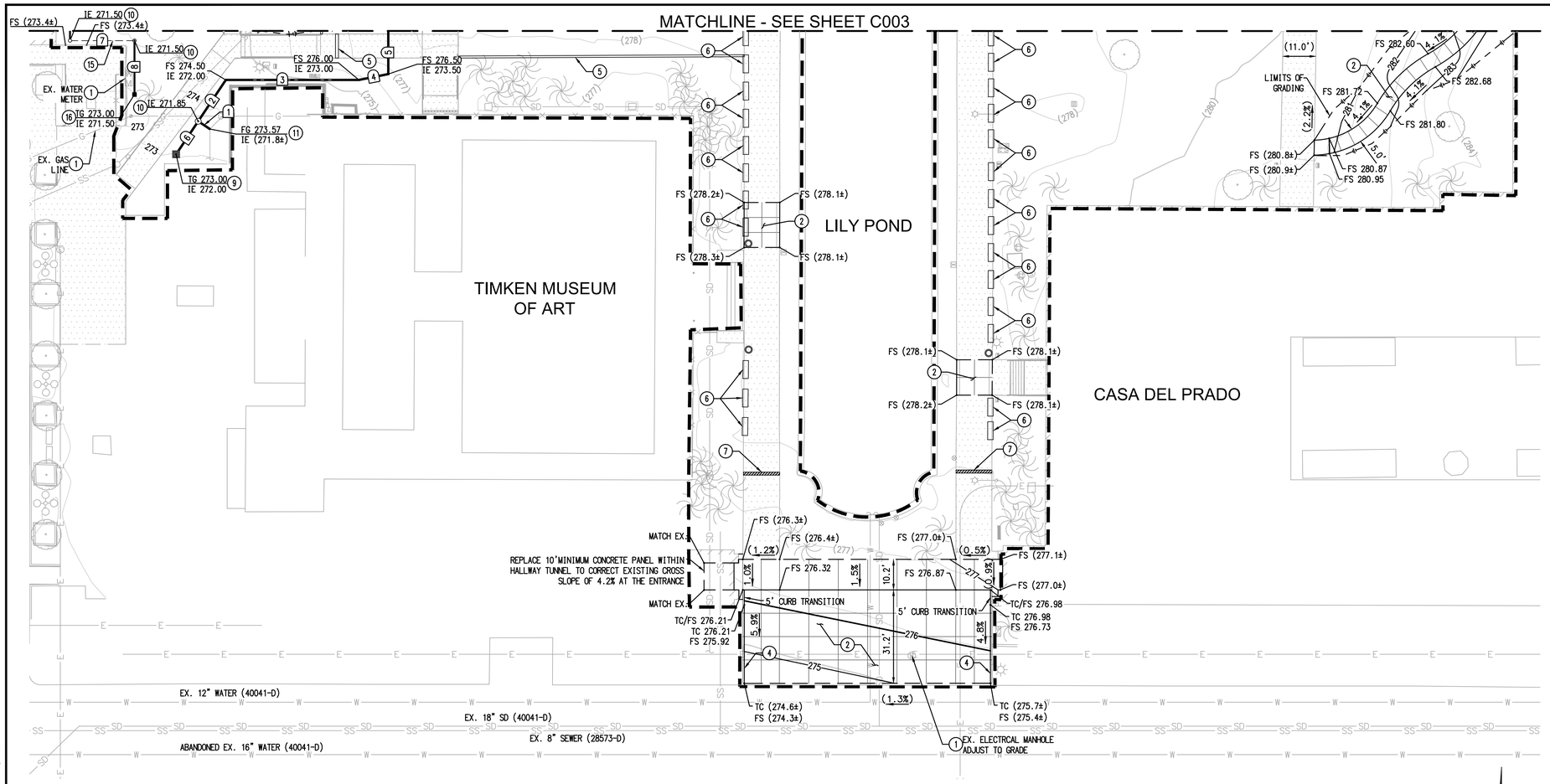


LEGEND

PROPOSED IMPROVEMENTS

IMPROVEMENT	STANDARD DWGS.	SYMBOL
RIGHT OF WAY LINE		
FINISH CONTOUR		280
TOP OF CURB ELEVATION		TC 280.50
APPROXIMATE LIMITS OF WORK		
PAVEMENT SAWCUT		
LIMITS OF GRADING		
CONCRETE WALKWAY	G-10,SDG-109,SDG-155	
DECOMPOSED GRANITE (DG)		
PROPOSED STORM DRAIN		
PROPOSED CATCH BASIN		

STORM DRAIN DATA TABLE

NO	BEARING/DELTA	LENGTH	SLOPE %	SIZE/TYPE
1	N 56°15'00" W	4.69'	0.9%	6" SDR-35 PVC
2	N 33°45'00" E	16.58'	0.9%	6" SDR-35 PVC
3	N 90°00'00" E	44.39'	2.3%	6" SDR-35 PVC
4	N 78°45'00" E	10.00'	5.0%	6" SDR-35 PVC
5	N 00°00'00" E	14.44'	6.7%	6" SDR-35 PVC
6	N 33°45'00" E	13.28'	1.1%	6" SDR-35 PVC
7	N 00°00'00" E	19.17'	-	4" SDR-35 PVC
8	N 89°43'50" W	18.66'	-	4" PERFORATED

CONSTRUCTION NOTES

1. PROTECT IN PLACE ITEM AS NOTED
2. PROPOSED PORTLAND CEMENT CONCRETE PAVEMENT PER DETAIL 1, SHEET C003. REFER TO LANDSCAPE DRAWINGS FOR CONCRETE FINISH AND PAVEMENT CONTROL JOINTS
4. CONSTRUCT CONCRETE CURB PER CITY STANDARD SDG-150
5. CONSTRUCT CONCRETE MOW CURB PER LANDSCAPE DRAWINGS
6. INSTALL NEW BENCH PER LANDSCAPE DRAWINGS
7. INSTALL NEW RECOGNITION BAND PER LANDSCAPE DRAWINGS
9. CONSTRUCT 12" PRECAST CATCH BASIN PER DETAIL 3, SHEET C004
10. INSTALL STORM DRAIN CLEANOUT PER DETAIL 2, SHEET C004
11. CONNECT TO EXISTING STORM DRAIN LINE
15. INSTALL PERFORATED DRAIN PIPE PER DETAIL 4, SHEET C004
16. INSTALL 9" BUBBLER CATCH BASIN (NDS OR APPROVED EQUAL)

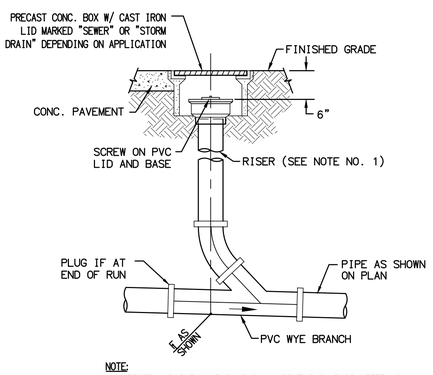
ACCESSIBILITY NOTES

1. COMPLY WITH THE REQUIREMENTS OF THE CALIFORNIA BUILDING CODE (2022 CBC) FOR ALL SITE IMPROVEMENTS.
2. MAXIMUM CROSS SLOPE ON WALKWAYS SHALL BE 1.5% AND 4.5% RUNNING SLOPE FOR CONSTRUCTION TOLERANCE.
3. NO CHANGES IN LEVEL GREATER THAN 1/2" SHALL BE ALLOWED WITHOUT A RAMP. CHANGES IN LEVEL BETWEEN 1/4" AND 1/2" SHALL BE BEVELED WITH A SLOPE NO GREATER THAN 1:2.
4. CATCH BASIN AND DRAIN INLET GRATES SHALL HAVE SPACES NO GREATER THAN 1/2" WIDE IN ALL DIRECTIONS. IF GRATING HAVE ELONGATED OPENINGS, THEY SHALL BE PLACED SO THE LONG DIMENSION IS PERPENDICULAR TO THE DOMINANT DIRECTION OF TRAVEL.
5. CURB RAMPS SHALL BE REQUIRED WHENEVER ACCESSIBLE ACCESS ROUTES CROSS A CURB.
6. ALL STAIRS SHALL HAVE A 2" WIDE SLIP RESISTANT, CONTRASTING COLOR STRIPE (FULL WIDTH OF STAIRS) AND DETECTABLE WARNING, 1" MAXIMUM FROM NOSING ON ALL TREADS.
7. ALL PAVEMENT CROSS SLOPES (SLOPES PERPENDICULAR TO THE DIRECTION OF TRAVEL) SHALL BE A MAXIMUM OF 2%. ALL RAMPS SHALL HAVE A MAXIMUM SLOPE OF 1 IN 12. ALL LANDINGS AT STAIRS AND RAMPS SHALL HAVE A MAXIMUM SLOPE OF 2.0% (BOTH DIRECTIONS). ALL WALKWAYS SHALL HAVE A MAXIMUM SLOPE LESS THAN 5% IN THE DIRECTION OF TRAVEL. ALL MAXIMUM SLOPES ARE ABSOLUTE AND SUPERSEDE CONSTRUCTION TOLERANCES STATED IN THE PROJECT SPECIFICATION OR ELSEWHERE. THE CONTRACTOR HAS THE OPTION OF ADJUSTING GRADES TO ALLOW FOR CONSTRUCTION TOLERANCE BUT SHALL NOT ADJUST GRADES TO LESS THAN 1% SLOPE OR GREATER THAN 1.5%. THE CONTRACTOR SHALL CONTACT THE ARCHITECT REGARDING ANY GRADE REVISIONS PRIOR TO CONSTRUCTION OF PAVEMENT AREAS. THE PAVEMENT SLOPES WILL BE REVIEWED AFTER CONSTRUCTION AND PAVEMENT OVER THE MAXIMUM SLOPES SPECIFIED ABOVE SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

SCALE 1"=20'

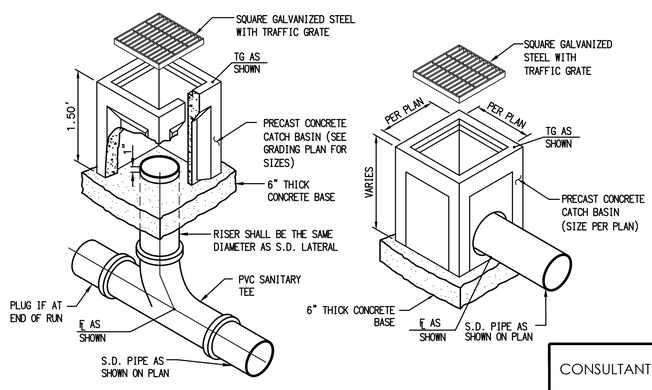
20 10 0 20 40 60

SCALE: 1"=20'



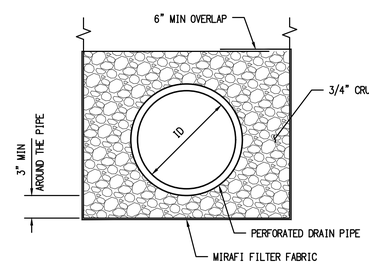
NOTE:
1. RISER AND CLEANOUT PLUG SHALL BE THE SAME DIAMETER AS SEWER OR STORM DRAIN LATERAL, DEPENDING ON APPLICATION
2. INSTALL METAL TAPE ON TOP OF NON-METALLIC SEWER PIPE

2 SEWER/STORM DRAIN TYPE CLEANOUT
N.T.S.



NOTE:
WHEN CATCH BASIN IS LOCATED IN CONCRETE PAVEMENT AREA PROVIDE FELT EXPANSION JOINT AROUND THE BOX.

3 PRECAST CONCRETE CATCH BASIN (PVT)
N.T.S.



4 PERFORATED DRAIN DETAIL
N.T.S.

PRIVATE CONTRACT

WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2

GRADING PLAN

Michael Baker INTERNATIONAL
9635 Granite Ridge Dr. Unit 300, San Diego, CA 92123
Phone: (858) 614-5000 · MBAKERINTL.COM

CONSULTANT
COMPANY ADDRESS: MICHAEL BAKER INTERNATIONAL, 9635 GRANITE RIDE DR UNIT 300, SAN DIEGO, CA 92123
COMPANY PHONE NUMBER: 858-614-5000
COMPANY EMAIL DATE OF: SCOTTDAVIS@MBAKERINTL.COM
SIGNING:
REGISTERED PROFESSIONAL ENGINEER SCOTT A. DAVIS No. 77281 Exp. 6/30/26 CIVIL STATE OF CALIFORNIA

SPEC. NO

The City of SAN DIEGO
FOR CITY APPROVAL

DEVELOPMENT SERVICES DEPARTMENT
SHEET 7 OF 61 SHEETS

APPROVED:
FOR CITY ENGINEER DATE

DESCRIPTION	BY	APPROVED	DATE
ORIGINAL	MBI		

AS BUILTS
CONTRACTOR DATE STARTED
INSPECTOR DATE COMPLETED

PMT NO.
PRJ NO 1119957
1847-6266 NAD83 COORDINATES
207-1706 LAMBERT COORDINATES
DRAWING NO. XXXX- 7 - D
C004

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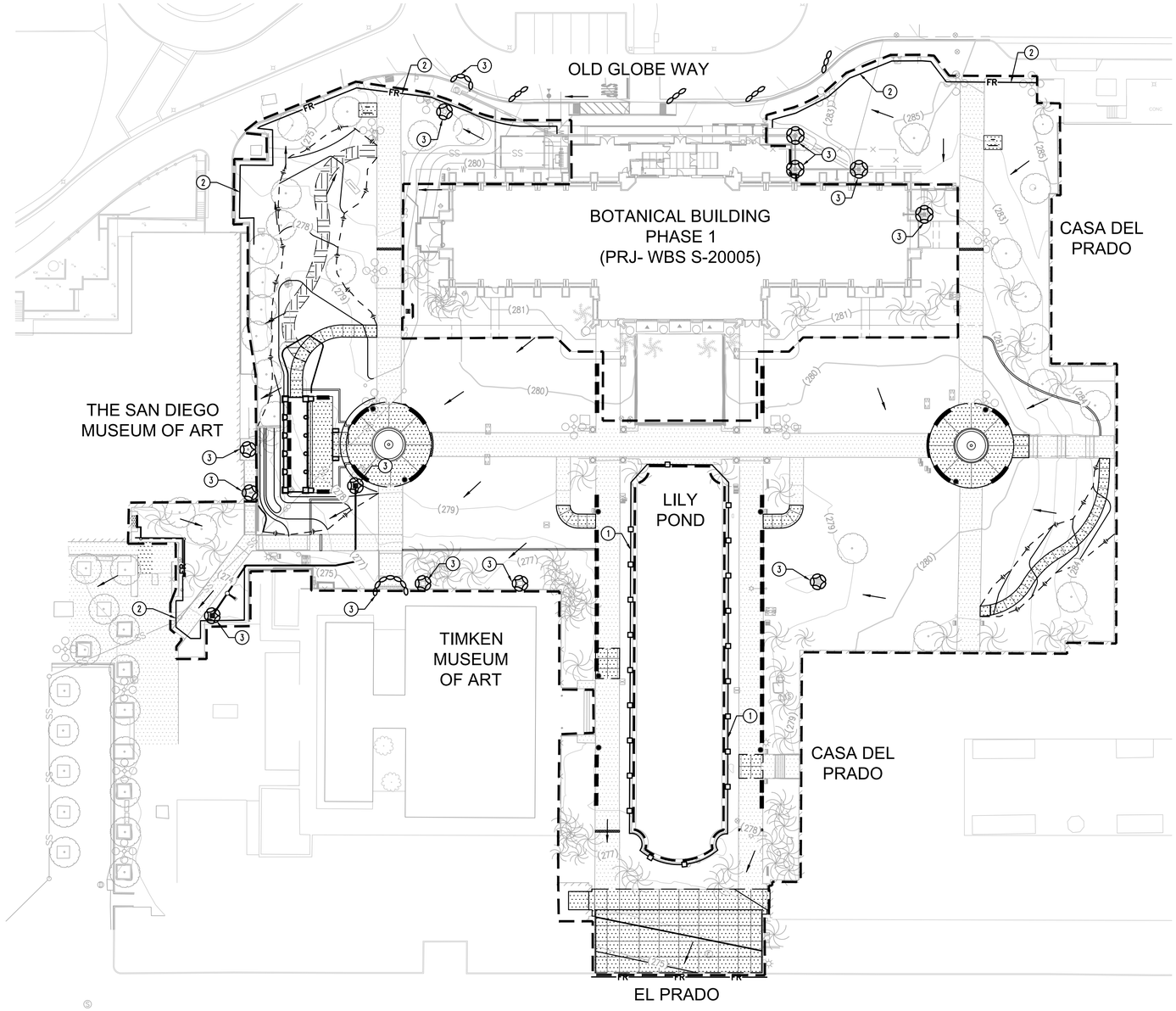

LEGEND

SYMBOL	STD.	IMPROVEMENT
		DRAINAGE SLOPE
FR	SE-5	FIBER ROLL
	SE-1	SILT FENCE
	SE-10	GRAVEL BAGS
	TC-1	CONSTRUCTION ENTRANCE
	EC-7	EROSION MAT
W		EXISTING WATER LINE
SS		EXISTING SEWER LINE
		EXISTING STORM DRAIN
E		EXISTING ELECTRICAL
G		EXISTING GAS LINE
EC-2	EC-2	PRESERVE EXISTING VEGETATION
WE-1	WE-1	WIND EROSION CONTROL
WM-1	WM-1	MATERIAL STORAGE AND DELIVERY
WM-3	WM-3	STOCKPILE MANAGEMENT
WM-4	WM-4	SPILL PREVENTION AND CONTROL
WM-5	WM-5	SOLID WASTE MANAGEMENT
WM-6	WM-6	HAZARDOUS WASTE MANAGEMENT
WM-8	WM-8	CONCRETE WASTE MANAGEMENT
WM-9	WM-9	SANITARY WASTE MANAGEMENT
NS-1	NS-1	WATER CONSERVATION PRACTICES
NS-3	NS-3	PAVING AND GRINDING OPERATIONS
NS-6	NS-6	ILLICIT CONNECTION/DISCHARGE DETECTION AND REPORTING
NS-12	NS-12	CONCRETE CURING
NS-13	NS-13	CONCRETE FINISHING
		(CONTRACTOR TO ADJUST STAGING AREAS AS NECESSARY)

BMP CONSTRUCTION NOTES

1. INSTALL SILT FENCE PER DETAIL 6 ON SHEET C-006 AND CASQA BMP SE-1
2. INSTALL FIBER ROLL PER DETAIL 1 ON SHEET C-006 AND CASQA BMP SE-5
3. INSTALL STORM DRAIN INLET PROTECTION PER DETAIL 2 ON SHEET C-006 AND CASQA BMP SE-10

SCALE 1"=30'

30 15 0 30 60 90

SCALE: 1"=30'

PRIVATE CONTRACT

WARNING

0 1/2 1

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PLANS FOR THE CONSTRUCTION OF BOTANICAL BUILDING AND GARDENS PHASE 2

EROSION CONTROL PLAN

CONSULTANT

COMPANY ADDRESS: MICHAEL BAKER INTERNATIONAL, 9635 GRANITE RIDE DR UNIT 300, SAN DIEGO, CA 92123

COMPANY PHONE NUMBER: 858-614-5000

COMPANY EMAIL DATE OF: SCOTTDAVIS@MBAKERINTL.COM

SIGNING:

REGISTERED PROFESSIONAL ENGINEER SCOTT A. DAVIS 86172281 Exp. 6/30/26 CIVIL STATE OF CALIFORNIA

SPEC. NO

The City of SAN DIEGO

FOR CITY APPROVAL

DEVELOPMENT SERVICES DEPARTMENT

SHEET 8 OF 61 SHEETS

APPROVED: FOR CITY ENGINEER DATE

DESCRIPTION	BY	APPROVED	DATE
ORIGINAL	MBI		

AS BUILTS

CONTRACTOR DATE STARTED

INSPECTOR DATE COMPLETED

PMT NO.

PRJ NO 1119957

1847-6266 NAD83 COORDINATES

207-1706 LAMBERT COORDINATES

DRAWING NO. XXXX- 8 - D

C005

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CONSTRUCTION BMP GENERAL NOTES

PRIOR TO ANY SOIL DISTURBANCE, TEMPORARY EROSION AND SEDIMENT CONTROLSHALL BE INSTALLED BY THE CONTRACTOR OR QUALIFIED PERSON(S) AS INDICATED BELOW:

1. ALL REQUIREMENTS OF THE CITY OF SAN DIEGO "LAND DEVELOPMENT MANUAL, STORM WATER STANDARDS" MUST BE INCORPORATED INTO THE DESIGN AND CONSTRUCTION OF THE PROPOSED GRADING/IMPROVEMENTS CONSISTENT WITH THE APPROVED STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND/OR WATER POLLUTION CONTROL PLAN (WPCP) FOR CONSTRUCTION LEVEL BMP'S AND, IF APPLICABLE, THE STORM WATER QUALITY MANAGEMENT PLAN (SWQMP) FOR POST CONSTRUCTION TREATMENT CONTROL BMP'S.

2. THE CONTRACTOR SHALL INSTALL AND MAINTAIN ALL STORM DRAIN INLETS. INLET PROTECTION IN THE PUBLIC RIGHT OF WAY MAY BE TEMPORARILY REMOVED WHERE IT IS PRONE TO FLOODING PRIOR TO A RAIN EVENT AND REINSTALLED AFTER RAIN IS OVER.

3. *ALL CONSTRUCTION BMPS SHALL BE INSTALLED AND PROPERLY MAINTAINED THROUGHOUT THE DURATION OF CONSTRUCTION.*

4. THE CONTRACTOR SHALL ONLY GRADE, INCLUDING CLEARING AND GRUBBING, AREAS FOR WHICH THE CONTRACTOR OR QUALIFIED PERSON CAN PROVIDE EROSION AND SEDIMENT CONTROL MEASURES.

5. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL SUB-CONTRACTORS AND SUPPLIERS ARE AWARE OF ALL STORM WATER QUALITY MEASURES AND IMPLEMENT SUCH MEASURES. FAILURE TO COMPLY WITH THE APPROVED SWPPP/WPCP WILL RESULT IN THE ISSUANCE OF CORRECTION NOTICES, CITATIONS, CIVIL PENALTIES AND/OR STOP WORK NOTICES.

6. THE CONTRACTOR OR QUALIFIED PERSON SHALL BE RESPONSIBLE FOR CLEANUP OF ALL SILT, DEBRIS AND MUD ON AFFECTED AND ADJACENT STREET(S) AND WITHIN STORM DRAIN SYSTEM DUE TO CONSTRUCTION VEHICLES/EQUIPMENT AND CONSTRUCTION ACTIVITY AT THE END OF EACH WORK DAY.

7. THE CONTRACTOR SHALL PROTECT NEW AND EXISTING STORM WATER CONVEYANCE SYSTEMS FROM SEDIMENTATION, CONCRETE RINSE, OR OTHER CONSTRUCTION RELATED DEBRIS AND DISCHARGES WITH THE APPROPRIATE BMPS THAT ARE ACCEPTABLE TO THE ENGINEER AND AS INDICATED IN THE SWPPP/WPCP

8. THE CONTRACTOR OR QUALIFIED CONTACT PERSON SHALL CLEAR DEBRIS, SILT, AND MUD FROM ALL DITCHES AND SWALES PRIOR TO AND WITHIN 3 BUSINESS DAYS AFTER EACH RAIN EVENT OR PRIOR TO THE NEXT RAIN EVENT, WHICHEVER IS SOONER.

9. IF A NON-STORMWATER DISCHARGE LEAVES THE SITE, THE CONTRACTOR SHALL IMMEDIATELY STOP THE ACTIVITY AND REPAIR THE DAMAGES. THE CONTRACTOR SHALL NOTIFY THE CITY RESIDENT ENGINEER OF THE DISCHARGE, PRIOR TO RESUMING CONSTRUCTION ACTIVITY. ANY AND ALL WASTE MATERIAL, SEDIMENT, AND DEBRIS FROM EACH NON-STORMWATER DISCHARGE SHALL BE REMOVED FROM THE STORM DRAIN CONVEYANCE SYSTEM AND PROPERLY DISPOSED OF BY THE CONTRACTOR. .

10. EQUIPMENT AND WORKERS FOR EMERGENCY WORK SHALL BE MADE AVAILABLE AT ALL TIMES. ALL NECESSARY MATERIALS SHALL BE STOCKPILED ON SITE AT CONVENIENT LOCATIONS TO FACILITATE RAPID DEPLOYMENT OF CONSTRUCTION BMPS WHEN RAIN IS IMMINENT.

11. THE CONTRACTOR SHALL RESTORE AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL BMPS TO WORKING ORDER YEAR ROUND.

12. THE CONTRACTOR SHALL INSTALL ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES DUE TO GRADING INACTIVITY OR UNFORESEEN CIRCUMSTANCES TO PREVENT NON-STORM WATER AND SEDIMENT-LADEN DISCHARGES.

13. THE CONTRACTOR SHALL BE RESPONSIBLE AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT PUBLIC TRESPASS ONTO AREAS WHERE IMPOUNDED WATERS CREATE A HAZARDOUS CONDITION.

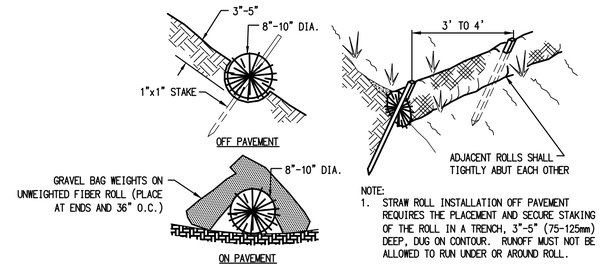
14. ALL EROSION AND SEDIMENT CONTROL MEASURES PROVIDED PER THE APPROVED SWPPP/WPCP SHALL BE INSTALLED AND MAINTAINED. ALL EROSION AND SEDIMENT CONTROL FOR INTERIM CONDITIONS SHALL BE PROPERLY DOCUMENTED AND INSTALLED TO THE SATISFACTION OF THE RESIDENT ENGINEER.

15. UPON NOTIFICATION BY THE RESIDENT ENGINEER, THE CONTRACTOR SHALL ARRANGE FOR MEETINGS DURING OCTOBER 1ST TO APRIL 30TH FOR PROJECT TEAM (GENERAL CONTRACTOR, QUALIFIED PERSON, EROSION CONTROL SUBCONTRACTOR IF ANY, ENGINEER OF WORK, OWNER/DEVELOPER AND THE RESIDENT ENGINEER) TO EVALUATE THE ADEQUACY OF THE EROSION AND SEDIMENT CONTROL MEASURES AND OTHER BMPS RELATIVE TO ANTICIPATED CONSTRUCTION ACTIVITIES.

16. THE CONTRACTOR SHALL CONDUCT VISUAL INSPECTIONS DAILY AND MAINTAIN ALL BMPS AS NEEDED. VISUAL INSPECTIONS AND MAINTENANCE OF ALL BMPS SHALL BE CONDUCTED BEFORE, DURING AND AFTER EVERY RAIN EVENT AND EVERY 24 HOURS DURING ANY PROLONGED RAIN EVENT. THE CONTRACTOR SHALL MAINTAIN AND REPAIR ALL BMPS AS SOON AS POSSIBLE AS SAFETY ALLOWS.

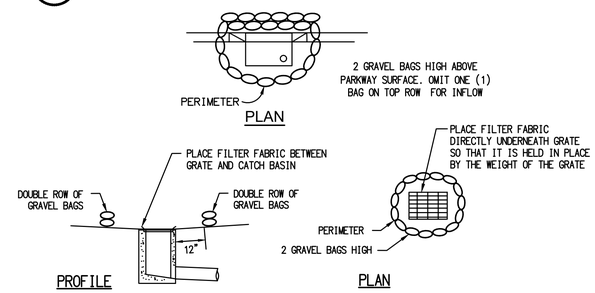
17. CONSTRUCTION ENTRANCE AND EXIT AREA. TEMPORARY CONSTRUCTION ENTRANCE AND EXITS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CASQA FACT SHEET TC-1OR CALTRANS FACT SHEET TC-01 TO PREVENT TRACKING OF SEDIMENT AND OTHER POTENTIAL POLLUTANTS ONTO PAVED SURFACES AND TRAVELED WAYS. WIDTH SHALL BE 10' OR THE MINIMUM NECESSARY TO ACCOMMODATE VEHICLES AND EQUIPMENT WITHOUT BY PASSING THE ENTRANCE.

    (a) NON-STORMWATER DISCHARGES SHALL BE EFFECTIVELY MANAGED PER THE SAN DIEGO MUNICIPAL CODE CHAPTER 4, ARTICLE 3, DIVISION 3 "STORM WATER MANAGEMENT AND DISCHARGE CONTROL".

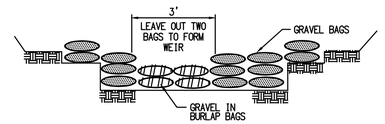


NOTE:
1. STRAW ROLL INSTALLATION OFF PAVEMENT REQUIRES THE PLACEMENT AND SECURE STAKING OF THE ROLL IN A TRENCH, 3"-5" (75-125mm) DEEP, DUG ON CONTOUR. RUNOFF MUST NOT BE ALLOWED TO RUN UNDER OR AROUND ROLL.

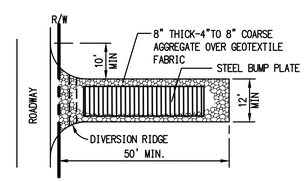
1 FIBER ROLL DETAIL
N.T.S.



2 TYPICAL INLET PROTECTION DETAIL EQUIVALENT, NEWER TECHNOLOGY ACCEPTABLE
N.T.S.

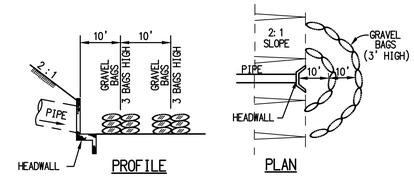


3 TYPICAL GRAVEL BAG SECTION
N.T.S.

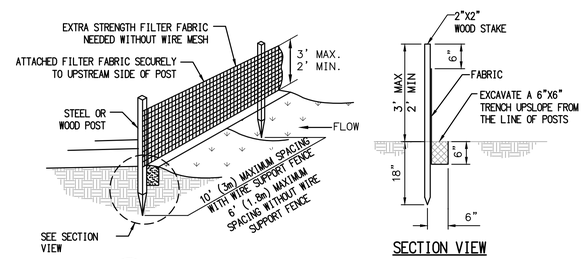


NOTES:
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

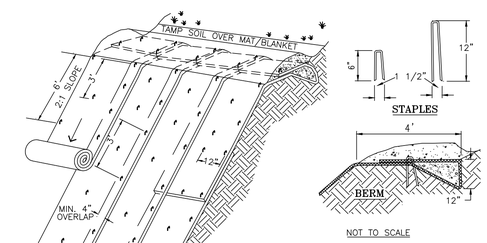
4 STABILIZED CONSTRUCTION ENTRANCE
N.T.S.



5 HEADWALL OUTLET DETAIL
N.T.S.



6 SILT FENCE
N.T.S.



ISOMETRIC VIEW

NOTES:
1. SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS AND GRASS. MATS/ BLANKETS SHALL HAVE GOOD SOIL CONTACT.
2. APPLY PERMANENT SEEDING BEFORE PLACING BLANKETS.
3. LAY BLANKETS LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT STRETCH.
4. MATS/BLANKETS SHOULD BE INSTALLED VERTICALLY DOWNSLOPE.
5. EROSION BLANKET TO BE USED ON TEMPORARY CONSTRUCTION SLOPES AS NECESSARY DURING CONSTRUCTION.

7 EROSION BLANKETS + TURF REINFORCEMENT MATS SLOPE STABILIZATION
N.T.S.

PRIVATE CONTRACT

WARNING
0 1/2 1
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PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2

EROSION CONTROL NOTES

CONSULTANT

COMPANY ADDRESS: MICHAEL BAKER INTERNATIONAL,
9635 GRANITE RIDE DR UNIT 300, SAN DIEGO, CA 92123
COMPANY PHONE NUMBER: 858-614-5000
COMPANY EMAIL DATE OF: SCOTTDAVIS@MBAKERINTL.COM
SIGNING:

REGISTERED PROFESSIONAL ENGINEER
SCOTT A. DAVIS
No. 72281
Exp. 6/30/26
CIVIL
STATE OF CALIFORNIA

SPEC. NO

The City of SAN DIEGO

FOR CITY APPROVAL

DEVELOPMENT SERVICES DEPARTMENT
SHEET 9 OF 61 SHEETS

APPROVED:
FOR CITY ENGINEER DATE

DESCRIPTION	BY	APPROVED	DATE
ORIGINAL	MBI		

AS BUILTS
CONTRACTOR DATE STARTED
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PMT NO.
PRJ NO 1119957
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DRAWING NO.
XXXX- 9 - D
C006

Michael Baker
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NOTES:

1. A CURB RAMP IS REQUIRED FOR EACH SIDEWALK CROSSING. IF A PEDESTRIAN CAN CROSS IN TWO DIRECTIONS FROM AN INTERSECTION CORNER, TWO CURB RAMPS SHALL BE PROVIDED. IF A PEDESTRIAN CAN ONLY CROSS IN ONE DIRECTION FROM AN INTERSECTION CORNER, ONLY A SINGLE CURB RAMP SHALL BE PROVIDED.
2. IN AN IDEAL CONDITION WHERE THE CURB RETURN AND INTERSECTION ARE LEVEL AND THE CURB HEIGHT IS 6":
   A. IF THE RIGHT-OF-WAY (ROW) LIMITS ARE 10'-0" OR MORE (MEASURED FACE OF CURB TO PROPERTY LINE), A TYPE A OR TYPE B CURB RAMP SHALL BE USED.
   B. IF THE ROW LIMITS ARE LESS THAN 10'-0" BUT NOT LESS THAN 8'-0", A TYPE C2 CURB RAMP SHALL BE USED.
   C. IF THE ROW LIMITS ARE LESS THAN 8'-0", A TYPE C1 CURB RAMP SHALL BE USED.
   D. A TYPE D CURB RAMP SHALL BE USED AT ALLEY CORNERS.
   E. A TYPE E CURB RAMP (BLENDED TRANSITION) SHALL BE USED FOR MULTI-DIRECTIONAL ACCESS AS AN ALTERNATIVE IF DUAL RAMPS CANNOT BE INSTALLED.
3. OPPOSING CURB RAMPS AT A SINGLE CROSSING SHALL LINE UP. ALIGN THE CURB RAMP WITH THE CROSSWALK SO THERE IS A STRAIGHT PATH OF TRAVEL FROM THE TOP OF THE RAMP TO THE CURB RAMP ON THE OTHER SIDE, TO THE MAXIMUM EXTENT FEASIBLE.
4. PULL BOXES, MANHOLES, VAULTS, AND OTHER UTILITIES SHALL BE RELOCATED OR INCORPORATED ONTO THE CURB RAMP AREA PROVIDED THAT THE ACCESS COVER IS STABLE, FIRM, SLIP RESISTANT, AND FLUSH OR ADJUSTED TO GRADE. COORDINATE THE WORK WITH THE ENGINEER
5. UTILITY POLES MAY BE INCORPORATED INTO THE FLARES OF THE CURB RAMP PROVIDED THAT THE REQUIRED ACCESSIBLE ROUTE WIDTH IS COMPLIANT.
6. RETAINING CURBS OR WALLS:
   A. INSTALL A RETAINING CURB/WALL AT THE BACK OF THE CURB RAMP IF NOT ABLE TO GRADE EXISTING SLOPE AT A 3:1 RATIO OR FLATTER WITHIN THE ROW.
   B. THE FRONT OF THE RETAINING CURB/WALL SHALL BE IN LINE WITH THE BACK OF THE SIDEWALK. TAPER THE BACK OF THE SIDEWALK WITHIN THE 4'-0" TRANSITION AREA OR TO THE NEXT JOINT, WHICHEVER IS GREATER.
   C. IN LIEU OF A FLARE, A RETAINING CURB WILL BE ALLOWED IF IT IS IMPRACTICAL TO REMOVE THE EXISTING OBSTRUCTION, SUCH AS A CURB INLET, UTILITY INFRASTRUCTURE, A SIGNIFICANT OR REGISTERED TREE, OR THE TREE CANNOT BE TRANSPLANTED.
   D. IF PEDESTRIANS ARE ABLE TO ACCESS THE PAVED AREA DIRECTLY BEHIND THE RETAINING CURB, INSTALL A PROTECTIVE RAILING PER **SDG-140**.
7. GRADE BREAKS AT THE TOP AND BOTTOM OF THE RAMPS AND CURB RAMPS SHALL BE PERPENDICULAR TO THE DIRECTION OF THE RAMP RUN. GRADE BREAKS SHALL NOT BE PERMITTED ON THE SURFACE OF RAMP RUNS AND TURNING SPACES. SURFACE SLOPES THAT MEET AT GRADE BREAKS SHALL BE FLUSH TO DELINEATE THE CURB RAMP.
8. PROVIDE A 1/2" DEEP TOOLED JOINT WITH 1/8" RADIUS EDGES AS SHOWN ON DRAWINGS.
9. INSTALL A 1/4" EXPANSION JOINT FILLER BETWEEN THE NEW CURB RAMP GUTTER AND THE EXISTING SIDEWALK.
10. PONDING IS NOT ALLOWED WITHIN THE CURB RAMP LIMITS, AND THE DRAINAGE PATTERN SHALL NOT BE ALTERED.
11. THE ADJUSTMENT OF THE CROSS SLOPE AT THE RAMP OPENING SHALL NOT CAUSE GUTTER TRICKLE FLOW TO SPILL ONTO TRAVELLED LANES OR PONDING ANYWHERE.
12. TRANSITIONS FROM RAMPS TO WALKS AND SIDEWALK GUTTER OR STREET SURFACE SHALL BE FLUSH AND AT THE SAME LEVEL. PAVEMENT AT THE STREET SURFACE SHALL BE MILLED TO ACHIEVE FLUSH CONDITION.

SHEET 1 OF 3

REVISION	BY	APPROVED	DATE
ORIGINAL	SS	A. OSKOUI	12/03
UPDATED	MM	J.NAGELVOORT	03/18
UPDATED	FC	J.NAGELVOORT	06/18
UPDATED	FC	J.NAGELVOORT	09/18
UPDATED	HN	J.NAGELVOORT	04/19
UPDATED	FC	J.NAGELVOORT	09/20

CITY OF SAN DIEGO – STANDARD DRAWING

GENERAL CURB RAMP NOTES

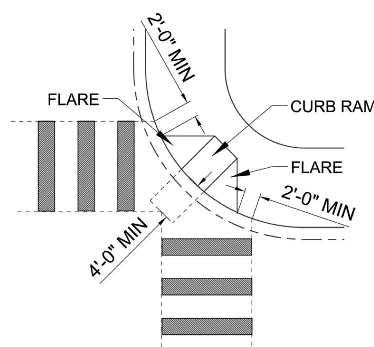
RECOMMENDED BY THE CITY OF SAN DIEGO STANDARDS COMMITTEE

9/22/20
COORDINATOR R.C.E. 56523 DATE

DRAWING NUMBER **SDG-131**

NOTES:

13. THE REMOVAL OF EXISTING PAVEMENT, CONCRETE CURB, GUTTER, SIDEWALK, AND EXISTING CURB RAMP FOR THE INSTALLATION OF A NEW CURB RAMP SHALL COMPLY WITH **SDG-156**.
14. DIAGONAL CURB RAMPS WITH FLARED SIDES SHALL HAVE A SEGMENT OF CURB 2'-0" LONG MINIMUM LOCATED ON EACH SIDE OF THE CURB RAMP AND WITHIN THE MARKED CROSSING. SEE SINGLE CURB RAMP CORNER DETAIL BELOW.



SINGLE CURB RAMP CORNER

15. PERPENDICULAR CURB RAMPS (TYPE A, TYPE B, AND TYPE C2) SHALL HAVE A 4'-0" MINIMUM CLEAR SPACE BEYOND THE BOTTOM OF THE GRADE BREAK WITHIN THE PEDESTRIAN STREET CROSSING AND WHOLLY OUTSIDE THE TRAFFIC LANES OF THE ROADWAY (VEHICULAR AND BIKE LANES). SEE SINGLE CURB RAMP CORNER DETAIL IN NOTE 14.
16. CURB RAMP AND FORM WORK SLOPES SHALL BE CHECKED WITH A DIGITAL LEVEL OF AN APPROPRIATE LENGTH. NO PORTION OF A RAMP RUN SHALL EXCEED THE MAXIMUM SLOPE REQUIREMENT.
17. CONTRACTOR SHALL PROVIDE AN EMBEDDED STAMP ON TOP OF THE CURB AT THE OPENING OF THE CURB RAMP. THE STAMP SHALL BE 1/4" DEEP AND 3/4" TO 1" HIGH, AND SHALL ONLY INCLUDE THE NAME OF THE CONTRACTOR AND THE YEAR OF INSTALLATION. THE STAMP SHALL BE COMPLETELY FLUSH WITH THE CURB SURFACE.
18. THE SLOPE OF THE RAMP SHALL BE UNIFORM ALONG EACH RAMP RUN.
19. THE CROSS SLOPE OF THE RAMP SHALL BE MEASURED PERPENDICULARLY TO THE PATH OR DIRECTION OF TRAVEL.
20. ANY DEVIATION FROM THESE PROVISIONS REQUIRES PRIOR APPROVAL FROM THE ENGINEER.
21. CONCRETE SHALL BE 520-C-2500.
22. THE EXISTING CONCRETE SPANDREL OF A CROSS GUTTER SHALL BE REMOVED AND REPLACED IN ITS ENTIRETY AS PART OF THE CURB RAMP INSTALLATION.
23. THE EXISTING CONCRETE ALLEY APRON SHALL BE REMOVED AND REPLACED IN ITS ENTIRETY AS PART OF THE CURB RAMP INSTALLATION.
24. A TRANSITION AREA IS REQUIRED IF THE CURB RAMP IMPROVEMENTS TIE INTO AN EXISTING SIDEWALK CROSS SLOPE EXCEEDING 2%. FOR CURB RAMPS TYPE C AND D, EXTEND THE TRANSITION AREA 4'-0" LONG MINIMUM WITH A 1.5% MAXIMUM CROSS SLOPE.

SHEET 2 OF 3

REVISION	BY	APPROVED	DATE
ORIGINAL	SS	A. OSKOUI	12/03
UPDATED	MM	J.NAGELVOORT	03/18
UPDATED	FC	J.NAGELVOORT	06/18
UPDATED	FC	J.NAGELVOORT	09/18
UPDATED	HN	J.NAGELVOORT	04/19
UPDATED	FC	J.NAGELVOORT	09/20

CITY OF SAN DIEGO – STANDARD DRAWING

GENERAL CURB RAMP NOTES

RECOMMENDED BY THE CITY OF SAN DIEGO STANDARDS COMMITTEE

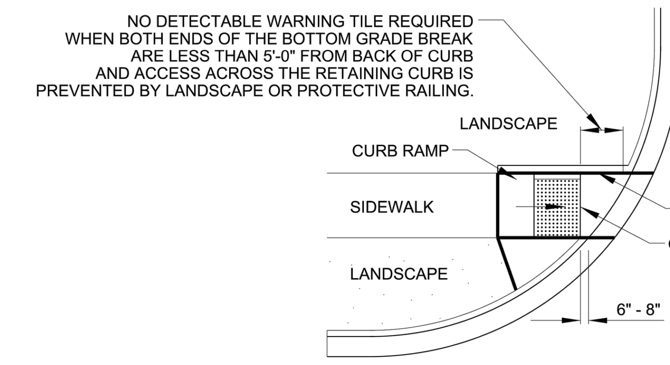
9/22/20
COORDINATOR R.C.E. 56523 DATE

DRAWING NUMBER **SDG-131**

NOTES:

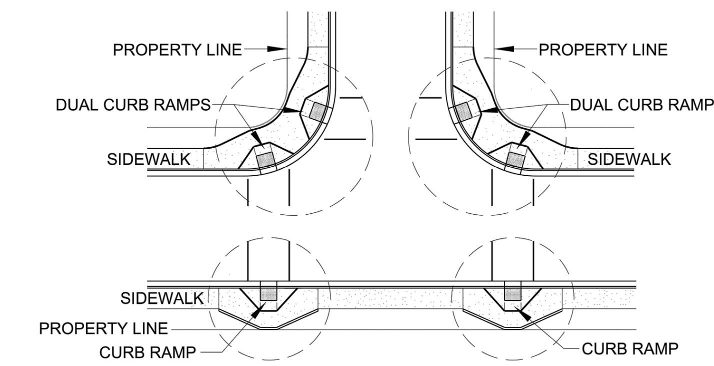
25. DETECTABLE WARNING TILE SHALL BE LOCATED SO THE EDGE NEAREST THE CURB IS 6" MINIMUM AND 8" MAXIMUM FROM THE LINE AT THE FACE OF THE CURB.

    SEE DETAIL BELOW FOR EXCEPTION.



DETAIL - NOTE 25
NOT TO SCALE

26. CURB RAMPS SHALL BE INSTALLED AT ALL PEDESTRIAN CROSSINGS AT INTERSECTIONS, INCLUDING AT T-INTERSECTIONS. SEE DETAIL BELOW.



DETAIL - NOTE 26
NOT TO SCALE

SHEET 3 OF 3

REVISION	BY	APPROVED	DATE
ORIGINAL	SS	A. OSKOUI	12/03
UPDATED	MM	J.NAGELVOORT	03/18
UPDATED	FC	J.NAGELVOORT	06/18
UPDATED	FC	J.NAGELVOORT	09/18
UPDATED	HN	J.NAGELVOORT	04/19
UPDATED	FC	J.NAGELVOORT	09/20

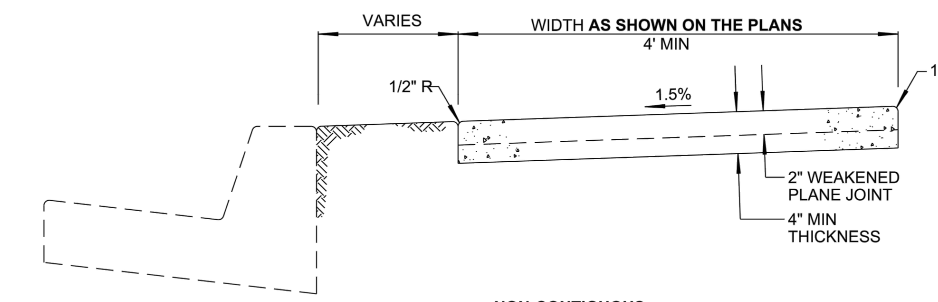
CITY OF SAN DIEGO – STANDARD DRAWING

GENERAL CURB RAMP NOTES

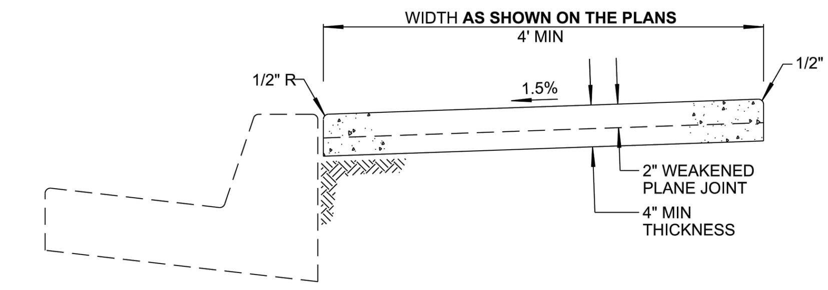
RECOMMENDED BY THE CITY OF SAN DIEGO STANDARDS COMMITTEE

9/22/20
COORDINATOR R.C.E. 56523 DATE

DRAWING NUMBER **SDG-131**



NON-CONTIGUOUS



CONTIGUOUS

NOTES:

1. CONCRETE SHALL BE 520-C-2500.
2. SEE JOINT DETAIL DRAWINGS **SDG-109 AND G-10**.
3. SIDEWALK SHALL MAINTAIN A MINIMUM CLEAR WIDTH OF 4' OF TRAVEL FROM ANY OBSTRUCTION.
4. ALL HISTORICAL STAMPS / IMPRESSIONS (STREET NAME, CONTRACTOR NAME, AND/OR DATE) SHALL BE PRESERVED **PER SDG-115**.
5. FOR DESIGNATED URBANIZED COMMUNITIES, SIDEWALK DESIGN (SCORING PATTERN, COLOR, TEXTURE) SHALL BE IN CONFORMANCE WITH HISTORIC DESIGN ON ADJACENT PROPERTIES.

LEGEND ON PLANS

REVISION	BY	APPROVED	DATE
ORIGINAL*	KA	J. NAGELVOORT	01/12
UPDATED	RB	J. NAGELVOORT	10/15
UPDATED	HM	J. NAGELVOORT	02/16
REDRAFTED	CD	J. NAGELVOORT	09/18

CITY OF SAN DIEGO – STANDARD DRAWING

SIDEWALK - TYPICAL SECTIONS

RECOMMENDED BY THE CITY OF SAN DIEGO STANDARDS COMMITTEE

9/4/18
COORDINATOR R.C.E. 56523 DATE

DRAWING NUMBER **SDG-155**

H:\PDATA\199708 - BOTANICAL GARDENS PH2\CADD\LAND\DLV\IMPROVE\09_C-7.DWG GONZALEZ, RAFAEL 11/4/2024 4:46 PM

Michael Baker INTERNATIONAL
9635 Granite Ridge Dr. UNIT 300, San Diego, CA 92123
Phone: (858) 614-5000 · MBAKERINTL.COM

CONSULTANT

SPEC. NO

COMPANY ADDRESS: MICHAEL BAKER INTERNATIONAL,
9635 GRANITE RIDE DR UNIT 300, SAN DIEGO, CA 92123
COMPANY PHONE NUMBER: 858-614-5000
COMPANY EMAIL DATE OF: SCOTTDAVIS@MBAKERINTL.COM

SIGNING:

REGISTERED PROFESSIONAL ENGINEER
SCOTT A. DAVIS
No. 72281
Exp. 6/30/26
CIVIL
STATE OF CALIFORNIA

The City of SAN DIEGO

FOR CITY APPROVAL

PRIVATE CONTRACT

WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2

STANDARD DRAWINGS

DEVELOPMENT SERVICES DEPARTMENT
SHEET 10 OF 61 SHEETS

APPROVED:
FOR CITY ENGINEER DATE

DESCRIPTION	BY	APPROVED	DATE
ORIGINAL	MBI		
AS BUILTS			

CONTRACTOR DATE STARTED
INSPECTOR DATE COMPLETED

PMT NO.

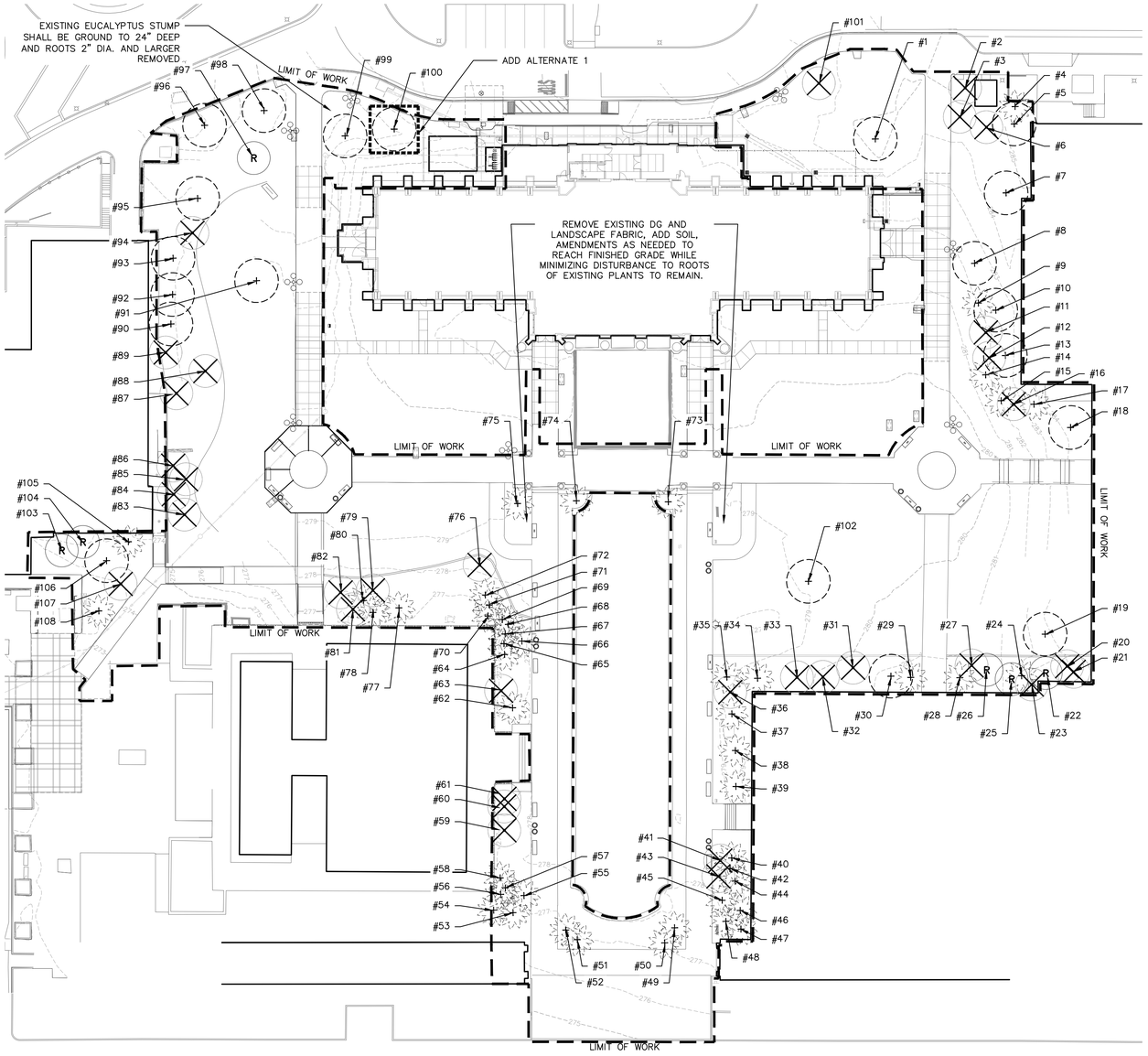
PRJ NO 1119957

1847–6266
NAD83 COORDINATES

207–1706
LAMBERT COORDINATES

DRAWING NO. C007

XXXX- 10 - D



TREE PROTECTION LEGEND

SYMBOL	DESCRIPTION
	EXISTING TREE OR PALM TO BE REMOVED
R	EXISTING TREE OR PALM TO BE RELOCATED
+	EXISTING TREE OR PALM TO REMAIN, PROTECT IN PLACE

SYMBOL	PLAN GRAPHICS
	LIMIT OF WORK

#	TREE SPECIES	TREE COMMON NAME	TRUNK DIAMETER (INCHES)	HEIGHT (FEET)	SPREAD (FEET)	FATE
1	FICUS MICROPHYLLA	MORETON BAY FIG	12			TREE TO REMAIN
2	ERIOBOTRYA DEFLEXA	BRONZE LOQUAT				TO BE REMOVED
3	MAGNOLIA GRANDIFLORA	SOUTHERN MAGNOLIA				TO BE REMOVED
4	HOWEA FORSTERIANA	KENTIA PALM				TREE TO REMAIN
5	PISONIA BRUNONIANA	BIRDTRAP TREE	60			TREE TO REMAIN
6	ERIOBOTRYA DEFLEXA	BRONZE LOQUAT				TO BE REMOVED
7	CUSSONIA SPICATA	SPIKED CABBAGE TREE	60			TREE TO REMAIN
8	PTEROSPERMUM ACERIFOLIUM	KARNIKARA	24			TREE TO REMAIN
9	LIVISTONA CHINENSIS	CHINESE FAN PALM	30			TREE TO REMAIN
10	SYZYGIUM SMITHII	LILLY PILLY	18			TREE TO REMAIN
11	WASHINGTONIA ROBUSTA	MEXICAN FAN PALM				TO BE REMOVED
12	LIVISTONA CHINENSIS	CHINESE FAN PALM				TO BE REMOVED
13	FICUS LYRATA	FIDDLELEAF FIG				TREE TO REMAIN
14	LIVISTONA CHINENSIS	CHINESE FAN PALM	24			TREE TO REMAIN
15	LIVISTONA CHINENSIS	CHINESE FAN PALM				TREE TO REMAIN
16	SCHEFFLERA PUECKLERI	TUPIDANTHUS				TO BE REMOVED
17	LIVISTONA CHINENSIS	CHINESE FAN PALM	24			TREE TO REMAIN
18	BAUHINIA X BLAKEANA	HONG KONG ORCHID TREE	24			TREE TO REMAIN
19	EUCALYPTUS CLADOCALYX	SUGAR GUM	96			TREE TO REMAIN
20	KENTIA PALM	HOWEA FORSTERIANA				TO BE REMOVED
21	FICUS MACROPHYLLA	MORETON BAY FIG				TO BE REMOVED
22	KENTIA PALM	HOWEA FORSTERIANA				TO BE RELOCATED
23	KENTIA PALM	HOWEA FORSTERIANA				TO BE REMOVED
24	ARCHONTOPHOENIX CUNNINGHAMIANA	KING PALM				TREE TO REMAIN
25	RHAPIS EXELSA	RHAPIS PALM				TO BE RELOCATED
26	DYPSIS DECARYI	TRIANGLE PALM				TO BE RELOCATED
27	WASHINGTONIA ROBUSTA	MEXICAN FAN PALM				TO BE REMOVED
28	ARCHONTOPHOENIX CUNNINGHAMIANA	KING PALM				TREE TO REMAIN
29	ARCHONTOPHOENIX CUNNINGHAMIANA	KING PALM				TREE TO REMAIN
30	EUCALYPTUS CLADOCALYX	SUGAR GUM	48			TREE TO REMAIN
31	STRELITZIA NICOLAI	GIANT BIRD OF PARADAISE				TO BE REMOVED
32	SCHEFFLERA					TO BE DETERMINED
33	STRELITZIA NICOLAI	GIANT BIRD OF PARADAISE				TO BE REMOVED
34	CHAMAEROPS HUMILIS	MEDITERRANEAN FAN PALM				TREE TO REMAIN
35	CHAMAEROPS HUMILIS	MEDITERRANEAN FAN PALM				TREE TO REMAIN
36	LIVISTONA CHINENSIS	CHINESE FAN PALM				TREE TO REMAIN
37	BRAHEA EDULIS	GUADALUPE PALM				TREE TO REMAIN
38	BRAHEA EDULIS	GUADALUPE PALM				TREE TO REMAIN
39	PHOENIX RECLINATA	SENEGAL DATE PALM				TREE TO REMAIN
40	TRACHYCARPUS FORTUNEI	WINDMILL PALM				TREE TO REMAIN
41	SABAL PALMETTO	SABAL PALM				TO BE REMOVED
42	TRACHYCARPUS FORTUNEI	WINDMILL PALM				TREE TO REMAIN
43	SABAL PALMETTO	SABAL PALM				TO BE REMOVED
44	BRAHEA EDULIS	GUADALUPE PALM				TREE TO REMAIN
45	BRAHEA ARMATA	MEXICAN BLUE PALM				TREE TO REMAIN
46	LIVISTONA CHINENSIS	CHINESE FAN PALM				TREE TO REMAIN
47	LIVISTONA CHINENSIS	CHINESE FAN PALM				TREE TO REMAIN
48	LIVISTONA CHINENSIS	CHINESE FAN PALM				TREE TO REMAIN
49	CHAMAEROPS HUMILIS VAR. ARGENTEA	BLUE MEDITERRANEAN FAN PALM				TREE TO REMAIN
50	CHAMAEROPS HUMILIS VAR. ARGENTEA	BLUE MEDITERRANEAN FAN PALM				TREE TO REMAIN
51	CHAMAEROPS HUMILIS VAR. ARGENTEA	BLUE MEDITERRANEAN FAN PALM				TREE TO REMAIN
52	CHAMAEROPS HUMILIS VAR. ARGENTEA	BLUE MEDITERRANEAN FAN PALM				TREE TO REMAIN

#	TREE SPECIES	TREE COMMON NAME	TRUNK DIAMETER (INCHES)	HEIGHT (FEET)	SPREAD (FEET)	FATE
53	CHAMAEROPS HUMILIS	MEDITERRANEAN FAN PALM				TREE TO REMAIN
54	CHAMAEROPS HUMILIS	MEDITERRANEAN FAN PALM				TREE TO REMAIN
55	CHAMAEROPS HUMILIS	MEDITERRANEAN FAN PALM				TREE TO REMAIN
56	LIVISTONA CHINENSIS	CHINESE FAN PALM				TREE TO REMAIN
57	LIVISTONA CHINENSIS	CHINESE FAN PALM				TREE TO REMAIN
58	CHAMAEROPS HUMILIS	MEDITERRANEAN FAN PALM				TREE TO REMAIN
59	ALOIDENDRON BARBERAE	TREE ALOE				TO BE REMOVED
60	ALOIDENDRON BARBERAE	TREE ALOE				TO BE REMOVED
61	ALOIDENDRON BARBERAE	TREE ALOE				TO BE REMOVED
62	BISMARCKIA NOBILIS	BISMARK PALM				TREE TO REMAIN
63	ALOIDENDRON BARBERAE	TREE ALOE				TO BE REMOVED
64	CHAMAEROPS HUMILIS	MEDITERRANEAN FAN PALM				TREE TO REMAIN
65	LIVISTONA CHINENSIS	CHINESE FAN PALM				TREE TO REMAIN
66	CHAMAEROPS HUMILIS	MEDITERRANEAN FAN PALM				TREE TO REMAIN
67	LIVISTONA CHINENSIS	CHINESE FAN PALM				TREE TO REMAIN
68	CHAMAEROPS HUMILIS	MEDITERRANEAN FAN PALM				TREE TO REMAIN
69	CHAMAEROPS HUMILIS	MEDITERRANEAN FAN PALM				TREE TO REMAIN
70	LIVISTONA CHINENSIS	CHINESE FAN PALM				TREE TO REMAIN
71	CHAMAEROPS HUMILIS	MEDITERRANEAN FAN PALM				TREE TO REMAIN
72	CHAMAEROPS HUMILIS	MEDITERRANEAN FAN PALM				TREE TO REMAIN
73	ACOELORRHAPHE WRIGHTII	EVERGLADES PALM				TREE TO REMAIN
74	ACOELORRHAPHE WRIGHTII	EVERGLADES PALM				TREE TO REMAIN
75	ROYSTONEA REGIA	ROYAL PALM	36			TREE TO REMAIN
76	CHAMAEROPS HUMILIS	MEDITERRANEAN FAN PALM				TO BE REMOVED
77	CHAMAEROPS HUMILIS	MEDITERRANEAN FAN PALM				TREE TO REMAIN
78	CHAMAEROPS HUMILIS	MEDITERRANEAN FAN PALM				TREE TO REMAIN
79	LIVISTONA CHINENSIS	CHINESE FAN PALM	30			TO BE REMOVED
80	CHAMAEROPS HUMILIS	MEDITERRANEAN FAN PALM				TREE TO REMAIN
81	LIVISTONA CHINENSIS	CHINESE FAN PALM	30			TO BE REMOVED
82	LIVISTONA CHINENSIS	CHINESE FAN PALM	30			TO BE REMOVED
83	BISCHOFIA JAVANICA	TOOG				TO BE REMOVED
84	WASHINGTONIA FILIFERA	CALIFORNIA FAN PALM				TO BE REMOVED
85	WASHINGTONIA FILIFERA	CALIFORNIA FAN PALM				TO BE REMOVED
86	WASHINGTONIA FILIFERA	CALIFORNIA FAN PALM				TO BE REMOVED
87	PINUS THUNBERGII	JAPANESE BLACK PINE				TO BE REMOVED
88	PINUS CANARIENSIS	CANARY ISLAND PINE				TO BE REMOVED
89	PINUS CANARIENSIS	CANARY ISLAND PINE				TO BE REMOVED
90	PINUS CANARIENSIS	CANARY ISLAND PINE	12			TREE TO REMAIN
91	PINUS CANARIENSIS	CANARY ISLAND PINE	36			TREE TO REMAIN
92	PINUS CANARIENSIS	CANARY ISLAND PINE	12			TREE TO REMAIN
93	PINUS CANARIENSIS	CANARY ISLAND PINE	12			TREE TO REMAIN
94	PITTOSPORUM UNDULATUM	VICTORIAN BOX				TO BE REMOVED
95	CEDRUS DEODARA	DEODAR CEDAR	18			TREE TO REMAIN
96	QUERCUS TOMENTELLA	ISLAND OAK	12			TREE TO REMAIN
97	CUPRESSUS CASHMERIANA	KASHMIR CYPRESS				TO BE RELOCATED
98	QUERCUS TOMENTELLA	ISLAND OAK	12			TREE TO REMAIN
99	CEDRUS DEODARA	DEODAR CEDAR	30			TREE TO REMAIN
100	CEDRUS DEODARA	DEODAR CEDAR	24			TREE TO REMAIN
101	BAMBOO					TO BE REMOVED
102	FICUS MACLELLANDII	BANANA LEAF FIG	60			TREE TO REMAIN
103	BISMARCKIA NOBILIS	BISMARCK PALM				TO BE RELOCATED
104	RAVENALA MADAGASCARIENSIS	TRAVELER'S PALM				TO BE RELOCATED
105	RAVENALA MADAGASCARIENSIS	TRAVELER'S PALM				TREE TO REMAIN
106	BISCHOFIA JAVANICA	BISHOPWOOD				TREE TO REMAIN
107	CHAMAEROPS HUMILIS	EUROPEAN FAN PALM				TREE TO REMOVED
108	CHAMAEROPS HUMILIS	EUROPEAN FAN PALM				TREE TO REMAIN

PRIVATE CONTRACT

GENERAL TREE PROTECTION, SALVAGE, AND REMOVAL NOTES:

1. ALL EXTERIOR TREES AND PALMS (OUTSIDE BOTANIC BUILDING) TO REMAIN UNLESS OTHERWISE NOTED ON PLANS. CONTRACTOR SHALL PROTECT IN PLACE AND MAINTAIN DURING CONSTRUCTION PER WHITEBOOK SPECS.
2. ANY EXISTING TREES OR PALMS DAMAGED BY THE CONTRACTOR INSIDE OR OUTSIDE THE IDENTIFIED LIMITS OF WORK DURING CONSTRUCTION ARE TO BE REPLACED IN KIND (EXACT VARIETY AND SIZE) AT THE EXPENSE OF THE CONTRACTOR. PAYMENT WILL BE REQUIRED PER WHITEBOOK WHERE THERE IS A DIFFERENCE IN VALUE BETWEEN THE TREE LOST AND THE REPLACEMENT TREE.
3. FOR PLANTS TO BE RELOCATED AND/OR PROTECTED IN PLACE, CONTRACTOR TO CONFIRM WITH CITY OF SAN DIEGO LOCATION, SIZE, SPECIES AND QUANTITY OF PLANTS TO BE RELOCATED AND/OR PROTECTED IN PLACE.
4. CONTRACTOR TO FIELD VERIFY QUANTITIES OF TREES TO BE RELOCATED, PROTECTED AND REMOVED SHOWN AND NOTIFY CITY OF SAN DIEGO OF ANY DISCREPANCIES.
5. NO TREES SHALL BE REMOVED UNLESS INDICATED ON THIS PLAN AND CONFIRMED WITH CITY ARBORIST AND LANDSCAPE ARCHITECT.
6. EXISTING TREES TO BE REMOVED SHALL BE REVIEWED WITH THE CITY ARBORIST AND LANDSCAPE ARCHITECT PRIOR TO REMOVAL.
7. CONTRACTOR TO EXERT EXTREME CAUTION AROUND TREES TO REMAIN AND AROUND CRITICAL ROOT ZONE OF TREES TO REMAIN.
8. FOR TREE RELOCATION, CONTRACTOR SHALL FOLLOW RECOMMENDATIONS OF REPORT 10613 FROM RECON DATED SEPTEMBER 18, 2024.

ADD ALTERNATE 1:

REMOVAL OF EXISTING CEDRUS DEODORA #100, INCLUDING STUMP AND ROOTS 2" IN DIAMETER AND LARGER. REPLACE IN KIND WITH SPECIMEN 36" BOX TREE IN THE SAME LOCATION.

N 30' 15' 0' 30'

SPURLOCK
LANDSCAPE ARCHITECTS
2122 Hancock Street
San Diego, California 92110
619.681.0090
spurlock-land.com

WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

PLANS FOR THE CONSTRUCTION OF BOTANICAL BUILDING AND GARDENS PHASE 2
TREE PROTECTION PLAN

CONSULTANT
COMPANY ADDRESS: SPURLOCK LANDSCAPE ARCHITECTS, 2122 HANCOCK ST, SAN DIEGO, CA 92110
COMPANY PHONE NUMBER: 619-681-0090
COMPANY EMAIL DATE OF: AARMOUR@SPURLOCK-LAND.COM
SIGNING:
LICENSED LANDSCAPE ARCHITECT LEIGH KYLE 6137 STATE OF CALIFORNIA
Signature 06/30/25
Renewal Date
11/01/24
Date

SPEC. NO

The City of SAN DIEGO
FOR CITY APPROVAL

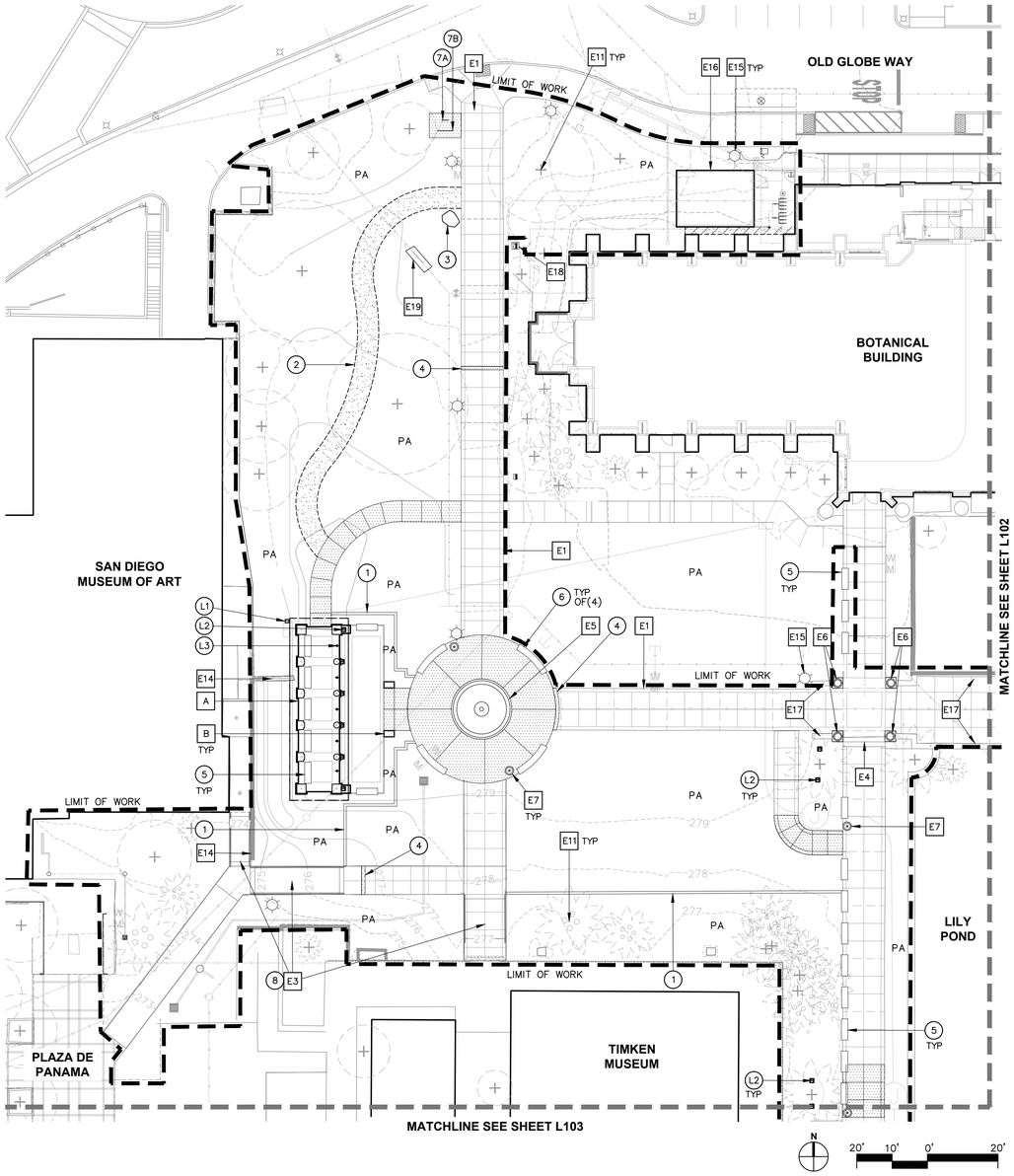
DEVELOPMENT SERVICES DEPARTMENT
SHEET 11 OF 61 SHEETS

APPROVED: FOR CITY ENGINEER DATE

DESCRIPTION	BY	APPROVED	DATE
ORIGINAL	SP		
AS BUILTS			

CONTRACTOR DATE STARTED
INSPECTOR DATE COMPLETED

PMT NO.
PRJ NO. 1119957
1847-6266 NAD83 COORDINATES
207-1706 LAMBERT COORDINATES
DRAWING NO. XXXX- 11 - D
L100



PARTIAL HARDSCAPE LEGEND

SEE SHEET **L104** FOR FULL LEGEND

SYMBOL (VEH / PED)	PAVING	DETAIL
	C.I.P. CONCRETE PAVING	PER CIVIL
	STABILIZED DECOMPOSED GRANITE PAVING	3 / L105
	UNSTABILIZED DECOMPOSED GRANITE PAVING	3 / L105
	PAVING JOINTS	2 / L106

SYMBOL	EDGING / CURBS / WALLS	DETAIL
1	CONCRETE MOW CURB	PER SDRSD SDL-103
2	METAL HEADER	3 / L105
3	BOULDER WITH DONOR RECOGNITION	4 / L105
4	DONOR RECOGNITION PAVER BAND	2 / L105

SYMBOL	SITE FURNITURE	DETAIL
5	BENCH, TYPE 1	1 / L106
6	BENCH, TYPE 2	1 / L106
7A	BIKE RACK TYPE 1	1 / L105
7B	BIKE RACK TYPE 2	1 / L105
8	EXISTING HANDRAILS TO BE REPAINTED	

SYMBOL	LIGHTING	
L1	RECEPTACLE PEDESTAL	PER ELECTRICAL
L2	IN-GRADE UP-LIGHT	PER ELECTRICAL
L3	TRELLIS DOWNLIGHT	PER ELECTRICAL

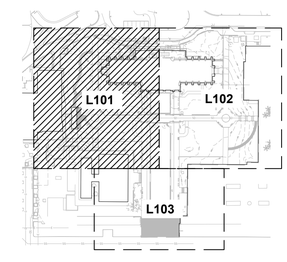
SYMBOL	IMPROVEMENTS BY OTHERS	
A	PERGOLA	PER ARCHITECTURE
B	PEDESTAL	PER ARCHITECTURE

SYMBOL	EXISTING TO REMAIN / TO BE RELOCATED
E1	EXISTING PAVING
E2	EXISTING MOWCURB TO REMAIN
E3	EXISTING RAMP AND HANDRAIL TO REMAIN
E4	EXISTING STAIRS TO REMAIN
E5	EXISTING FOUNTAIN TO REMAIN
E6	EXISTING PEDESTAL AND URN TO REMAIN
E7	EXISTING TRASH/RECYCLING RECEPTACLE TO BE RELOCATED AND REPAINTED, COLOR TO MATCH EXISTING COLOR
E8	EXISTING SIGNAGE TO REMAIN
E9	EXISTING UTILITY TO REMAIN
E10	EXISTING SHED TO REMAIN
E11	EXISTING TREE TO REMAIN AND BE PROTECTED
E12	EXISTING TRASH ENCLOSURE
E13	EXISTING PLANTER WALL
E14	EXISTING RETAINING WALL TO REMAIN
E15	EXISTING LIGHT POLES TO REMAIN
E16	EXISTING BUILDING
E17	EXISTING BALUSTRADES TO REMAIN
E18	EXISTING IRRIGATION CONTROLLER TO REMAIN
E19	EXISTING BACKFLOW PREVENTER TO REMAIN AND RECEIVE A STAINLESS STEEL ENCLOSURE PER CIVIL

SYMBOL	PLAN GRAPHICS
	LIMIT OF WORK
PA	PLANTING AREA

NOTES:

1. REFER TO CIVIL FOR UTILITIES AND GRADING.
2. REFER TO ARCHITECTURE FOR PERGOLA AND PERGOLA'S FORECOURT.
3. REFER TO ELECTRICAL FOR SITE LIGHTING.
4. ALL PAVEMENT, CURBS AND WALLS WITHIN 10 FEET OF A TREE SHALL BE LINED WITH ROOT BARRIER PER PLANTING PLANS AND SPECIFICATIONS.
5. PROVIDE ISOLATION JOINTS WHERE INDICATED ON THE DRAWINGS, AND WHERE PAVING ABUTS WALLS, CURBS, STEPS, RAMPS AND OTHER VERTICAL APPURTENANCES. OMIT DOWELS WHERE ABUTTING WALLS, BUILDINGS, AND CURBS, UNLESS OTHERWISE INDICATED IN GEOTECHNICAL REPORT.



SPURLOCK
LANDSCAPE ARCHITECTS
2122 Hancock Street
San Diego, California 92110
619.681.0090
spurlock-land.com

WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

PRIVATE CONTRACT

PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2
HARDSCAPE PLAN

CONSULTANT

COMPANY ADDRESS: SPURLOCK LANDSCAPE ARCHITECTS, 2122 HANCOCK ST, SAN DIEGO, CA 92110
COMPANY PHONE NUMBER: 619-681-0090
COMPANY EMAIL DATE OF: AARMOUR@SPURLOCK-LAND.COM
SIGNING:

LICENSED LANDSCAPE ARCHITECT
LEIGH KYLE - 6173
Signature
06/30/25
Renewal Date
11/01/24
Date
STATE OF CALIFORNIA

SPEC. NO

The City of SAN DIEGO

FOR CITY APPROVAL

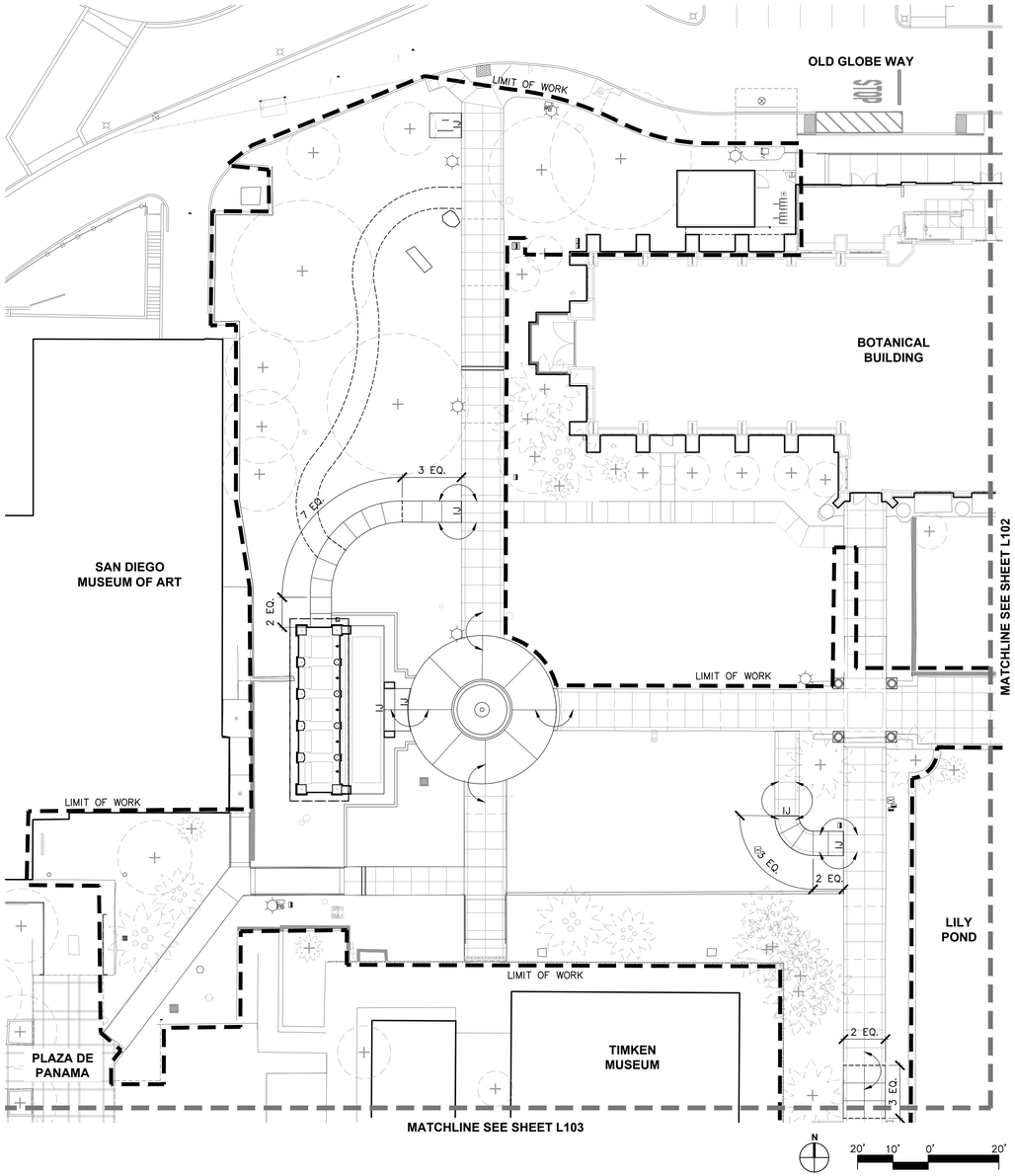
DEVELOPMENT SERVICES DEPARTMENT
SHEET 12 OF 61 SHEETS

APPROVED:
FOR CITY ENGINEER DATE

DESCRIPTION	BY	APPROVED	DATE
ORIGINAL	SP		
AS BUILTS			

CONTRACTOR DATE STARTED
INSPECTOR DATE COMPLETED

PMT NO.
PRJ NO. 1119957
1847-6266 NAD83 COORDINATES
207-1706 LAMBERT COORDINATES
DRAWING NO. L101
XXXX- 12 - D

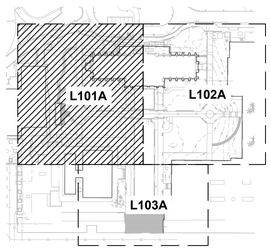


LAYOUT LEGEND

SYMBOL	ITEM	DETAIL
IJ	ISOLATION JOINT	
	CONSTRUCTION JOINT	
	CONTROL JOINT	
	DECORATIVE JOINT	
	CENTERLINE	
EQ	EQUAL	
	ALIGN	
	PROPERTY LINE	
	LIMIT OF WORK	

NOTES:

1. SEE SHEETS **L104** FOR HARDSCAPE MATERIALS.
2. REFER TO CIVIL SHEETS FOR TOP OF WALL & FINISH SURFACE ELEVATIONS
3. CIVIL TO PROVIDE CONTRACTOR DIGITAL FILES TO COMPLETE CONSTRUCTION STAKING AND HORIZONTAL CONTROL FOR ALL IMPROVEMENTS, TYP.



PRIVATE CONTRACT

SPURLOCK
LANDSCAPE ARCHITECTS
2122 Hancock Street
San Diego, California 92110
619.681.0090
spurlock-land.com

WARNING
0 1/2 1
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PLANS FOR THE CONSTRUCTION OF BOTANICAL BUILDING AND GARDENS PHASE 2

LAYOUT PLAN

CONSULTANT

COMPANY ADDRESS: SPURLOCK LANDSCAPE ARCHITECTS, 2122 HANCOCK ST, SAN DIEGO, CA 92110
COMPANY PHONE NUMBER: 619-681-0090
COMPANY EMAIL DATE OF: AARMOUR@SPURLOCK-LAND.COM
SIGNING:

LICENSED LANDSCAPE ARCHITECT
LEIGH KYLE - 6173
Signature
06/30/25
Renewal Date
11/01/24
Date
STATE OF CALIFORNIA

SPEC. NO

The City of SAN DIEGO
FOR CITY APPROVAL

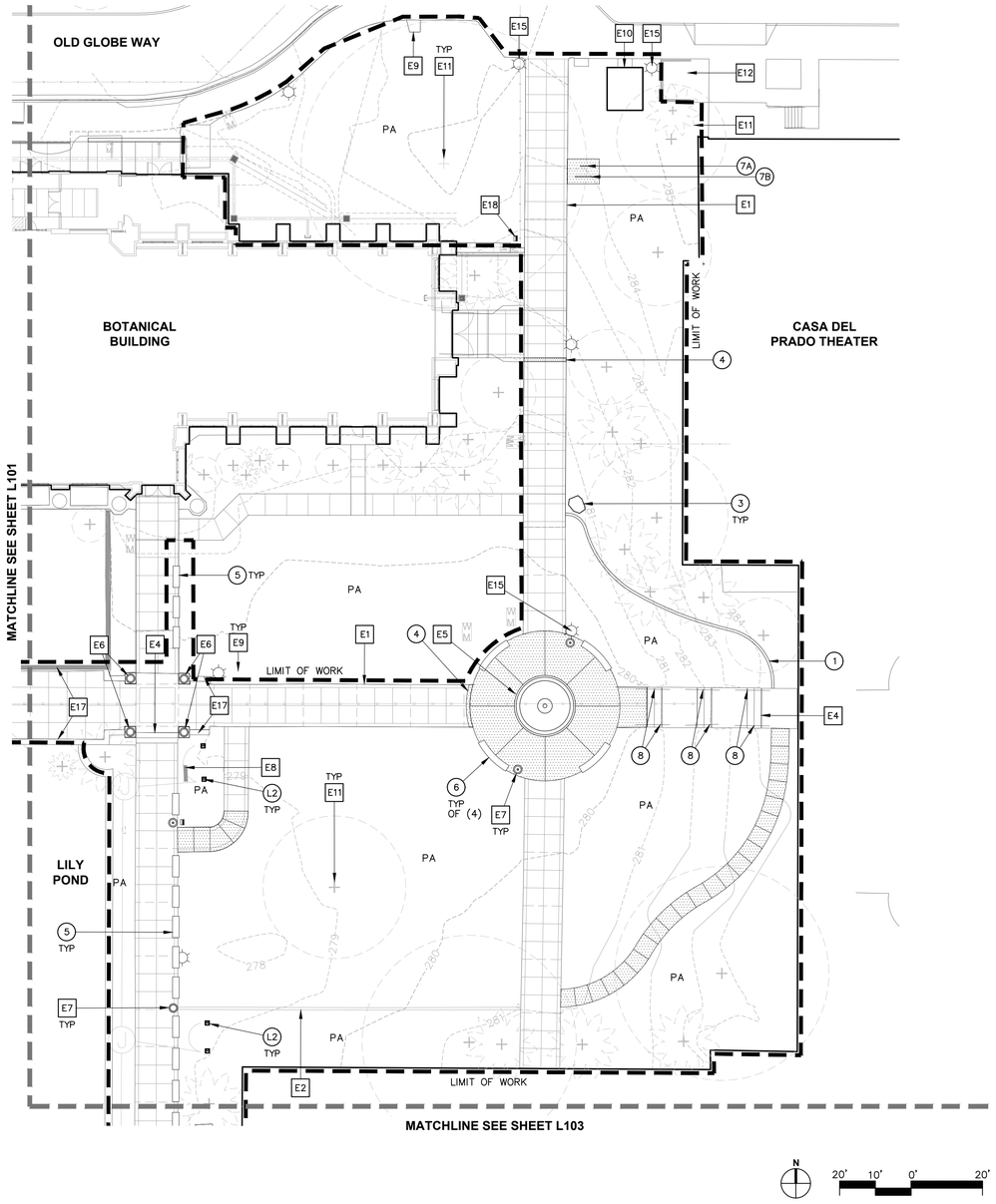
DEVELOPMENT SERVICES DEPARTMENT
SHEET 13 OF 61 SHEETS

APPROVED:
FOR CITY ENGINEER DATE

DESCRIPTION	BY	APPROVED	DATE
ORIGINAL	SP		
AS BUILTS			

CONTRACTOR DATE STARTED
INSPECTOR DATE COMPLETED

PMT NO.
PRJ NO. 1119957
1847-6266
NAD83 COORDINATES
207-1706
LAMBERT COORDINATES
DRAWING NO. L101A
XXXX- 13 - D



PARTIAL HARDSCAPE LEGEND

SEE SHEET **L104** FOR FULL LEGEND

SYMBOL	PAVING	DETAIL
VEH PED		
	C.I.P. CONCRETE PAVING	PER CIVIL
	STABILIZED DECOMPOSED GRANITE PAVING	3 L105
	UNSTABILIZED DECOMPOSED GRANITE PAVING	3 L105
	PAVING JOINTS	2 L106

SYMBOL	EDGING / CURBS / WALLS	DETAIL
1	CONCRETE MOW CURB	PER SDRSD SDL-103
2	METAL HEADER	3 L105
3	BOULDER WITH DONOR RECOGNITION	4 L105
4	DONOR RECOGNITION PAVER BAND	2 L105

SYMBOL	SITE FURNITURE	DETAIL
5	BENCH, TYPE 1	1 L106
6	BENCH, TYPE 2	1 L106
7A	BIKE RACK TYPE 1	1 L105
7B	BIKE RACK TYPE 2	1 L105
8	EXISTING HANDRAILS TO BE REPAINTED	

SYMBOL	LIGHTING	
L1	RECEPTACLE PEDESTAL	PER ELECTRICAL
L2	IN-GRADE UP-LIGHT	PER ELECTRICAL
L3	TRELLIS DOWNLIGHT	PER ELECTRICAL

SYMBOL	IMPROVEMENTS BY OTHERS	
A	PERGOLA	PER ARCHITECTURE
B	PEDESTAL	PER ARCHITECTURE

SYMBOL	EXISTING TO REMAIN / TO BE RELOCATED
E1	EXISTING PAVING
E2	EXISTING MOWCURB TO REMAIN
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E4	EXISTING STAIRS TO REMAIN
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E8	EXISTING SIGNAGE TO REMAIN
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E10	EXISTING SHED TO REMAIN
E11	EXISTING TREE TO REMAIN AND BE PROTECTED
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E14	EXISTING RETAINING WALL TO REMAIN
E15	EXISTING LIGHT POLES TO REMAIN
E16	EXISTING BUILDING
E17	EXISTING BALUSTRADES TO REMAIN
E18	EXISTING IRRIGATION CONTROLLER TO REMAIN
E19	EXISTING BACKFLOW PREVENTER TO REMAIN AND RECEIVE A STAINLESS STEEL ENCLOSURE PER CIVIL

SYMBOL	PLAN GRAPHICS
	LIMIT OF WORK
PA	PLANTING AREA

NOTES:

1. REFER TO CIVIL FOR UTILITIES AND GRADING.
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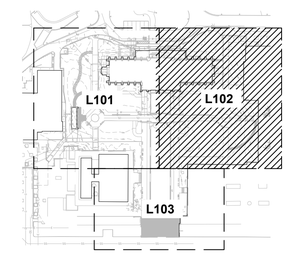

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PRIVATE CONTRACT

PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2
HARDSCAPE PLAN

CONSULTANT

COMPANY ADDRESS: SPURLOCK LANDSCAPE ARCHITECTS, 2122 HANCOCK ST, SAN DIEGO, CA 92110
COMPANY PHONE NUMBER: 619-681-0090
COMPANY EMAIL DATE OF: AARMOUR@SPURLOCK-LAND.COM
SIGNING:

LICENSED LANDSCAPE ARCHITECT
LEIGH KYLE - 6137
Signature
06/30/25
Renewal Date
11/01/24
Date
STATE OF CALIFORNIA

SPEC. NO

The City of SAN DIEGO

FOR CITY APPROVAL

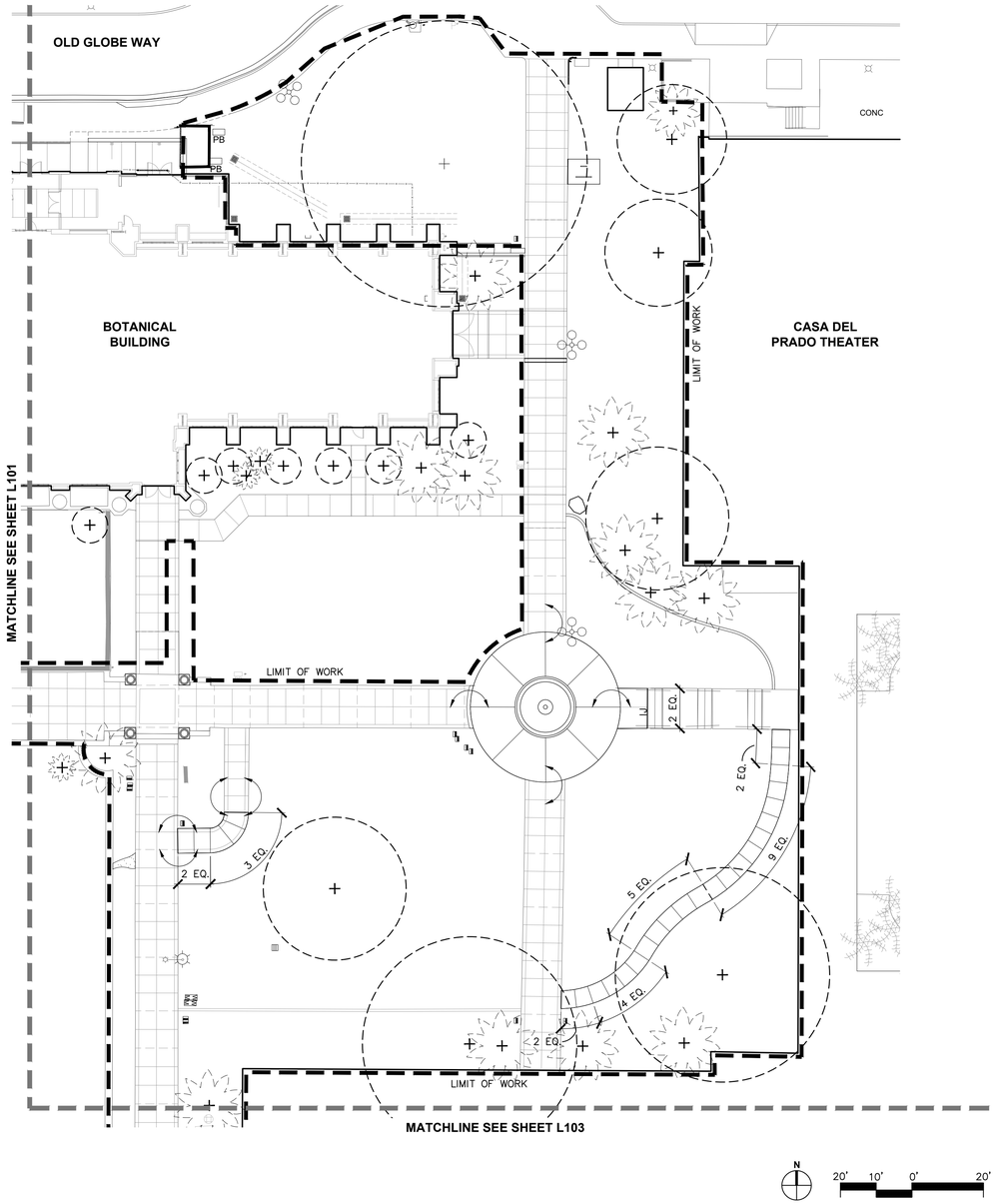
DEVELOPMENT SERVICES DEPARTMENT
SHEET 14 OF 61 SHEETS

APPROVED: FOR CITY ENGINEER DATE

DESCRIPTION	BY	APPROVED	DATE
ORIGINAL	SP		
AS BUILTS			

CONTRACTOR DATE STARTED
INSPECTOR DATE COMPLETED

PMT NO.
PRJ NO. 1119957
1847-6266 NAD83 COORDINATES
207-1706 LAMBERT COORDINATES
DRAWING NO. L102
XXXX- 14 - D

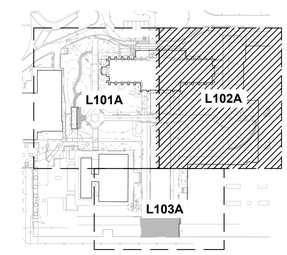


LAYOUT LEGEND

SYMBOL	ITEM	DETAIL
IJ	ISOLATION JOINT	
	CONSTRUCTION JOINT	
	CONTROL JOINT	
	DECORATIVE JOINT	
	CENTERLINE	
EQ	EQUAL	
	ALIGN	
	PROPERTY LINE	
	LIMIT OF WORK	

NOTES:

1. SEE SHEETS **L104** FOR HARDSCAPE MATERIALS.
2. REFER TO CIVIL SHEETS FOR TOP OF WALL & FINISH SURFACE ELEVATIONS
3. CIVIL TO PROVIDE CONTRACTOR DIGITAL FILES TO COMPLETE CONSTRUCTION STAKING AND HORIZONTAL CONTROL FOR ALL IMPROVEMENTS, TYP.



PRIVATE CONTRACT

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LANDSCAPE ARCHITECTS
2122 Hancock Street
San Diego, California 92110
619.681.0090
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PLANS FOR THE CONSTRUCTION OF BOTANICAL BUILDING AND GARDENS PHASE 2
LAYOUT PLAN

CONSULTANT

COMPANY ADDRESS: SPURLOCK LANDSCAPE ARCHITECTS, 2122 HANCOCK ST, SAN DIEGO, CA 92110
COMPANY PHONE NUMBER: 619-681-0090
COMPANY EMAIL DATE OF: AARMOUR@SPURLOCK-LAND.COM
SIGNING:

LICENSED LANDSCAPE ARCHITECT
KEIGH KYLE - 6172
STATE OF CALIFORNIA
Signature
06/30/25
Renewal Date
11/01/24
Date

SPEC. NO

The City of SAN DIEGO
FOR CITY APPROVAL

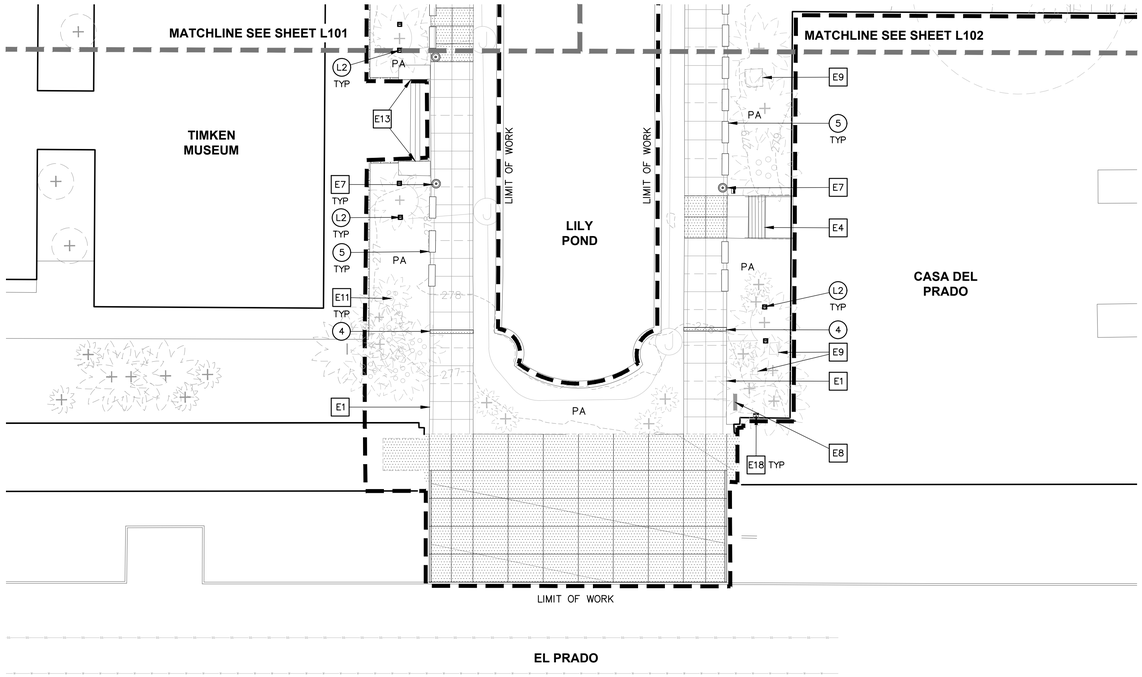
DEVELOPMENT SERVICES DEPARTMENT
SHEET 15 OF 61 SHEETS

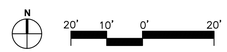
APPROVED:
FOR CITY ENGINEER DATE

DESCRIPTION	BY	APPROVED	DATE
ORIGINAL	SP		
AS BUILTS			

CONTRACTOR DATE STARTED
INSPECTOR DATE COMPLETED

PMT NO.
PRJ NO. 1119957
1847-6266 NAD83 COORDINATES
207-1706 LAMBERT COORDINATES
DRAWING NO. L102A
XXXX- 15 - D





PARTIAL HARDSCAPE LEGEND

SEE SHEET **L104** FOR FULL LEGEND

SYMBOL	PAVING	DETAIL
VEH PED		
	C.I.P. CONCRETE PAVING	PER CIVIL
	STABILIZED DECOMPOSED GRANITE PAVING	3 L105
	UNSTABILIZED DECOMPOSED GRANITE PAVING	3 L105
	PAVING JOINTS	2 L106

SYMBOL	EDGING / CURBS / WALLS	DETAIL
1	CONCRETE MOW CURB	PER SDRSD SDL-103
2	METAL HEADER	3 L105
3	BOULDER WITH DONOR RECOGNITION	4 L105
4	DONOR RECOGNITION PAVER BAND	2 L105

SYMBOL	SITE FURNITURE	DETAIL
5	BENCH, TYPE 1	1 L106
6	BENCH, TYPE 2	1 L106
7A	BIKE RACK TYPE 1	1 L105
7B	BIKE RACK TYPE 2	1 L105
8	EXISTING HANDRAILS TO BE REPAINTED	

SYMBOL	LIGHTING	
L1	RECEPTACLE PEDESTAL	PER ELECTRICAL
L2	IN-GRADE UP-LIGHT	PER ELECTRICAL
L3	TRELLIS DOWNLIGHT	PER ELECTRICAL

SYMBOL	IMPROVEMENTS BY OTHERS	
A	PERGOLA	PER ARCHITECTURE
B	PEDESTAL	PER ARCHITECTURE

SYMBOL	EXISTING TO REMAIN / TO BE RELOCATED
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E2	EXISTING MOWCURB TO REMAIN
E3	EXISTING RAMP AND HANDRAIL TO REMAIN
E4	EXISTING STAIRS TO REMAIN
E5	EXISTING FOUNTAIN TO REMAIN
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E15	EXISTING LIGHT POLES TO REMAIN
E16	EXISTING BUILDING
E17	EXISTING BALUSTRADES TO REMAIN
E18	EXISTING IRRIGATION CONTROLLER TO REMAIN
E19	EXISTING BACKFLOW PREVENTER TO REMAIN AND RECEIVE A STAINLESS STEEL ENCLOSURE PER CIVIL

SYMBOL	PLAN GRAPHICS
	LIMIT OF WORK
PA	PLANTING AREA

NOTES:

1. REFER TO CIVIL FOR UTILITIES AND GRADING.
2. REFER TO ARCHITECTURE FOR PERGOLA AND PERGOLA'S FORECOURT.
3. REFER TO ELECTRICAL FOR SITE LIGHTING.
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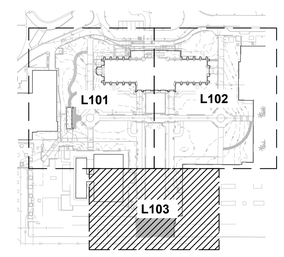

PRIVATE CONTRACT

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LANDSCAPE ARCHITECTS
2122 Hancock Street
San Diego, California 92110
619.681.0090
spurlock-land.com

WARNING
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PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2
HARDSCAPE PLAN

CONSULTANT

COMPANY ADDRESS: SPURLOCK LANDSCAPE ARCHITECTS, 2122 HANCOCK ST, SAN DIEGO, CA 92110
COMPANY PHONE NUMBER: 619-681-0090
COMPANY EMAIL DATE OF: AARMOUR@SPURLOCK-LAND.COM
SIGNING:

LICENSED LANDSCAPE ARCHITECT
LEIGH KYLE - 6173
Signature
06/30/25
Renewal Date
11/01/24
Date
STATE OF CALIFORNIA

SPEC. NO

The City of SAN DIEGO
FOR CITY APPROVAL

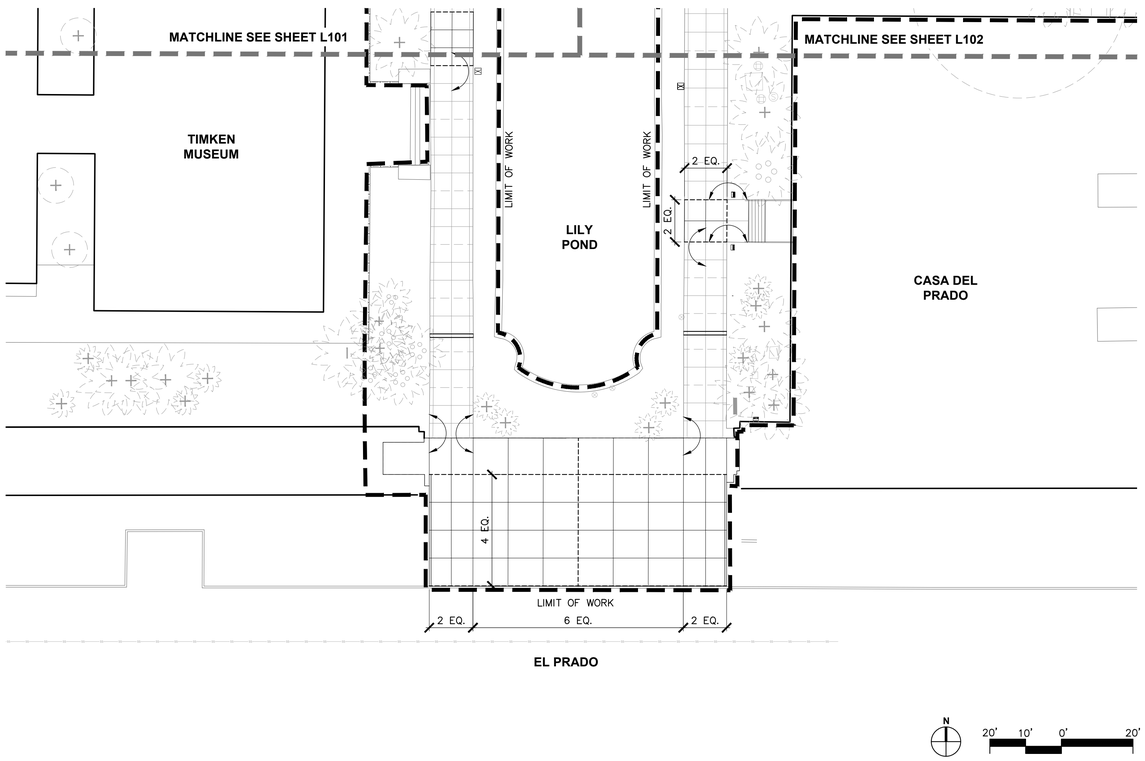
DEVELOPMENT SERVICES DEPARTMENT
SHEET 16 OF 61 SHEETS

APPROVED: FOR CITY ENGINEER DATE

DESCRIPTION	BY	APPROVED	DATE
ORIGINAL	SP		
AS BUILTS			

CONTRACTOR
INSPECTOR
DATE STARTED
DATE COMPLETED

PMT NO.
PRJ NO. 1119957
1847-6266 NAD83 COORDINATES
207-1706 LAMBERT COORDINATES
DRAWING NO. L103
XXXX- 16 - D

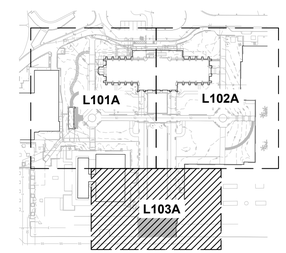


LAYOUT LEGEND

SYMBOL	ITEM	DETAIL
IJ	ISOLATION JOINT	
	CONSTRUCTION JOINT	
	CONTROL JOINT	
	DECORATIVE JOINT	
	CENTERLINE	
EQ	EQUAL	
	ALIGN	
	PROPERTY LINE	
	LIMIT OF WORK	

NOTES:

1. SEE SHEETS **L104** FOR HARDSCAPE MATERIALS.
2. REFER TO CIVIL SHEETS FOR TOP OF WALL & FINISH SURFACE ELEVATIONS
3. CIVIL TO PROVIDE CONTRACTOR DIGITAL FILES TO COMPLETE CONSTRUCTION STAKING AND HORIZONTAL CONTROL FOR ALL IMPROVEMENTS, TYP.



PRIVATE CONTRACT

SPURLOCK
LANDSCAPE ARCHITECTS
2122 Hancock Street
San Diego, California 92110
619.681.0090
spurlock-land.com

WARNING
0 1/2 1
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PLANS FOR THE CONSTRUCTION OF BOTANICAL BUILDING AND GARDENS PHASE 2
LAYOUT PLAN

CONSULTANT

COMPANY ADDRESS: SPURLOCK LANDSCAPE ARCHITECTS, 2122 HANCOCK ST, SAN DIEGO, CA 92110
COMPANY PHONE NUMBER: 619-681-0090
COMPANY EMAIL DATE OF: AARMOUR@SPURLOCK-LAND.COM
SIGNING:

LICENSED LANDSCAPE ARCHITECT
KEIGH KYLE - 6121
STATE OF CALIFORNIA
Signature
06/30/25
Renewal Date
11/01/24
Date

SPEC. NO

The City of SAN DIEGO
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DEVELOPMENT SERVICES DEPARTMENT
SHEET 17 OF 61 SHEETS

APPROVED:
FOR CITY ENGINEER DATE

DESCRIPTION	BY	APPROVED	DATE
ORIGINAL	SP		
AS BUILTS			

CONTRACTOR DATE STARTED
INSPECTOR DATE COMPLETED

PMT NO.
PRJ NO. 1119957
1847-6266
NAD83 COORDINATES
207-1706
LAMBERT COORDINATES
DRAWING NO. L103A
XXXX- 17 - D

FULL HARDSCAPE LEGEND

SYMBOL	PAVING	DETAIL	DESCRIPTION	MANUFACTURER	MODEL / SIZE / COLOR / FINISH
VEH PED	C.I.P. CONCRETE PAVING	PER CIVIL	C.I.P. INTEGRAL COLOR CONCRETE, BROOM FINISH, TO MATCH EXISTING	DAVIS COLORS 800-356-4848	TO MATCH EXISTING COLOR: SAN DIEGO BUFF FINISH: MEDIUM BROOM
	STABILIZED DECOMPOSED GRANITE PAVING	3 L105	4" THICK STABILIZED DECOMPOSED GRANITE PAVING	SOUTHWEST BOULDER & STONE 760-685-5224	COLOR: DESERT GOLD
	UNSTABILIZED DECOMPOSED GRANITE PAVING	3 L105	4" THICK UNSTABILIZED DECOMPOSED GRANITE PAVING	SOUTHWEST BOULDER & STONE 760-685-5224	COLOR: DESERT GOLD
	PAVING JOINTS	2 L106			

SYMBOL	EDGING / CURBS / WALLS	DETAIL	DESCRIPTION	MANUFACTURER	MODEL / SIZE / COLOR / FINISH
1	CONCRETE MOW CURB	PER SDRSD SDL-103	C.I.P., TO MATCH EXISTING		TO MATCH EXISTING
2	METAL HEADER	3 L105	3/16" THICK X 5" X 16' LONG, ALUMINUM EDGING; 18" ALUMINUM STAKES	PERMALOC 616-399-9600	MODEL: CLEANLINE XL, COLOR: BL-BLACK DURAFLEX
3	BOULDER WITH DONOR RECOGNITION	4 L105	4' DIA., WITH DONOR RECOGNITION WITH SANDBLASTED AND PAINTED INSCRIPTION ON SLICED AND BURNISHED BOULDER FACE	SOUTHWEST BOULDER & STONE 760-685-5224	BOULDER TYPE: DESERT SAND PAINT COLOR: MONUMENT BLACK, FONT: CHRISTIANA
4	DONOR RECOGNITION PAVER BAND	2 L105	C.I.P. CONCRETE DONOR BAND WITH 3" BRONZE LETTERING SET FLUSH W/ PAVING, NOT IN CONTRACT	INSTALLER: TB PENICK & SONS 619-954-1054 LETTERS FABRICATOR: CA SIGNS 818-899-1888	MATERIAL: BRONZE FONT: CHRISTIANA

SYMBOL	SITE FURNITURE	DETAIL	DESCRIPTION	MANUFACTURER	MODEL / SIZE / COLOR / FINISH
5	BENCH, TYPE 1	1 L106	PRECAST CONCRETE, 6' LENGTH, WITH INSET, PAINTED 1" LETTERS INTO VERTICAL BAND; OWNER FURNISHED, CONTRACTOR INSTALLED	QCP 951-256-3221 ENGRAVING: SOUTHWEST BOULDER & STONE 619-331-3120	MODEL: Q2-AZ72B COLOR: MISSION WHITE FINISH: ACID ETCH SEALER: PREMIUM PERMASHIELD 5400, ANTI-GRAFFITI LETTERS INSET COLOR: BLACK
6	BENCH, TYPE 2	1 L106	PRECAST CONCRETE, CURVED, 11' LENGTH, LEGS AND PROFILE TO MATCH BENCH TYPE 1, WITH INSET, PAINTED 1" LETTERS INTO VERTICAL BAND; OWNER FURNISHED, CONTRACTOR INSTALLED	QCP 951-256-3221 ENGRAVING: SOUTHWEST BOULDER & STONE 619-331-3120	MODEL: Q2-AZ72B CURVED COLOR: MISSION WHITE FINISH: ACID ETCH SEALER: PREMIUM PERMASHIELD 5400, ANTI-GRAFFITI LETTERS INSET COLOR: BLACK
7A	BIKE RACK TYPE 1	1 L105	HOOP SHAPE BIKE RACK, IN-GRADE MOUNT	DERO 415-425-7562	MODEL: HOOP RACK FINISH: GALVANIZED STEEL, POWDER COAT COLOR: GREEN (BALBOA PARK STANDARD)
7B	BIKE RACK TYPE 2	1 L105	PENNY FARTHING BIKE RACK, IN-GRADE MOUNT	DERO 415-425-7562	MODEL: PENNY FARTHING FINISH: GALVANIZED STEEL, POWDER COAT COLOR: GREEN (BALBOA PARK STANDARD)
8	EXISTING HANDRAILS TO BE REPAINTED		PRIMER AND PAINT EXISTING RAILS PER BALBOA PARK STANDARDS		PRIMER: HIGH ZINC PRIMER PAINT: TWO COATS MARINE GRADE POINT COLOR: SHERMIN WILLIAMS SW 1189 BLACK HILLS

SYMBOL	LIGHTING	DETAIL
L1	RECEPTACLE PEDESTAL	PER ELECTRICAL
L2	IN-GRADE UP-LIGHT	PER ELECTRICAL
L3	TRELLIS DOWNLIGHT	PER ELECTRICAL

SYMBOL	IMPROVEMENTS BY OTHERS	DETAIL
A	PERGOLA	PER ARCHITECTURE
B	PEDESTAL	PER ARCHITECTURE

SYMBOL	EXISTING TO REMAIN / TO BE RELOCATED	DESCRIPTION
E1	EXISTING PAVING	
E2	EXISTING MOWCURB TO REMAIN	
E3	EXISTING RAMP AND HANDRAIL TO REMAIN	
E4	EXISTING STAIRS TO REMAIN	
E5	EXISTING FOUNTAIN TO REMAIN	
E6	(8) EXISTING PEDESTAL AND URN TO REMAIN	W/GFRC 10"X18" DONOR RECOGNITION PLAQUE, OWNER FURNISHED CONTRACTOR INSTALLED
E7	EXISTING TRASH/RECYCLING RECEPTACLE TO BE RELOCATED AND REPAINTED, COLOR TO MATCH EXISTING COLOR	
E8	EXISTING SIGNAGE TO REMAIN	
E9	EXISTING UTILITY TO REMAIN	
E10	EXISTING SHED TO REMAIN	
E11	EXISTING TREE TO REMAIN AND BE PROTECTED	
E12	EXISTING TRASH ENCLOSURE	
E13	EXISTING PLANTER WALL	
E14	EXISTING RETAINING WALL TO REMAIN	
E15	EXISTING LIGHT POLES TO REMAIN	
E16	EXISTING BUILDING	
E17	EXISTING BALUSTRADES TO REMAIN	
E18	EXISTING IRRIGATION CONTROLLER TO REMAIN	
E19	EXISTING BACKFLOW PREVENTER TO REMAIN AND RECEIVE A STAINLESS STEEL ENCLOSURE PER CIVIL	

SYMBOL	PLAN GRAPHICS
	LIMIT OF WORK
PA	PLANTING AREA

NOTES:

1. REFER TO CIVIL FOR UTILITIES AND GRADING.
2. REFER TO ARCHITECTURE FOR PERGOLA AND PERGOLA'S FORECOURT.
3. REFER TO ELECTRICAL FOR SITE LIGHTING.
4. ALL PAVEMENT, CURBS AND WALLS WITHIN 10 FEET OF A TREE SHALL BE LINED WITH ROOT BARRIER PER PLANTING PLANS AND SPECIFICATIONS.
5. PROVIDE ISOLATION JOINTS WHERE INDICATED ON THE DRAWINGS, AND WHERE PAVING ABUTS WALLS, CURBS, STEPS, RAMPS AND OTHER VERTICAL APPURTENANCES. OMIT DOWELS WHERE ABUTTING WALLS, BUILDINGS, AND CURBS, UNLESS OTHERWISE INDICATED IN GEOTECHNICAL REPORT.

SPURLOCK
LANDSCAPE ARCHITECTS
2122 Hancock Street
San Diego, California 92110
619.681.0090
spurlock-land.com

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PRIVATE CONTRACT

PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2
HARDSCAPE LEGEND

CONSULTANT

COMPANY ADDRESS: SPURLOCK LANDSCAPE ARCHITECTS, 2122 HANCOCK ST, SAN DIEGO, CA 92110
COMPANY PHONE NUMBER: 619-681-0090
COMPANY EMAIL DATE OF: AARMOUR@SPURLOCK-LAND.COM
SIGNING:

LICENSED LANDSCAPE ARCHITECT
KEIGH KYLE - 6126
Signature
06/30/25
Renewal Date
11/01/24
Date
STATE OF CALIFORNIA

SPEC. NO

The City of SAN DIEGO
FOR CITY APPROVAL

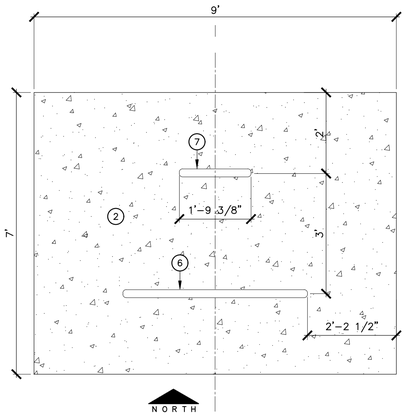
DEVELOPMENT SERVICES DEPARTMENT
SHEET 18 OF 61 SHEETS

APPROVED:
FOR CITY ENGINEER DATE

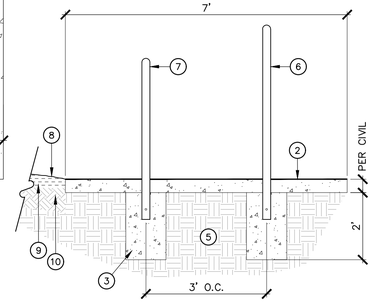
DESCRIPTION	BY	APPROVED	DATE
ORIGINAL	SP		
AS BUILTS			

CONTRACTOR DATE STARTED
INSPECTOR DATE COMPLETED

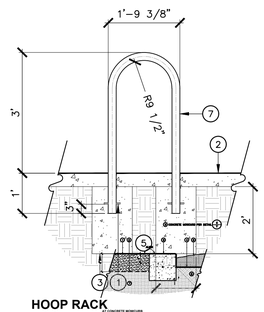
PMT NO.
PRJ NO. 1119957
1847-6266 NAD83 COORDINATES
207-1706 LAMBERT COORDINATES
DRAWING NO. L104
XXXX- 18 - D



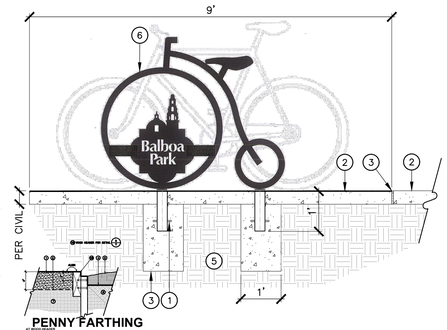
PLAN VIEW



SIDE VIEW



HOOP RACK
FRONT VIEW



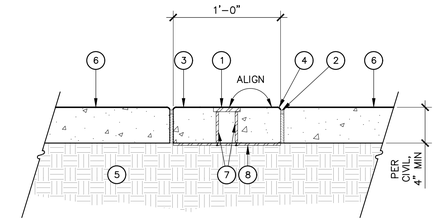
PENNY FARTHING
FRONT VIEW

1. 1/2" REBAR AT 1 1/4" LONG, TYP.
2. CONCRETE PAVING PER HARDSCAPE PLAN AND LEGEND
3. ISOLATION JOINT
4. CONCRETE FOOTING – RECESS BELOW FINISH GRADE. ASSUME SAME FOOTING TYPE FOR ALL BIKE RACKS.
5. COMPACTED SUBGRADE PER GEOTECHNICAL REPORT
6. PENNY FARTHING BIKE RACK PER HARDSCAPE PLAN, CENTER ON PAD, CONFIRM IN FIELD
7. HOOP RACK BIKE RACK PER HARDSCAPE PLAN, CENTER ON PAD, CONFIRM IN FIELD
8. FINISH GRADE AT ADJACENT PLANTING AREA
9. MULCH PER PLANS AND SPECIFICATIONS, TAPERED AT EDGE OF PAVING AS SHOWN
10. AMENDED PLANTING SOIL PER SPECIFICATIONS

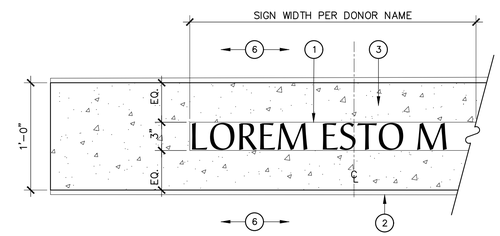
NOTES:

1. INSTALL BIKE RACKS ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
2. COLOR AND FINISH PER LEGEND.
3. SEE SITE PLAN FOR LOCATION.
4. BIKE RACKS ON THE SOUTH SIDE OF CONCRETE PAD ARE TO BE THE PENNY FARTHING BIKE RACK.

1 BIKE RACK - TYPE 1 & TYPE 2 SCALE: 3/4" = 1'-0"



SECTION



PLAN VIEW

1. 1/2" THICK, BRONZE ALLOY #220 LETTERS INLAID ON CONCRETE PER MANUFACTURER. HORIZONTAL BRUSH FACE FINISH AND MATTE EDGES.
2. ISOLATION JOINT
3. CONCRETE PAVING PER HARDSCAPE PLAN
4. 1/4" R TOOLED EDGES
5. COMPACTED SUBGRADE PER GEOTECHNICAL REPORT
6. ADJACENT EXISTING OR NEW CONCRETE PAVING PER HARDSCAPE PLAN
7. 18-8 STAINLESS STEEL PAN HEAD PHILLIP SCREWS, 32 THREAD X 3-1/2" LONG; 2X SCREWS PER LETTER MIN.
8. 1/4" ALUMINUM PANEL PER MANUFACTURER. PAINT ALL PANEL SIDES WITH CRL BITUMINOUS PAINT.

NOTES:

1. LETTERS TO BE SET FLUSH WITH ADJACENT PAVING.
2. PROVIDE SHOP DRAWINGS FOR EACH DONOR RECOGNITION BAND PRIOR TO FABRICATION INCLUDING FONT TYPE, LETTER LAYOUTS, AND EMBEDMENT DETAIL.
3. CHRISTIANA FONT FOR LETTERING.

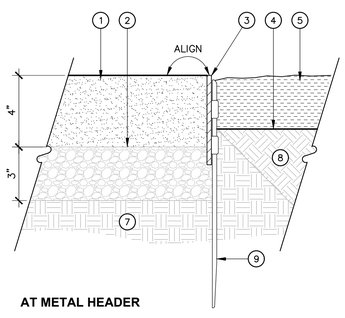
NOT IN CONTRACT

2 DONOR RECOGNITION BAND SCALE: 1 1/2" = 1'-0"

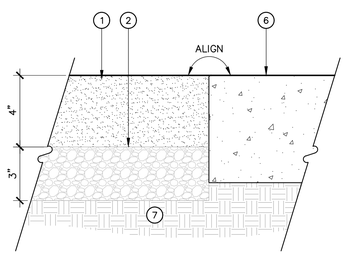
NOTES:

1. USE MANUFACTURED 90-DEGREE ANGLE EDGING AT CORNERS.
2. STAKES TO BE INSTALLED SO TOP OF STAKE IS FLUSH WITH OR SLIGHTLY BELOW TOP OF EDGING.
3. PROVIDE SAMPLES OF MATERIALS AND PREPARE 4'X4' MOCKUP FOR REVIEW INCLUDING METAL HEADER FOR APPROVAL.

1. DECOMPOSED GRANITE; TYPE PER HARDSCAPE LEGEND, DEPTH AS SHOWN, INSTALL IN 2" LIFTS
2. COMPACTED CLASS 2 BASE
3. METAL HEADER PER HARDSCAPE LEGEND
4. FINISH GRADE OF ADJACENT PLANTING AREA
5. MULCH PER PLAN AND SPECIFICATIONS
6. ADJACENT CONCRETE PAVING PER HARDSCAPE PLAN AND LEGEND
7. COMPACTED SUBGRADE PER GEOTECHNICAL REPORT
8. AMENDED PLANTING SOIL PER SPECIFICATIONS
9. STAKE PER MANUFACTURER

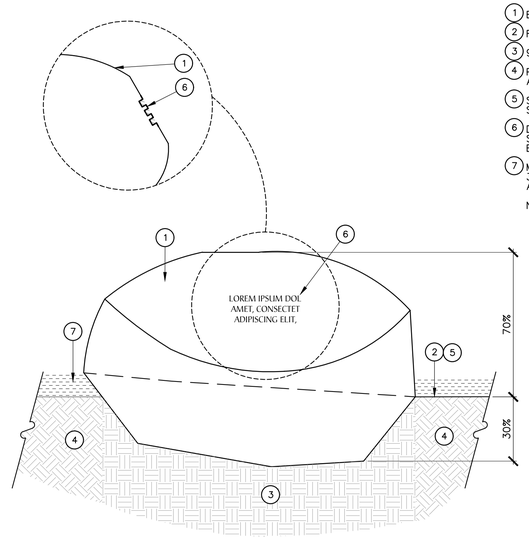


AT METAL HEADER



AT CONCRETE PAVING

3 DECOMPOSED GRANITE PAVING SCALE: 3" = 1'-0"



SECTION

1. BOULDER PER HARDSCAPE PLAN AND LEGEND
2. FINISH GRADE PER CIVIL
3. 90% COMPACTED SUBGRADE AT BOULDER.
4. PLANTING SOIL WITH AMENDED SOIL PER PLAN AND SPECIFICATIONS
5. SET BOULDER AT 30 % ± BELOW FINISH SURFACE
6. DONOR RECOGNITION LETTERS, 1" SIZE, SANDBLASTED AND PAINTED ON SLICED FLAT, BURNISHED BOULDER FACE
7. MULCH PER PLAN AND SPECIFICATIONS; KEEP 3"-4" FROM TRUNK AND STEMS AND TAPER AT ROOTBALL

NOTES:

1. CONTRACTOR TO STAKE LOCATIONS FOR LANDSCAPE ARCHITECT TO REVIEW PRIOR TO THE INSTALLATION.
2. PROVIDE SHOP DRAWINGS OF DONOR RECOGNITION LETTERS PRIOR TO FABRICATION. INCLUDE FONT TYPE AND LETTERS LAYOUT FOR EACH DONOR RECOGNITION BOULDER.
3. CHRISTIANA FONT LETTERING.
4. BOULDER TO BE SELECTED AND TAGGED WITH THE OWNER REPRESENTATIVE PRIOR TO FABRICATION.

4 BOULDER WITH DONOR RECOGNITION SCALE: 1" = 1'-0"

SPURLOCK
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WARNING
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PRIVATE CONTRACT

PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2
HARDSCAPE DETAILS

CONSULTANT

COMPANY ADDRESS: SPURLOCK LANDSCAPE ARCHITECTS, 2122 HANCOCK ST, SAN DIEGO, CA 92110
COMPANY PHONE NUMBER: 619-681-0090
COMPANY EMAIL DATE OF: AARMOUR@SPURLOCK-LAND.COM
SIGNING:

LICENSED LANDSCAPE ARCHITECT
LEIGH KYLE - 6173
Signature
06/30/25
Renewal Date
11/01/24
Date
STATE OF CALIFORNIA

SPEC. NO

The City of SAN DIEGO
FOR CITY APPROVAL

DEVELOPMENT SERVICES DEPARTMENT
SHEET 19 OF 61 SHEETS

APPROVED:
FOR CITY ENGINEER DATE

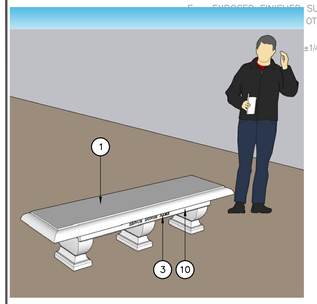
DESCRIPTION	BY	APPROVED	DATE
ORIGINAL	SP		
AS BUILTS			

CONTRACTOR DATE STARTED
INSPECTOR DATE COMPLETED

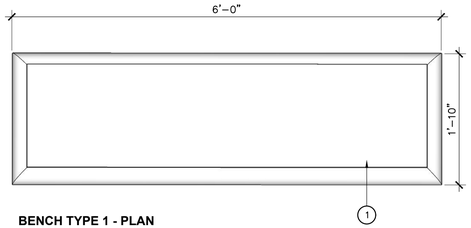
PMT NO.
PRJ NO. 1119957
1847-6266 NAD83 COORDINATES
207-1706 LAMBERT COORDINATES
DRAWING NO. L105
XXXX- 19 - D

GENERAL PRODUCT NOTES:

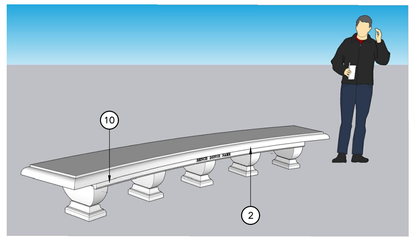
5. EXPOSED FINISHED SURFACE ±1/4". OTHERS.



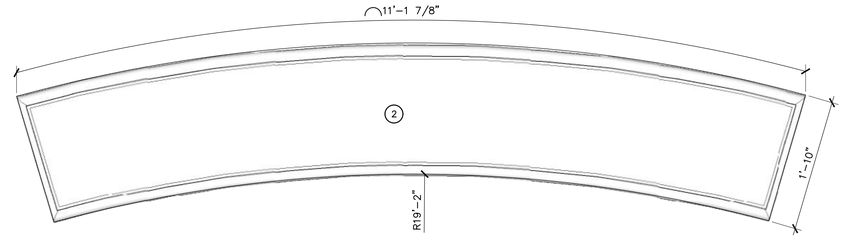
BENCH TYPE 1 - PERSPECTIVE



BENCH TYPE 1 - PLAN

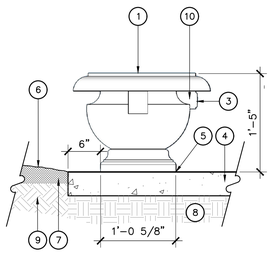


BENCH TYPE 2 - PERSPECTIVE

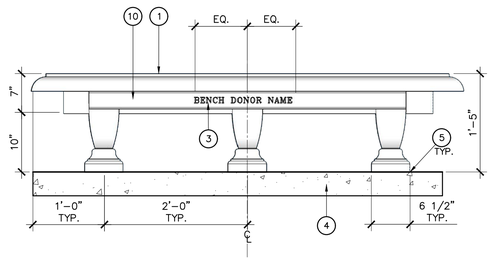


BENCH TYPE 2 - PLAN

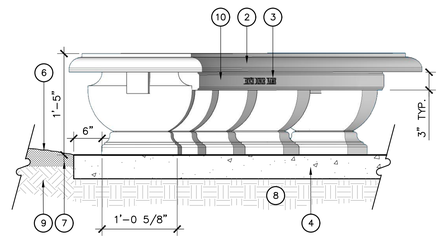
1. PRECAST CONCRETE BENCH TYPE 1
2. PRECAST CONCRETE BENCH TYPE 2
3. 1" INSET DONOR RECOGNITION LETTERS, PAINTED PER HARDSCAPE LEGEND, CENTER ON BENCH LEDGE
4. CONCRETE PAVING PER HARDSCAPE PLAN AND LEGEND
5. EPOXY TO ANCHOR TO CONCRETE PAVING PER MANUFACTURER
6. FINISH GRADE AT ADJACENT PLANTING AREA
7. MULCH PER PLANS AND SPECIFICATIONS, TAPERED AT EDGE OF PAVING AS SHOWN
8. BASE AND SUBGRADE PREPARATION PER GEOTECHNICAL REPORT
9. AMENDED PLANTING SOIL PER SPECIFICATIONS
10. DONOR RECOGNITION PANEL (3 / L106)



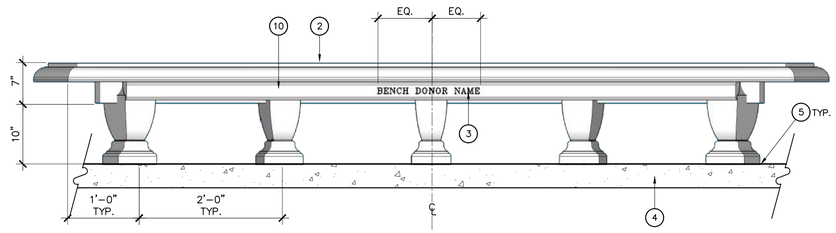
BENCH TYPE 1 - SIDE VIEW



BENCH TYPE 1 - ELEVATION

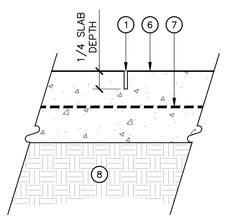


BENCH TYPE 2 - ELEVATIONS

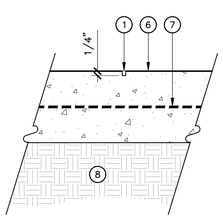


1 SITE BENCHES

SCALE: 1" = 1'-0"



CONTROL JOINT

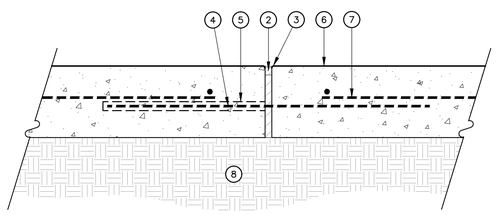


DECORATIVE JOINT

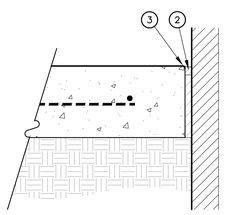
1. 3/16" WIDE SAWCUT
2. 3/8" ISOLATION JOINT W/ SEALANT DUSTED WITH DOUBLE-WASHED CONCRETE SAND WHILE WET PER SPECIFICATIONS; SAND COLOR TO MATCH COLOR OF ADJACENT CONCRETE COLOR
3. 1/8" RADIUS TOOLED EDGE
4. #4 18" DOWEL @ 18" O.C
5. DOWEL SLEEVE
6. CONCRETE PAVING PER CIVIL
7. REINFORCING PER CONCRETE PAVING
8. BASE AND SUBGRADE PER CONCRETE PAVING DETAIL

NOTE:

1. REFER TO LAYOUT PLAN(S) FOR JOINT LOCATIONS.
2. PROVIDE ISOLATION JOINTS WHERE PAVING ABUTS WALLS, CURBS, STEPS, RAMPS AND OTHER VERTICAL APPURTENANCES.
3. CONTRACTOR TO PROVIDE SHOP DRAWINGS INDICATING JOINT LAYOUT FOR APPROVAL PRIOR TO INSTALLATION.



ISOLATION JOINT
AT HORIZONTAL SURFACE



ISOLATION JOINT
AT VERTICAL SURFACE

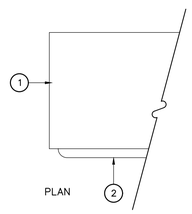
2 PAVING JOINTS

SCALE: 3" = 1'-0"

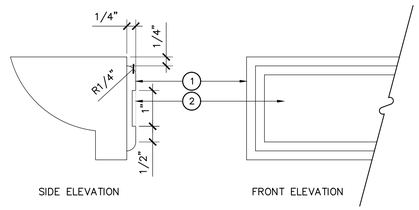
1. DONOR RECOGNITION PANEL
2. SANDBLASTED AND PAINTED INSCRIPTION

NOTES:

1. FONT CHRISTIANA



PLAN



SIDE ELEVATION

FRONT ELEVATION

3 DONOR RECOGNITION PANEL

SCALE: 6" = 1'-0"

SPURLOCK
LANDSCAPE ARCHITECTS
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San Diego, California 92110
619.681.0090
spurlock-land.com

WARNING

0 1/2 1

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PRIVATE CONTRACT

PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2
HARDSCAPE DETAILS

CONSULTANT

COMPANY ADDRESS: SPURLOCK LANDSCAPE ARCHITECTS, 2122 HANCOCK ST, SAN DIEGO, CA 92110

COMPANY PHONE NUMBER: 619-681-0090

COMPANY EMAIL DATE OF: AARMOUR@SPURLOCK-LAND.COM

SIGNING:

LICENSED LANDSCAPE ARCHITECT
LEIGH KYLE - 6
STATE OF CALIFORNIA
Signature
06/30/25
Renewal Date
11/01/24
Date

SPEC. NO

The City of SAN DIEGO

FOR CITY APPROVAL

DEVELOPMENT SERVICES DEPARTMENT
SHEET 20 OF 61 SHEETS

APPROVED:
FOR CITY ENGINEER DATE

DESCRIPTION	BY	APPROVED	DATE
ORIGINAL	SP		
AS BUILTS			

CONTRACTOR DATE STARTED
INSPECTOR DATE COMPLETED

PMT NO.

PRJ NO. 1119957

1847-6266
NAD83 COORDINATES

207-1706
LAMBERT COORDINATES

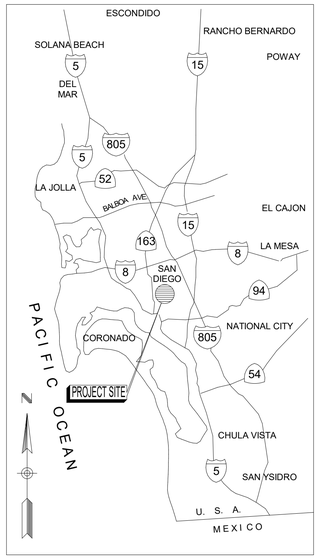
DRAWING NO. L106

XXXX- 20 - D

Balboa Park Botanical Bldg and Gardens Phase 2 - Pergola

DISCIPLINE CODE

G	GENERAL
D	DEMOLITION
C	CIVIL
L	LANDSCAPE
A	ARCHITECTURAL
S	STRUCTURAL
M	MECHANICAL
E	ELECTRICAL
I	INSTRUMENTATION
T	TRAFFIC CONTROL



VICINITY MAP

NOT TO SCALE

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S901	WOOD DETAILS

LEGAL DESCRIPTION:
CITY #RR-_____ (___) IN BALBOA PARK; PUBLIC LAND

SITE ADDRESS
1549 EL PRADO SAN DIEGO CA 92101

ASSESSOR'S NUMBER
760-212-94-00

PROJECT DATA
OCCUPANCY CLASSIFICATION(S):
U (AGRICULTURE) - ENTIRE STRUCTURE;
B, A-3, & A-5 - ENCLOSED SPACES
NUMBER OF STORIES (EXISTING & PROPOSED): 1
HEIGHT OF BUILDING (EXISTING & PROPOSED):
FLOOR AREA AND FLOOR AREA RATIO:
- BUILDING AREA;
- ENCLOSED GARDEN AREA;
UNZONED, N/A - FLOOR AREA RATIO
TOTAL NEW FLOOR AREA ADDED: 1,271 SF
TOTAL EXISTING FLOOR AREA TO REMAIN PER STORY:
- BUILDING;
- ENCLOSED GARDEN
CONDITION OF SOIL (UNDISTURBED, COMPACT, OR LOOSE FILL): COMPACT
LANDSCAPE AREA SQUARE FOOTAGE:
TOTAL AREA OF DISTURBANCE:
LISTING OF DEFERRED SUBMITTALS: FIRE ALARM AND SPRINKLER
FIRE PROTECTION REQUIREMENTS: SEE G002
APPLICABLE CODES:

FIELD DATA
TOPOGRAPHY SOURCE: ALTA LAND SURVEYING 2019
THE BASIS OF BEARINGS FOR THIS SURVEY IS THE CALIFORNIA COORDINATE SYSTEM OF 1983, ZONE 6, EPOCH 1991.35 ADJUSTED, GRID BEARING BETWEEN GPS STATION '1055' AND '3054' AS SHOWN ON RECORD OF SURVEY 14492. BENCHMARK FOR THIS SURVEY IS THE NGVD 29 ELEVATION AT THE ABOVE REFERENCED STATION '1055' AS SHOWN ON SAID RECORD OF SURVEY, BEING A 3" BRASS DISC IN STREET WELL MONUMENT @ CENTER OF PARK BOULEVARD AND VILLAGE PLACE.
NVGD ELEV=284.05

OWNER
CITY OF SAN DIEGO
525 B STREET
SUITE 750
SAN DIEGO CA. 92101
PHONE NUMBER 619-533-3863
PROJECT MANAGER: JACQUELINE HIGGINS

ZONING
CONSTRUCTION TYPE: ?
BUILDING TYPE: ?
BUILDING CODE YEAR: ?
EXISTING USE OF BUILDING: ?
PROPOSED USE OF BUILDING: PERGOLA

PARK INSPECTION STAGES
1. PRE-CONSTRUCTION MEETING
2. DEMOLITION MARK-OUT (IF APPLICABLE)
3. ROUGH GRADING AND DRAINAGE.
4. IRRIGATION MAINLINE PRESSURE TEST.
5. IRRIGATION LATERAL LINE PRESSURE TESTS.
6. WIRING PRIOR TO BACKFILLING TRENCHES.
7. HARDSCAPE AT TIME OF FINISHED STAKING AND LAYOUT.
8. FINISH GRADING AND SOIL PREPARATION.
9. IRRIGATION COVERAGE TEST.
10. PLANT MATERIAL (WHEN DELIVERED) AND PLACEMENT APPROVAL.
11. PLAY GROUND INSPECTION, IF APPLICABLE.
12. PROJECT CONSTRUCTION 90 PERCENT COMPLETE (DEVELOP PUNCH LIST AND SUBMIT RED-LINE AS-BUILTS).
13. 90-DAY PLANT MAINTENANCE PERIOD (THIS INSPECTION IS TO BE HELD WHEN THE PUNCH LIST ITEMS ARE COMPLETE. IF TURF AREA IS PLANTED FROM SEED OR STOLONS THE PLANT MAINTENANCE PERIOD SHALL BE 120-DAYS).
14. FINAL WALK-THROUGH, ACCEPTANCE BY THE CITY. CONTRACTOR TO SUBMIT FINAL APPROVED AS-BUILT DRAWINGS TO THE CITY.

WORK TO BE DONE
RECONSTRUCTION OF 1926 PERGOLA ADJACENT TO THE BOTANICAL BUILDING WITHIN BALBOA PARK.

BID ALTERNATES
REFER TO **ATTACHMENT A, SECTION 2.4 SCOPE OF WORK** FOR DESCRIPTION OF ADDITIVE ALTERNATES.

PROJECT TEAM

CIVIL
MICHAEL BAKER INTERNATIONAL
9635 GRANITE RIDGE DRIVE
SAN DIEGO , CA 92124
(858) 614-5000

LANDSCAPE
SPURLOCK LANDSCAPE ARCHITECTS
2122 HANCOCK STREET
SAN DIEGO, CA 92110
(619) 681-0090

ARCHITECTURAL
RNT ARCHITECTS
363 FIFTH AVENUE, SUITE 202
SAN DIEGO, CA 92101
(619) 233-1023

STRUCTURAL
KPFF CONSULTING ENGINEERS
3131 CAMINO DEL RIO N, # 1080
SAN DIEGO, CA 92108
(619) 521-8500

MECHANICAL & PLUMBING
TBD

ELECTRICAL
TBD

LIGHTING
VISUAL CONCEPTS LIGHTING INC
4858 MERCURY STREET, SUITE 210
SAN DIEGO, CA 92111
(858) 278-4503

PARK INSPECTION TEAM
A. SITE SUPERINTENDENT (CONTRACTOR/DEVELOPER'S REPRESENTATIVE)
B. CONTRACTOR
C. RESIDENT ENGINEER FROM PUBLIC WORKS DEPARTMENT
D. PROJECT MANAGER
E. CONSULTANT
F. PARKS AND RECREATION DISTRICT MANAGER
G. PARKS AND RECREATION ASSET MANAGER

PRIVATE CONTRACT

WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2
COVER SHEET

CONSULTANT RNT ARCHITECTS

COMPANY ADDRESS: RNT ARCHITECTS, 363 FIFTH AVENUE, SAN DIEGO, CA 92101
COMPANY PHONE NUMBER: 619-233-1023
COMPANY EMAIL DATE OF: DIAZ@RNTARCHITECTS.COM
SIGNING:
LICENSED ARCHITECT
PAUL F. DIAZ
C-22987
31 MAY 2025
RENEWAL DATE
STATE OF CALIFORNIA

SPEC. NO

The City of SAN DIEGO
FOR CITY APPROVAL

DEVELOPMENT SERVICES DEPARTMENT
SHEET 21 OF 61 SHEETS

APPROVED:
FOR CITY ENGINEER
DATE

DESCRIPTION	BY	APPROVED	DATE
ORIGINAL	SP		
AS BUILTS			

CONTRACTOR
INSPECTOR
DATE STARTED
DATE COMPLETED

PMT NO.
PRJ NO 1119957
1847-6266
NAD83 COORDINATES
207-1706
LAMBERT COORDINATES
DRAWING NO.
XXXX- 21 - D
AG-01

ACCESSIBILITY COMPLIANCE NOTES

ACCESSIBLE ROUTES, WALKS AND SIDEWALKS

1. CONTINUOUS SURFACE: ABRUPT CHANGES IN LEVEL EXCEEDING 4 INCHES IN A VERTICAL DIMENSION BETWEEN WALKS, SIDEWALKS OR OTHER PEDESTRIAN WAYS AND ADJACENT SURFACES OR FEATURES SHALL BE IDENTIFIED BY WARNING CURBS AT LEAST 6 INCHES IN HEIGHT ABOVE THE WALK OR SIDEWALK SURFACE. A WARNING CURB IS NOT REQUIRED BETWEEN A WALK OR SIDEWALK AND AN ADJACENT STREET OR DRIVEWAY. A WARNING CURB IS NOT REQUIRED WHEN A GUARD OR HANDRAIL IS PROVIDED WITH A GUIDE RAIL CENTERED 2 INCHES MINIMUM AND 4 INCHES MAXIMUM ABOVE THE SURFACE OF THE WALK OR SIDEWALK, PER 11B-303.5. PER CITY ACCESS MEMO ALL CROSS-SLOPES SHALL NOT EXCEED 1.5% MAX AND RUNNING SLOPE SHALL NOT EXCEED 4.5% MAX. ALL FLOOR AND GROUND SURFACES SHALL BE STABLE, FIRM, AND SLIP RESISTANT AND SHALL COMPLY WITH 11B-302.
2. GRATINGS: WALKWAYS, SIDEWALKS AND PEDESTRIAN WAYS SHALL BE FREE OF GRATINGS WHENEVER POSSIBLE. FOR GRATINGS LOCATED IN THE SURFACE OF ANY OF THESE AREAS, GRID OPENINGS IN GRATINGS SHALL BE LIMITED TO 1/2 INCH (13 MM) IN THE DIRECTION OF TRAVEL. (PER CURRENT CODE)
3. CHANGES IN LEVEL: WHERE CHANGES IN LEVEL ARE PERMITTED AT FLOOR AND GROUND SURFACES THEY SHALL COMPLY WITH 11B-303. CHANGES IN LEVEL ARE NOT PERMITTED AT TURNING SPACES, CLEAR FLOOR AND GROUND SPACE, DOOR MANUEVERING CLEARANCES (EXCEPT AT THE THRESHOLDS), RAMP SURFACES, PARKING ACCESS AISLES, PASSENGER LOADING ZONE ACCESS AISLE, AND WHEEL CHAIR SPACES (SEATING).
4. WARNING CURBS: ABRUPT CHANGES IN LEVEL EXCEEDING 4 INCHES IN A VERTICAL DIMENSION BETWEEN WALKS, SIDEWALKS OR OTHER PEDESTRIAN WAYS AND ADJACENT SURFACES OR FEATURES SHALL BE IDENTIFIED BY WARNING CURBS AT LEAST 6 INCHES IN HEIGHT ABOVE THE WALK OR SIDEWALK SURFACE. A WARNING CURB IS NOT REQUIRED BETWEEN A WALK OR SIDEWALK AND AN ADJACENT STREET OR DRIVEWAY. A WARNING CURB IS NOT REQUIRED WHEN A GUARD OR HANDRAIL IS PROVIDED WITH A GUIDE RAIL CENTERED 2 INCHES MINIMUM AND 4 INCHES MAXIMUM ABOVE THE SURFACE OF THE WALK OR SIDEWALK, PER SECTION 11B-303.5.
5. PROVIDE A 60" X 60" LEVEL AREA FOR A 36" DOOR (OR GATE) WHERE THE SWING IS TOWARD THE WALKWAY IN THE ACCESSIBLE ROUTE OF TRAVEL. EXTEND WALK A MINIMUM 24" BEYOND THE STRIKE EDGE OF ANY DOOR (OR GATE) THAT SWINGS TOWARDS THE WALKWAY. SWINGING DOORS AND GATES SHALL HAVE MANUEVERING CLEARANCES COMPLYING WITH TABLE 11B-404.2.
6. WALKWAYS WITH CONTINUOUS GRADIENTS SHALL BE PROVIDED WITH LEVEL AREAS A MINIMUM 5'-0" LONG AT INTERVALS OF 400'-0" MAXIMUM PER SECTION 11B-403.7.
7. IF A WALK CROSSES OR ADJOINS A VEHICULAR WAY, AND THE WALKING SURFACES ARE NOT SEPARATED BY CURBS, RAILINGS, OR OTHER ELEMENTS BETWEEN THE PEDESTRIAN AREAS AND VEHICULAR AREAS, THE BOUNDARY BETWEEN THE AREAS SHALL BE DEFINED BY A CONTINUOUS 36" WIDE DETECTABLE WARNING MATERIAL. MATERIAL SHALL COMPLY WITH CRITERIA OF SECTIONS 11B-705.
8. COLOR YELLOW FOR DETECTABLE WARNING SURFACE SHALL CONFORM TO COLOR NO. 33538 PER FEDERAL STANDARD NO. 595C, EXCEPT AT CURB RAMPS, ISLANDS, OR CUT-THROUGH MEDIANS. (CBC SECTIONS 11B-705.1.1.5). APPROVAL TO USE COLOR GRAY FOR DETECTABLE WARNING SURFACE FOR BALBOA PARK PROJECT DEPENDS ON SURROUNDING CONCRETE COLOR. DETECTABLE WARNING SURFACE TO BE STAINLESS STEEL OR REPLACEABLE MATERIAL PER AUTHORIZED MATERIALS LIST.
9. PROVIDE MINIMUM 5 YEAR WARRANTY FOR DETECTABLE WARNING SURFACE.

STAIRWAYS

1. STRIPING FOR THE VISUALLY IMPAIRED: THE UPPER APPROACH AND THE LOWER TREAD OF EACH INTERIOR STAIR SHALL BE MARKED. THE UPPER APPROACH AND ALL TREADS OF EACH EXTERIOR STAIR SHALL BE MARKED. MARKING SHALL CONSIST OF A STRIP OF CLEARLY CONTRASTING COLOR 2 TO 4 INCHES WIDE PLACED PARALLEL TO AND CLOSE TO (NOT MORE THAN 1 INCH FROM) THE NOSE OF THE STEP OR LANDING TO ALERT THE VISUALLY IMPAIRED. THE STRIP SHALL BE OF MATERIAL THAT IS AT LEAST AS SLIP-RESISTANT AS THE OTHER TREADS OF THE STAIR. (SECTION 11B-504.4.1)
2. TREADS: ALL TREAD SURFACES SHALL BE SLIP-RESISTANT. IF OUTDOORS, THE STAIR AND THEIR APPROACHES SHALL BE DESIGNED SO THAT WATER WILL NOT ACCUMULATE ON WALKING SURFACES. TREADS SHALL HAVE SMOOTH, ROUNDED OR CHAMFERED EXPOSED EDGES, AND NO ABRUPT EDGES AT THE NOSING (LOWER FRONT EDGE). (SECTIONS 11B-504 AND 11B-302).

ACCESSIBILITY COMPLIANCE NOTES

STAIRWAYS (CONT.)

3. ALL STEPS ON A FLIGHT OF STAIRS SHALL HAVE UNIFORM RISER HEIGHTS AND UNIFORM TREAD DEPTHS. STAIRWAY RISER MUST BE 4" MINIMUM AND 7" MAXIMUM, AND MINIMUM RUN SHALL BE 11". (SECTION 11B-504.2).
4. OPEN RISERS ARE NOT PERMITTED. (SECTION 11B-504.3)

PEDESTRIAN RAMPS

1. THE ALLOWABLE CROSS SLOPE AT PEDESTRIAN RAMPS SHALL BE 1.5% MAXIMUM, PER CITY ACCESS MEMO.
2. RAMP SURFACES SHALL BE SLIP-RESISTANT.
3. RAMPS SHALL HAVE A MINIMUM CLEAR WIDTH OF 48 INCHES, PER SECTION 11B-405.5. WHERE A RAMP SERVES A BUILDING HAVING AN OCCUPANT LOAD OF 300 OR MORE, THE MINIMUM CLEAR WIDTH SHALL BE 60 INCHES.
4. RAMPS SHALL HAVE LANDINGS AT THE TOP AND THE BOTTOM OF EACH RAMP RUN. RAMPS SHALL COMPLY WITH SECTION 11B-405:
   - A. BOTTOM LANDINGS SHALL EXTEND 72" MINIMUM IN THE DIRECTION OF THE RAMP RUN.
   - B. TOP LANDINGS SHALL BE A MINIMUM OF 60" X 60".
   - C. WHERE THE CHANGE IN ELEVATION IS GREATER THAN 30", PROVIDE INTERMEDIATE LANDINGS SO THAT EACH RAMP RUN IS NO MORE THAN 30" IN HEIGHT. WHERE THERE IS A CHANGE OF DIRECTION, PROVIDE A LANDING OF 72" MINIMUM IN THE DIRECTION OF RAMP RUN. PROVIDE A LANDING OF 60" IN THE DIRECTION OF RAMP RUN IN OTHER INTERMEDIATE LANDINGS.
   - D. HANDRAIL EXTENSIONS ARE NOT PERMITTED TO OBSTRUCT REQUIRED CLEAR LANDING DIMENSIONS EXCEPT AS ALLOWED BY THE EXCEPTION TO 11B-307.2. WHERE THE RAMP WIDTH IS LESS THAN THE TOP LANDING WIDTH, ADDITIONAL LANDING LENGTH MAY BE NECESSARY TO ACCOMMODATE HANDRAIL EXTENSIONS REQUIRED TO BE IN THE DIRECTION OF THE RAMP RUN WITHOUT DIMINISHING THE REQUIRED CLEAR LAND LENGTH.
   - E. ADDITIONAL LANDING LENGTH MAY BE PROVIDED ACROSS THE ENTIRE LANDING WIDTH OR AS A LEVEL EXTENSION AT THE TOP OF THE RAMP RUN.

FIRE DEPARTMENT NOTES

1. FIRE DEPARTMENT FINAL INSPECTION REQUIRED. SCHEDULE ALL INSPECTIONS 24 HOURS IN ADVANCE.
2. ALL EXIT DOORS SHALL BE OPENABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT. NO DEADBOLTS, NO SLIDING BOLTS, ETC.
3. BUILDING OCCUPANT TO SECURE ALL PERMITS REQUIRED BY THE FIRE DEPARTMENT FROM THE FIRE PREVENTION BUREAU PRIOR TO OCCUPANCY.
4. PLANS FOR ALL FIXED FIRE PROTECTION EQUIPMENT AND FIRE ALARM SYSTEM SHALL BE SUBMITTED TO ARCHITECT OF RECORD AND AUTHORITY HAVING JURISDICTION FOR APPROVAL PRIOR TO INSTALLATION.
5. INTERIOR FINISHES SHALL COMPLY WITH THE REQUIREMENTS OF CHAPTER 8, CALIFORNIA BUILDING CODE, 2013 EDITION.
6. ALL DECORATIVE MATERIALS SHALL BE MAINTAINED IN A FLAME-RETARDANT CONDITION. (C.C.R. T-19, SEC. 1.14, 3.08, 3.21, AND C.F.C. SEC. 807)
7. THE CONSTRUCTION, REMODEL, OR DEMOLITION OF A BUILDING SHALL COMPLY WITH CFC CHAPTER 14 AND CBC CHAPTER 33.
8. FIRE HYDRANTS SHALL COMPLY WITH FIRE DEPARTMENT REQUIREMENTS FOR ON-SITE FIRE HYDRANTS, CFC SECTION 507.5 AND APPENDICES BB AND CC.
9. CONTRACTOR SHALL PROVIDE PROPER FIRE TRUCK ACCESS AND FIRE EXITS DURING CONSTRUCTION AT ALL TIMES.

CONSTRUCTION INSPECTION STAGES AND INSPECTION TEAM

CONSTRUCTION INSPECTION STAGES (MINIMUM - SEE PLANS AND SUPLEMENTAL SPECIFICATIONS FOR ANY ADDITIONAL):

1. PRE-CONSTRUCTION MEETING
2. DEMOLITION MARK-OUT (IF APPLICABLE)
3. PROTECTION OF EXISTING PLANT MATERIALS.
4. ROUGH GRADING
5. HARDSCAPE AT TIME OF FINISHED STAKING AND LAYOUT
6. FINISH GRADING
7. 3RD PARTY CASP INSPEECTION - PRELIMINARY AND FINAL
8. PROJECT CONSTRUCTION 90 PERCENT COMPLETE (DEVELOP PUNCH LIST AND SUBMIT RED-LINE AS-BUILTS).
9. FINAL WALK-THROUGH, ACCEPTANCE BY THE CITY. CONTRACTOR TO SUBMIT FINAL APPPROVED AS-BUILT DRAWINGS TO THE CITY.

INSPECTION TEAM:

- A. SITE SUPERINTENDENT (CONTRACTOR'S REPRESENTATIVE)
- B. CONTRACTOR(S)
- C. FOREVER BALBOA PARK PROJECT MANAGER
- D. PARKS AND RECREATION ASSET MANAGER
- E. CONSULTANT(S) REPRESENTATIVE
- F. BALBOA PARK DISTRICT MANAGER
- G. BALBOA PARK HORTICULTURIST
- H. PARKS AND RECREATION IRRIGATION SPECIALIST
- I. CERTIFIED ACCESS SPECIALIST (CASP) - 3RD PARTY

APPLICABLE STANDARDS AND SPECIFICATIONS

CONSTRUCTION SHALL COMPLY WITH THE FOLLOWING PARTS OF THE TITLE 24 OF THE CALIFORNIA CODE OF REGULATIONS (CCR):

2022 CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE, C.C.R. TITLE 24 PART 1 AND 2

2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 C.C.R. (2009 INTERNATIONAL BUILDING CODE VOL. 1-2, 2010 CALIFORNIA AMENDMENTS)

2022 CALIFORNIA ELECTRICAL CODE (CEC), C.C.R. TITLE 24 PART 3

2022 CALIFORNIA MECHANICAL CODE (CMC), C.C.R. TITLE 24 PART 4

2022 CALIFORNIA PLUMBING CODE (CPC), C.C.R. TITLE 24 PART 5

2022 CALIFORNIA ENERGY CODE, C.C.R. TITLE 24 PART 6

2022 CALIFORNIA ELEVATOR SAFETY CODE, C.C.R. TITLE 24 PART 7

2022 CALIFORNIA HISTORICAL CODE, C.C.R. TITLE 24 PART 8

2022 CALIFORNIA FIRE CODE, C.C.R. TITLE 24 PART 9

2022 CALIFORNIA EXISTING BUILDING CODE, C.C.R. TITLE 24 PART 10

2022 CALIFORNIA GREEN BUILDING CODE, C.C.R. TITLE 24 PART 11

2022 CALIFORNIA REF. STANDARDS CODE, C.C.R. TITLE 24 PART 12

TITLE 19	C.C.R., PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS
NFPA 13	AUTOMATIC SPRINKLER SYSTEMS, CURRENT EDITION
NFPA 14	STANDPIPE SYSTEMS, CURRENT EDITION
NFPA 17	DRY CHEMICAL EXTINGUISHING SYSTEMS, CURRENT EDITIONS
NFPA 17a	WET CHEMICAL EXTINGUISHING SYSTEMS, CURRENT EDITION
NFPA 20	STATIONARY PUMPS, CURRENT EDITION
NFPA 24	PRIVATE FIRE MAINS, CURRENT EDITION
NFPA 72	NATIONAL FIRE ALARM CODE (CALIFORNIA AMENDED), CURRENT ED. (NOTE SEE UL STANDARD 1971 FOR "VISUAL DEVICES")
NFPA 80	FIRE DOOR AND OTHER OPENING PROTECTIVES, CURRENT ED.
NFPA 253	CRITICAL RADIANT FLUX OF FLOOR COVERING SYSTEMS, CURRENT ED.
NFPA 2001	CLEAN AGENT FIRE EXTINGUISHING SYSTEMS, CURRENT ED.

REFERENCE CODE SECTION FOR NFPA STANDARDS - 2019 CBC (SFM) CHAPTER 35

GREENBOOK - STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION INCLUDING THE CITY OF SAN DIEGO "WHITEBOOK" SUPPLEMENT TO THE GREENBOOK (CURRENT EDITION).

CITY OF SAN DIEGO STANDARD DRAWINGS (CURRENT EDITION).

AMERICAN WITH DISABILITIES ACT (ADA), TITLE II REGULATIONS 28 CFR PART 35 AND 35.151, INCLUDING THE 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN, (APPENDIX A OF 28 CFR PART 36)(ADAS);

THE STATE OF CALIFORNIA CODE OF REGULATIONS (CCR), INCLUDING THE CURRENT CALIFORNIA BUILDING CODE (CBC) AND THE CURRENT CALIFORNIA ACCESS COMPLIANCE REFERENCE MANUAL; AND CITY OF SAN DIEGO ACCESS MEMOS.

MANUAL OF TRAFFIC CONTROLS FOR CONSTRUCTION AND MAINTENANCE WORK ZONES, STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION (CURRENT EDITION).

NOTE: THE MOST CURRENT EDITIONS OF THE PRECEDING DOCUMENTS SHALL BE USED. WHERE ONE OR MORE SETS OF SPECIFICATIONS OR DRAWINGS ARE APPLICABLE, THE MOST RESTRICTIVE SHALL TAKE PRECEDENCE. FOR EXAMPLE, WHEN A CONFLICT EXISTS BETWEEN THE ADAS AND CBC, DEVELOPER SHALL COMPLY WITH THE MOST RESTRICTIVE REQUIREMENT (I.E. THAT WHICH PROVIDES THE MOST ACCESS).

PROJECT SCOPE

RECONSTRUCTION OF THE 1915 ORIGINAL WEST GARGEN PERGOLA DESIGN AS MUCH AS POSSIBLE. THIS INCLUDES...

GENERAL NOTES

1. THE PROJECT MANUAL ISSUED AS PART OF THESE CONSTRUCTION DOCUMENTS IS AN INTEGRAL PART OF THE CONTRACT DOCUMENTS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THAT ALL WORKMANSHIP, MATERIALS AND CONSTRUCTION SHALL BE IN COMPLIANCE WITH THE APPLICABLE CODES AND FEDERAL REQUIREMENTS AND REGULATIONS.
3. THE CONTRACTOR SHALL VISIT THE SITE AND VERIFY ALL DIMENSIONS PRIOR TO SUBMITTING A BID. THE CONTRACTOR IS ALSO RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS AND OBTAIN CONSTRUCTION CHANGE APPROVAL WHEN REQUIRED.
4. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS, GRADES, ELEVATIONS AND DIMENSIONS BEFORE STARTING WORK. THE ARCHITECT SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCY OR INCONSISTENCY.
5. THE CONTRACTOR SHALL DETERMINE THE LOCATION OF ALL EXISTING UTILITY SERVICES IN THE AREA TO BE EXCAVATED PRIOR TO THE BEGINNING OF EXCAVATION. THE CONTRACTOR SHALL PROTECT ALL UTILITY LINES AND SERVICE LINES TO REMAIN WHICH ARE ENCOUNTERED DURING CONSTRUCTION.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ENFORCEMENT OF FEDERAL AND STATE OF CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REQUIREMENTS AND REGULATIONS.
7. DO NOT SCALE ANY DRAWINGS IN THIS SET. CONTRACTOR SHALL CONTACT THE OWNER'S BIDDERS TECHNICAL QUESTIONS DESK, TEL: 619-782-2212, PRIOR TO BID IF A SPECIFIC DIMENSION IS NEEDED FOR ITS BID PREPARATION BUT IS NOT AVAILABLE IN THE CONTRACT DOCUMENTS.
8. ALL DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE SHOWN ON PLANS, SECTIONS AND DETAILS. SPECIFIC NOTES AND DETAILS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS.
9. SPECIFICATIONS SHALL TAKE PRECEDENCE OVER THE MATERIAL NOTES AND DRAWINGS.
10. ALL OMISSIONS AND CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND/OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT IMMEDIATELY BEFORE PROCEEDING WITH ANY WORK SO INVOLVED. NO CHANGES ARE TO BE MADE UNLESS THE ARCHITECT AND THE OWNER ARE NOTIFIED IN WRITING AND APPROVE SUCH A CHANGE ACCORDING TO THE CONTRACT.
11. THE ARCHITECT IS NOT RESPONSIBLE FOR ASBESTOS ABATEMENT.
12. PROVIDE BACKING AT ALL INDICATED LOCATIONS OF FIXTURES, SIGNS, HANDRAILS, ETC.
13. DURING CONSTRUCTION PERIOD, CONSTRUCTION MATERIALS SHALL BE SPREAD OUT IF PLACED ON FRAMED FLOORS OR ROOF. THE LOAD SHALL NOT EXCEED THE DESIGN LIVE LOADS FOR EACH PARTICULAR LEVEL.
14. TRADE NAMES AND MANUFACTURERS REFERRED TO ARE FOR QUALITY STANDARDS ONLY. SUBSTITUTIONS WILL BE PERMITTED AS APPROVED BY THE OWNER AND THE ARCHITECT ONLY UPON SUBMITTAL, AND FOR A LIMITED PERIOD.
15. ITEMS SHOWN AS N.I.C. ON PLANS REQUIRE COOPERATION BY THE CONTRACTOR WITH THE OWNER'S THIRD PARTY INSTALLER AS SPECIFIED IN STANDARD SPECIFICATION SECTION 7-7, COOPERATION AND COLLATERAL WORK. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS OF SUPPORT INFRASTRUCTURE FOR N.I.C. EQUIPMENT.
16. CONTRACTOR SHALL VERIFY MINIMUM 2% SITE DRAINAGE TO DRAINAGE INLETS. EXCEPTION: CROSS SLOPE OF ACCESSIBLE PATH OF TRAVEL SHALL BE 1.5% MAXIMUM PER ACCESSIBILITY ACCESS NOTE #1.
17. CONTRACTOR SHALL ENSURE ALL FLOOR FINISH MATERIALS WILL BE FLUSH WITH ADJACENT WALKING SURFACES WITH THE JOINT NOT EXCEEDING 1/4".
18. CONTRACTOR SHALL ENSURE ALL FINISH MATERIALS WILL BE FLUSH WHERE NEW FINISH SURFACE MATERIALS JOIN EXISTING TO PROVIDE SMOOTH TRANSITION.
19. SAFETY GLAZING IN HAZARDOUS LOCATIONS SUCH AS GLASS DOORS, GLAZING ADJACENT TO SUCH DOORS AND GLAZING ADJACENT TO WALKWAY SURFACES TO COMPLY WITH SECTIONS 2406 AND 2406.4. OF THE CBC, APPLICABLE EDITION.

GENERAL NOTES CONT'D

20. DOORS SHOULD NOT PROJECT MORE THAN 7 INCHES INTO THE REQUIRED CORRIDOR WIDTH WHEN FULLY OPENED OR MORE THAN ONE-HALF INTO THE REQUIRED CORRIDOR WIDTH WHEN IN ANY POSITION PER CBC SECTION 1005.7.1.
21. CONTRACTOR ACKNOWLEDGES THAT DRAWINGS ARE DIAGRAMMATIC IN NATURE AND ARE TO REPRESENT THE INTENT OF THE WORK TO BE ACCOMPLISHED. CONTRACTOR IS TO INSTALL MATERIALS AND SYSTEMS WITH EXPERIENCED SKILLED CRAFTSMEN WHO WILL BE RESPONSIBLE FOR THE INTEGRITY OF THEIR RESPECTIVE WORK. NOT EVERY DETAIL OF EACH CONDITION IS DRAWN. CONTRACTOR AND SUB-CONTRACTOR ARE RESPONSIBLE FOR COMPLETE WORKMANLIKE INSTALLATION OF ALL MATERIALS AND SYSTEMS AND WILL NEED TO PROVIDE ADDITIONAL DETAILS FOR INSTALLATION BASED ON GENERAL INFORMATION SHOWN. FOR INSTANCE, NOT EVERY WATERPROOFING OR FLASHING DETAIL FOR EVERY CONDITION IS SHOWN. CONTRACTOR IS TO PROVIDE DETAILS AND INSTALLATION FOR A COMPLETE WATERTIGHT INSTALLATION.
22. CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY AN ADDENDUM OR A CHANGE ORDER APPROVED BY THE AUTHORITY HAVING JURISDICTION.
23. GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.
24. THE FINISH SURFACE OUTSIDE EVERY EXTERIOR DOOR SHALL SLOPE NO MORE THAN 2% IN ANY DIRECTION IN THE AREA EXTENDING 66" IN FRONT OF THE DOOR AND 30" ON EACH SIDE
25. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS, INCLUDING DEFERRED SUBMITTALS AND CONSTRUCTION CHANGE APPROVAL WHEN REQUIRED. DESIGN GUIDELINES AND PERFORMANCE STANDARDS PROVIDED IN "ATTACHMENT A" ESTABLISH BASIC DESIGN CRITERIA, MINIMUM MATERIAL QUALITY AND EQUIPMENT STANDARDS. THE DESIGN AND CONSTRUCTION BY THE CONTRACTOR MUST COMPLY WITH THE REQUIREMENTS OF ALL APPLICABLE AGENCIES AND CODES HAVING JURISDICTION OVER THE PROJECT.
26. CONTRACTOR SHALL PROVIDE WEATHERSTRIPPING, CAULKING, FLASHING, AND OTHER MATERIALS AND DETAILING AS SHOWN IN THE DRAWINGS AND AS NECESSARY TO ENSURE A WATERPROOF BUILDING ENVELOPE.
27. NOTICE OF RESPONSIBILITY: INFORMATION PROVIDED IN THE DRAWINGS AND SPECIFICATIONS ARE FOR THE DESIGN BUILD TEAM ONLY TO ASSIST AND HELP IN PROVIDING A COST ESTIMATE, DESIGN CONCEPTS, AND FEES TO THE CITY OF SAN DIEGO AND THESE DOCUMENTS ARE NOT TO BE RELIED UPON FOR FINAL DESIGN. THE SELECTED (AWARDED) CONTRACTOR AND ENGINEER OF RECORD SHALL ASSUME FULL RESPONSIBILITY AND LIABILITY FOR THE FINAL DESIGN.
28. REFERENCES TO "CONTRACTOR" AND "DESIGN-BUILDER" WILL BE USED INTERCHANGEABLY.
29. PER CITY OF SAN DIEGO MUNICIPAL CODE SECTIONS 12.0104, 43.0310, 129.0104(A)(4), AND 142.0220, PERMITS ARE REQUIRED TO BE INSPECTED BY CITY INSPECTION STAFF TO ENSURE COMPLIANCE WITH ISSUED CONSTRUCTION PERMIT. THIS INCLUDES, BUT IS NOT LIMITED TO, STORM WATER COMPLIANCE INSPECTION REQUIREMENTS ASSOCIATED WITH EACH PERMIT.

PRIVATE CONTRACT

WARNING

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

PLANS FOR THE CONSTRUCTION OF BOTANICAL BUILDING AND GARDENS PHASE 2

GENERAL NOTES

CONSULTANT RNT ARCHITECTS

COMPANY ADDRESS: RNT ARCHITECTS, 363 FIFTH AVENUE, SAN DIEGO, CA 92101

COMPANY PHONE NUMBER: 619-233-1023

COMPANY EMAIL DATE OF: DIAZ@RNTARCHITECTS.COM

SIGNING:

LICENSED ARCHITECT RAUL F. DIAZ C-22987 31 MAY 2025 RENEWAL DATE STATE OF CALIFORNIA

SPEC. NO

The City of SAN DIEGO

FOR CITY APPROVAL

DEVELOPMENT SERVICES DEPARTMENT

SHEET 22 OF 61 SHEETS

APPROVED: FOR CITY ENGINEER DATE

DESCRIPTION	BY	APPROVED	DATE
ORIGINAL	SP		
AS BUILTS			

CONTRACTOR DATE STARTED

INSPECTOR DATE COMPLETED

PMT NO.

PRJ NO 1119957

1847-6266 NAD83 COORDINATES

207-1706 LAMBERT COORDINATES

DRAWING NO. AG-02

XXXX- 22 - D

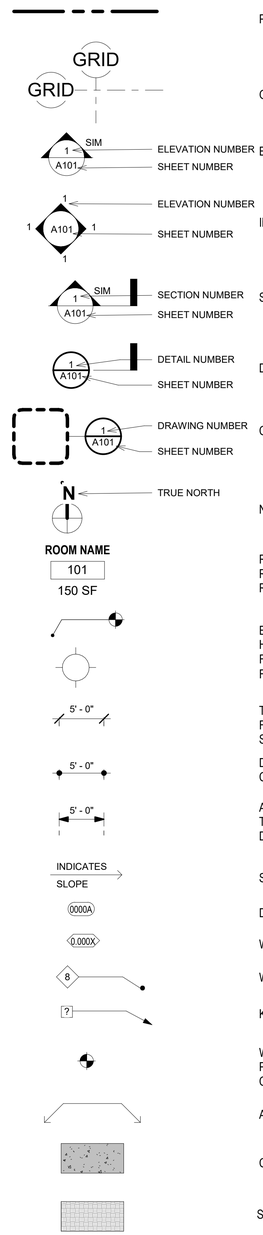
ABBREVIATIONS

DIA.	DIAMETER
&	AND
C	CENTERLINE
#	POUND OR NUMBER
A.B.	ANCHOR BOLT
ABV	ABOVE
ACOUST.	ACOUSTICAL
A.C.	ASPHALT CONCRETE
ACC.	ACCESSIBLE
ADJ.	ADJUSTABLE
A.F.F.	ABOVE FINISH FLOOR
ALUM.	ALUMINUM
APC	ACOUSTICAL PANEL CEILING
ARCH.	ARCHITECTURAL
BATT.	BATTEN
BD	BOARD
BLDG	BUILDING
BLKG	BLOCKING
BM	BEAM
B.O.	BOTTOM OF
BOT.	BOTTOM
BTW	BETWEEN
CAB.	CABINET
CALGREEN	CALIFORNIA GREEN BUILDING STANDARDS CODE
C.B.	CATCH BASIN
CBC	CALIFORNIA BUILDING CODE
CFOI	CONTRACTOR-FURNISHED OWNER-INSTALLED
C.I.P.	CAST IN PLACE
C.J.	CONTROL JOINT
C.L.	CHAIN LINK
CLG	CEILING
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
C.O.	CLEAN OUT
COL.	COLUMN
CONC.	CONCRETE
CONSTR.	CONSTRUCTION
CONT.	CONTINUOUS
CORR.	CORRIDOR
DBL	DOUBLE
D.F.	DOUGLAS FIR
D.F.	DRINKING FOUNTAIN
D.G.	DECOMPOSED GRANITE
DIA.	DIAMETER
DIAG.	DIAGONAL
DIM.	DIMENSION
DN	DOWN
DR	DOOR
DS	DOWNSPOUT
DWG	DRAWING
(E)	EXISTING
EA	EACH
E.J.	EXPANSION JOINT
ELECT.	ELECTRICAL
ELEV.	ELEVATION
ENCL.	ENCLOSURE
EQ.	EQUAL
EQUIP.	EQUIPMENT
EXIST.	EXISTING
EXT.	EXTERIOR
F.B.	FIRE BLANKET
F.D.	FLOOR DRAIN
FNT	FOUNTAIN
F.E.	FIRE EXTINGUISHER
F.E.C.	FIRE EXTINGUISHER CABINET
F.F.	FINISH FLOOR
FIN.	FINISH
FLASH'G	FLASHING
FLR	FLOOR
F.O.C.	FACE OF CONTENT
F.O.F.	FACE OF FINISH
F.O.M.	FACE OF MASONRY
F.O.S.	FACE OF STUD
FRAM'G	FRAMING
FRP	FIBERGLASS REINFORCED POLYESTER

F.F.	FINISH FLOOR
FIN.	FINISH
FLASH'G	FLASHING
FLR	FLOOR
F.O.C.	FACE OF CONTENT
F.O.F.	FACE OF FINISH
F.O.M.	FACE OF MASONRY
F.O.S.	FACE OF STUD
FRAM'G	FRAMING
FRP	FIBERGLASS REINFORCED POLYESTER
F.S.	FINISH SURFACE
FT	FOOT OR FEET
FTG.	FOOTING
F.V.	FIELD VERIFY
GA.	GAUGE
GALV.	GALVANIZED
G.I.	GALVANIZED IRON
GL.	GLASS
GLB	GLU-LAM BEAM
GOVN'T	GOVERNMENT
GYP. BD.	GYPSUM BOARD
HC	HANDICAPPED
HD	HOLDDOWN
H.D.G.	HOT DIPPED GALVANIZED
HDWR	HARDWARE
HDR.	HEADER
HGR	HANGER
HORIZ.	HORIZONTAL
H.M.	HOLLOW METAL
HPL	HIGH PRESSURE LAMINATE
HR	HOUR
HT	HEIGHT
INSUL.	INSULATION
INT.	INTERIOR
I.S.A.	INTERNATIONAL SYMBOL OF ACCESSIBILITY
JT	JOINT
JST	JOIST
LAM.	LAMINATE
LAV.	LAVATORY
LT	LIGHT
MFR	MANUFACTURER
MAT'L	MATERIAL
MAX.	MAXIMUM
M.B.	MACHINE BOLT
MECH.	MECHANICAL
MIN	MINIMUM
MIN	MINUTE
MISC.	MISCELLANEOUS
M.O.	MASONRY OPENING
M.R.	MOISTURE-RESISTANT
MTL.	METAL
(N)	NEW
N.I.C.	NOT IN CONTRACT
NO. OR #	NUMBER
N.T.S.	NOT TO SCALE
O/	OVER
O.C.	ON CENTER
OFCI	OWNER-FURNISHED CONTRACTOR-INSTALLED
OFOI	OWNER-FURNISHED OWNER-INSTALLED
O.H.	OPPOSITE HAND
OPNG	OPENING
OPP.	OPPOSITE
PB	PULL-BOX
PERF.	PERFORATED
PL.	PLASTIC
PLAST.	PLASTER
PLYWD	PLYWOOD
PR	PAIR
PROJ.	PROJECTION
P.T.D.F.	PRESSURE-TREATED DOUGLAS FIR

R OR RAD	RADIUS
R.D.	ROOF DRAIN
REF.	REFRIGERATOR
REFL.	REFLECTED
REINF.	REINFORCED OR REINFORCEMENT
REQ.	REQUIRED
RET.	RETAINING
RF	ROOF
RM	ROOM
ROOF'G	ROOFING
R.R.	RESTROOM
S.C.	SOLID CORE
SCHED.	SCHEDULE
SF	SQUARE FOOT OR SQUARE FEET
SHT'G	SHEATHING
SHT	SHEET
SIM.	SIMILAR
S.J.	SAWCUT JOINT
S.M.S.	SHEET METAL SCREW
S.O.G.	SLAB ON GRADE
SQ.	SQUARE
S.S.	STAINLESS STEEL
STD.	STANDARD
STL	STEEL
STOR.	STORAGE
STRUCT.	STRUCTURAL
SUSP.	SUSPENDED
T&B	TOP & BOTTOM
T&G	TONGUE AND GROOVE
TEL.	TELEPHONE
TEMP.	TEMPERED
TERM.	TERMINATE, TERMINATION
T.O.B	TOP OF BEAM
T.O.G.	TOP OF GRATE
T.O.	TOP OF
T.O.W.	TOP OF WALL
TYP.	TYPICAL
U.O.N.	UNLESS OTHERWISE NOTED
U.N.O	UNLESS NOTED OTHERWISE
UFC	UNIFIED FACILITIES CRITERIA
VCT	VINYL COMPOSITION TILE
VERT.	VERTICAL
W/	WITH
WC	WATER CLOSET
WD	WOOD
W.J.	WEAKENED JOINT
W.O.	WHERE OCCURS
WP	WATERPROOF
W.R.	WATER RESISTANT
WT	WEIGHT
W.W.F.	WELDED WIRE FABRIC

SYMBOLS



LEGEND - FLOOR PLAN

- W1 — WALL TYPES, REFER TO AD-101 SERIES
- 4" STUD WALL
- 6" STUD WALL
- # — INDICATES BUILDING SIGNAGE, REFER TO AD-701 & AD-702
- FD — FLOOR DRAIN, REFER TO PLUMBING
- FLOOR BOX, REFER TO ELECTRICAL
- 000X — DOOR PER DOOR SCHEDULE, REFER TO A-701
- 000X — WINDOW REFER TO WINDOW TYPES A-701
- ILLUMINATED DIRECTIONAL EXIT SIGN
- FEC-1 — FIRE EXTINGUISHER CABINET, RECESSED, REFER TO AD-111; FIRE EXTINGUISHER TO HAVE MIN. RATING OF 2A:10B:C.
- 1-HOUR RATED WALL

LEGEND - ROOF PLAN

- R1 — - ROOF ASSEMBLY TYPE, FOR ROOF ASSEMBLY INFORMATION REFER TO SHEET AD-501
- - ROOF DRAIN AND OVERFLOW REFER TO 8 & 13/AD-501
- - EXTENT OF ROOFING MEMBRANE, REFER TO ROOFING ASSEMBLY ON AD-501
- - EXTENT OF TILE ROOFING, REFER TO ROOFING ASSEMBLY ON AD-501

LEGEND - SITE PLAN

- DECOMPOSED GRANITE, REFER TO LANDSCAPE DRAWINGS
- CONCRETE PAVING, REFER TO LANDSCAPE DRAWINGS
- CONCRETE SLAB ON GRADE, REFER TO STRUCTURAL DRAWINGS
- 8X8 QUARRY TILE, REFER TO ____

LEGEND - CEILING PLAN

- EXPOSED METAL DECK
- DOWN LIGHT - RECESSED CAN
- SURFACE MOUNTED LIGHT FIXTURE
- RECESSED LIGHT FIXURE - 2X4
- RECESSED LIGHT FIXURE - 2X2
- RECESSED LIGHT FIXURE - .LINEAR
- RETURN AIR GRILL
- SUPPLY AIRE DIFFUSER
- EXHAUST FAN REGISTER
- 1 HOUR RATED WALL, OCCUPANCY SEPARATION
- EXIT LIGHT - REFER TO ELECTRICAL DRAWINGS
- SMOKE DETECTOR - REFER TO ELECTRICAL DRAWINGS
- M — CEILING MOUNTED MOTION SENSOR - REFER TO ELECTRICAL DRAWINGS
- HORN/STROBE - REFER TO ELECTRICAL DRAWINGS
- HEAT DETECTOR - REFER TO ELECTRICAL DRAWINGS
- STROBE - REFER TO ELECTRICAL DRAWINGS
- CEILING MOUNTED SECURITY MOTION SENSOR - REFER TO ELECTRICAL DRAWINGS
- FIRE SPRINKLER - DEFERRED SUBMITTAL
- SHORT THROW PROJECTOR, WALL MOUNTED, N.I.C.
- CEILING MOUNTED PROJECTOR, N.I.C.

PRIVATE CONTRACT

WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

PLANS FOR THE CONSTRUCTION OF BOTANICAL BUILDING AND GARDENS PHASE 2
ABBREVIATIONS AND SYMBOLS

CONSULTANT RNT ARCHITECTS

COMPANY ADDRESS: RNT ARCHITECTS, 363 FIFTH AVENUE, SAN DIEGO, CA 92101

COMPANY PHONE NUMBER: 619-233-1023

COMPANY EMAIL DATE OF: DIAZ@RNTARCHITECTS.COM

SIGNING:

LICENSED ARCHITECT
RAUL F. DIAZ
C-22987
31 MAY 2025
RENEWAL DATE
STATE OF CALIFORNIA

SPEC. NO

The City of SAN DIEGO

FOR CITY APPROVAL

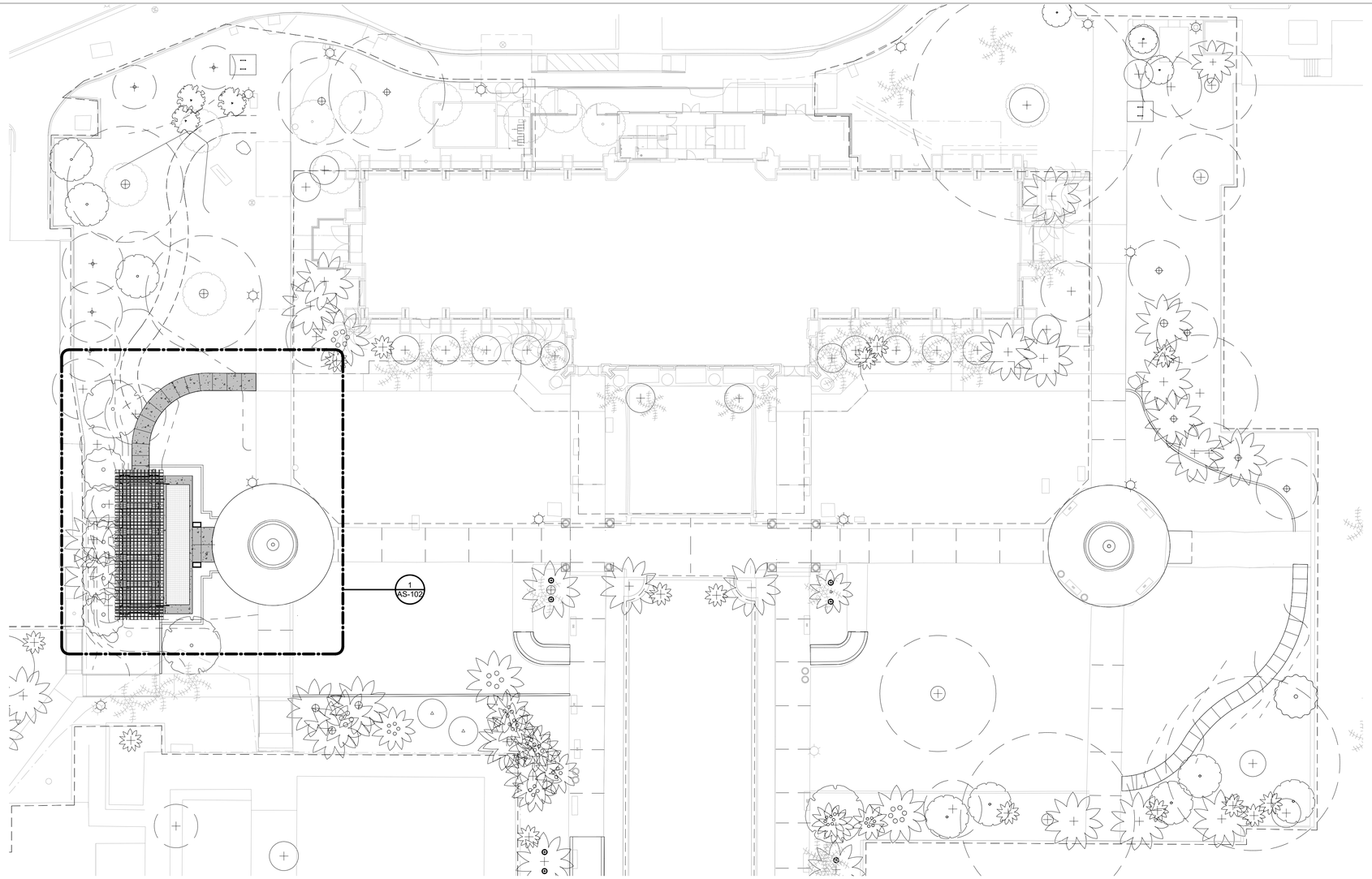
DEVELOPMENT SERVICES DEPARTMENT
SHEET 23 OF 61 SHEETS

APPROVED: FOR CITY ENGINEER DATE

DESCRIPTION	BY	APPROVED	DATE
ORIGINAL	SP		
AS BUILTS			

CONTRACTOR DATE STARTED
INSPECTOR DATE COMPLETED

PMT NO. ____
PRJ NO 1119957
1847-6266 NAD83 COORDINATES
207-1706 LAMBERT COORDINATES
DRAWING NO. AG-03
XXXX- 23 - D



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

0 20 40 60
1" = 20' - 0"

N

GENERAL NOTES

1. REFER TO SHEETS AG001 - AG004 FOR GENERAL NOTES AND LEGENDS.
2. REFER TO A-101 FOR ADDITIONAL INFORMATION.

PRIVATE CONTRACT

WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2
OVERALL SITE PLAN

CONSULTANT RNT ARCHITECTS

COMPANY ADDRESS: RNT ARCHITECTS, 363 FIFTH AVENUE, SAN DIEGO, CA 92101

COMPANY PHONE NUMBER: 619-233-1023

COMPANY EMAIL DATE OF: DIAZ@RNTARCHITECTS.COM

SIGNING:

LICENSED ARCHITECT
PAUL F. DIAZ
Paul Diaz
C-22987
31 MAY 2025
RENEWAL DATE
STATE OF CALIFORNIA

SPEC. NO

The City of SAN DIEGO

FOR CITY APPROVAL

DEVELOPMENT SERVICES DEPARTMENT
SHEET 24 OF 61 SHEETS

APPROVED:
FOR CITY ENGINEER DATE

DESCRIPTION	BY	APPROVED	DATE
ORIGINAL	SP		
AS BUILTS			

CONTRACTOR DATE STARTED
INSPECTOR DATE COMPLETED

PMT NO.

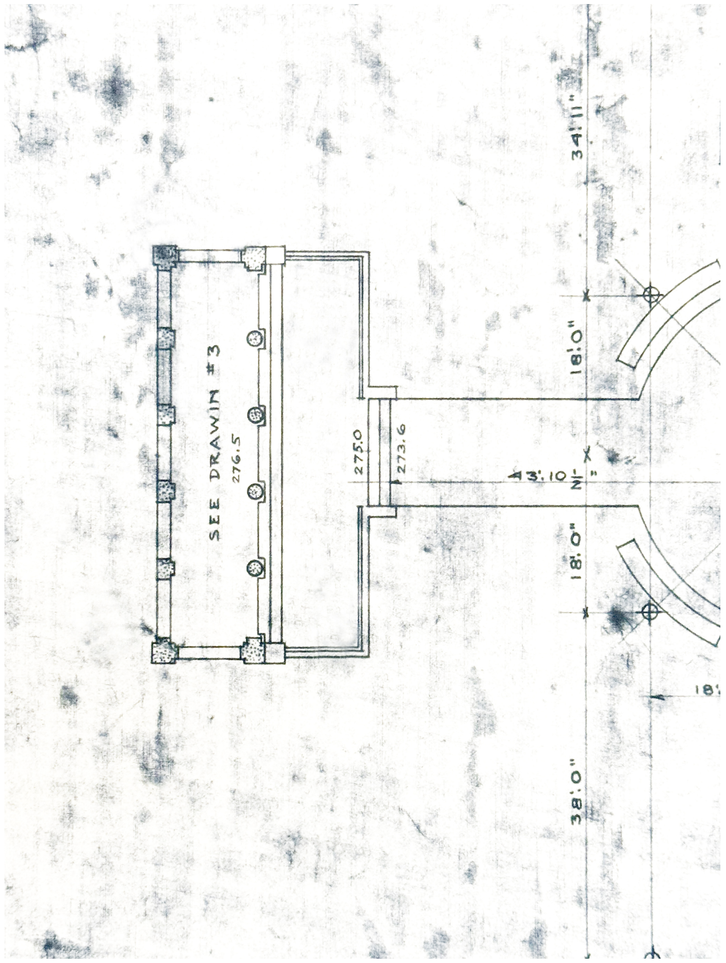
PRJ NO *1119957*

1847-6266
NAD83 COORDINATES

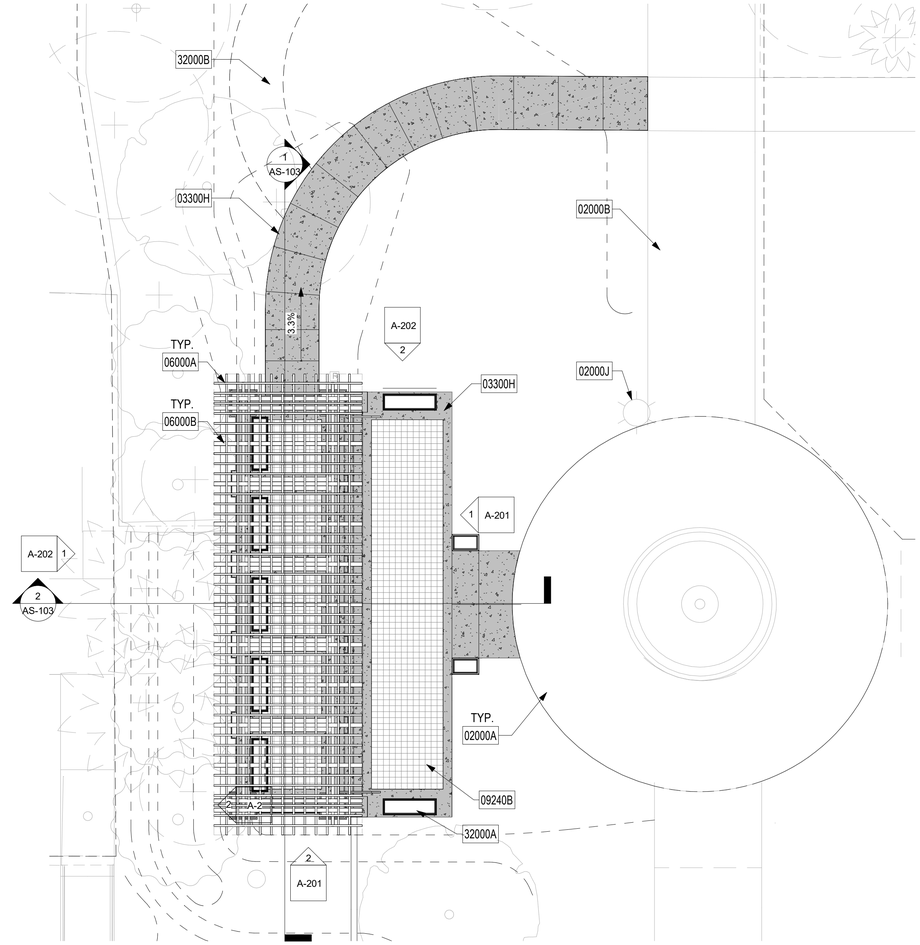
207-1706
LAMBERT COORDINATES

DRAWING NO.
XXXX- 24 - D

AS-101



R1 1915 PERGOLA ORIGINAL DRAWING
(FOR REFERENCE ONLY)



1 ENLARGED SITE PLAN
1/8" = 1'-0"

0 8 16 24
1" = 8'- 0"

N

GENERAL NOTES

1. REFER TO SHEETS AG001 - AG004 FOR GENERAL NOTES AND LEGENDS.
2. REFER TO A-101 FOR ADDITIONAL INFORMATION.

KEYNOTES

02000A	PROTECT (E) PRE-CAST CONCRETE BENCHES
02000B	PROTECT (E) CONCRETE PAVING
02000J	PROTECT (E) LIGHT
03300H	CONCRETE PAVING, REFER TO LANDSCAPE DRAWINGS
06000A	1-1/2" X 2-1/2" WOOD PURLIN, REFER TO STRUCTURAL DRAWINGS
06000B	7-1/2" X 5-1/2" WOOD JOIST, REFER TO 8/AD-801 AND STRUCTURAL DRAWINGS
09240B	8"X8" QUARRY TILE, DONOR RECOGNITION WHERE OCCURS, REFER TO 3/AD-701
32000A	PRE-CAST CONCRETE BENCHES WITH DONOR RECOGNITION, REFER TO LANDSCAPE DRAWINGS
32000B	DECOMPOSED GRANITE, REFER TO LANDSCAPE DRAWINGS

PRIVATE CONTRACT

WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2
ENLARGED SITE PLAN

CONSULTANT RNT ARCHITECTS

COMPANY ADDRESS: RNT ARCHITECTS, 363 FIFTH AVENUE, SAN DIEGO, CA 92101
COMPANY PHONE NUMBER: 619-233-1023
COMPANY EMAIL DATE OF: DIAZ@RNTARCHITECTS.COM
SIGNING:

LICENSED ARCHITECT
PAUL F. DIAZ
C-22987
31 MAY 2025
RENEWAL DATE
STATE OF CALIFORNIA

SPEC. NO

The City of SAN DIEGO

FOR CITY APPROVAL

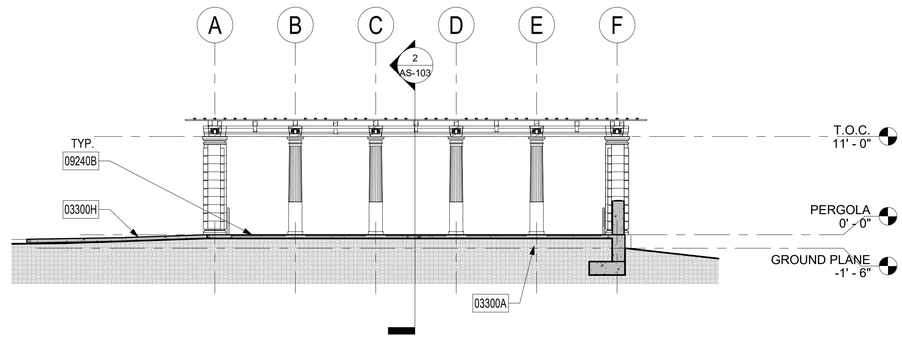
DEVELOPMENT SERVICES DEPARTMENT
SHEET 25 OF 61 SHEETS

APPROVED:
FOR CITY ENGINEER DATE

DESCRIPTION	BY	APPROVED	DATE
ORIGINAL	SP		
AS BUILTS			

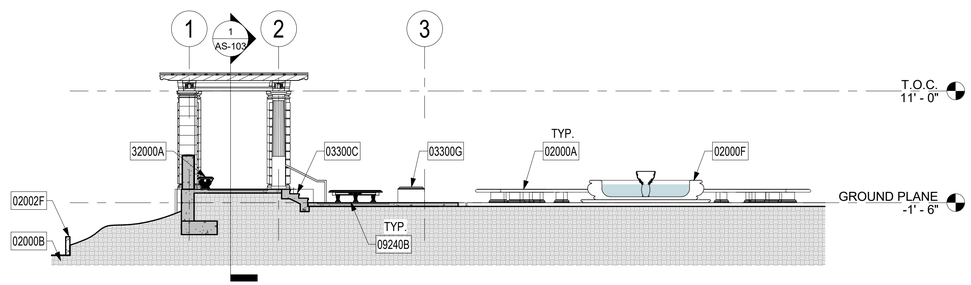
CONTRACTOR DATE STARTED
INSPECTOR DATE COMPLETED

PMT NO.
PRJ NO 1119957
1847-6266 NAD83 COORDINATES
207-1706 LAMBERT COORDINATES
DRAWING NO. AS-102
XXXX- 25 - D



1 SITE SECTION - NORTH SOUTH
1/8" = 1'-0"

0 8 16 24
1" = 8'- 0"



2 SITE SECTION - EAST WEST
1/8" = 1'-0"

0 8 16 24
1" = 8'- 0"

GENERAL NOTES

1. REFER TO SHEETS AG001 - AG004 FOR GENERAL NOTES AND LEGENDS.
2. REFER TO A-101 FOR ADDITIONAL INFORMATION.

KEYNOTES

02000A	PROTECT (E) PRE-CAST CONCRETE BENCHES
02000B	PROTECT (E) CONCRETE PAVING
02000F	PROTECT (E) WATER FOUNTAIN
02002F	PROTECT (E) WALL
03300A	CONCRETE, CAST IN PLACE SLAB ON GRADE, REFER TO 3/S501
03300C	CONCRETE, CAST IN PLACE STAIRS, REFER TO AD-902 AND 7/S501
03300G	CAST-IN-PLACE CONCRETE PLINTH, REFER TO 4/AD-701
03300H	CONCRETE PAVING, REFER TO LANDSCAPE DRAWINGS
09240B	8"X8" QUARRY TILE, DONOR RECOGNITION WHERE OCCURS, REFER TO 3/AD-701
32000A	PRE-CAST CONCRETE BENCHES WITH DONOR RECOGNITION, REFER TO LANDSCAPE DRAWINGS

PRIVATE CONTRACT

WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2
SITE SECTIONS

CONSULTANT RNT ARCHITECTS

COMPANY ADDRESS: RNT ARCHITECTS, 363 FIFTH AVENUE, SAN DIEGO, CA 92101

COMPANY PHONE NUMBER: 619-233-1023

COMPANY EMAIL DATE OF: DIAZ@RNTARCHITECTS.COM

SIGNING:

LICENSED ARCHITECT
PAUL F. DIAZ
Paul Diaz
C-22987
31 MAY 2025
RENEWAL DATE
STATE OF CALIFORNIA

SPEC. NO

The City of SAN DIEGO

FOR CITY APPROVAL

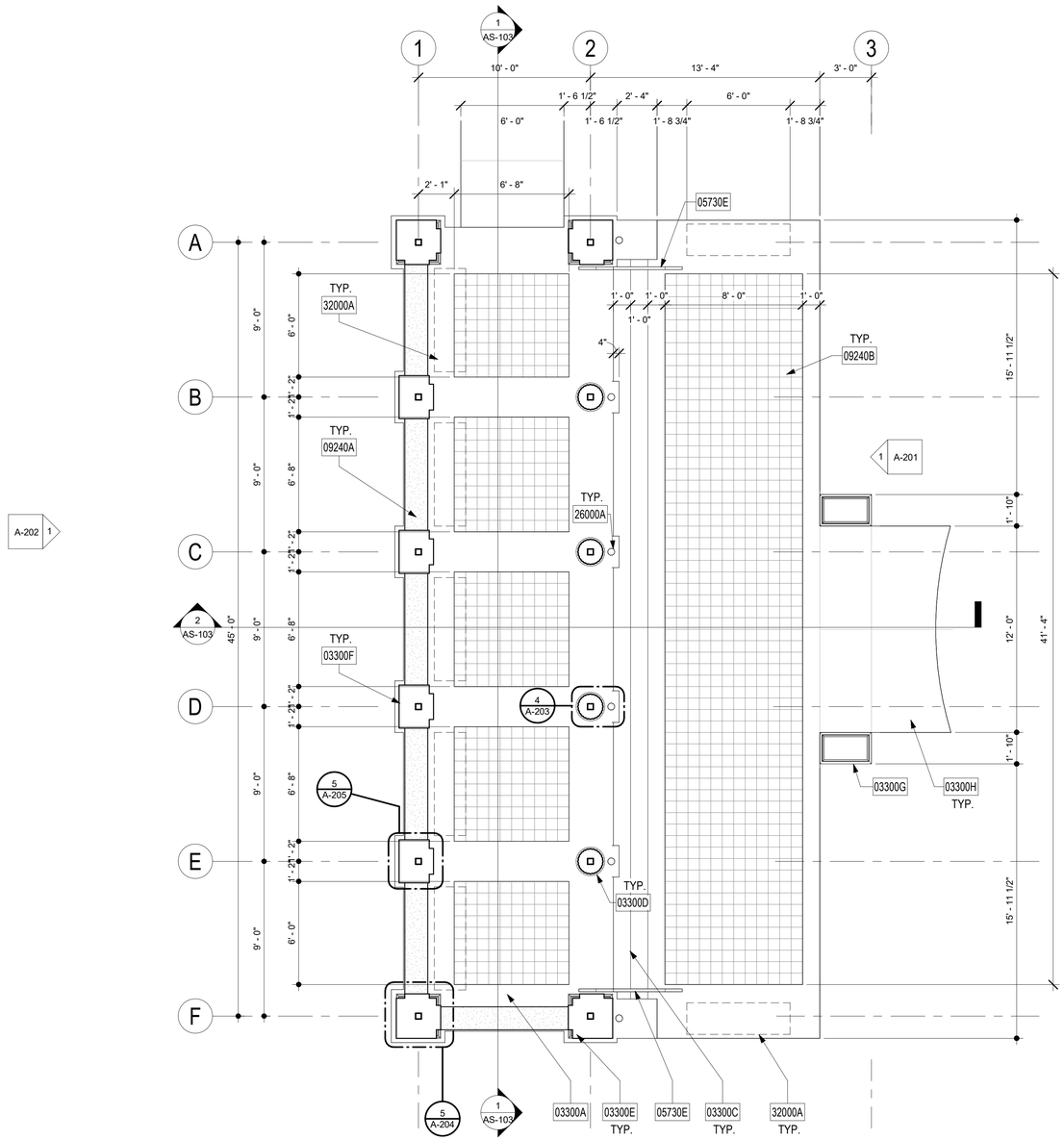
DEVELOPMENT SERVICES DEPARTMENT
SHEET 26 OF 61 SHEETS

APPROVED:
FOR CITY ENGINEER DATE

DESCRIPTION	BY	APPROVED	DATE
ORIGINAL	SP		
AS BUILTS			

CONTRACTOR DATE STARTED
INSPECTOR DATE COMPLETED

PMT NO.
PRJ NO 1119957
1847-6266
NAD83 COORDINATES
207-1706
LAMBERT COORDINATES
DRAWING NO.
XXXX- 26 - D
AS-103



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

0 4 8 12
1" = 4'- 0"

N

GENERAL NOTES

1. REFER TO SHEETS AG001 - AG004 FOR GENERAL NOTES AND LEGENDS.
2. REFER TO A-101 FOR ADDITIONAL INFORMATION.

KEYNOTES

03300A	CONCRETE, CAST IN PLACE SLAB ON GRADE, REFER TO 3/S501
03300C	CONCRETE, CAST IN PLACE STAIRS, REFER TO AD-902 AND 7/S501
03300D	PRE-CAST CONCRETE COLUMN 1, REFER TO A-202
03300E	PRE-CAST CONCRETE COLUMN 2, REFER TO A-203
03300F	PRE-CAST CONCRETE COLUMN 3, REFER TO A-204
03300G	CAST-IN-PLACE CONCRETE PLINTH, REFER TO 4/AD-701
03300H	CONCRETE PAVING, REFER TO LANDSCAPE DRAWINGS
05730A	STEEL COLUMN, REFER TO 2, 3, 7 AND 8/S801
05730E	HOT-DIPPED GALVANIZED STEEL HANDRAIL, REFER TO AD-901 AND 5 AND 6/S501
09240A	PORTLAND CEMENT PLASTER, SAND FINISH, PLSTR-1
09240B	8"X8" QUARRY TILE, DONOR RECOGNITION WHERE OCCURS, REFER TO 3/AD-701
26000A	LIGHT FIXTURE, REFER TO ELECTRICAL DRAWINGS
32000A	PRE-CAST CONCRETE BENCHES WITH DONOR RECOGNITION, REFER TO LANDSCAPE DRAWINGS

PRIVATE CONTRACT

WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2
FLOOR PLAN

CONSULTANT RNT ARCHITECTS

COMPANY ADDRESS: RNT ARCHITECTS, 363 FIFTH AVENUE, SAN DIEGO, CA 92101

COMPANY PHONE NUMBER: 619-233-1023

COMPANY EMAIL DATE OF: DIAZ@RNTARCHITECTS.COM

SIGNING:

LICENSED ARCHITECT
RAUL F. DIAZ
Raul Diaz
C-22987
31 MAY 2025
RENEWAL DATE
STATE OF CALIFORNIA

SPEC. NO

The City of SAN DIEGO

FOR CITY APPROVAL

DEVELOPMENT SERVICES DEPARTMENT
SHEET 27 OF 61 SHEETS

APPROVED:
FOR CITY ENGINEER DATE

DESCRIPTION	BY	APPROVED	DATE
ORIGINAL	SP		

AS BUILTS

CONTRACTOR DATE STARTED
INSPECTOR DATE COMPLETED

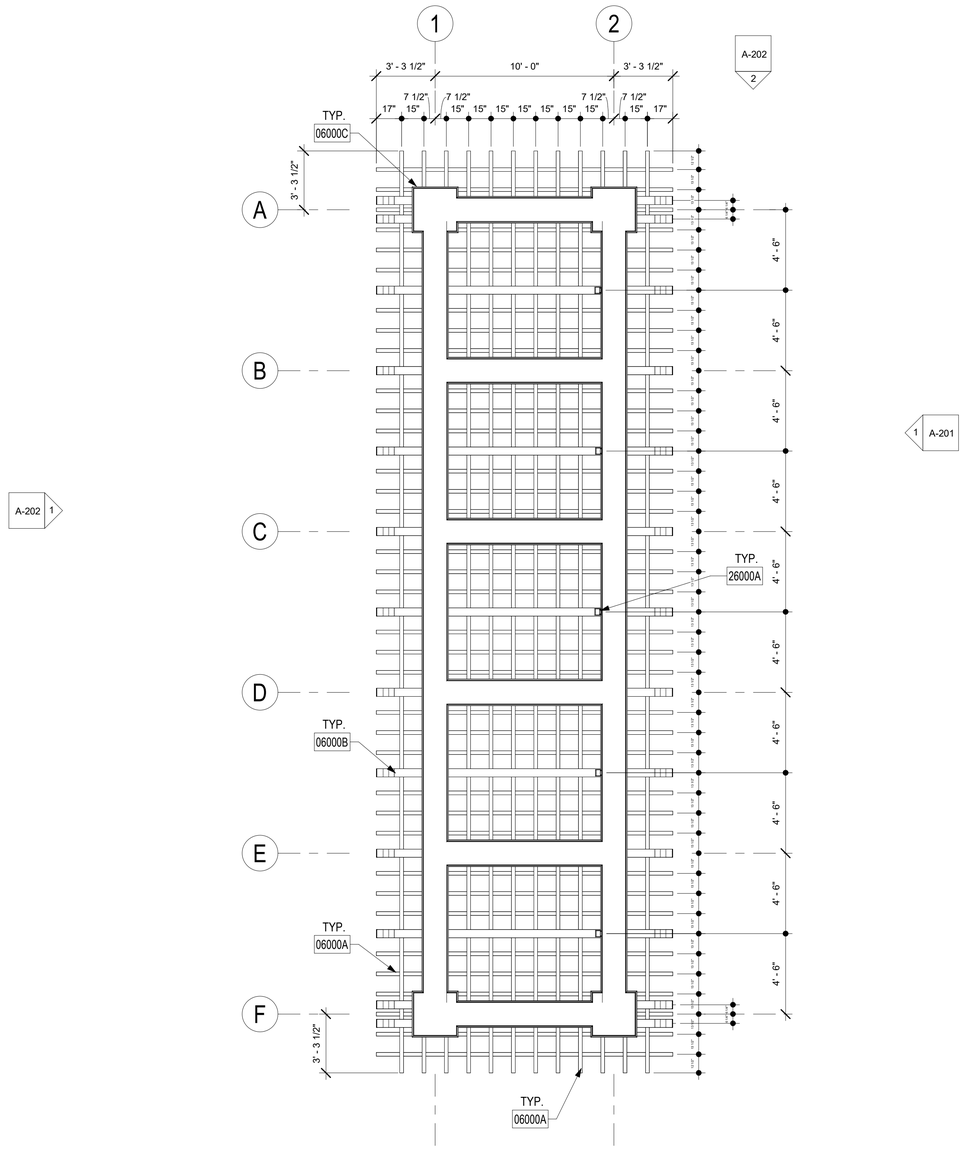
PMT NO.

PRJ NO 1119957

1847-6266
NAD83 COORDINATES

207-1706
LAMBERT COORDINATES

DRAWING NO.
XXXX- 27 - D
A-101



1 Level 1 - REFLECTED CEILING PLAN
1/4" = 1'-0"

0 4 8 12
1" = 4'- 0"

N

GENERAL NOTES

1. REFER TO SHEETS AG001 - AG004 FOR GENERAL NOTES AND LEGENDS.
2. REFER TO A-101 FOR ADDITIONAL INFORMATION.

KEYNOTES

05730A	STEEL COLUMN, REFER TO 2, 3, 7 AND 8/S801
06000A	1-1/2" X 2-1/2" WOOD PURLIN, REFER TO STRUCTURAL DRAWINGS
06000B	7-1/2" X 5-1/2" WOOD JOIST, REFER TO 8/AD-801 AND STRUCTURAL DRAWINGS
06000C	COMPOSITE WOOD BEAM, MITERED CORNERS, REFER TO 2 AND 4/AD-801 AND STRUCTURAL DRAWINGS
26000A	LIGHT FIXTURE, REFER TO ELECTRICAL DRAWINGS

PRIVATE CONTRACT

WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2
REFLECTED CEILING PLAN

CONSULTANT RNT ARCHITECTS

COMPANY ADDRESS: RNT ARCHITECTS, 363 FIFTH AVENUE, SAN DIEGO, CA 92101

COMPANY PHONE NUMBER: 619-233-1023

COMPANY EMAIL DATE OF: DIAZ@RNTARCHITECTS.COM

SIGNING:

LICENSED ARCHITECT
RAUL F. DIAZ
C-22987
31 MAY 2025
RENEWAL DATE
STATE OF CALIFORNIA

SPEC. NO

The City of SAN DIEGO

FOR CITY APPROVAL

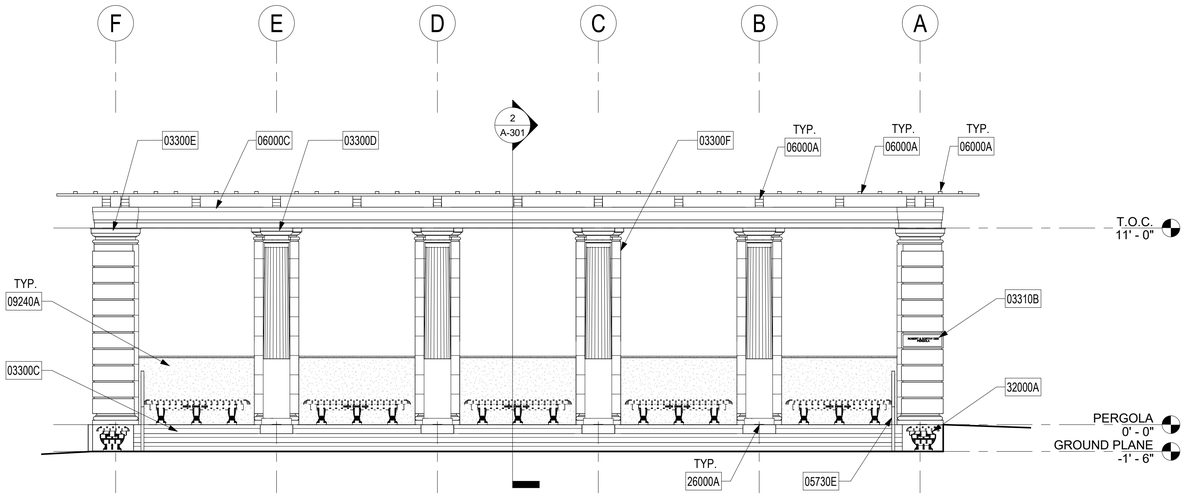
DEVELOPMENT SERVICES DEPARTMENT
SHEET 28 OF 61 SHEETS

APPROVED:
FOR CITY ENGINEER DATE

DESCRIPTION	BY	APPROVED	DATE
ORIGINAL	SP		
AS BUILTS			

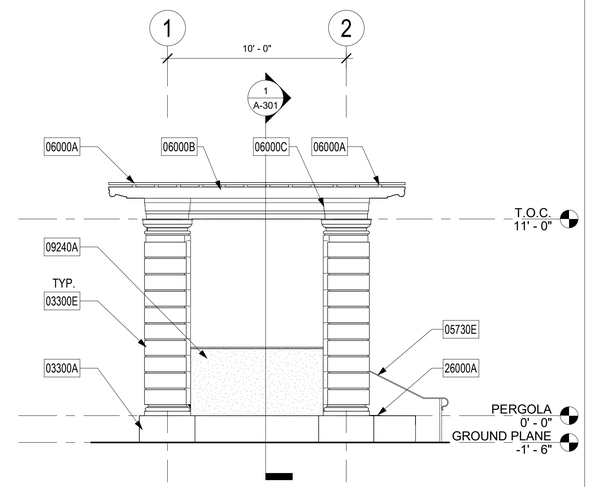
CONTRACTOR DATE STARTED
INSPECTOR DATE COMPLETED

PMT NO.
PRJ NO 1119957
1847-6266
NAD83 COORDINATES
207-1706
LAMBERT COORDINATES
DRAWING NO.
XXXX- 28 - D
A-102



1 EAST ELEVATION
1/4" = 1'-0"

0 4 8 12
1" = 4'- 0"



2 SOUTH ELEVATION
1/4" = 1'-0"

0 4 8 12
1" = 4'- 0"

R2 INSIDE THE 1915 PERGOLA
(FOR REFERENCE ONLY)

R3 EAST ELEVATION OF THE 1915 PERGOLA
(FOR REFERENCE ONLY)

GENERAL NOTES

1. REFER TO SHEETS AG001 - AG004 FOR GENERAL NOTES AND LEGENDS.
2. REFER TO A-101 FOR ADDITIONAL INFORMATION.

KEYNOTES

03300A	CONCRETE, CAST IN PLACE SLAB ON GRADE, REFER TO 3/S501
03300C	CONCRETE, CAST IN PLACE STAIRS, REFER TO AD-902 AND 7/S501
03300D	PRE-CAST CONCRETE COLUMN 1, REFER TO A-202
03300E	PRE-CAST CONCRETE COLUMN 2, REFER TO A-203
03300F	PRE-CAST CONCRETE COLUMN 3, REFER TO A-204
03310B	DONOR RECOGNICTION, ETCHED IN PRE-CAST CONCRETE COLUMN 2, WHERE OCCURS
05730E	HOT-DIPPED GALVANIZED STEEL HANDRAIL, REFER TO AD-901 AND 5 AND 6/S501
06000A	1-1/2" X 2-1/2" WOOD PURLIN, REFER TO STRUCTURAL DRAWINGS
06000B	7-1/2" X 5-1/2" WOOD JOIST, REFER TO 8/AD-801 AND STRUCTURAL DRAWINGS
06000C	COMPOSITE WOOD BEAM, MITERED CORNERS, REFER TO 2 AND 4/AD-801 AND STRUCTURAL DRAWINGS
09240A	PORTLAND CEMENT PLASTER, SAND FINISH, PLSTR-1
26000A	LIGHT FIXTURE, REFER TO ELECTRICAL DRAWINGS
32000A	PRE-CAST CONCRETE BENCHES WITH DONOR RECOGNITION, REFER TO LANDSCAPE DRAWINGS

PRIVATE CONTRACT

WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2
ELEVATIONS

CONSULTANT RNT ARCHITECTS

COMPANY ADDRESS: RNT ARCHITECTS, 363 FIFTH AVENUE, SAN DIEGO, CA 92101

COMPANY PHONE NUMBER: 619-233-1023

COMPANY EMAIL DATE OF: DIAZ@RNTARCHITECTS.COM

SIGNING:

LICENSED ARCHITECT
RAUL F. DIAZ
Raul Diaz
C-22987
31 MAY 2025
RENEWAL DATE
STATE OF CALIFORNIA

SPEC. NO

The City of SAN DIEGO

FOR CITY APPROVAL

DEVELOPMENT SERVICES DEPARTMENT
SHEET 29 OF 61 SHEETS

APPROVED:
FOR CITY ENGINEER DATE

DESCRIPTION	BY	APPROVED	DATE
ORIGINAL	SP		

AS BUILTS

CONTRACTOR DATE STARTED
INSPECTOR DATE COMPLETED

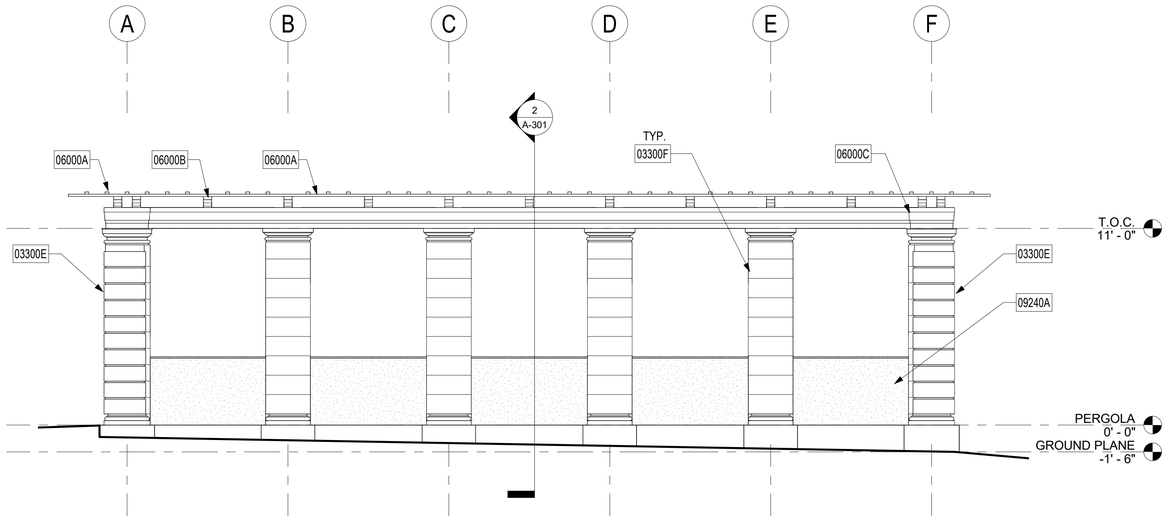
PMT NO.

PRJ NO 1119957

1847-6266
NAD83 COORDINATES

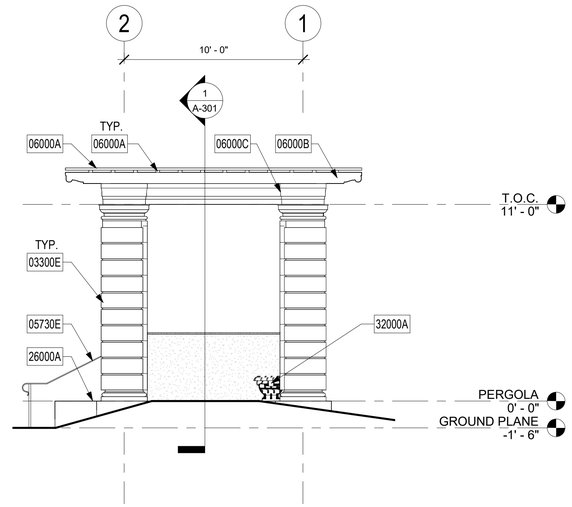
207-1706
LAMBERT COORDINATES

DRAWING NO.
XXXX- 29 - D
A-201



1 WEST ELEVATION
1/4" = 1'-0"

0 4 8 12
1" = 4'- 0"



2 NORTH ELEVATION
1/4" = 1'-0"

0 4 8 12
1" = 4'- 0"

GENERAL NOTES

1. REFER TO SHEETS AG001 - AG004 FOR GENERAL NOTES AND LEGENDS.
2. REFER TO A-101 FOR ADDITIONAL INFORMATION.

KEYNOTES

03300E	PRE-CAST CONCRETE COLUMN 2, REFER TO A-203
03300F	PRE-CAST CONCRETE COLUMN 3, REFER TO A-204
05730E	HOT-DIPPED GALVANIZED STEEL HANDRAIL, REFER TO AD-901 AND 5 AND 6/S501
06000A	1-1/2" X 2-1/2" WOOD PURLIN, REFER TO STRUCTURAL DRAWINGS
06000B	7-1/2" X 5-1/2" WOOD JOIST, REFER TO 8/AD-801 AND STRUCTURAL DRAWINGS
06000C	COMPOSITE WOOD BEAM, MITERED CORNERS, REFER TO 2 AND 4/AD-801 AND STRUCTURAL DRAWINGS
09240A	PORTLAND CEMENT PLASTER, SAND FINISH, PLSTR-1
26000A	LIGHT FIXTURE, REFER TO ELECTRICAL DRAWINGS
32000A	PRE-CAST CONCRETE BENCHES WITH DONOR RECOGNITION, REFER TO LANDSCAPE DRAWINGS

PRIVATE CONTRACT

WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2
ELEVATIONS

CONSULTANT RNT ARCHITECTS

COMPANY ADDRESS: RNT ARCHITECTS, 363 FIFTH AVENUE, SAN DIEGO, CA 92101
COMPANY PHONE NUMBER: 619-233-1023
COMPANY EMAIL DATE OF: DIAZ@RNTARCHITECTS.COM

SIGNING:
LICENSED ARCHITECT
RAUL F. DIAZ
C-22987
31 MAY 2025
RENEWAL DATE
STATE OF CALIFORNIA

SPEC. NO

The City of SAN DIEGO

FOR CITY APPROVAL

DEVELOPMENT SERVICES DEPARTMENT
SHEET 30 OF 61 SHEETS

APPROVED:
FOR CITY ENGINEER DATE

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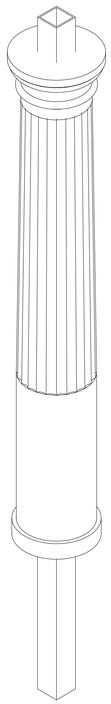
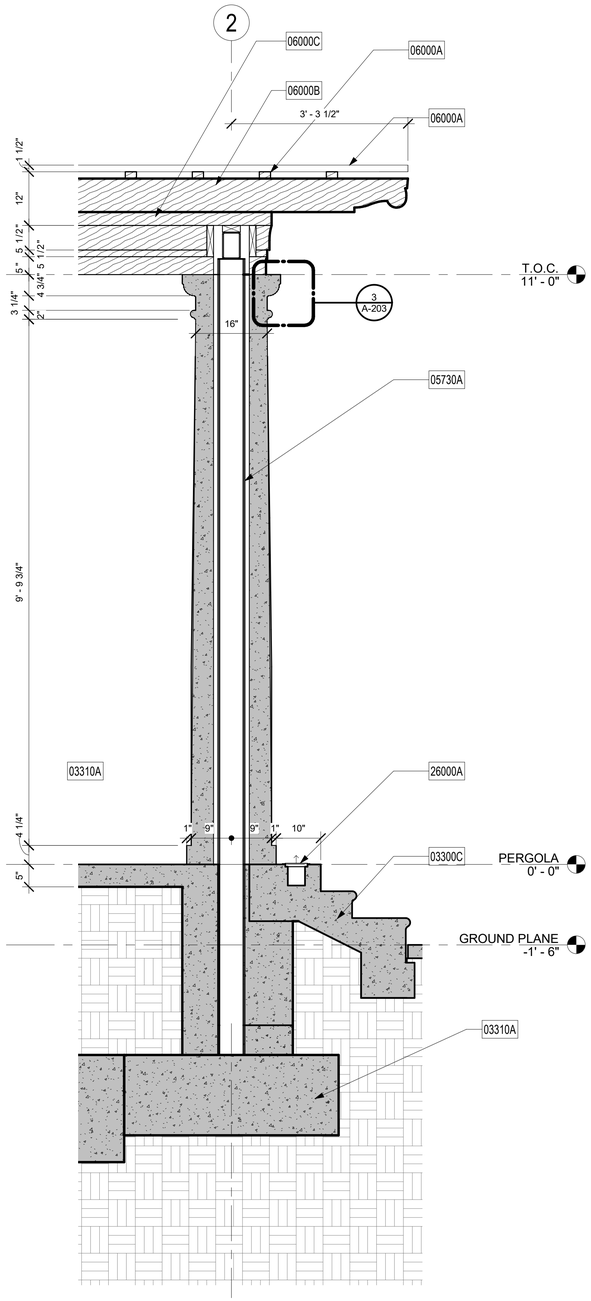
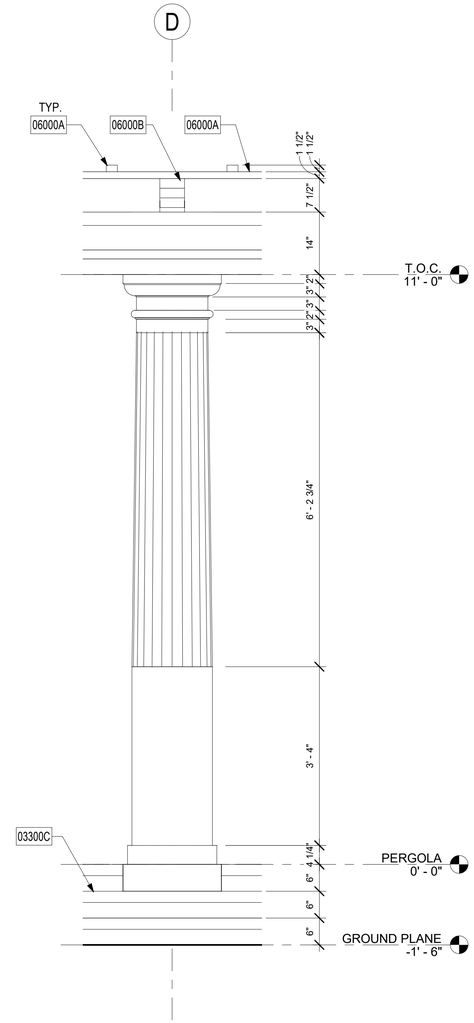
PMT NO.
PRJ NO 1119957
1847-6266
NAD83 COORDINATES
207-1706
LAMBERT COORDINATES
DRAWING NO.
A-202
XXXX- 30 - D

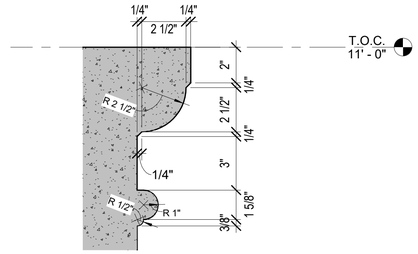




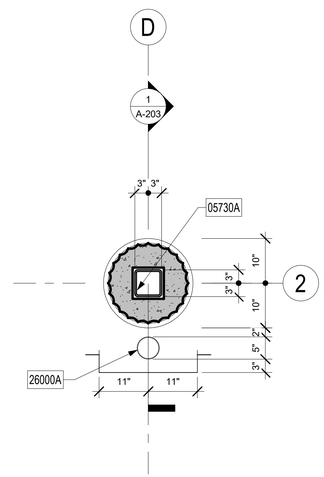
1 ENLARGED SECTION TYPICAL COLUMN 1
3/4" = 1'-0"



2 ENLARGED ELEVATION TYPICAL COLUMN 1
3/4" = 1'-0"



3 TYPICAL COLUMN 1 - CAPITAL
3" = 1'-0"



4 ENLARGED PLAN TYPICAL COLUMN 1
3/4" = 1'-0"

0 1 2 3
3/4" = 1'

N

GENERAL NOTES

1. REFER TO SHEETS AG001 - AG004 FOR GENERAL NOTES AND LEGENDS.
2. REFER TO A-101 FOR ADDITIONAL INFORMATION.

KEYNOTES

03300C	CONCRETE, CAST IN PLACE STAIRS, REFER TO AD-902 AND 7/S501
03310A	FOOTING, REFER TO STRUCTURAL DRAWINGS
05730A	STEEL COLUMN, REFER TO 2, 3, 7 AND 8/S801
06000A	1-1/2" X 2-1/2" WOOD PURLIN, REFER TO STRUCTURAL DRAWINGS
06000B	7-1/2" X 5-1/2" WOOD JOIST, REFER TO 8/AD-801 AND STRUCTURAL DRAWINGS
06000C	COMPOSITE WOOD BEAM, MITERED CORNERS, REFER TO 2 AND 4/AD-801 AND STRUCTURAL DRAWINGS
26000A	LIGHT FIXTURE, REFER TO ELECTRICAL DRAWINGS

PRIVATE CONTRACT

WARNING
0 1/2 1
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PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2
ENLARGED COLUMN 1

CONSULTANT RNT ARCHITECTS

COMPANY ADDRESS: RNT ARCHITECTS, 363 FIFTH AVENUE, SAN DIEGO, CA 92101

COMPANY PHONE NUMBER: 619-233-1023

COMPANY EMAIL DATE OF: DIAZ@RNTARCHITECTS.COM

SIGNING:

LICENSED ARCHITECT
PAUL F. DIAZ
C-22987
31 MAY 2025
RENEWAL DATE
STATE OF CALIFORNIA

SPEC. NO

The City of SAN DIEGO

FOR CITY APPROVAL

DEVELOPMENT SERVICES DEPARTMENT
SHEET 31 OF 61 SHEETS

APPROVED:
FOR CITY ENGINEER DATE

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AS BUILTS			

CONTRACTOR DATE STARTED
INSPECTOR DATE COMPLETED

PMT NO.

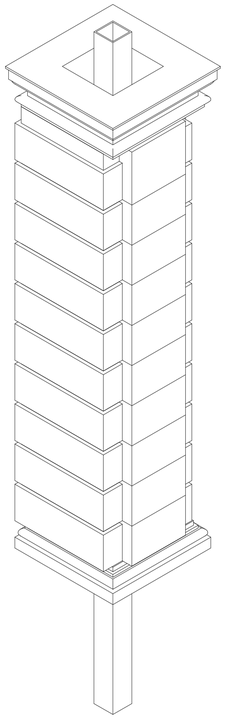
PRJ NO 1119957

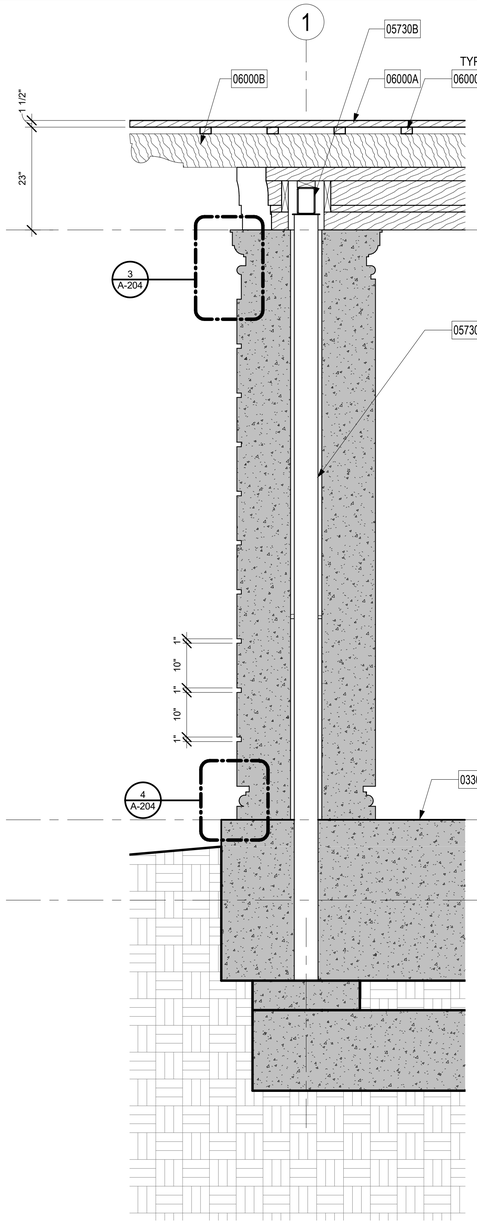
1847-6266
NAD83 COORDINATES

207-1706
LAMBERT COORDINATES

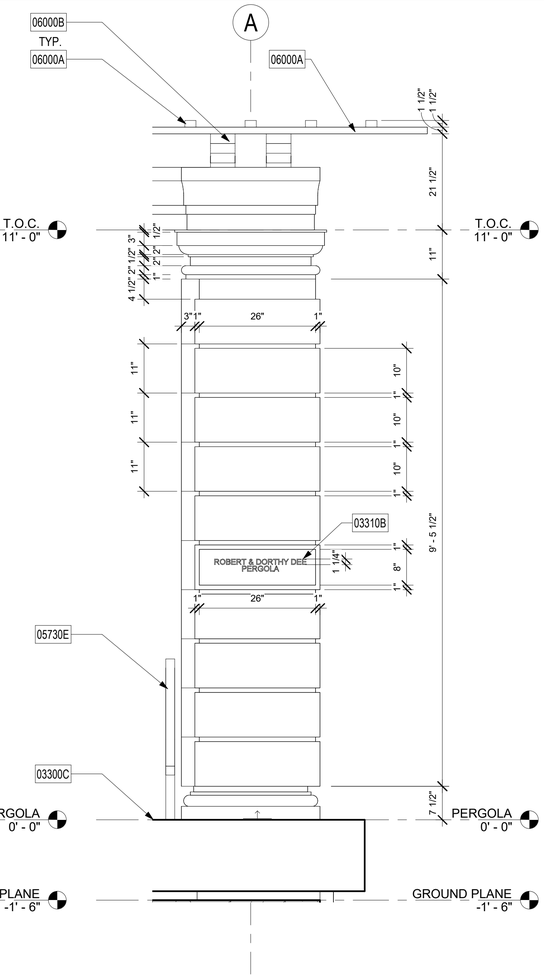
DRAWING NO.
XXXX- 31 - D

A-203

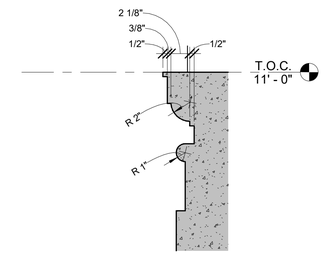




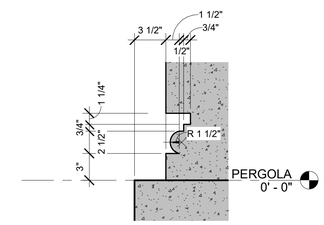
1 ENLARGED SECTION TYPICAL COLUMN 2
3/4" = 1'-0"



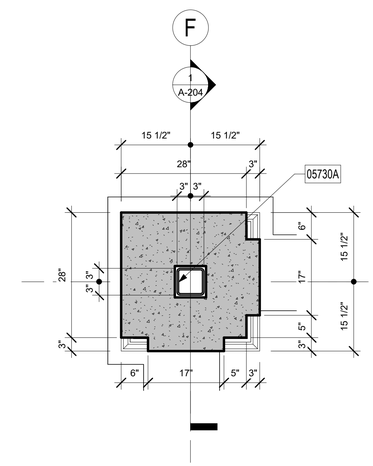
2 ENLARGED ELEVATION TYPICAL COLUMN 2
3/4" = 1'-0"



3 TYPICAL COLUMN 2 - CAPITAL
1 1/2" = 1'-0"



4 TYPICAL COLUMN 2 - BASE
1 1/2" = 1'-0"



5 ENLARGED PLAN TYPICAL COLUMN 2
3/4" = 1'-0"

GENERAL NOTES

1. REFER TO SHEETS AG001 - AG004 FOR GENERAL NOTES AND LEGENDS.
2. REFER TO A-101 FOR ADDITIONAL INFORMATION.

KEYNOTES

03300A	CONCRETE, CAST IN PLACE SLAB ON GRADE, REFER TO 3/S501
03300C	CONCRETE, CAST IN PLACE STAIRS, REFER TO AD-902 AND 7/S501
03310A	FOOTING, REFER TO STRUCTURAL DRAWINGS
03310B	DONOR RECOGNICTION, ETCHED IN PRE-CAST CONCRETE COLUMN 2, WHERE OCCURS
05730A	STEEL COLUMN, REFER TO 2, 3, 7 AND 8/S801
05730B	STEEL BEAM, REFER TO 4 AND 8/S901
05730E	HOT-DIPPED GALVANIZED STEEL HANDRAIL, REFER TO AD-901 AND 5 AND 6/S501
06000A	1-1/2" X 2-1/2" WOOD PURLIN, REFER TO STRUCTURAL DRAWINGS
06000B	7-1/2" X 5-1/2" WOOD JOIST, REFER TO 8/AD-801 AND STRUCTURAL DRAWINGS

PRIVATE CONTRACT

WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2
ENLARGED COLUMN 2

0 1 2 3
3/4" = 1'

CONSULTANT RNT ARCHITECTS

COMPANY ADDRESS: RNT ARCHITECTS, 363 FIFTH AVENUE, SAN DIEGO, CA 92101

COMPANY PHONE NUMBER: 619-233-1023

COMPANY EMAIL DATE OF: DIAZ@RNTARCHITECTS.COM

SIGNING:

LICENSED ARCHITECT
RAUL F. DIAZ
C-22987
31 MAY 2025
RENEWAL DATE
STATE OF CALIFORNIA

SPEC. NO

The City of SAN DIEGO

FOR CITY APPROVAL

DEVELOPMENT SERVICES DEPARTMENT
SHEET 32 OF 61 SHEETS

APPROVED:
FOR CITY ENGINEER DATE

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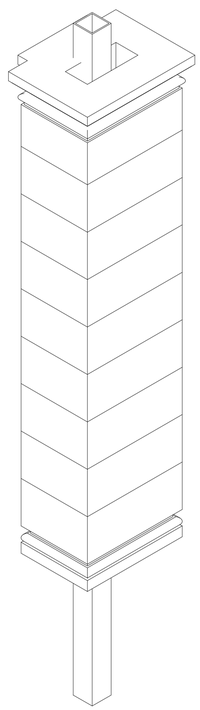
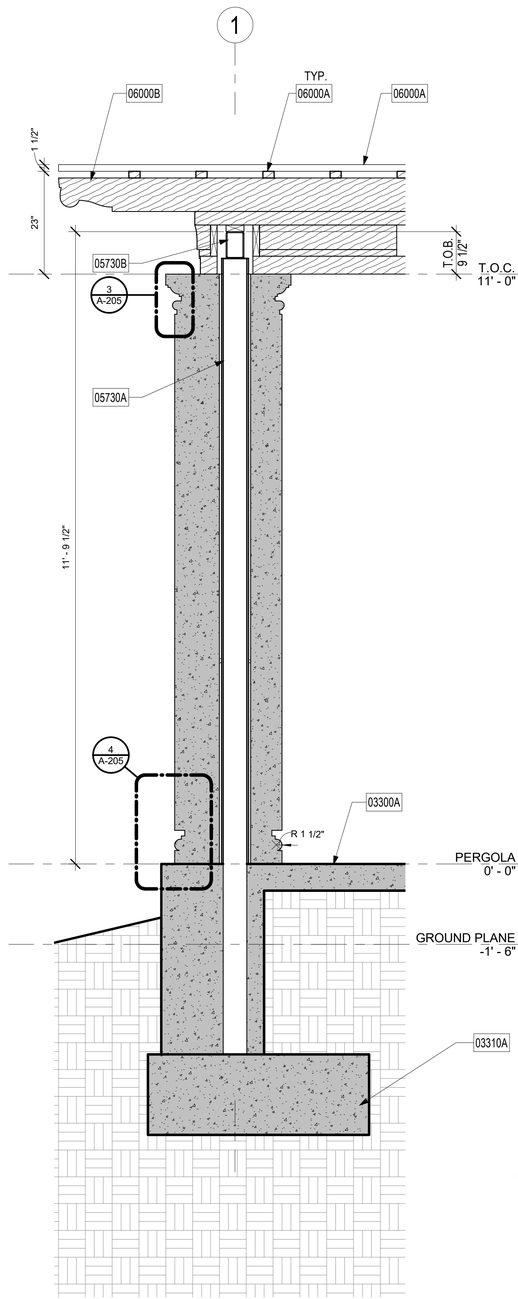
AS BUILTS			

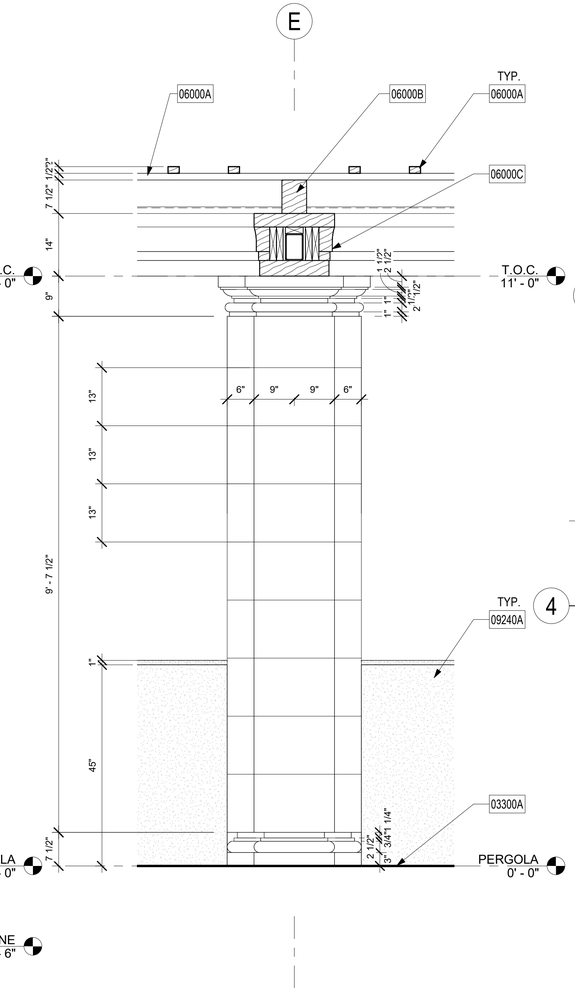
CONTRACTOR DATE STARTED
INSPECTOR DATE COMPLETED

PMT NO.
PRJ NO 1119957
1847-6266 NAD83 COORDINATES
207-1706 LAMBERT COORDINATES
DRAWING NO. A-204
XXXX- 32 - D

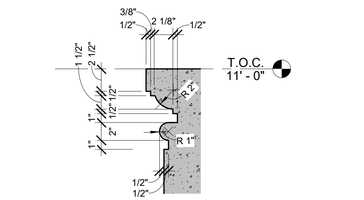




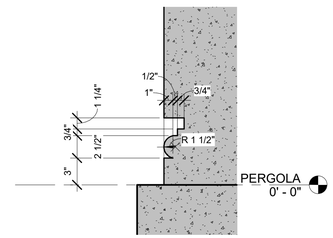
1 ENLARGED SECTION TYPICAL COLUMN 3
3/4" = 1'-0"



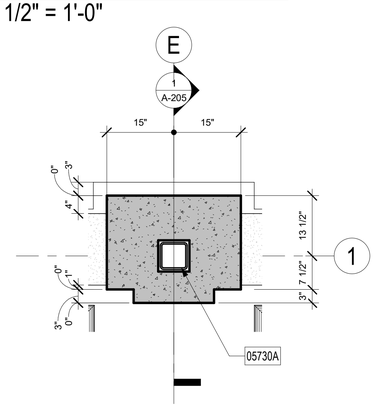
2 ENLARGED ELEVATION TYPICAL COLUMN 3
3/4" = 1'-0"



3 TYPICAL COLUMN 3 - CAPITAL
1 1/2" = 1'-0"



4 TYPICAL COLUMN 3 - BASE
1 1/2" = 1'-0"



5 ENLARGED PLAN TYPICAL COLUMN 3
3/4" = 1'-0"

0 1 2 3
3/4" = 1'

GENERAL NOTES

1. REFER TO SHEETS AG001 - AG004 FOR GENERAL NOTES AND LEGENDS.
2. REFER TO A-101 FOR ADDITIONAL INFORMATION.

KEYNOTES

03300A	CONCRETE, CAST IN PLACE SLAB ON GRADE, REFER TO 3/S501
03310A	FOOTING, REFER TO STRUCTURAL DRAWINGS
05730A	STEEL COLUMN, REFER TO 2, 3, 7 AND 8/S801
05730B	STEEL BEAM, REFER TO 4 AND 8/S901
06000A	1-1/2" X 2-1/2" WOOD PURLIN, REFER TO STRUCTURAL DRAWINGS
06000B	7-1/2" X 5-1/2" WOOD JOIST, REFER TO 8/AD-801 AND STRUCTURAL DRAWINGS
06000C	COMPOSITE WOOD BEAM, MITERED CORNERS, REFER TO 2 AND 4/AD-801 AND STRUCTURAL DRAWINGS
09240A	PORTLAND CEMENT PLASTER, SAND FINISH, PLSTR-1

PRIVATE CONTRACT

WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2
ENLARGED COLUMN 3

CONSULTANT RNT ARCHITECTS

COMPANY ADDRESS: RNT ARCHITECTS, 363 FIFTH AVENUE, SAN DIEGO, CA 92101

COMPANY PHONE NUMBER: 619-233-1023

COMPANY EMAIL DATE OF: DIAZ@RNTARCHITECTS.COM

SIGNING:

LICENSED ARCHITECT
PAUL F. DIAZ
Paul Diaz
C-22987
31 MAY 2025
RENEWAL DATE
STATE OF CALIFORNIA

SPEC. NO

The City of SAN DIEGO

FOR CITY APPROVAL

DEVELOPMENT SERVICES DEPARTMENT
SHEET 33 OF 61 SHEETS

APPROVED:
FOR CITY ENGINEER DATE

DESCRIPTION	BY	APPROVED	DATE
ORIGINAL	SP		
AS BUILTS			

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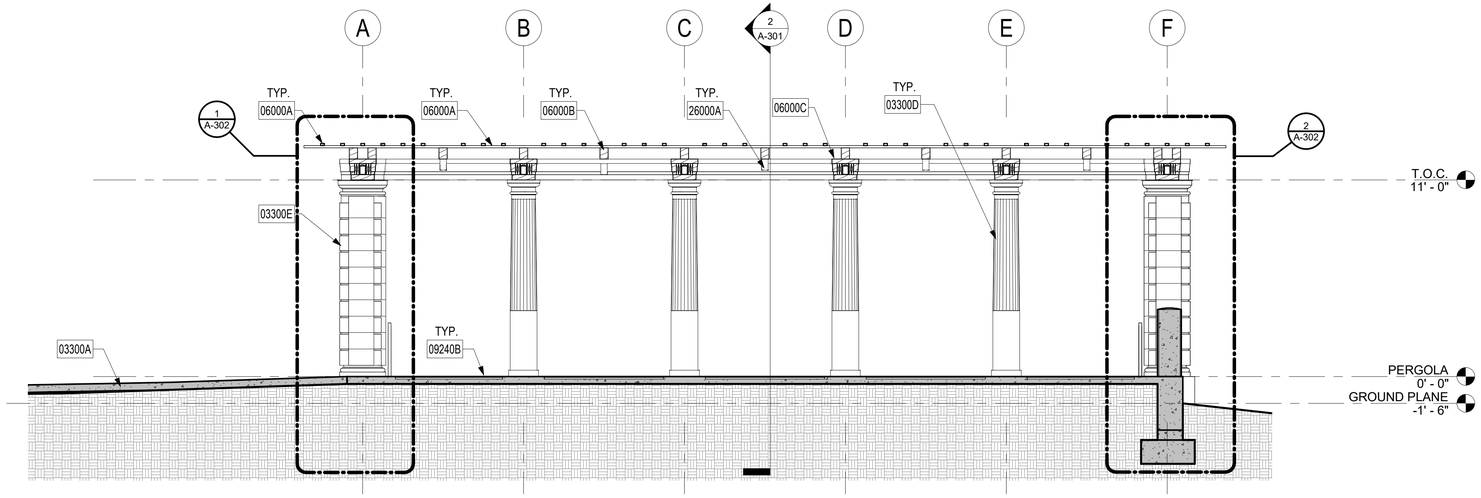
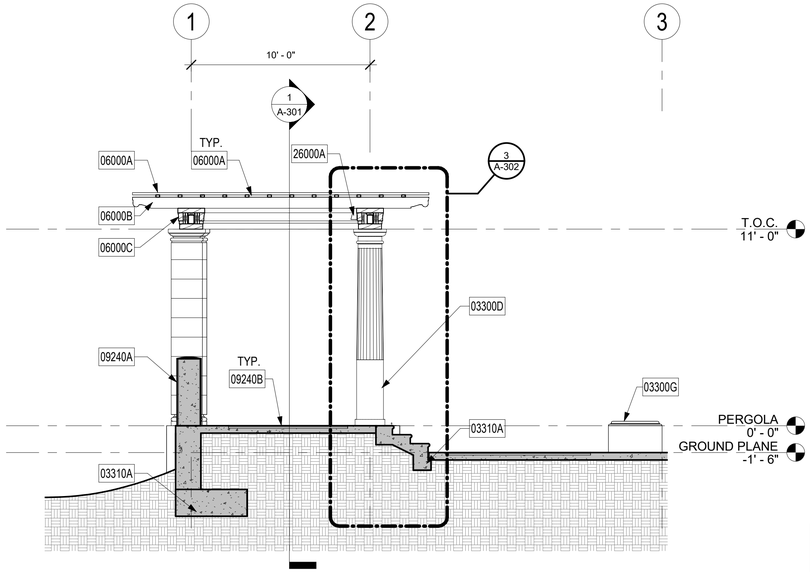
INSPECTOR DATE COMPLETED

PMT NO.
PRJ NO 1119957
1847-6266 NAD83 COORDINATES
207-1706 LAMBERT COORDINATES
DRAWING NO. A-205
XXXX- 33 - D



1 SECTION NORTH SOUTH
1/4" = 1'-0"

0 4 8 12
1" = 4'- 0"



2 SECTION EAST WEST
1/4" = 1'-0"

0 4 8 12
1" = 4'- 0"

GENERAL NOTES

1. REFER TO SHEETS AG001 - AG004 FOR GENERAL NOTES AND LEGENDS.
2. REFER TO A-101 FOR ADDITIONAL INFORMATION.

KEYNOTES

03300A	CONCRETE, CAST IN PLACE SLAB ON GRADE, REFER TO 3/S501
03300D	PRE-CAST CONCRETE COLUMN 1, REFER TO A-202
03300E	PRE-CAST CONCRETE COLUMN 2, REFER TO A-203
03300G	CAST-IN-PLACE CONCRETE PLINTH, REFER TO 4/AD-701
03310A	FOOTING, REFER TO STRUCTURAL DRAWINGS
06000A	1-1/2" X 2-1/2" WOOD PURLIN, REFER TO STRUCTURAL DRAWINGS
06000B	7-1/2" X 5-1/2" WOOD JOIST, REFER TO 8/AD-801 AND STRUCTURAL DRAWINGS
06000C	COMPOSITE WOOD BEAM, MITERED CORNERS, REFER TO 2 AND 4/AD-801 AND STRUCTURAL DRAWINGS
09240A	PORTLAND CEMENT PLASTER, SAND FINISH, PLSTR-1
09240B	8"X8" QUARRY TILE, DONOR RECOGNITION WHERE OCCURS, REFER TO 3/AD-701
26000A	LIGHT FIXTURE, REFER TO ELECTRICAL DRAWINGS

PRIVATE CONTRACT

WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2
SECTIONS

CONSULTANT RNT ARCHITECTS

COMPANY ADDRESS: RNT ARCHITECTS, 363 FIFTH AVENUE, SAN DIEGO, CA 92101

COMPANY PHONE NUMBER: 619-233-1023

COMPANY EMAIL DATE OF: DIAZ@RNTARCHITECTS.COM

SIGNING:

LICENSED ARCHITECT
PAUL F. DIAZ
Paul Diaz
C-22987
31 MAY 2025
RENEWAL DATE
STATE OF CALIFORNIA

SPEC. NO

The City of SAN DIEGO

FOR CITY APPROVAL

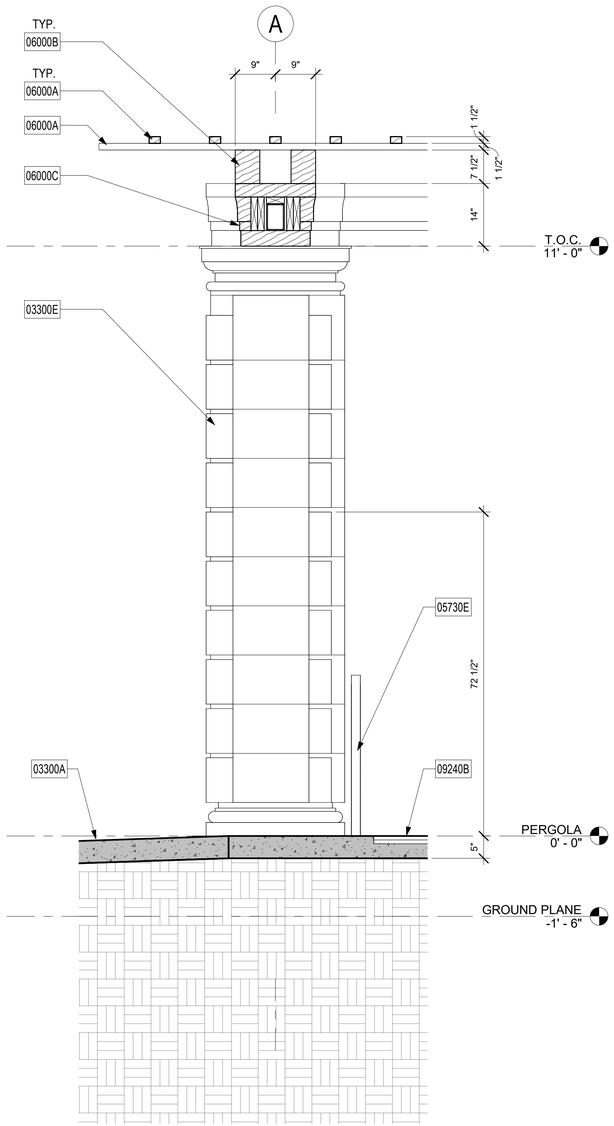
DEVELOPMENT SERVICES DEPARTMENT
SHEET 34 OF 61 SHEETS

APPROVED:
FOR CITY ENGINEER DATE

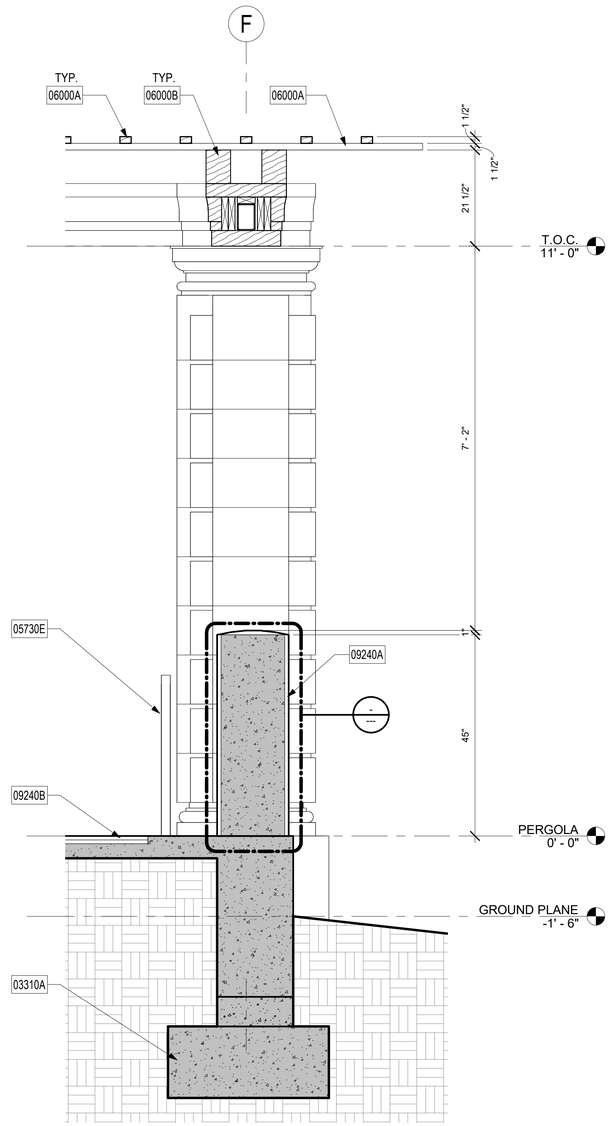
DESCRIPTION	BY	APPROVED	DATE
ORIGINAL	SP		
AS BUILTS			

CONTRACTOR DATE STARTED
INSPECTOR DATE COMPLETED

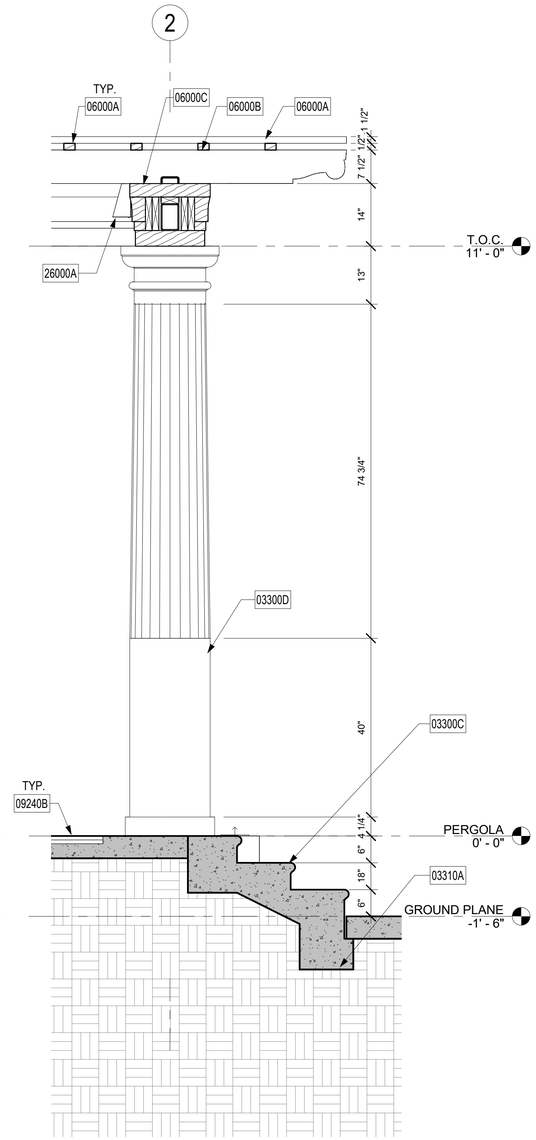
PMT NO.
PRJ NO 1119957
1847-6266 NAD83 COORDINATES
207-1706 LAMBERT COORDINATES
DRAWING NO. A-301
XXXX- 34 - D



1 ENLARGED SECTION - 1
3/4" = 1'-0"



2 ENLARGED SECTION - 2
3/4" = 1'-0"



3 ENLARGED SECTION - 3
3/4" = 1'-0"

0 1 2 3
3/4" = 1'

GENERAL NOTES

1. REFER TO SHEETS AG001 - AG004 FOR GENERAL NOTES AND LEGENDS.
2. REFER TO A-101 FOR ADDITIONAL INFORMATION.

KEYNOTES

03300A	CONCRETE, CAST IN PLACE SLAB ON GRADE, REFER TO 3/S501
03300C	CONCRETE, CAST IN PLACE STAIRS, REFER TO AD-902 AND 7/S501
03300D	PRE-CAST CONCRETE COLUMN 1, REFER TO A-202
03300E	PRE-CAST CONCRETE COLUMN 2, REFER TO A-203
03310A	FOOTING, REFER TO STRUCTURAL DRAWINGS
05730E	HOT-DIPPED GALVANIZED STEEL HANDRAIL, REFER TO AD-901 AND 5 AND 6/S501
06000A	1-1/2" X 2-1/2" WOOD PURLIN, REFER TO STRUCTURAL DRAWINGS
06000B	7-1/2" X 5-1/2" WOOD JOIST, REFER TO 8/AD-801 AND STRUCTURAL DRAWINGS
06000C	COMPOSITE WOOD BEAM, MITERED CORNERS, REFER TO 2 AND 4/AD-801 AND STRUCTURAL DRAWINGS
09240A	PORTLAND CEMENT PLASTER, SAND FINISH, PLSTR-1
09240B	8"X8" QUARRY TILE, DONOR RECOGNITION WHERE OCCURS, REFER TO 3/AD-701
26000A	LIGHT FIXTURE, REFER TO ELECTRICAL DRAWINGS

PRIVATE CONTRACT

WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2
ENLARGED SECTIONS

CONSULTANT RNT ARCHITECTS

COMPANY ADDRESS: RNT ARCHITECTS, 363 FIFTH AVENUE, SAN DIEGO, CA 92101
COMPANY PHONE NUMBER: 619-233-1023
COMPANY EMAIL DATE OF: DIAZ@RNTARCHITECTS.COM
SIGNING:
LICENSED ARCHITECT
RAUL F. DIAZ
C-22987
31 MAY 2025
RENEWAL DATE
STATE OF CALIFORNIA

SPEC. NO

The City of SAN DIEGO
FOR CITY APPROVAL

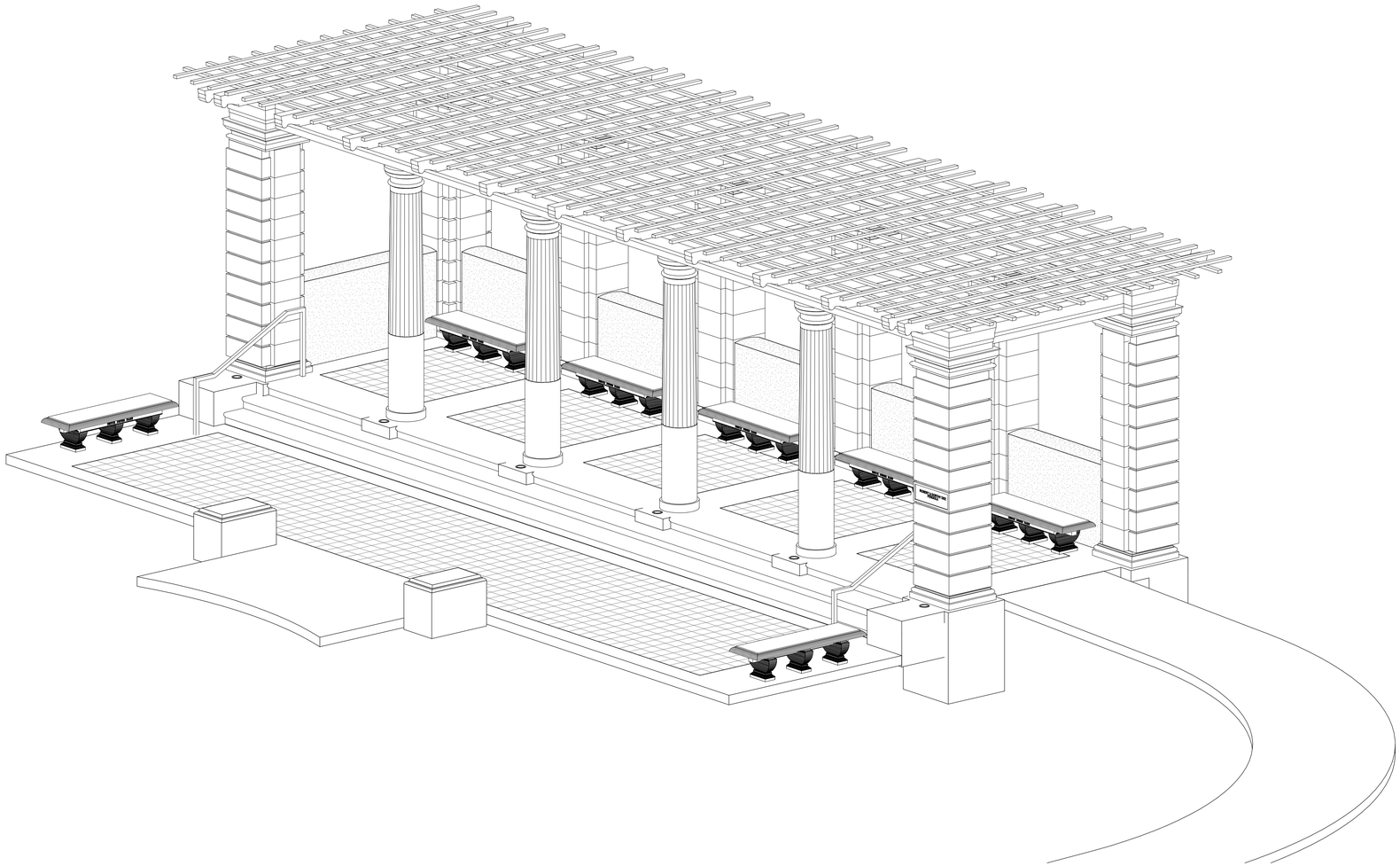
DEVELOPMENT SERVICES DEPARTMENT
SHEET 35 OF 61 SHEETS

APPROVED:
FOR CITY ENGINEER DATE

DESCRIPTION	BY	APPROVED	DATE
ORIGINAL	SP		
AS BUILTS			

CONTRACTOR DATE STARTED
INSPECTOR DATE COMPLETED

PMT NO.
PRJ NO 1119957
1847-6266
NAD83 COORDINATES
207-1706
LAMBERT COORDINATES
DRAWING NO.
XXXX- 35 - D
A-302



1 PERGOLA ISOMETRIC - NORTH EAST

R4 1915 PERGOLA
(FOR REFERENCE ONLY)

PRIVATE CONTRACT

WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2
PERGOLA ISOMETRIC

CONSULTANT RNT ARCHITECTS

COMPANY ADDRESS: RNT ARCHITECTS, 363 FIFTH AVENUE, SAN DIEGO, CA 92101

COMPANY PHONE NUMBER: 619-233-1023

COMPANY EMAIL DATE OF: DIAZ@RNTARCHITECTS.COM

SIGNING:

LICENSED ARCHITECT
RAUL F. DIAZ
Raul Diaz
C-22987
31 MAY 2025
RENEWAL DATE
STATE OF CALIFORNIA

SPEC. NO

The City of SAN DIEGO

FOR CITY APPROVAL

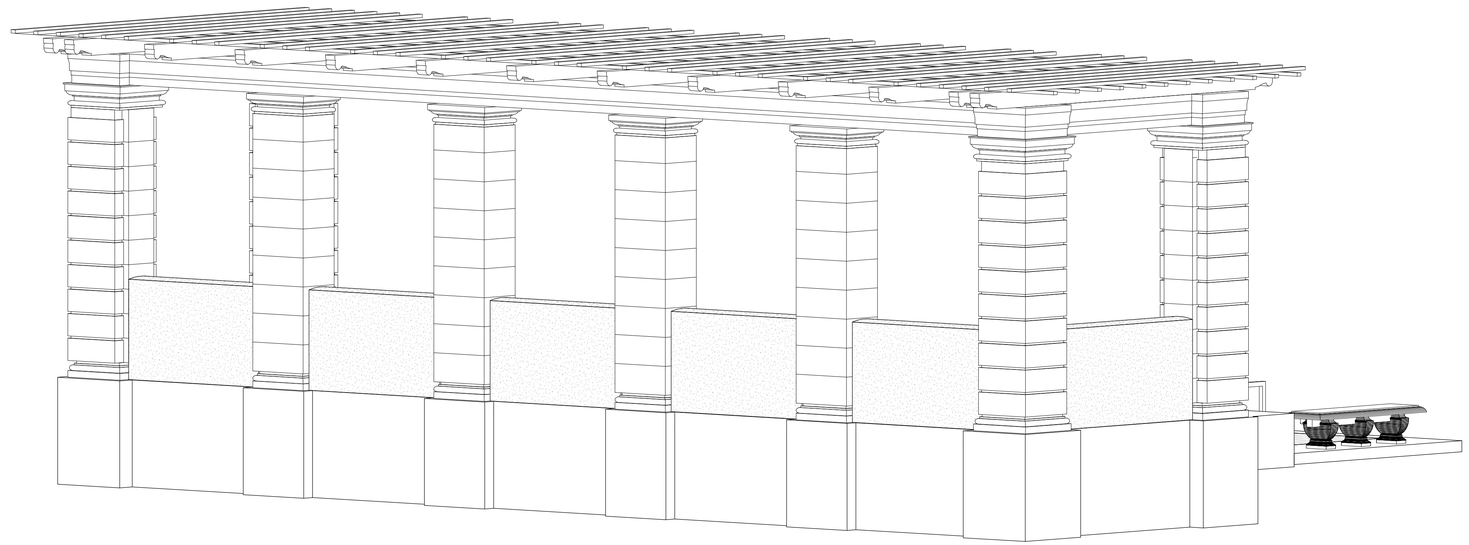
DEVELOPMENT SERVICES DEPARTMENT
SHEET 36 OF 61 SHEETS

APPROVED:
FOR CITY ENGINEER DATE

DESCRIPTION	BY	APPROVED	DATE
ORIGINAL	SP		
AS BUILTS			

CONTRACTOR DATE STARTED
INSPECTOR DATE COMPLETED

PMT NO.
PRJ NO 1119957
1847-6266
NAD83 COORDINATES
207-1706
LAMBERT COORDINATES
DRAWING NO.
XXXX- 36 - D
A-701



1 PERGOLA ISOMETRIC - SOUTH WEST

PRIVATE CONTRACT

WARNING

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

PLANS FOR THE CONSTRUCTION OF BOTANICAL BUILDING AND GARDENS PHASE 2

PERGOLA ISOMETRIC

CONSULTANT RNT ARCHITECTS

COMPANY ADDRESS: RNT ARCHITECTS, 363 FIFTH AVENUE, SAN DIEGO, CA 92101

COMPANY PHONE NUMBER: 619-233-1023

COMPANY EMAIL DATE OF: DIAZ@RNTARCHITECTS.COM

SIGNING:

LICENSED ARCHITECT
RAUL F. DIAZ
C-22987
31 MAY 2025
RENEWAL DATE
STATE OF CALIFORNIA

SPEC. NO

The City of SAN DIEGO

FOR CITY APPROVAL

DEVELOPMENT SERVICES DEPARTMENT

SHEET 37 OF 61 SHEETS

APPROVED:

FOR CITY ENGINEER DATE

DESCRIPTION	BY	APPROVED	DATE
ORIGINAL	SP		
AS BUILTS			

CONTRACTOR DATE STARTED

INSPECTOR DATE COMPLETED

PMT NO.

PRJ NO 1119957

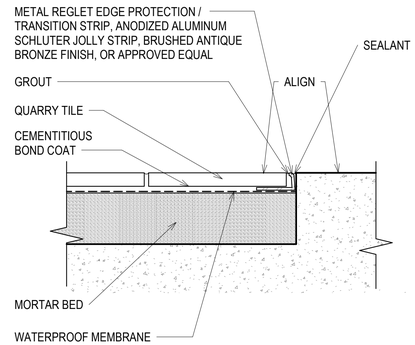
1847-6266
NAD83 COORDINATES

207-1706
LAMBERT COORDINATES

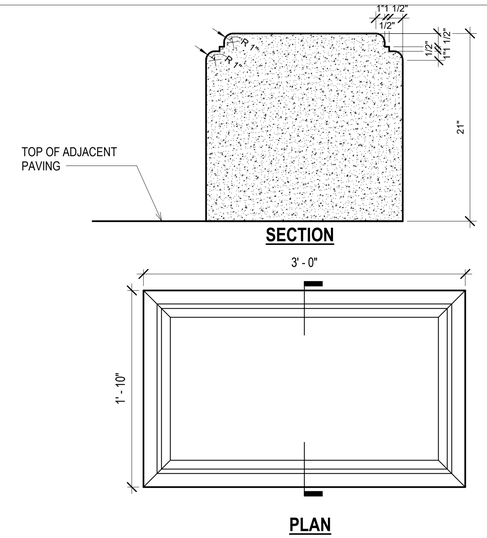
DRAWING NO.

XXXX- 37 - D

A-702



QUARRY TILE TRANSITION 6" = 1'-0" (3)



CAST-IN-PLACE PLINTH 1 1/2" = 1'-0" (4)

PRIVATE CONTRACT

WARNING

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2
TYPICAL CONCRETE DETAILS

CONSULTANT RNT ARCHITECTS

COMPANY ADDRESS: RNT ARCHITECTS, 363 FIFTH AVENUE, SAN DIEGO, CA 92101

COMPANY PHONE NUMBER: 619-233-1023

COMPANY EMAIL DATE OF: DIAZ@RNTARCHITECTS.COM

SIGNING:

LICENSED ARCHITECT
RAUL F. DIAZ
C-22987
31 MAY 2025
RENEWAL DATE
STATE OF CALIFORNIA

SPEC. NO

The City of SAN DIEGO

FOR CITY APPROVAL

DEVELOPMENT SERVICES DEPARTMENT
SHEET 38 OF 61 SHEETS

APPROVED: FOR CITY ENGINEER DATE

DESCRIPTION	BY	APPROVED	DATE
ORIGINAL	SP		
AS BUILTS			

CONTRACTOR DATE STARTED
INSPECTOR DATE COMPLETED

PMT NO.

PRJ NO 1119957

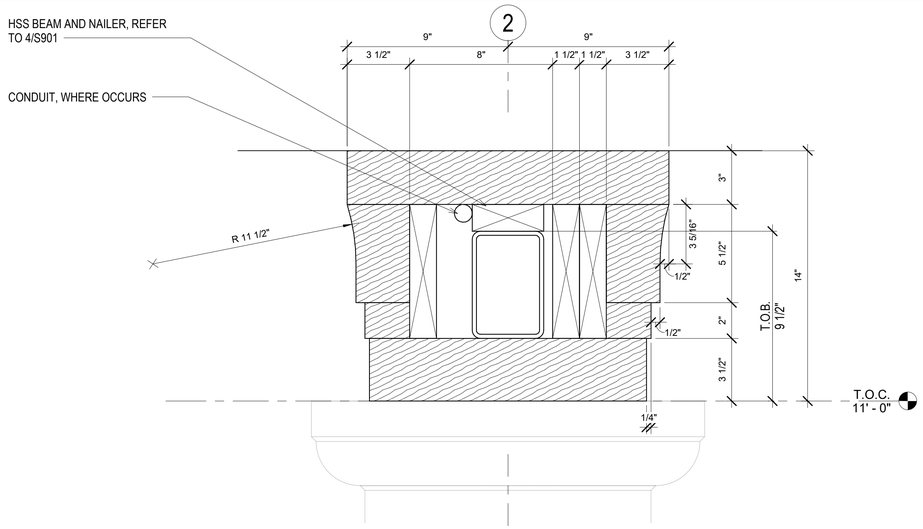
1847-6266
NAD83 COORDINATES

207-1706
LAMBERT COORDINATES

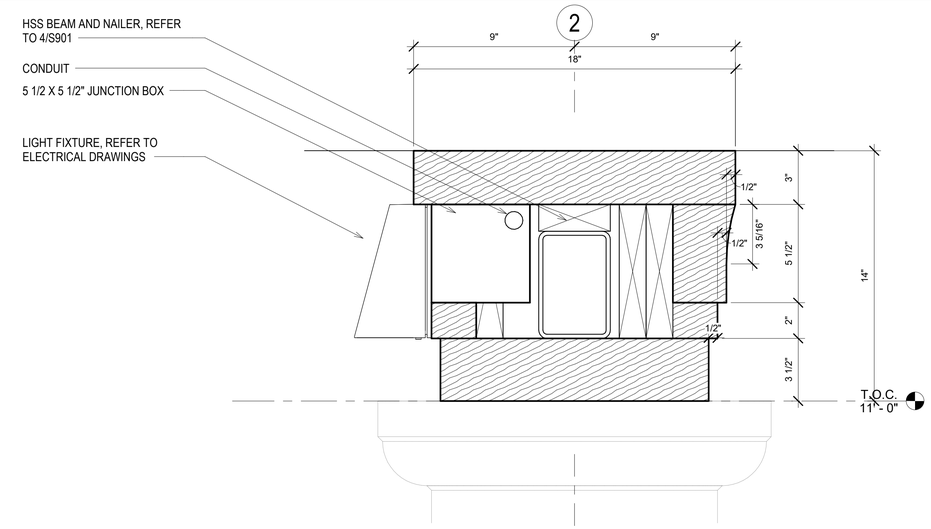
DRAWING NO.

XXXX- 38 - D

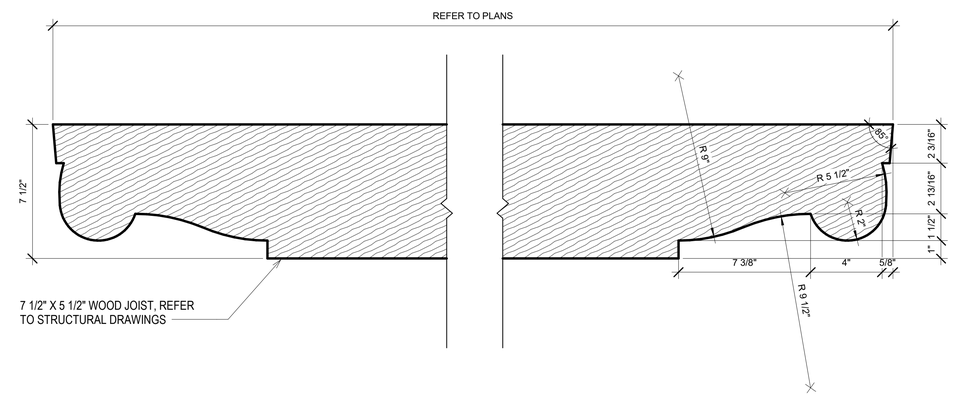
AD-701



COMPILED WOOD BEAM 3" = 1'-0" 2



COMPILED WOOD BEAM WITH LIGHT 3" = 1'-0" 4



WOOD SCROLL 3" = 1'-0" 8

PRIVATE CONTRACT

WARNING

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2
TYPICAL WOOD DETAILS

CONSULTANT RNT ARCHITECTS

COMPANY ADDRESS: RNT ARCHITECTS, 363 FIFTH AVENUE, SAN DIEGO, CA 92101

COMPANY PHONE NUMBER: 619-233-1023

COMPANY EMAIL DATE OF: DIAZ@RNTARCHITECTS.COM

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LICENSED ARCHITECT
RAUL F. DIAZ
C-22987
31 MAY 2025
RENEWAL DATE
STATE OF CALIFORNIA

SPEC. NO

The City of SAN DIEGO

FOR CITY APPROVAL

DEVELOPMENT SERVICES DEPARTMENT
SHEET 39 OF 61 SHEETS

APPROVED:

FOR CITY ENGINEER DATE

DESCRIPTION	BY	APPROVED	DATE
ORIGINAL	SP		
AS BUILTS			

CONTRACTOR DATE STARTED

INSPECTOR DATE COMPLETED

PMT NO.

PRJ NO 1119957

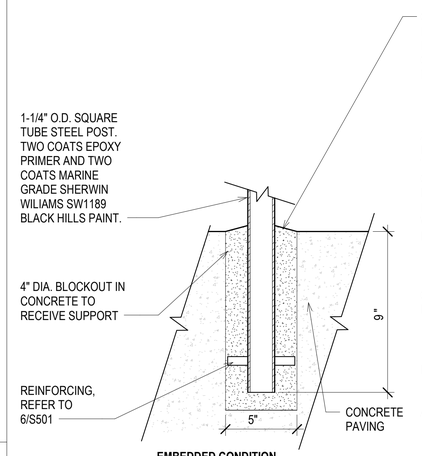
1847-6266
NAD83 COORDINATES

207-1706
LAMBERT COORDINATES

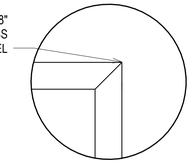
DRAWING NO.

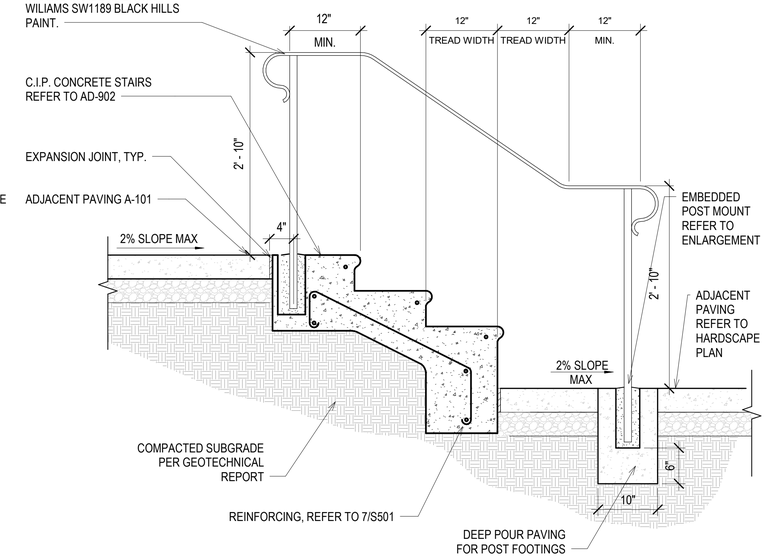
XXXX- 39 - D

AD-801



EMBEDDED CONDITION ENLARGEMENT





SECTION

NOTE:

1. REFER TO AD-902 FOR STAIR ON GRADE DETAILS.
2. GRIPPING SURFACES SHALL HAVE A SMOOTH SURFACE WITH NO SHARP CORNERS.
3. SUBMIT SEALANT COLOR SAMPLE FOR ARCHITECT REVIEW PRIOR TO FABRICATION.
4. LANDINGS AT TOP AND BOTTOM OF STAIRS AND RAMPS MUST NOT CREATE PONDING.
5. MEDIUM BROOM FINISH PERPENDICULAR TO TRAFFIC ON ALL TREADS. TROWELED FINISH ALL OTHER EXPOSED SURFACES.
6. 1/8/FT. SLOPE ON TREADS FOR DRAINAGE.
7. LOCATE HANDRAILS ON BOTH SIDES, REFER TO SITE PLAN.
8. TWO COATS EPOXY PRIMER AND TWO COATS MARINE GRADE SHERWIN WILIAMS SW1189 BLACK HILLS PAINT.

CIP CONCRETE STAIR HANDRAIL

1" = 1'-0" 8

PRIVATE CONTRACT

WARNING

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2
TYPICAL HANDRAIL DETAILS

CONSULTANT RNT ARCHITECTS

COMPANY ADDRESS: RNT ARCHITECTS, 363 FIFTH AVENUE, SAN DIEGO, CA 92101

COMPANY PHONE NUMBER: 619-233-1023

COMPANY EMAIL DATE OF: DIAZ@RNTARCHITECTS.COM

SIGNING:

LICENSED ARCHITECT
RAUL F. DIAZ
C-22987
31 MAY 2025
RENEWAL DATE
STATE OF CALIFORNIA

SPEC. NO

The City of SAN DIEGO

FOR CITY APPROVAL

DEVELOPMENT SERVICES DEPARTMENT
SHEET 40 OF 61 SHEETS

APPROVED:
FOR CITY ENGINEER DATE

DESCRIPTION	BY	APPROVED	DATE
ORIGINAL	SP		

AS BUILTS

CONTRACTOR DATE STARTED
INSPECTOR DATE COMPLETED

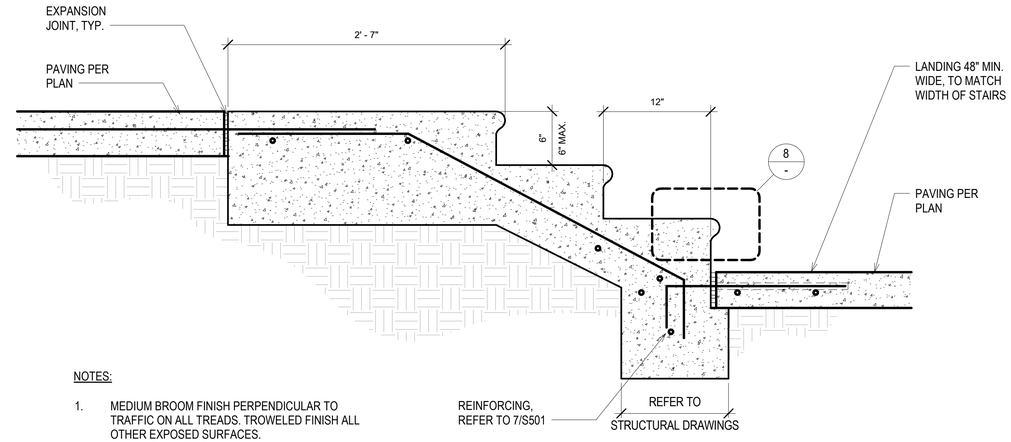
PMT NO.

PRJ NO 1119957

1847-6266
NAD83 COORDINATES

207-1706
LAMBERT COORDINATES

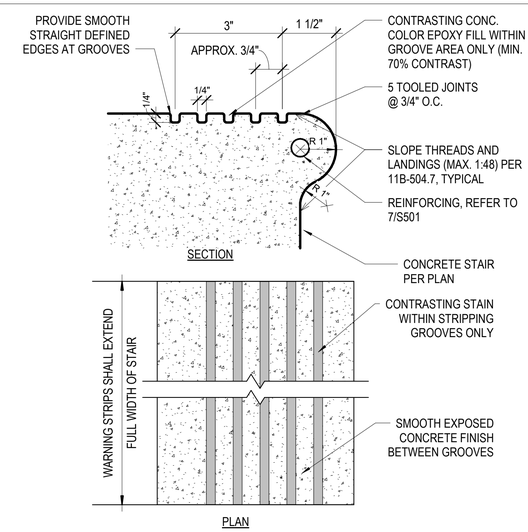
DRAWING NO.
XXXX- 40 - D
AD-901



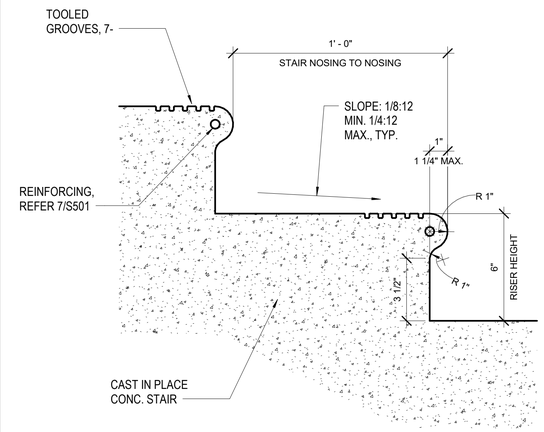
NOTES:

1. MEDIUM BROOM FINISH PERPENDICULAR TO TRAFFIC ON ALL TREADS. TROWELED FINISH ALL OTHER EXPOSED SURFACES.
2. SLOPE ON TREADS FOR DRAINAGE.
3. LOCATE HANDRAILS ON BOTH SIDES.
4. REFER TO STRUCTURAL DRAWING 7/S501.

CIP CONCRETE STAIR SECTION — 1 1/2" = 1'-0" (4)



TYPICAL TOOLED GROOVES — 6" = 1'-0" (7)



CIP CONCRETE STAIR NOSING — 3" = 1'-0" (8)

PRIVATE CONTRACT

WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2
TYPICAL STAIR DETAILS

CONSULTANT: RNT ARCHITECTS

COMPANY ADDRESS: RNT ARCHITECTS, 363 FIFTH AVENUE, SAN DIEGO, CA 92101
COMPANY PHONE NUMBER: 619-233-1023
COMPANY EMAIL DATE OF: DIAZ@RNTARCHITECTS.COM
SIGNING:
LICENSED ARCHITECT — RAUL F. DIAZ — C-22987 — 31 MAY 2025 — RENEWAL DATE — STATE OF CALIFORNIA

SPEC. NO

The City of SAN DIEGO

FOR CITY APPROVAL

DEVELOPMENT SERVICES DEPARTMENT
SHEET 41 OF 61 SHEETS

APPROVED: FOR CITY ENGINEER — DATE

DESCRIPTION	BY	APPROVED	DATE
ORIGINAL	SP		

AS BUILTS

CONTRACTOR — DATE STARTED
INSPECTOR — DATE COMPLETED

PMT NO.
PRJ NO 1119957
1847-6266 NAD83 COORDINATES
207-1706 LAMBERT COORDINATES
DRAWING NO. AD-902
XXXX- 41 - D

GENERAL STRUCTURAL NOTES (G.S.N.)

DESIGN CRITERIA

SCOPE: RECONSTRUCTION OF A HISTORIC PERGOLA

CODE: 2022 CALIFORNIA BUILDING CODE, REFERRED TO AS "THE CODE"

GOVERNING JURISDICTION: CITY OF SAN DIEGO

LIVE LOADS:
ROOF..... 20 PSF REDUCIBLE
PUBLIC AREAS..... 100 PSF NON-REDUCIBLE TYPICAL

WIND ANALYSIS: DIRECTIONAL PROCEDURE PER ASCE 7, CHAPTER 27
RISK CATEGORY..... = II
BASIC WIND SPEED.....V = 96 MPH
WIND EXPOSURE..... = CATEGORY B
GUST EFFECT FACTOR.....G = VARIES
INTERNAL PRESSURE COEFFICIENT.....GCpi = ±0.55

COMPONENTS & CLADDING WIND PRESSURES (psf)

LOCATION		COMPONENT TRIBUTARY AREA (ft^2)					
		10		100		500	
		POSITIVE	NEGATIVE	POSITIVE	NEGATIVE	POSITIVE	NEGATIVE
ROOF	ZONE 1'	16.0	-18.4	16.0	-18.4	16.0	16.0
	ZONE 1	16.0	-32.0	16.0	-25.0	16.0	-20.1
	ZONE 2	16.0	-42.2	16.0	-33.2	16.0	-26.9
	ZONE 3	16.0	-57.5	16.0	-39.5	16.0	-26.9
WALLS	ZONE 4	18.4	-19.9	16.0	-17.2	16.0	-16.0
	ZONE 5	18.4	-24.5	16.0	-19.1	16.0	-16.0
PARAPETS	-	CASE A	CASE B	CASE A	CASE B	CASE A	CASE B
	ZONE 4	69.7	32.1	49.0	26.7	34.5	23.0
	ZONE 5	69.7	36.7	49.0	28.6	34.5	23.0

SEISMIC CRITERIA:
SITE CLASSIFICATION..... = C
RISK CATEGORY..... = II
SEISMIC DESIGN CATEGORY..... = D

S_S = 1.424 g S_{DS} = 1.139 g
S_1 = 0.483 g S_{D1} = 0.483 g

SEISMIC ANALYSIS: EQUIVALENT LATERAL FORCE PROCEDURE USED PER ASCE 7, SECTION 12.9
SEISMIC FORCE RESISTING SYSTEM.....SFRS = SPECIAL CANTILEVER STEEL COLUMN
RESPONSE MODIFICATION COEFFICIENT.....R = 2.5
SYSTEM OVERSTRENGTH FACTOR.....Ω_0 = 2.5
SEISMIC IMPORTANCE FACTOR.....I_E = 1.0
SEISMIC BASE SHEAR.....C_S = 0.456 W

GROUND MOTION: MAPPED ACCELARATION PARAMETERS

SEISMIC ANALYSIS: NONSTRUCTURAL COMPONENTS PER ASCE 7, CHAPTER 13
COMPONENT AMPLIFICATION FACTOR.....a_P = VARIES
RESPONSE MODIFICATION FACTOR.....R_P = VARIES
COMPONENT OVERSTRENGTH FACTOR.....Ω_P = VARIES
COMPONENT IMPORTANCE FACTOR.....I_P = 1.0
COMPONENT ATTACHMENT HEIGHT.....z = VARIES FT
AVERAGE ROOF HEIGHT.....h = 11 FT

GENERAL

1. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION. DO NOT SCALE THE DRAWINGS. THE ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES OR INCONSISTENCIES. IN CASE OF CONFLICT, MORE COSTLY REQUIREMENTS GOVERN FOR BIDDING. SUBMIT CLARIFICATION REQUEST PRIOR TO PROCEEDING WITH WORK.

2. ALL DRAWINGS ARE CONSIDERED TO BE A PART OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REVIEW AND COORDINATION OF ALL DRAWINGS AND SPECIFICATIONS PRIOR TO THE START OF CONSTRUCTION. STRUCTURAL DRAWINGS INDICATE INFORMATION SUFFICIENT TO CONVEY DESIGN INTENT. IF ERRORS, INCONSISTENCIES OR OMISSIONS ARE DISCOVERED, THE ARCHITECT AND STRUCTURAL ENGINEER SHALL BE NOTIFIED PRIOR TO PROCEEDING WITH WORK. DEVIATION FROM THE APPROVED SET OF CONTRACT DOCUMENTS SHALL ONLY BE MADE AFTER WRITTEN APPROVAL BY THE ENGINEER OF RECORD.

3. NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS ARE GIVEN, CONSTRUCTION SHALL BE AS SHOWN FOR SIMILAR WORK. UNLESS NOTED OTHERWISE, DETAILS IN STRUCTURAL DRAWINGS ARE TYPICAL AS INDICATED BY CUTS, REFERENCES OR TITLES.

4. ALL WORK SHALL CONFORM TO THE MINIMUM STANDARDS OF THE FOLLOWING CODES: LOCAL BUILDING CODE, AND ANY OTHER REGULATING AGENCIES WHICH HAVE AUTHORITY OVER ANY PORTION OF THE WORK, INCLUDING THE STATE OF CALIFORNIA DIVISION OF INDUSTRIAL SAFETY, AND THOSE CODES AND STANDARDS LISTED IN THESE NOTES AND SPECIFICATIONS.

5. SEE ARCHITECTURAL DRAWINGS FOR THE FOLLOWING:

   A. SIZE AND LOCATION OF ALL DOOR AND WINDOW OPENINGS, EXCEPT AS NOTED.
   B. SIZE AND LOCATION OF ALL INTERIOR AND EXTERIOR NON-BEARING PARTITIONS.
   C. SIZE AND LOCATION OF ALL CONCRETE CURBS, EQUIPMENT PADS, PITS, FLOOR DRAINS, SLOPES, DEPRESSED AREAS, CHANGE IN LEVEL, CHAMFERS, GROOVES, INSERTS, ETC.
   D. SIZE AND LOCATION OF ALL FLOOR AND ROOF OPENINGS EXCEPT AS SHOWN.
   E. FLOOR AND ROOF FINISHES.
   F. DIMENSIONS AND ELEVATIONS NOT SHOWN ON STRUCTURAL DRAWINGS.

6. SEE MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR THE FOLLOWING:

   A. PIPE RUNS, SLEEVES, HANGERS, TRENCHES, WALL AND SLAB OPENINGS, ETC., EXCEPT AS SHOWN OR NOTED.
   B. ELECTRICAL CONDUIT RUNS, BOXES, OUTLETS IN WALLS AND SLABS.
   C. CONCRETE INSERTS FOR ELECTRICAL, MECHANICAL, OR PLUMBING FIXTURES.
   D. SIZE AND LOCATION OF MACHINE OR EQUIPMENT BASES, ANCHOR BOLTS FOR MOTOR MOUNTS.

7. SEE CIVIL DRAWINGS FOR THE FOLLOWING:

   A. BUILDING PAD AND FINISH GRADE ELEVATIONS AT ALL STRUCTURAL FOUNDATIONS.
   B. TOP OF WALL ELEVATIONS AT SITE AND RETAINING WALLS.

8. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. OBSERVATION VISITS TO THE SITE BY THE STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS.

9. ALL REFERENCED STANDARDS (i.e. ACI, AISC, ASTM, ETC.) SHOWN IN THESE DOCUMENTS SHALL BE PER THE LATEST ADOPTED EDITION AS LISTED IN CHAPTER 35 OF THE CODE.

10. CONTRACTOR SHALL INVESTIGATE SITE DURING CLEARING AND EARTHWORK OPERATIONS FOR FILLED EXCAVATIONS OR BURIED STRUCTURES, SUCH AS CESSPOOLS, CISTERNS, FOUNDATIONS, ETC. IF ANY SUCH STRUCTURES ARE FOUND, STRUCTURAL ENGINEER SHALL BE NOTIFIED IMMEDIATELY.

11. CONSTRUCTION MATERIAL SHALL BE SPREAD OUT IF PLACED ON FRAMED ROOF OR FLOOR. LOAD SHALL NOT EXCEED THE DESIGN LIVE LOAD PER SQUARE FOOT. PROVIDE ADEQUATE SHORING AND/OR BRACING WHERE STRUCTURE HAS NOT ATTAINED DESIGN STRENGTH.

12. ALL CONSTRUCTION MEETING OR CROSSING EXPANSION OR SHRINKAGE CONTROL JOINTS IN FRAMED FLOORS OR ROOFS MUST HAVE PROVISIONS TO ACCOMMODATE THE MOVEMENT OR MUST BE DELAYED UNTIL THE JOINT IS CLOSED.

13. CONTRACTOR TO PROVIDE A LIST OF ALL PROPOSED SUBSTITUTIONS, WITH APPLICABLE MANUFACTURER'S ICC/IAPMO REPORTS, TO ARCHITECT, ENGINEER OF RECORD AND GOVERNING JURISDICTION FOR REVIEW AND APPROVAL BEFORE FABRICATION.

14. CONTRACTOR SHALL SUBMIT A WRITTEN "STATEMENT OF RESPONSIBILITY TO THE ARCHITECT OF RECORD AND GOVERNING JURISDICTION PRIOR TO CONSTRUCTION OF THE LATERAL FORCE RESISTING SYSTEM. THIS CONTRACTOR'S "STATEMENT OF RESPONSIBILITY SHALL COMPLY WITH CODE SECTION 1704.4.

SHOP DRAWINGS / SUBMITTALS

1. THE FOLLOWING IS A PARTIAL LIST OF STRUCTURAL SHOP DRAWINGS AND SUBMITTALS. FOR ADDITIONAL SUBMITTAL REQUIREMENTS, SEE SPECIFICATIONS. UNLESS SPECIFICALLY INDICATED IN THE TABLE BELOW, ALL SUBMITTALS LISTED REQUIRE REVIEW BY THE ENGINEER OF RECORD.

SUBMITTAL ITEM	REQUIRED FOR SEOR REVIEW	ITEMS TO BE ENGINEERED BY CONTRACTOR (SEE NOTE 3)	DEFERRED APPROVAL ITEMS (SEE NOTE 4)
CONCRETE			
CONCRETE MIX DESIGNS, INCLUDING STRENGTH AND SHRINKAGE TEST RESULTS	X	-	-
REINFORCING STEEL (EXCEPT WHERE NOTED BELOW)	X	-	-
PRECAST AND PRESTRESSED MEMBERS	X	X	-
STEEL			
STRUCTURAL STEEL MILL REPORTS	-	-	-
STRUCTURAL STEEL	X	-	-

2. GENERAL:
   A. THE STRUCTURAL SHOP DRAWING REVIEW IS INTENDED TO HELP THE ENGINEER VERIFY THE DESIGN CONCEPT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CHECK THEIR OWN SHOP DRAWINGS PRIOR TO SUBMITTING TO THE ENGINEER OF RECORD.

   B. THE STRUCTURAL SHOP DRAWINGS WILL BE RETURNED FOR RESUBMITTAL IF A CURSORY REVIEW SHOWS MAJOR ERRORS WHICH SHOULD HAVE BEEN FOUND BY THE CONTRACTOR'S CHECKING.

   C. ANY SUBMITTAL OF A DETAIL SHEET WITH ADDED INFORMATION NOT SHOWN ON PLANS SHALL BE ACCOMPANIED BY LOCATION PLAN IDENTIFYING THE MEMBERS INVOLVED AND CLOUDING AROUND ADDED INFORMATION.

   D. THE SHOP DRAWINGS SHALL REFERENCE THE DATE OF THE CONSTRUCTION DOCUMENTS THAT THE SHOP DRAWINGS ARE BASED ON AND THE DESIGN CRITERIA USED TO PRODUCE THE SUBMITTAL.

   E. CONTRACTOR/SUBCONTRACTOR TO PROVIDE (1) ELECTRONIC COPY OF SHOP DRAWINGS FOR REVIEW BY THE ARCHITECT AND THE ENGINEER OF RECORD. WHERE PAPER COPIES ARE REQUIRED (e.g. DEFERRED APPROVAL ITEMS) PROVIDE (4) SETS OF SHOP DRAWINGS FOR REVIEW. (2) SETS WILL BECOME THE ENGINEER'S AND ARCHITECTS COPIES AND (2) SETS WILL BE RETURNED TO THE CONTRACTOR WITH REDLINES FOR PERMIT SUBMITTAL WHEN REQUIRED.

3. ITEMS TO BE ENGINEERED BY THE CONTRACTOR:
   A. ITEMS INDICATED AS BEING ENGINEERED BY THE CONTRACTOR ARE EXCLUDED FROM THE SCOPE OF THESE DRAWINGS AND SHALL BE ENGINEERED AND PROVIDED BY THE CONTRACTOR AND SUBMITTED FOR STRUCTURAL REVIEW.
   B. SUBMITTALS SHALL INCLUDED CALCULATIONS AND ARE TO BE STAMPED AND SIGNED BY A LICENSED PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS TO BE CONSTRUCTED PRIOR TO SUBMITTAL. THE FULL RESPONSIBILITY OF SUCH ENGINEERING RESTS WITH THE PERSON SEALING THE DESIGN.

4. DEFERRED APPROVAL ITEMS:
   A. ITEMS INDICATED AS STRUCTURAL DEFERRED APPROVAL ITEMS SHALL BE PROVIDED BY THE CONTRACTOR AND SUBMITTED SEPARATELY. THE STRUCTURAL DEFERRED APPROVAL ITEMS SHALL INCLUDE CALCULATIONS AND DRAWINGS STAMPED AND SIGNED BY A LICENSED PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS TO BE CONSTRUCTED. SEE THE ARCHITECTURAL DRAWINGS FOR A COMPLETE LIST OF DEFERRED APPROVAL ITEMS.

   B. DEFERRED APPROVAL ITEMS SHALL NOT BE SUBMITTED TO THE ARCHITECT/ENGINEER OF RECORD UNTIL THE CONSTRUCTION DOCUMENTS FOR THIS PROJECT AS A WHOLE HAVE BEEN APPROVED BY THE GOVERNING JURISDICTION.

   C. SUBMITTAL DOCUMENTS FOR DEFERRED APPROVAL ITEMS SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER OF RECORD IN THE FORM OF A "SHOP DRAWING APPROVAL".

   D. DEFERRED APPROVAL ITEMS SHALL NOT BE SUBMITTED TO THE GOVERNING JURISDICTION UNTIL THEY HAVE BEEN REVIEWED BY THE ARCHITECT/ENGINEER OF RECORD WITH NO REMAINING ITEMS TO BE CORRECTED.

   E. DEFERRED APPROVAL ITEMS SHALL NOT BE INSTALLED NOR SHALL INSPECTIONS OF DEFERRED APPROVAL ITEMS BE AUTHORIZED PRIOR TO THE APPROVAL BY THE GOVERNING JURISDICTION.

   F. DEFERRED APPROVAL DOCUMENTS SHALL BE SUBMITTED SUFFICIENTLY IN ADVANCE OF INSTALLATION TO ALLOW FOR MODIFICATIONS RESULTING FROM DESIGN TEAM AND GOVERNING JURISDICTION REVIEW.

5. SUBMITTALS FOR STEEL PART OF SEISMIC FORCE RESISTING SYSTEM SFRS.
   A. PROVISION FOR WELDING HEAT EFFECTS: A SEQUENCE OF FIELD WELDING SHALL BE PLANNED TO MINIMIZE LOCKED IN STRESSES AND DISTORTION AND SHALL BE SUBMITTED TO THE ENGINEER AT TIME OF SHOP DRAWING SUBMITTAL. ANY PROPOSED DEVIATIONS FROM THE DETAILS SHOWN ON THE DRAWINGS SHALL BE APPROVED BY THE ENGINEER. THE PROCEDURES AND THE DETAILS USED SHALL RESULT IN COMPLETED CONNECTIONS, WHICH ARE IN FULL COMPLIANCE WITH THE INTENT OF THE DETAILS SHOWN ON THE DRAWINGS AND SPECIFICATIONS. THE SEQUENCE OF FIELD WELDING, BOTH IN THE JOINTS AND FRAMES AS A WHOLE, SHALL BE SUBMITTED TO THE GOVERNING JURISDICTION FOR APPROVAL NO FIELD WELDING SHALL BE PERFORMED PRIOR TO SAID JURISDICTION APPROVAL.

   B. SUBMIT ALL REQUIRED ITEMS PER SECTION J2 OF CHAPTER J OF AISC 341.

STRUCTURAL OBSERVATIONS

STRUCTURAL OBSERVATION PER THE REQUIREMENTS OF THE CODE IS REQUIRED. THE STRUCTURAL ENGINEER WILL VISIT THE PROJECT AT THE FOLLOWING STAGES OF CONSTRUCTION:

ITEM	STAGE
DRILLED PIER REINFORCING	BEFORE FIRST POUR
STRUCTURAL STEEL	AFTER ERECTION

1. STRUCTURAL OBSERVATION DOES NOT INCLUDE OR WAIVE THE INSPECTIONS REQUIRED BY THE CODE.

2. ALL OBSERVED DEFICIENCIES SHALL BE REPORTED IN WRITING TO THE OWNER'S REPRESENTATIVE, SPECIAL INSPECTOR, AND CONTRACTOR.

   A. THE CONTRACTOR SHALL ENSURE THAT ALL DEFICIENCIES NOTED BY THE STRUCTURAL ENGINEER IN STRUCTURAL OBSERVATION REPORTS ARE CORRECTED. SUCH COMPLIANCE SHALL BE REPORTED IN WRITING TO THE ENGINEER OF RECORD.

   B. THE SPECIAL INSPECTOR SHALL ENSURE THAT ALL DEFICIENCIES, RELATED TO SPECIAL INSPECTION TABLES, NOTED BY THE STRUCTURAL ENGINEER IN STRUCTURAL OBSERVATION REPORTS ARE CORRECTED. SUCH COMPLIANCE SHALL BE REFERENCED IN SPECIAL INSPECTOR REPORT.

   C. THE STRUCTURAL OBSERVER SHALL SUBMIT A FINAL WRITTEN STATEMENT TO THE GOVERNING JURISDICTION THAT SITE VISITS HAVE BEEN MADE AND IDENTIFYING ANY REPORTED DEFICIENCIES THAT HAVE NOT BEEN RESOLVED. THE STRUCTURE WILL NOT BE IN COMPLIANCE UNTIL THE DESIGNER HAS NOTIFIED THE GOVERNING JURISDICTION THAT ALL DEFICIENCIES ARE RESOLVED.

SHEET LIST

SHEET NUMBER	SHEET NAME
S001	GENERAL STRUCTURAL NOTES
S002	GENERAL STRUCTURAL NOTES
S003	GENERAL STRUCTURAL NOTES
S004	GENERAL STRUCTURAL NOTES
S005	GENERAL STRUCTURAL NOTES
SS100	SITE PLAN
S101	FOUNDATION PLAN
S102	PRE-CAST CONCRETE COLUMN PLAN
S103	ROOF FRAMING PLAN
S301	SECTIONS
S302	SECTIONS
S501	FOUNDATION DETAILS
S502	FOUNDATION DETAILS
S600	TYPICAL CONCRETE DETAILSS6XX
S801	STEEL AND CONCRETE DETAILS
S901	WOOD DETAILS

Sheet Total: 16

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San Diego, California 92110
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spurlock-land.com

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PRIVATE CONTRACT

PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2

GENERAL STRUCTURAL NOTES

CONSULTANT kpff
COMPANY ADDRESS: KPFF Consulting Engineers
3131 Camino Del Rio North Suite 1080, San Diego Ca. 92108
COMPANY PHONE NUMBER: 619-521-8500
COMPANY EMAIL DATE OF: Bryon.Spicer@kpff.com
SIGNING:
REGISTERED PROFESSIONAL ENGINEER FARID MOHSENI No. S4775 Exp. 9/30/24 STRUCTURAL STATE OF CALIFORNIA

SPEC. NO

The City of SAN DIEGO
FOR CITY APPROVAL

DEVELOPMENT SERVICES DEPARTMENT
SHEET 42 OF 61 SHEETS

APPROVED:
FOR CITY ENGINEER DATE

DESCRIPTION	BY	APPROVED	DATE
ORIGINAL	SP		
AS BUILTS			

CONTRACTOR DATE STARTED
INSPECTOR DATE COMPLETED

PMT NO.
PRJ NO 1119957
1847-6266 NAD83 COORDINATES
207-1706 LAMBERT COORDINATES
DRAWING NO. S001
XXXX- 42 - D

(G.S.N. CONTINUED)

SPECIAL INSPECTION

1. ALL SPECIAL INSPECTIONS AND TESTING SHALL BE IN CONFORMANCE WITH CHAPTER 17 OF THE CODE. THE OWNER IS RESPONSIBLE FOR RETAINING AN APPROVED AGENCY TO PERFORM SPECIAL INSPECTIONS FOR THIS PROJECT.

2. THE SPECIAL INSPECTION TABLES LISTED BELOW ARE PARTIAL EXCERPTS OF THE TABLES LISTED IN THE CODE AND ADDITIONAL SPECIAL INSPECTION REQUIREMENTS OF THIS PROJECT. IT IS THE RESPONSIBILITY OF THE SPECIAL INSPECTOR TO CONFORM WITH ALL ASPECTS OF THE CODE AND STANDARDS REFERENCED BY CHAPTER 17.

3. THE SPECIAL INSPECTORS MUST BE CERTIFIED BY THE GOVERNING JURISDICTION IN THE CATEGORY OF WORK REQUIRED TO HAVE SPECIAL INSPECTION.
   EXCEPTIONS:

   A. SOILS INSPECTIONS BY THE SOILS ENGINEER OF RECORD
   B. SMOKE CONTROL SYSTEM, BY THE MECHANICAL ENGINEER OF RECORD
   C. WHEN WAIVED BY THE GOVERNING JURISDICTION

4. THE CONSTRUCTION MATERIALS TESTING LABORATORY MUST BE APPROVED BY THE GOVERNING JURISDICTION FOR TESTING OF MATERIALS, SYSTEMS, COMPONENTS AND EQUIPMENTS.

5. THE SPECIAL INSPECTIONS IDENTIFIED ON PLANS ARE IN ADDITION TO, AND NOT A SUBSTITUTE FOR, THOSE INSPECTIONS REQUIRED TO BE PERFORMED BY THE GOVERNING JURISDICTION. SPECIALLY INSPECTED WORK WHICH IS INSTALLED OR COVERED WITHOUT THE APPROVAL OF AN INSPECTOR FROM THE GOVERNING JURISDICTION IS SUBJECT TO REMOVAL OR EXPOSURE.

6. FOR CONTINUOUS INSPECTION, WHEN WORK IN MORE THAN ONE CATEGORY OF WORK REQUIRING SPECIAL INSPECTION IS TO BE PERFORMED SIMULTANEOUSLY, OR THE GEOGRAPHIC LOCATION OF THE WORK IS SUCH THAT IT CANNOT BE CONTINUOUSLY OBSERVED IN ACCORDANCE WITH THE PROVISIONS OF THE CODE, IT IS THE AGENT'S RESPONSIBILITY TO EMPLOY A SUFFICIENT NUMBER OF INSPECTORS TO ASSURE THAT ALL WORK IS INSPECTED IN ACCORDANCE WITH THOSE PROVISIONS.

7. PERIODIC INSPECTION SHALL OCCUR FREQUENTLY ENOUGH TO INSPECT ALL OF THE INSTALLED ITEMS AND TO PERIODICALLY WITNESS THE INSTALLATION OF THE ITEMS.

8. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INFORM THE SPECIAL INSPECTOR OR INSPECTION AGENCY AT LEAST ONE WORKING DAY PRIOR TO PERFORMING ANY WORK THAT REQUIRES SPECIAL INSPECTION. ALL WORK PERFORMED WITHOUT REQUIRED SPECIAL INSPECTION IS SUBJECT TO REMOVAL.

9. THE SPECIAL INSPECTOR SHALL PROVIDE WEEKLY REPORTS AND A FINAL REPORT TO THE STRUCTURAL ENGINEER.

10. THE SPECIAL INSPECTOR SHALL ENSURE THAT ALL DEFICIENCIES RELATED TO THE SPECIAL INSPECTION TABLES NOTED BY THE STRUCTURAL ENGINEER IN STRUCTURAL OBSERVATION REPORTS ARE CORRECTED. SUCH COMPLIANCE SHALL BE REFERENCED IN SPECIAL INSPECTOR REPORT.

11. THE FABRICATOR MUST BE APPROVED BY THE GOVERNING JURISDICTION FOR THE FABRICATION OF MEMBERS AND ASSEMBLIES ON THE PREMISES OF THE FABRICATOR'S SHOP.

12. AN APPLICATION TO PERFORM OFF-SITE FABRICATION MUST BE SUBMITTED TO THE GOVERNING JURISDICTION, WHERE REQUIRED, FOR APPROVAL PRIOR TO FABRICATION.

13. A CERTIFICATE OF COMPLIANCE FOR OFF-SITE FABRICATION MUST BE COMPLETED AND SUBMITTED TO THE GOVERNING JURISDICTION, WHERE REQUIRED, PRIOR TO ERECTION OF PREFABRICATED COMPONENTS.

14. NOTICE TO THE APPLICANT/OWNER/OWNER'S AGENT/ARCHITECT:
    BY USING THIS PERMITTED CONSTRUCTION DRAWINGS FOR CONSTRUCTION/INSTALLATION OF THE WORK SPECIFIED HEREIN, YOU AGREE TO COMPLY WITH THE REQUIREMENTS OF THE GOVERNING JURISDICTION FOR SPECIAL INSPECTIONS, STRUCTURAL OBSERVATIONS, CONSTRUCTION MATERIAL TESTING AND OFF-SITE FABRICATION OF BUILDING COMPONENTS, CONTAINED IN THE STATEMENT OF SPECIAL INSPECTIONS AND, AS REQUIRED BY THE GOVERNING BUILDING CODES.

15. NOTICE TO THE CONTRACTOR/BUILDER/INSTALLER/SUBCONTRACTOR/OWNER BUILDER::
    BY USING THIS PERMITTED CONSTRUCTION DRAWINGS FOR CONSTRUCTION/INSTALLATION OF THE WORK SPECIFIED HEREIN, YOU ACKNOWLEDGE AND ARE AWARE OF, THE REQUIREMENTS CONTAINED IN THE STATEMENT OF SPECIAL INSPECTIONS. YOU AGREE TO COMPLY WITH THE REQUIREMENTS OF THE GOVERNING JURISDICTION FOR SPECIAL INSPECTIONS, STRUCTURAL OBSERVATIONS, CONSTRUCTION MATERIAL TESTING AND OFF-SITE FABRICATION OF BUILDING COMPONENTS, CONTAINED IN THE STATEMENT OF SPECIAL INSPECTIONS AND, AS REQUIRED BY THE GOVERNING BUILDING CODES.

    THE FOLLOWING ELEMENTS OF CONSTRUCTION SHALL REQUIRE SPECIAL INSPECTION PER CHAPTER 17 OF THE CODE. UNO

SOIL: SPECIAL INSPECTION TASK	CONTINUOUS	PERIODIC
1. VERIFY MATERIAL BELOW FOOTINGS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	-	X
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	-	X
3. PERFORM CLASSIFICATION AND TESTING OF CONTROLLED FILL MATERIALS.	-	X
4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF CONTROLLED FILL.	X	-
5. PRIOR TO PLACEMENT OF CONTROLLED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	-	X

PIER FOUNDATIONS: SPECIAL INSPECTION TASK	CONTINUOUS	PERIODIC
1. OBSERVE DRILLING OPERATIONS AND MAINTAIN COMPLETE AND ACCURATE RECORDS FOR EACH PIER.	X	-
2. VERIFY PLACEMENT LOCATIONS AND PLUMBNESS, CONFIRM PIER DIAMETER, BELL DIAMETERS (IF APPLICABLE), LENGTHS, EMBEDMENT INTO BEDROCK (IF APPLICABLE) AND ADEQUATE END BEARING STRATA CAPACITY	X	-
3. FOR CONCRETE PIERS, PERFORM ADDITIONAL INSPECTIONS PER CONCRETE SPECIAL INSPECTION TABLE.	X	-
4. FOR MASONRY PIERS, PERFORM ADDITIONAL INSPECTIONS PER MASONRY SPECIAL INSPECTION TABLE.	-	-

CONCRETE: SPECIAL INSPECTION TASK	CONTINUOUS	PERIODIC
1. INSPECTION OF REINFORCING STEEL, PRESTRESSING TENDONS, SHEAR STUDS, AND PLACEMENT.	-	X
2. INSPECTION OF REINFORCING STEEL WELDING:		
A. VERIFICATION OF WELDABILITY OF REINFORCING STEEL OTHER THAN ASTM A706.	-	X
B. REINFORCING STEEL RESISTING FLEXURAL AND AXIAL FORCES IN MOMENT FRAMES, AND BOUNDARY ELEMENTS OF SPECIAL REINFORCED CONCRETE SHEAR WALLS IN THE SFRS.	X	-
C. SHEAR REINFORCEMENT.	X	-
D. OTHER REINFORCING STEEL.	-	X
3. INSPECTION OF BOLTS AND EMBED PLATES TO BE INSTALLED IN CONCRETE PRIOR TO AND DURING PLACEMENT OF CONCRETE.	-	X
4. POST INSTALLED ANCHORS IN HARDENED CONCRETE MEMBERS (SEE KEYNOTE 1).	-	X
5. VERIFYING USE OF REQUIRED DESIGN MIX.	-	X
6. AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X	-
7. INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	X	-
8. MAINTENANCE OF THE SPECIFIED CURING TEMPERATURE AND TECHNIQUES	-	X
9. INSPECTION OF PRESTRESSED AND POST-TENSIONED CONCRETE:		
A. APPLICATION OF PRESTRESS FORCES	X	-
B. GROUTING OF BONDED PRESTRESSING TENDONS IN THE SFRS.	X	-
10. ERECTION OF THE PRECAST CONCRETE MEMBERS	-	X
11. VERIFICATION ON IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.	-	X
12. FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBERS BEING FORMED	-	X

CONCRETE SPECIAL INSPECTION KEYNOTES:

1. THE SPECIAL INSPECTOR FOR ADHESIVE ANCHORS SHALL VERIFY THE DRILLING OF ANY HOLES, THE CLEANLINESS OF THE HOLE, THE MOISTURE IN THE HOLE, MIXING THE ADHESIVE, THE BRAND OF ADHESIVE, AND THE PROPER MATERIAL FOR ASSEMBLY.

STRUCTURAL STEEL: QUALITY ASSURANCE (QA) SPECIAL INSPECTION PER AISC 360, CHAPTER N AND AISC 341, CHAPTER J
1. VERIFY FABRICATOR AND ERECTOR QUALITY CONTROL (QC) PROGRAM PER AISC 360, SECTION N2
2. INSPECTION TASKS PRIOR TO WELDING PER AISC 360 TABLE N5.4-1 AND AISC 341 TABLE J6-1 (SEE KEYNOTES 1 & 3)
3. INSPECTION TASKS DURING TO WELDING PER AISC 360 TABLE N5.4-2 AND AISC 341 TABLE J6-2 (SEE KEYNOTE 3)
4. INSPECTION TASKS AFTER WELDING PER AISC 360 TABLE N5.4-3 AND AISC 341 TABLE J6-3 (SEE KEYNOTES 2 & 3)
5. INSPECTION TASKS PRIOR TO BOLTING PER AISC 360 TABLE N5.6-1 AND AISC 341 TABLE J7-1 (SEE KEYNOTES 4, 5 & 6)
6. INSPECTION TASKS DURING BOLTING PER AISC 360 TABLE N5.6-2 AND AISC 341 TABLE J7-2 (SEE KEYNOTES 4, 5 & 6)
7. INSPECTION TASKS AFTER BOLTING PER AISC 360 TABLE N5.6-3 AND AISC 341 TABLE J7-3 (SEE KEYNOTES 5 & 6)
8. NON-DESTRUCTIVE TESTING OF WELDED JOINTS PER AISC 341, SECTION J6.2
9. OTHER INSPECTION TASKS OF THE SFRS PER AISC 341 TABLE J8.1
10. INSPECTION OF COMPOSITE CONSTRUCTION PER AISC 341 TABLES J9.1, J9.2, AND J9.3
11. INSPECTION TASKS OF COLD-FORMED STEEL DECK PER SDI QA/QC 2017
12. INSPECTION OF SPRAYED FIRE RESISTANT MATERIAL

STEEL SPECIAL INSPECTION KEYNOTES:

1. THE FABRICATOR OR ERECTOR, AS APPLICABLE, SHALL MAINTAIN A SYSTEM BY WHICH A WELDER WHO HAS WELDED A JOINT OR MEMBER CAN BE IDENTIFIED. STAMPS, IF USED, SHALL BE THE LOW-STRESS TYPE.
2. WHEN WELDING OF DOUBLER PLATES, CONTINUITY PLATES OR STIFFENERS HAS BEEN PERFORMED IN THE K-AREA, VISUALLY INSPECT THE WEB K-AREA FOR CRACKS WITHIN 3 IN. (75 MM) OF THE WELD.
3. THE SPECIAL INSPECTIONS NOTED IN ITEMS 2, 3, AND 4 ARE NOT REQUIRED WHERE THE WORK IS DONE ON THE PREMISES OF A FABRICATOR REGISTERED AND APPROVED BY THE GOVERNING JURISDICTION.
4. THE SPECIAL INSPECTIONS NOTED IN ITEMS 5 AND 6 ARE NOT REQUIRED FOR SNUG-TIGHT JOINTS.
5. PROVIDE SPECIAL INSPECTION FOR CONNECTIONS BOLTED WITH A325 AND A490 BOLTS. INSPECTIONS SHALL BE DONE PER APPROVED NATIONALLY RECOGNIZED STANDARDS AND THE REQUIREMENTS OF THE CODE AND THE GOVERNING JURISDICTION. WHILE THE WORK IS IN PROGRESS, THE SPECIAL INSPECTOR SHALL DETERMINE THE BOLTS, NUTS, WASHERS AND PAINT; BOLTED PARTS; AND INSTALLATION AND TIGHTENING MEET THE STANDARDS REQUIREMENTS.
6. THE SPECIAL INSPECTOR FOR HIGH STRENGTH BOLTED CONNECTIONS SHALL:
   A. OBSERVE THE CALIBRATION PROCEDURES WHEN SUCH PROCEDURES ARE REQUIRED BY THE PLANS OR SPECIFICATIONS.

   B. MONITOR THE INSTALLATION OF BOLTS TO DETERMINE THAT ALL PLIES OF CONNECTED MATERIALS HAVE BEEN DRAWN TOGETHER.

   C. MONITOR THAT THE SELECTED PROCEDURE IS PROPERLY USED TO TIGHTEN ALL BOLTS.

WOOD CONSTRUCTION: SPECIAL INSPECTION TASK	CONTINUOUS	PERIODIC
1. VERIFY SHEAR WALL CONSTRUCTION, INCLUDING: WALL LENGTH, SILL CONNECTIONS, SHEAR TRANSFER, SHEAR PANEL FASTENERS, HOLDOWNS, STRAP AND BLOCKING, PENETRATIONS.	-	X
2. VERIFY FLOOR & ROOF DIAPHRAGM CONSTRUCTION, INCLUDING: SHEATHING TYPE AND THICKNESS, FASTENERS, STRAPS, BLOCKING, DRAG MEMBERS, PENETRATIONS.	-	X
3. VERIFY FLOOR FRAMING, INCLUDING: MEMBER SIZE AND LAYOUT, BLOCKING, CONNECTIONS, PENETRATIONS.	-	X
4. VERIFY ROOF FRAMING, INCLUDING: MEMBER SIZE AND LAYOUT, BLOCKING AND BRACING, CONNECTIONS, PENETRATIONS.	-	X
5. VERIFY WALL FRAMING, INCLUDING: MEMBER SIZE AND LAYOUT, STUD AND POST SEATING AT TOP AND BOTTOM, POSTS, BLOCKING, CONNECTIONS, PENETRATIONS.	-	X
6. MISCELLANEOUS STRAPS AND TIES (WALLS, FLOORS, ROOF, FLOOR-TO-FLOOR)	-	X
7. VERIFICATION OF MOISTURE CONTENT OF WOOD FRAMING	-	X

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PRIVATE CONTRACT

PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2

GENERAL STRUCTURAL NOTES

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SPEC. NO

The City of SAN DIEGO

FOR CITY APPROVAL

DEVELOPMENT SERVICES DEPARTMENT
SHEET 43 OF 61 SHEETS

APPROVED:
FOR CITY ENGINEER DATE

DESCRIPTION	BY	APPROVED	DATE
ORIGINAL	SP		
AS BUILTS			

CONTRACTOR DATE STARTED
INSPECTOR DATE COMPLETED

PMT NO.
PRJ NO 1119957
1847-6266
NAD83 COORDINATES
207-1706
LAMBERT COORDINATES
DRAWING NO. S002
XXXX- 43 - D

(G.S.N. CONTINUED)

FOUNDATION

1. FOUNDATION DESIGN BASED ON THE FOLLOWING SOILS REPORT:
   COMPANY: GEOCON INCORPORATED.
   PROJECT NO: G3245-42-01.
   DATE: FEBRUARY 26, 2024.

2. FOOTINGS ARE DESIGNED BASED ON THE FOLLOWING INFORMATION:
   ALLOWABLE BEARING * = 5,000 PSF + 0 PSF PER FOOT WIDTH OR DEPTH BEYOND MINUMUM (5,000 PSF MAX)

   EQUIVALENT FLUID PRESSURE = 35 PCF : UNRESTRAINED, TRIANGULAR
   = 7 H+35 PCF : RESTRAINED, TRIANGULAR
   = 15 H :SEISMIC, INVERSE TRIANGULAR

   PASSIVE EARTH PRESSURE = 300 PCF

   COEFFICIENT OF FRICTION = 35

   * ALLOWABLE BEARING MAY BE INCREASED BY 1/3 FOR WIND AND SEISMIC LOAD CASES.

3. FOOTINGS SHALL BEAR ON APPROVED COMPACTED FILL PER THE SOILS REPORT. VERIFY FOOTING ELEVATION WITH THE CIVIL DRAWINGS. MINIMUM DEPTH AND DIMENSIONS OF FOOTINGS SHALL BE AS FOLLOWS:
   MINIMUM DEPTH BELOW LOWEST ADJACENT GRADE..... 2'- 0"
   MINIMUM WIDTH..... 1'- 0"

4. SLABS ON GRADE SHALL BEAR ON APPROVED SUBGRADE PER THE RECOMMENDATIONS OF THE SOILS REPORT.

5. CONTRACTOR TO PROVIDE FOR DE-WATERING OF EXCAVATIONS FROM EITHER SURFACE WATER, GROUND WATER, OR SEEPAGE, IF REQUIRED.

6. CONTRACTOR SHALL PROVIDE FOR DESIGN AND INSTALLATION OF ALL CRIBBING, SHEATHING, AND SHORING REQUIRED AND SHALL BE SOLELY RESPONSIBLE FOR ALL EXCAVATION PROCEDURES INCLUDING LAGGING, SHORING, AND PROTECTION OF ADJACENT PROPERTY, STRUCTURES, STREETS, AND UTILITIES IN ACCORDANCE WITH ALL NATIONAL, STATE, AND LOCAL SAFETY ORDINANCES.

7. ALL EXCAVATIONS SHALL BE PROPERLY BACKFILLED. DO NOT PLACE BACKFILL BEHIND RETAINING WALLS BEFORE CONCRETE OR GROUT IN THE WALLS AND SLABS RESTRAINING THE WALLS HAVE ATTAINED FULL DESIGN STRENGTH. CONTRACTOR SHALL BRACE OR PROTECT ALL BUILDING AND PIT WALLS BELOW GRADE FROM LATERAL LOADS UNTIL ATTACHED FLOORS ARE COMPLETELY IN PLACE AND HAVE ATTAINED FULL STRENGTH. CONTRACTOR SHALL PROVIDE FOR DESIGN, PERMITS, AND INSTALLATION OF SUCH BRACING.

8. FOUNDATIONS SHALL BE PLACED AND ESTIMATED ACCORDING TO DEPTHS SHOWN ON DRAWINGS. SHOULD SOIL ENCOUNTERED AT THESE DEPTHS NOT BE APPROVED BY THE INSPECTOR OR SOILS ENGINEER, FOUNDATION ELEVATIONS WILL BE ALTERED.

9. FOOTING BACKFILL AND UTILITY TRENCH BACKFILL WITHIN BUILDING AREA SHALL BE MECHANICALLY COMPACTED IN LAYERS IN ACCORDANCE WITH THE SOILS REPORT AND APPROVED BY THE SPECIAL INSPECTOR.

10. ALL ABANDONED FOOTINGS, UTILITIES, ETC. SHALL BE REMOVED.

11. DO NOT DE-TENSION SOIL TIEBACKS UNTIL ALL ATTACHED SLABS, CLOSURE STRIPS AND PERPENDICULAR CONCRETE AND CMU WALLS ARE IN PLACE AND HAVE CURED.

12. REMOVE CONTAMINATED SOILS AS REQUIRED PER THE SOILS REPORT.

13. SOIL REMOVAL AND RECOMPACTION SHALL BE PER THE SOILS REPORT AND APPROVED CONTRACT DOCUMENTS.

14. ALL ROOF AND AREA DRAINAGE SHALL BE DIRECTED AWAY FROM FOUNDATIONS.

CONCRETE

1. ALL CONCRETE CONSTRUCTION SHALL CONFORM WITH THE CODE AND WITH THE PROVISIONS OF ACI 318.

2. SCHEDULE OF STRUCTURAL CONCRETE PERFORMANCE REQUIREMENTS:

MEMBER	COMPRESSIVE STRENGTH 28 DAY UNO (PSI)	MAX DENSITY (PCF)	MAX W/C RATIO (NOTE 3C)	MAX SHRINKAGE (%) (NOTE 4)	EXPOSURE CATEGORY/ CLASS (NOTE 3E)
DRILLED SHAFTS AND OTHERS DEEP FOUNDATIONS	4000	150	0.50	0.060	W1
SLAB-ON-GRADE	3000	150	-	0.050	
OTHER RETAINING WALLS	4000	150	0.45	0.050	W1, C1
** ADDITIONAL TEST CYLINDERS ARE REQUIRED FOR 56 DAY STRENGTHS.					

3. CONCRETE MIXES:
   A. MIX SHALL BE DESIGNED BY A QUALIFIED TESTING LABORATORY AND APPROVED BY THE STRUCTURAL ENGINEER.
   B. MIX DESIGN METHODS (TEST HISTORY OR TRIAL BATCH METHOD) PER THE CODE SHALL BE USED TO PROPORTION CONCRETE. SUBMIT MIX DESIGN METHOD DATA FOR REVIEW.
   C. MIX DESIGNS SHALL SATISFY EITHER THE SHRINKAGE CRITERIA OR THE W/C RATIO AND TOTAL WATER CONTENT CRITERIA SPECIFIED.
   D. MIX DESIGNS FOR SLABS ON GRADE, ELEVATED SLABS AND BEAMS MUST MEET SHRINKAGE CRITERIA, REGARDLESS OF THE W/C RATIO SPECIFIED.
   E. MIX DESIGNS SHALL MEET THE MINIMUM REQUIREMENTS FOR EXPOSURE CLASSES F0, S0, W0, AND C0 AS DEFINED IN CHAPTER 19 OF ACI 318 UNLESS OTHERWISE SPECIFIED IN THE TABLE ABOVE.
   F. FOR SHOTCRETE APPLICATIONS, PROVIDE MIX DESIGNS FOR COMPRESSIVE STRENGTH AS WELL AS TEST PANEL RESULTS FOR STRENGTH AND CORE GRADES PER THE SHOTCRETE GENERAL STRUCTURAL NOTES.
   G. PORTLAND CEMENT SHALL CONFORM TO ASTM C-150, TYPE I OR II, UNLESS NOTED OTHERWISE.
   H. AGGREGATE FOR HARDROCK CONCRETE SHALL CONFORM TO ALL REQUIREMENTS AND TESTS OF ASTM C33 AND PROJECT SPECIFICATIONS. EXCEPTIONS MAY BE USED ONLY WITH PERMISSION OF THE STRUCTURAL ENGINEER.
   I. AGGREGATE FOR LIGHTWEIGHT CONCRETE (MAX DENSITY < 120 PCF) SHALL BE THE EXPANDED SHALE TYPE CONFORMING TO ALL REQUIREMENTS AND TESTS OF ASTM C330 AND PROJECT SPECIFICATIONS. EXCEPTIONS MAY BE USED ONLY WITH PERMISSION OF THE STRUCTURAL ENGINEER.

4. SHRINKAGE TESTS:
   A. CONCRETE SHRINKAGE RESULTS FOR ALL PROPOSED MIX DESIGNS SHALL BE PROVIDED WITH THE SUBMITTED MIX DESIGN FOR SEOR REVIEW. THOSE SHRINKAGE RESULTS SHALL BE FOR MIX DESIGNS SHALL BE PER ASTM C157 TESTING AT 28 DAYS.
   B. SHRINKAGE TEST RESULTS SHALL BE BASED ON A 35 DAY READING (28 DAY AIR DRY).

5. CONCRETE INSTALLATION:
   A. CONCRETE MIXING OPERATION, ETC. SHALL CONFORM TO ASTM C94.
   B. PLACEMENT OF CONCRETE SHALL CONFORM TO ACI 318 AND PROJECT SPECIFICATIONS.
   C. CLEAN AND ROUGHEN TO 1/4" AMPLITUDE ALL CONCRETE SURFACES AGAINST WHICH NEW CONCRETE ISTO BE PLACED.
   D. ALL REINFORCING BARS, ANCHOR BOLTS, AND OTHER CONCRETE INSERTS SHALL BE WELL SECURED IN POSITION PRIOR TO PLACING CONCRETE.

6. PENETRATIONS IN CONCRETE:
   A. PROVIDE SLEEVES FOR PLUMBING AND ELECTRICAL OPENINGS IN CONCRETE BEFORE PLACING. DO NOT CUT ANY REINFORCING WHICH MAY CONFLICT. CORING CONCRETE IS NOT PERMITTED EXCEPT AS OUTLINED IN THE M.E.P. COORDINATION NOTES. OPENINGS, POCKETS, ETC., LARGER THAN 6" SHALL NOT BE PLACED IN CONCRETE SLABS, AT DROP PANELS OR BEAMS UNLESS SPECIALLY DETAILED ON THE STRUCTURAL DRAWINGS. NOTIFY STRUCTURAL ENGINEER WHEN DRAWINGS BY OTHERS SHOW OPENINGS, POCKETS, ETC. LARGER THAN 6" NOT SHOWN ON THE STRUCTURAL DRAWINGS, SEE THE M.E.P. COORDINATION NOTES FOR ADDITIONAL RESTRICTIONS ON THE PLACEMENT OF OPENINGS IN SLABS AND WALLS.
   B. PIPES LARGER THAN 1 1/2" DIAMETER SHALL NOT BE EMBEDDED IN STRUCTURAL CONCRETE EXCEPT WHERE SPECIFICALLY APPROVED BY STRUCTURAL ENGINEER. PIPES SHALL NOT DISPLACE OR INTERRUPT REINFORCING BARS. PIPES SHALL NOT BE PLACED IN COLUMN DROP HEAD AREA OR STUDRAIL ZONE. SPACE EMBEDDED PIPES AT A MINIMUM OF 3 DIAMETERS. SIZE OF PIPE SHALL BE ONE THIRD OF SLAB THICKNESS MAX SEE THE M.E.P. COORDINATION NOTES FOR ADDITIONAL RESTRICTIONS ON THE PLACEMENT OF PIPES IN STRUCTURAL CONCRETE.

7. CONCRETE FORMWORK AND SHORING:
   A. CONTRACTOR TO SUBMIT ENGINEERED SHORING AND RESHORING PLANS AND CALCULATIONS TO THE STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION. SEE SHOP DRAWING/SUBMITTALS AND CONSTRUCTION JOINTS NOTES FOR ADDITIONAL REQUIREMENTS.
   B. ELEVATED SLAB SHORING AND RESHORING SHALL BE DESIGNED AND INSTALLED SUCH THAT, PRIOR TO STRESSING TENDONS OR PULLING FORMS, THE SLAB HAS PROPER LEVELNESS AND FLATNESS PER PROJECT SPECIFICATIONS.
   C. FORMWORK SHALL BE CAMBERED TO COMPENSATE FOR FORM SAG UNDER WET CONCRETE LOAD IN ADDITION TO CAMBER SPECIFIED ON THE DRAWINGS. SEE PLANS FOR CAMBER IN CONCRETE SLABS AND BEAMS. RECORD CAMBERS AT UNDERSIDES OF STRUCTURE IMMEDIATELY BEFORE AND AFTER RESHORING AND IMMEDIATELY AFTER DESHORING.
   D. MINIMUM STRENGTH FOR REMOVAL OF BOTTOM FORMS AND SHORING SHALL BE 75% OF SPECIFIED STRENGTH OR 3000 PSI, WHICHEVER IS LARGER.
   E. ALL ELEVATED SLABS RECEIVING WET CONCRETE, FORMWORK OR CONSTRUCTION LOADS SHALL BE RESHORED FOR A MINIMUM OF THREE LEVELS UNLESS APPROVED BY THE ENGINEER OF RECORD.
   F. ALL ELEVATED NON-PT SLABS SHALL BE RESHORED A MINIMUM OF 7 DAYS AFTER PULLING FORMS, REGARDLESS OF CONSTRUCTION LOADING OR LACK THEREOF, UNLESS APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.
   G. COLUMN AND WALL FORMS MAY BE REMOVED IN 24 HOURS.
   H. FOAM USED AS STAY-IN-PLACE FORMS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 5.8 PSI AT 1% DEFORMATION AND A MINIMUM COMPRESSIVE MODULUS OF 580 PSI PER ASTM D6817.
   I. PROVIDE 3/4" CHAMFER ON ALL EXPOSED CORNERS UNLESS INDICATED OTHERWISE BY THE ARCHITECT.

8. ALL EXTERIOR CRACKS TO BE SKIM COATED.

9. TOPPING SLABS AT EXTERIOR CONDITIONS OR EXPOSED TO VIEW:
   A. ALL TOPPING SLABS TO BE REINFORCED WITH WELDED WIRE FABRIC EQUAL TO 0.18% OF CONCRETE CROSS SECTION, WWF4x4-W2.5xW2.5 MIN, UNO
   B. ADD CONTROL JOINTS AT EACH WAY, 1/4 SLAB THICKNESS MIN, SPACED AT 28*SLAB THICKNESS AND FULL DEPTH JOINTS EACH WAY SPACED 84*SLAB THICKNESS (EX: 7-0" OC AND 21'-0" OC FOR 3" SLAB). VERIFY LOCATIONS WITH ARCHITECT.
   C. ADD #3 X 5'-0" MIDHEIGHT DIAGONAL BARS AT RE-ENTRANT CORNERS AND LARGE OPENINGS WHERE CRACKS ARE LIKELY TO FORM.

PRECAST CONCRETE

1. PRESTRESSED PRETENSIONED HARDROCK ITEMS SHALL BE AS MANUFACTURED BY: TPAC, CORESLAB, OR APPROVED EQUAL.

2. MANUFACTURER SHALL BE RESPONSIBLE FOR DESIGN OF THESE ITEMS FOR LOADS IN ADDITION TO THEIR WEIGHT AS SHOWN ON PLANS, & SHALL INFORM THE ARCHITECT PRIOR TO BIDDING, IF LARGER THAN SPECIFIED SIZES BECOME ADVISABLE. THE DESIGN SHALL INCLUDE, BUT NOT BE LIMITED TO, THOSE LOADS SHOWN ON S111, S112 & S113.

3. SUBSTITUTION TO THE DESIGN SHOWN WILL NOT BE PERMITTED UNLESS APPROVED PRIOR TO BIDDING. IF CONTRACTOR ELECTS TO SUBSTITUTE, THEY SHALL BE RESPONSIBLE FOR ALL ADDED COORDINATION, COSTS & TIME REQUIRED TO ACHIEVE THE DESIGN INTENT.

4. PRESTRESSING STRANDS SHALL HAVE SUFFICIENT COVER FOR MIN TWO HOUR FIRE RATING OR AS REQUIRED ON ARCHITECTURAL DRAWINGS. SPRAY STEMS WITH FIRE-PROOFING IF COVER IS NOT ATTAINABLE.

5. DESIGN MUST INCLUDE VERIFICATION OF ALL OPENINGS AND MECHANICAL LOADS REQUIRED BY CONTRACT DOCUMENTS. DESIGN, FABRICATION, TRANSPORTATION, AND ERECTION PER LATEST ACI CODES & PCI HANDBOOK.

6. SEALED DESIGN CALCULATIONS SUFFICIENT TO OBTAIN A BUILDING PERMIT SHALL BE SUBMITTED TO THE ARCHITECT SOON AFTER AWARD OF THE CONTRACT. THESE AND ANY ADDITIONAL CALCULATIONS SHALL BE SUBMITTED FOR REVIEW WITH THE SHOP DRAWINGS PRIOR TO FABRICATION. SUBMITTAL SHALL INCLUDE A COPY OF THE LETTER INFORMING GENERAL CONTRACTOR IF MINIMUM TOPPING STRENGTH REQUIRED IS GREATER THAN 3,000 P.S.I.

7. THE CONTRACTOR SHALL OBTAIN THE CAMBERS FROM PRESTRESSER PRIOR TO BIDDING, TO ALLOW FOR SUFFICIENT COST OF OVERLAY AND FOR COORDINATION WITH REQUIRED SCOPE.

8. ALL BEARINGS FOR SPAN DECK PRESTRESS MEMBERS SHALL BE PROVIDED WITH NEOPRENE PAD OVER THE DESIGNED BEARING AREA. NEOPRENE PAD DESIGN IS TO BE BY PRESTRESSER.

9. REINFORCING SHOWN IN DETAILS IS FOR IN-PLACE CONDITION. CONTRACTOR SHALL BE RESPONSIBLE FOR PICK UP POINT INSERTS AND LOCATIONS, SPECIAL PICK UP REINFORCING AND STRONG BACKS, AND ALL PICK UP AND PLACING OPERATIONS. PLASTIC TIGER-SHIMS MAY BE USED FOR ERECTION PROVIDED THEY DO NOT COVER MORE THAN 10% OF BEARING AREA AND ARE ENCLOSED WITH GROUT. USE STEEL SHIMS ENCLOSED IN GROUT OTHERWISE.

10. DO NOT TAMP FLAT PRECAST SLABS. USE ROLLER BUG, VIBRATING SCREED OR BULL FLOAT TO FINISH.

11. ALL GROUT USED TO BOND PLANK SHALL BE SAND AGGREGATE NON-SHRINK WITH f'c=3,000 PSI MIN

12. ALL PLANKS SHALL BE GROUTED AT LEAST 12" AT BEARING POINTS.

PRIVATE CONTRACT

SPURLOCK
LANDSCAPE ARCHITECTS
2122 Hancock Street
San Diego, California 92110
619.681.0090
spurlock-land.com

WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

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FARID MOHSENI
No. S4775
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REINFORCING STEEL

1. BAR SPECIFICATIONS:
   A. REINFORCING BARS SHALL CONFORM TO THE REQUIREMENTS OF CHAPTER 19 OF THE CODE, GRADE PER TABLE BELOW:

MEMBER	ASTM DESIGNATION	GRADE
DRILLED SHAFTS AND OTHERS DEEP FOUNDATIONS	A615 OR A706	60
SLAB ON GRADE	A615 OR A706	60
OTHER RETAINING WALLS	A615 OR A706	60

   B. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A1064 AND SHALL BE SUPPORTED ON APPROVED CHAIRS.

2. INSTALLATION:
   A. BARS SHALL BE CLEAN OF RUST, GREASE, OR OTHER MATERIALS LIKELY TO IMPAIR BOND.
   B. ALL REINFORCING BAR BENDS SHALL BE MADE COLD.
   C. ALL BARS SHALL BE MARKED SO THEIR IDENTIFICATION CAN BE MADE WHEN THE FINAL IN-PLACE INSPECTION IS MADE.
   D. BARS IN SLABS SHALL BE SECURELY SUPPORTED ON WELL-CURED CONCRETE BLOCKS OR APPROVED METAL CHAIRS, PRIOR TO PLACING CONCRETE.
   E. UNLESS SPECIFICALLY NOTED OTHERWISE: THE MINIMUM CLEAR SPACING BETWEEN PARALLEL BARS IN A LAYER SHALL BE AT LEAST d_b, BUT NOT LESS THAN 1". WHERE PARALLEL REINFORCEMENT IS PLACED IN TWO OR MORE LAYERS, THE UPPER LAYERS SHALL BE PLACED DIRECTLY ABOVE THE BARS IN THE BOTTOM LAYER WITH A CLEAR DISTANCE BETWEEN BARS NOT LESS THAN 1".

3. SPLICES:
   A. REINFORCING BAR SPLICES SHALL, IN CONCRETE, CONFORM TO THE PROVISIONS OF ACI 318, AND IN MASONRY, CONFORM TO THE PROVISIONS OF ACI 530.
   B. #14 AND #18 BARS SHALL NOT BE LAP SPLICED.
   C. LAP ALL HORIZONTAL BARS AT CORNERS AND INTERSECTIONS.
   D. DOWEL ALL VERTICAL REBAR TO FOUNDATIONS.
   E. ALL SPLICE LOCATIONS ARE SUBJECT TO APPROVAL BY STRUCTURAL ENGINEER. PROVIDE REQUIRED SHOP DRAWINGS AND FABRICATE AFTER ENGINEER'S REVIEW.
   F. MECHANICAL BAR SPLICES (COUPLERS) SHALL BE USED WHERE SPECIFIED ON PLANS. THEY MAY ALSO BE USED AT THE CONTRACTOR'S OPTION IN LIEU OF LAP SPLICES AND WHERE REINFORCING IS SHOWN CONTINUOUS THROUGH CONSTRUCTION JOINTS. THE MINIMUM COVER ON THE COUPLER OF 3/4" SHALL BE MAINTAINED. UNLESS NOTED OTHERWISE, ALL MECHANICAL BAR SPLICES SHALL BE "TYPE 2" AS DEFINED BY ACI 318 AND BE ONE OF THOSE LISTED BELOW AND INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS:
      - HRC 500 SERIES MECHANICAL COUPLERS (ICC ESR-2764)
      - LENTON A2 SERIES MECHANICAL SPLICES (IAPMO ER-0129)
   G. MINIMUM LAP SPLICES SHALL BE AS FOLLOWS: U.N.O.
      - WELDED WIRE FABRIC: THE GREATER OF 9" OR 48 BAR DIA.
      - DEFORMED BARS IN CONCRETE: THE GREATER OF 12" OR 24 BAR DIA.
      - DEFORMED BARS IN MASONRY: THE GREATER OF 24" OR 48 BAR DIA.

4. WELDING REBAR:
   A. WELDING OF REINFORCING MUST BE APPROVED BY THE STRUCTURAL ENGINEER.
   B. ALL WELDS SHALL BE IN CONFORMITY WITH THE PROJECT SPECIFICATIONS AND AWS D1.4. SEE SPECIAL INSPECTION SECTION FOR WELDING INSPECTION REQUIREMENTS.
   C. ALL REINFORCING BARS TO BE WELDED SHALL BE ASTM A706, U.N.O.
   D. ALL WELDS SHALL BE DONE BY AWS CERTIFIED WELDERS USING THE FOLLOWING ELECTRODES, U.N.O:

	GRADE 60	GRADE 80
ASTM A706	E80XX	E100XX
ASTM A615	E90XX	E110XX

   E. FOR WELDING OF ANY GRADE 80 REBAR, THE FABRICATOR SHALL SUBMIT A PROCEDURE QUALIFICATION RECORD (PQR) FOR SEOR REVIEW.

5. REBAR DETAILING:
   A. REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE WITH ACI 315.
   B. COMPLETE AND DETAILED REINFORCING PLACEMENT DRAWINGS SHALL BE PREPARED AND SUBMITTED TO THE ARCHITECT FOR REVIEW BY THE STRUCTURAL ENGINEER PRIOR TO FABRICATION IN ACCORDANCE WITH SPECIFICATIONS AND APPLICABLE CODES. THESE APPROVED DRAWINGS SHALL BE AVAILABLE ON THE JOB SITE PRIOR TO PLACING OF CONCRETE.
   C. REBAR SPACINGS GIVEN ARE MAXIMUM ON CENTER WHETHER STATED AS "OC" OR NOT. UNLESS A SPECIFIED LENGTH IS GIVEN, ALL REBAR IS CONTINUOUS WHETHER STATED AS "CONT" OR NOT.

6. MILL TEST REPORTS SHALL BE SUBMITTED PRIOR TO PLACEMENT OF CONCRETE.

7. CONTINUOUS INSPECTION OF CONCRETE SHALL INCLUDE INSPECTION DURING INSTALLATION OF REINFORCING STEEL. INSPECTION SHALL BE SCHEDULED SO THAT PLACEMENT OF REINFORCING STEEL, CONDUIT, SLEEVES, AND EMBEDDED ITEMS MAY BE CORRECTED PRIOR TO PLACEMENT OF OVERLYING GRIDS OF REINFORCING STEEL.

8. CONCRETE PROTECTION FOR REINFORCEMENT:
   (i) CAST-IN-PLACE CONCRETE (NON-PRESTRESSED). THE FOLLOWING CONCRETE COVER SHALL BE PROVIDED FOR REINFORCEMENT, U.N.O.:

	MINIMUM COVER	TOLERANCES + OR -
A. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3"	3/8"
B. CONCRETE EXPOSED TO EARTH OR WEATHER:		
NO. 6 THROUGH NO. 18 BAR	2"	3/8"
NO. 5 BAR, W31 OR D31 WIRE AND SMALLER	1 1/2"	3/8"
C. CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH THE GROUND:		
SLABS, WALLS, JOISTS:		
NO. 14 AND NO. 18 BAR	1 1/2"	3/8"
NO. 11 BAR AND SMALLER	3/4"	1/4"
BEAMS, COLUMNS:		
PRIMARY REINFORCEMENT, TIES, STIRRUPS AND SPIRALS	1 1/2"	3/8"
SHELLS, FOLDED PLATE MEMBERS:		
NO. 6 BAR AND LARGER	3/4"	1/4"
NO. 5 BAR, W31 OR D31 WIRE AND SMALLER	1/2"	3/16"

   (ii) PRECAST CONCRETE (MANUFACTURED UNDER PLANT CONTROL CONDITIONS). THE FOLLOWING CONCRETE COVER SHALL BE PROVIDED FOR REINFORCEMENT, U.N.O.:

	MINIMUM COVER	TOLERANCES + OR -
A. CONCRETE EXPOSED TO EARTH OR WEATHER:		
WALL PANELS:		
NO. 14 AND NO. 18 BAR	1 1/2"	3/8"
NO. 11 BAR AND SMALLER	3/4"	1/4"
OTHER MEMBERS:		
NO. 14 AND NO. 18 BAR	2"	3/8"
NO. 6 BAR THROUGH NO. 11 BAR	1 1/2"	3/8"
NO. 5 BAR, W31 OR D31 WIRE AND SMALLER	1 1/4"	3/8"
B. CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH THE GROUND:		
SLABS, WALLS, JOISTS:		
NO. 14 AND NO. 18 BAR	1 1/2"	3/8"
NO. 11 BAR AND SMALLER	5/8"	3/16"
BEAMS, COLUMNS:		
PRIMARY REINFORCEMENT	$5/8" < d_b > 1\ 1/2"$	ONE THIRD OF COVER
TIES, STIRRUPS AND SPIRALS		
NO. 6 BAR AND LARGER	3/4"	3/16"
NO. 5 BAR, W31 OR D31 WIRE AND SMALLER	1/2"	3/16"
SHELLS, FOLDED PLATE MEMBERS:		
NO. 6 BAR THROUGH NO. 11 BAR	5/8"	3/16"
NO. 5 BAR, W31 OR D31 WIRE AND SMALLER	3/8"	1/8"

9. SLAB SHEAR STUD REINFORCEMENT SHALL BE ONE OF THE FOLLOWING:
   A. DECON STUD RAILS (ICC ESR-2494)
   B. PEIKKO DSA RAILS (ICC ESR-3902)
   C. ALTERNATE APPROVED BY KPFF

10. HEADED REINFORCEMENT (TERMINATORS) SHALL BE USED WHERE SPECIFIED ON PLANS. THEY MAY ALSO BE USED IN LIEU OF STANDARD HOOKS AT THE CONTRACTOR'S OPTION. UNLESS NOTED OTHERWISE, HEADED REINFORCEMENT SHALL BE ONE OF THOSE LISTED BELOW AND INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS:
    A. HRC 555 HEADED REINFORCING BARS (ICC ESR-2935)
    B. LENTON TERMINATORS (IAPMO ER-0188)
    C. ALTERNATE APPROVED BY KPFF

11. ALL ARCHITECTURAL CONCRETE NOT SHOWN ON THE STRUCTURAL DRAWINGS SHALL HAVE REINFORCEMENT EQUAL TO 0.18% OF THE CONCRETE CROSS SECTION IN EACH DIRECTION. CONCRETE COVER TO MEET THE REQUIREMENTS OF NOTE 8.

12. REINFORCING ALLOWANCE: THE CONTRACTOR SHALL PROVIDE 5% OF TOTAL REINF AS EXTRA REINFORCING FOR THE ENGINEER TO USE AT THEIR DISCRETION DURING CONSTRUCTION. THE CONTRACTOR SHALL REIMBURSE THE OWNER FOR THE UNUSED PORTION.

CONSTRUCTION JOINTS

1. ALL CONSTRUCTION JOINTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ACI 318 SECTION 6.4 AND THE TYPICAL CONSTRUCTION JOINT DETAILS SHOWN ON THE STRUCTURAL DRAWINGS.

2. ALL SURFACES OF CONSTRUCTION JOINTS SHALL BE CLEANED TO REMOVE DUST, CHIPS, OR OTHER FOREIGN AND ROUGHENED TO 1/4" MINIMUM AMPLITUDE (UNLESS KEYWAYS ARE PROVIDED PER DETAILS ON THE STRUCTURAL DRAWINGS) PRIOR TO PLACING ADJACENT CONCRETE.

3. THE CONTRACTOR SHALL SUBMIT THE PROPOSED LOCATIONS OF CONSTRUCTION JOINTS FOR APPROVAL BY THE ARCHITECT AND THE STRUCTURAL ENGINEER BEFORE STARTING CONSTRUCTION.

4. SLAB POUR STRIPS SHALL BE POURED NO SOONER THAN 28 DAYS AFTER YOUNGEST ADJACENT CONCRETE, U.N.O. THE SLAB BAY THAT INCLUDES THE POUR STRIP SHALL BE SHORED FOR THE FULL HEIGHT OF THE STRUCTURE. ADJACENT BAYS ON EITHER SIDE OF THE POUR STRIP SHALL BE SHORED UNTIL THE POUR STRIP IS POURED AND REACHES 75% OF DESIGN STRENGTH, U.N.O.

5. SEE REINFORCING STEEL NOTE 3 FOR MECHANICAL SPLICES.

6. AT SLABS-ON-GRADE, TOPPING SLABS, AND WALLS, DO NOT PLACE CONCRETE IN LENGTHS EXCEEDING 100 FEET.

7. CAST SLABS-ON-GRADE IN ALTERNATE SECTIONS UNLESS PERMANENT FORMS ARE USED. WAIT 48 HOURS BETWEEN ALL ADJACENT CONCRETE CASTINGS.

POST-INSTALLED CONCRETE ANCHORS

1. POST-INSTALLED ANCHORAGE SHALL BE AS DETAILED ON THE PLANS. SUBSTITUTION OF PRODUCTS SPECIFICALLY DETAILED IN THESE DRAWINGS SHALL NOT BE ALLOWED WITHOUT WRITTEN APPROVAL FROM THE STRUCTURAL ENGINEER OF RECORD.

2. SPECIAL INSPECTION IS REQUIRED FOR ALL POST-INSTALLED ANCHORS, U.N.O.

3. WHERE ANCHOR TYPE IS NOT NOTED OR AN ALTERNATE BRAND IS PREFERRED, THE FOLLOWING PRODUCTS ARE ACCEPTABLE TO BE SUBMITTED FOR A SUBSTITUTION REQUEST:

   A. EXPANSION ANCHORS: UNLESS NOTED OTHERWISE, EXPANSION ANCHORS IN CONCRETE SHALL BE ONE OF THOSE LISTED BELOW AND INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS.
      - HILTI KWIK BOLT TZ2 (ICC ESR-4266)
      - SIMPSON STRONG-BOLT-2 (ICC ESR-3037)
      - DEWALT/POWERS POWER-STUD +SD2 (ICC ESR-2502)
      - ALTERNATE APPROVED BY KPFF

   B. ADHESIVE ANCHORS: UNLESS NOTED OTHERWISE, EPOXY ANCHORS IN CONCRETE SHALL BE ONE OF THOSE LISTED BELOW AND INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS.
      - HILTI HIT-HY 200-V3 (ICC ESR-4868)
      - HILTI HIT-RE 500-V3 (ICC ESR-3814)
      - SIMPSON SET-3G (ICC ESR-4057)
      - SIMPSON SET-XP (ICC ESR-2508)
      - DEWALT/POWERS PURE110+ (ICC ESR-3298)
      - DEWALT/POWERS AC100+GOLD (ICC ESR-2582)
      - ALTERNATE APPROVED BY KPFF

   C. POWER ACTUATED FASTENERS: UNLESS NOTED OTHERWISE, POWER ACTUATED FASTENERS IN CONCRETE SHALL BE ONE OF THOSE LISTED BELOW AND INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS.
      - HILTI LOW VELOCITY POWER DRIVEN FASTENERS (ICC ESR-1663)
      - SIMPSON POWER ACTUATED FASTENERS (ICC ESR-2138)
      - DEWALT/POWERS POWER-DRIVEN FASTENERS (ICC ESR-2024
      - DEWALT/POWERS TRACK-IT C5 GAS ACTUATED FASTENERS (ICC ESR-3275)
      - ALTERNATE APPROVED BY KPFF

   D. SCREW ANCHORS: UNLESS NOTED OTHERWISE, SCREW ANCHORS IN CONCRETE SHALL BE ONE OF THOSE LISTED BELOW AND INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS.
      - HILTI KWIK HUS-EZ (ICC ESR-3027)
      - SIMPSON TITEN-HD (ICC ESR-2713)
      - DEWALT/POWERS SCREWBOLT+ (ICC ESR-3889)
      - ALTERNATE APPROVED BY KPFF

4. TENDONS AND REBAR MUST BE LOCATED AND AVOIDED BEFORE DRILLING INTO OR FASTENING TO SLABS, EXCEPT WHEN ANCHORS ARE USED WITH A MAXIMUM EMBEDMENT OF 3/4" OR LESS.

5. ALL CONCRETE ANCHORS WHICH ARE EXPOSED TO THE WEATHER SHALL BE STAINLESS STEEL OR HOT DIP GALVANIZED.

6. WHERE ADHESIVE ANCHORS ARE TO BE INSTALLED IN OVERHEAD CONDITIONS, OR IN HORIZONTAL CONDITIONS WHERE THE SPECIFIED EMBEDMENT DEPTH IS GREATER THAN 8", A PISTON PLUG SHALL BE USED DURING INSTALLATION.

HEADED STUDS

1. ALL HEADED STUDS WELDED TO BEAMS OR CONCRETE CONNECTIONS SHALL BE ONE OF THOSE LISTED BELOW AND INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS:
   A. TRU-WELD SHEAR CONNECTOR STUDS (ICC ESR-2577)
   B. NELSON SHEAR CONNECTOR STUDS (ICC ESR-2856)
   C. ALTERNATE APPROVED BY KPFF.

2. ALL HEADED STUDS SHALL BE AUTOMATICALLY END WELDED IN SHOP OR FIELD WITH EQUIPMENT RECOMMENDED BY MANUFACTURER OF STUDS.

3. STEEL SHEAR STUDS MATERIAL, WELDING, AND INSPECTIONS SHALL BE IN ACCORDANCE WITH AWS "STRUCTURAL WELDING CODE", AWS D1.1

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PRIVATE CONTRACT

PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2

GENERAL STRUCTURAL NOTES

CONSULTANT kpff
COMPANY ADDRESS: KPFF Consulting Engineers
3131 Camino Del Rio North Suite 1080, San Diego Ca. 92108
COMPANY PHONE NUMBER: 619-521-8500
COMPANY EMAIL DATE OF: Bryon.Spicer@kpff.com
SIGNING:
REGISTERED PROFESSIONAL ENGINEER FARID MOHSENI No. S4775 Exp. 9/30/24 STRUCTURAL STATE OF CALIFORNIA

SPEC. NO

The City of SAN DIEGO
FOR CITY APPROVAL

DEVELOPMENT SERVICES DEPARTMENT
SHEET 45 OF 61 SHEETS

APPROVED:
FOR CITY ENGINEER DATE

DESCRIPTION	BY	APPROVED	DATE
ORIGINAL	SP		
AS BUILTS			

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PMT NO.
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1847-6266 NAD83 COORDINATES
207-1706 LAMBERT COORDINATES
DRAWING NO. XXXX- 45 - D
S004

(G.S.N. CONTINUED)

STRUCTURAL STEEL

1. ALL STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED, AND ERECTED IN ACCORDANCE WITH AISC 303 AND AISC 360. THE FABRICATOR AND THE ERECTOR SHALL BE AISC CERTIFIED (CATEGORY BU AND CATEGORY CSE, RESPECTIVELY) OR CERTIFIED BY THE GOVERNING JURISDICTION UNLESS APPROVED BY THE ENGINEER OF RECORD. SEE SPECIAL INSPECTION SECTION FOR ADDITIONAL REQUIREMENTS ON SHOP FABRICATION.

2. ALL STRUCTURAL STEEL SHALL CONFORM TO THE ASTM DESIGNATION AS INDICATED BELOW (U.N.O.):

DESCRIPTION	ASTM DESIGNATION
ALL BASE PLATES AND LATERAL RESISTING CONNECTION PLATES	A572, GRADE 50 [A36]
ALL ANGLES, CHANNELS, AND MISC.	A36
HSS SECTIONS	A500 GRADE B OR C [A1085, GRADE 50]
HIGH STRENGTH BOLTS	F3125, GRADES A325 & F1852 F3125, GRADES A490 & F2280
MACHINE BOLTS	A307
ANCHOR BOLTS	F1554, GRADE 36 [55, 55 WELDABLE, 105]
THREADED RODS	A36

3. THE STRUCTURAL STEEL FABRICATOR SHALL FURNISH SHOP DRAWINGS OF ALL STEEL FOR ARCHITECT'S AND STRUCTURAL ENGINEER'S REVIEW BEFORE FABRICATION.

4. HOLES IN STEEL SHALL BE AS FOLLOWS, U.N.O.:
   A. FOR NOMINAL BOLT SIZE LESS THAN 1", HOLE DIAMETER SHALL BE 1/16" LARGER
   B. FOR NOMINAL BOLT SIZE EQUAL TO OR LARGER THAN 1", HOLE DIAMETER SHALL BE 1/8" LARGER.
   C. COLUMN BASE PLATE HOLES MAY BE OVERSIZED PER AISC MANUAL TABLE 14-2

5. ALL STRUCTURAL STEEL SURFACES THAT ARE ENCASED IN CONCRETE, MASONRY, OR SPRAY ON FIREPROOFING, OR ARE ENCASED BY BUILDING FINISH, SHALL BE LEFT UNPAINTED.

6. ALL STRUCTURAL STEEL AND MISCELLANEOUS METAL PERMANENTLY EXPOSED TO WEATHER SHALL BE HOT DIP GALVANIZED AFTER FABRICATION, U.N.O. ALTERNATE FINISHES SHALL BE SUBMITTED TO THE ARCHITECT FOR REVIEW AND APPROVAL.
   A. FIELD WELDING OF GALVANIZED STEEL SHALL BE IN CONFORMANCE WITH AWS D19.0.
   B. GALVANIZING AT FIELD WELDS SHALL BE REPAIRED WITH A GALVANIZING REPAIR PAINT ACCORDING TO ASTM A780.
   C. ALL WELDING OF GALVANIZED STEEL DESIGNATED AESS SHALL USE ELECTRODES WITH LESS THAN OR EQUAL TO 0.3% SILICON CONTENT.

7. HIGH STRENGTH BOLTS TO BE FULLY PRETENSIONED PER AISC SPECIFICATION FOR STRUCTURAL JOINTS, U.N.O. TEST SLIP CRITICAL (SC) BOLTS WITH A CALIBRATED WRENCH UNLESS LOAD INDICATOR BOLTS ARE USED.

8. PROVIDE BEVELED WASHERS PER ANSI B18.23.1 AS REQUIRED ON SLOPED SURFACES.

9. STRUCTURAL MEMBERS AND CONNECTIONS EXPOSED TO VIEW IN THE COMPLETED STRUCTURE SHALL BE DESIGNATED ARCHITECTURALLY EXPOSED STRUCTURAL STEEL (AESS) WHERE NOTED ON PLAN. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.

10. WELDING:
   A. ALL WELDS SHALL BE IN CONFORMITY WITH THE PROJECT SPECIFICATIONS AND AWS D1.1, SEE SPECIAL INSPECTION SECTION FOR WELDING INSPECTION REQUIREMENTS.
   B. ALL WELDING IS TO BE DONE BY CERTIFIED WELDERS USING E70XX ELECTRODES (U.N.O.).
   C. WELD LENGTHS CALLED FOR ON PLANS ARE THE NET EFFECTIVE LENGTH REQUIRED. WHERE FILLET WELD SYMBOL IS GIVEN WITHOUT INDICATION OF SIZE, USE MINIMUM SIZE WELDS AS SPECIFIED IN AISC 360.
   D. WELDS TERMINATING AT ENDS OR SIDES, WHERE PRACTICAL, SHALL BE RETURNED CONTINUOUSLY AROUND CORNERS A DISTANCE 2 TIMES THE NOMINAL SIZE OF THE WELD PER AISC 360 SECTION J2.2B, U.N.O.
   E. ALL FULL-PENETRATION FIELD WELDS SHALL BE ULTRASONICALLY TESTED.
   F. ALL TWO-SIDED FILLET WELDS SHOWN SHALL BE WELDED WITH THE SAME (GIVEN) WELD SIZE ON BOTH SIDES.
   G. ALL UNSIZED GROOVE OR BUTT WELDS SHOWN SHALL BE COMPLETE PENETRATION. ALL PROVISIONS OF AWS SHALL BE OBSERVED INCLUDING REQUIREMENTS FOR BACK-UP PLATES AND WELD TRANSITIONS WHETHER OR NOT THEY ARE SPECIFICALLY SHOWN.
   H. A WRITTEN WELDING PROCEDURE SPECIFICATION SHALL BE SUBMITTED TO THE TESTING LABORATORY. IT SHALL INCLUDE ALL WELDING PROCEDURES TO BE USED AS DESCRIBED IN AWS, CHAPTER 4.
   I. WHERE FIELD WELDING IS INDICATED, THE FIELD DESIGNATION IS GIVEN AS A RECOMMENDATION ONLY.

11. ALL ANCHOR BOLTS SHALL BE HEADED STUD BOLTS OR THREADED RODS WITH NUTS. J BOLTS ARE NOT ACCEPTABLE IN ANY APPLICATION.

12. GROUT OTHER THAN FOR MASONRY CELLS SHALL BE NON-SHRINK, NON-METALLIC GROUT, MEETING ASTM C-1107, MIXED AND INSTALLED PER MANUFACTURER'S SPECIFICATIONS. MINIMUM COMPRESSIVE STRENGTH SHALL BE 5,000 PSI IN THREE DAYS, UNLESS APPROVED BY THE STRUCTURAL ENGINEER.

13. ALL ROLLED STEEL MEMBERS WITH FLANGES EXCEEDING 1 1/2" AND ALL PLATES EXCEEDING 2" IN THICKNESS SHALL COMPLY WITH THE FOLLOWING:
   A. ALL MATERIALS SHALL HAVE CHARPY V-NOTCH TESTING AS REQUIRED PER AISC 360 SECTION A3.1.
   B. ALL BEAM COPES AND WELD ACCESS HOLES SHALL COMPLY WITH AISC 360 SECTION J1.6
   C. ALL WELD MATERIAL SHALL COMPLY WITH AISC 360 SECTION J2.6
   D. ALL THERMAL CUTTING SHALL COMPLY WITH AISC 360 SECTION

WOOD FRAMING

1. ALL STRUCTURAL LUMBER SHALL BE DOUGLAS FIR-LARCH, VISUALLY GRADED OR MACHINE GRADED UNDER THE LUMBER GRADING RULES OF WEST COAST LUMBER INSPECTION BUREAU (WCLIB), OR WESTERN WOOD PRODUCTS ASSOCIATION (WWPA), LATEST EDITION. ALL FRAMING MEMBERS SHALL BE AS FOLLOWS U.N.O.:

THICKNESS	GRADE
4" NOM AND SMALLER	GRADE No. 2
6" NOM	GRADE No. 1
LARGER THAN 6" NOM (EXCEPT AS SHOWN ON PLANS)	GRADE SELECT STRUCTURAL
STUDS (2x)	
NON-BEARING	STUD GRADE
EXTERIOR AND BEARING	GRADE No. 2
SILLS AND TOP PLATES	GRADE No. 2 (PRESSURE TREATED AT MUDSILLS ONLY)

2. ALL WOOD FRAMING SHALL BE PROTECTED FROM MOISTURE DURING CONSTRUCTION. ALL DIMENSION LUMBER SHALL BE GRADE STAMPED "S-DRY WHICH INDICATES A MOISTURE CONTENT NOT EXCEEDING 19 PERCENT. ALL TIMBERS (6" NOM. OR LARGER) SHALL BE FIELD VERIFIED THAT THEIR MOISTURE CONTENT DOES NOT EXCEED 19 PERCENT AT THE TIME OF INSTALLATION. SEE SPECIAL INSPECTION SECTION FOR ADDITIONAL INFORMATION REGARDING MOISTURE VERIFICATION.

3. ALL LUMBER IN CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE TREATED. ALL LUMBER (EXCEPT REDWOOD AND CEDAR) EXPOSED TO THE WEATHER SHALL BE PRESSURE TREATED OR PAINTED.

4. ALL FASTENERS IN CONTACT WITH PRESSURE TREATED OR FIRE-RETARDANT TREATED LUMBER SHALL BE GALVANIZED OR STAINLESS STEEL (NOT REQUIRED AT ENCLOSED AREAS PROTECTED FROM THE WEATHER WHERE SBX/DOT OR ZINC BORATE PRESERVATIVE TREATMENT IS USED, REFERENCE CODE SECTION 2304.9.5).

5. UNLESS OTHERWISE NOTED, EXTERIOR STUD WALLS SHALL BE FRAMED AS FOLLOWS:

MAX HEIGHT	WALL FRAMING
8'-0"	2x4@16"
10'-0"	2x6@16"
12'-0"	2x8@16"

6. CEILING JOISTS, U.N.O. SHALL BE AS FOLLOWS:

MAX SPAN	CEILING JOIST
9'-0"	2x4@24"
14'-0"	2x6@24"
18'-0"	2x8@24"

7. PROVIDE DOUBLE JOISTS UNDER PARTITIONS RUNNING PARALLEL TO JOISTS, UNLESS SUPPORTED BY A WALL BELOW OR SHOWN OTHERWISE. NAIL DOUBLED JOISTS WITH 16d AT 12" OC, STAGGERED.

8. UNLESS OTHERWISE NOTED, ALL WOOD SILL PLATES UNDER BEARING, EXTERIOR, OR SHEAR WALLS IN CONTACT WITH CONCRETE OR MASONRY SHALL BE BOLTED TO CONCRETE OR MASONRY w/ 5/8"ØX12" BOLTS AT 48" OC BEGINNING AT 9" OC MAX FROM EACH END OF THE PLATES WITH APPROPRIATELY SIZED CUT WASHERS AND NUTS. BOLTS SHALL EXTEND A MINIMUM OF 8" INTO CONCRETE OR MASONRY. A MINIMUM OF TWO ANCHOR BOLTS SHALL BE PLACED IN ANY ONE PIECE OF SILL PLATE. THESE AND ALL ADDITIONAL REQUIREMENTS OF THE CODE SHALL BE FOLLOWED IN THE INSTALLATION OF WALL SILL PLATES.

9. METAL FRAMING ACCESSORIES ARE REFERRED TO ON PLANS BY PARTICULAR TYPE AS MANUFACTURED BY SIMPSON STRONG-TIE. ACCESSORIES OF OTHER MANUFACTURERS WITH EQUIVALENT LOAD CARRYING CHARACTERISTICS MAY BE USED SUBJECT TO THE APPROVAL OF THE ENGINEER OF RECORD. MANUFACTURER'S DATA, INCLUDING A LOAD CAPACITY COMPARISON TABLE FOR ALL SUBSTITUTIONS AND/OR ICC/IAPMO EVALUATION REPORTS, SHALL BE SUBMITTED AS SHOP DRAWINGS TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION.
   A. JOIST AND BEAM HANGERS: UNLESS NOTED OTHERWISE, USE THE FOLLOWING HANGERS (HANGER SIZE TO MATCH BEAM SIZE):
      • 2x & 4x..... LUS (ICC ESR-2549)
      • 6x, PSL, LSL, LVL & GLULAM....WPU OR HWU (ICC ESR-2615)
      • PWJ.....MIU (ICC ESR-2552)
   B. STRUCTURAL WOOD SCREWS: WHERE INDICATED ON THE DRAWINGS, USE THE FOLLOWING STRUCTURAL FASTENERS:
      • SDS.....(ICC ESR-2236)
      • SDWS..... (IAPMO ER-192)
      • SDWH..... (IAPMO ER-192)
   C. FRAMING ANGLES AND PLATES: WHERE INDICATED ON THE DRAWINGS, USE THE FOLLOWING FRAMING ACCESSORIES:
      • A34 & A35..... (IAPMO ER-112)
      • LTP4.....(ICC ESR-2606)

10. APPROVED METAL TYPE BRIDGING SHALL BE USED ONLY FOR ROOFS.

11. FOR LAG BOLTS, PRE-DRILL HALF THE LAG DIAMETER IN THREADED PORTION AND FULL SHANK DIAMETER IN THE UNTHREADED PORTION.

12. RETIGHTEN BOLTS BEFORE CLOSING IN.

WOOD FRAMING (CONT)

13. WOOD STRUCTURAL PANELS
   A. ALL WOOD STRUCTURAL PANELS SHALL HAVE THE FOLLOWING SPAN RATINGS U.N.O.:
      • FLOOR SHEATHING SHALL BE 3/4" SQ. EDGE IDENT INDEX 48/24
      • ROOF SHEATHING SHALL BE 1/2" SQ. EDGE IDENT INDEX 24/0
      • WALL SHEATHING SHALL BE 1/2" SQ. EDGE IDENT INDEX 16/0
   B. ALL WOOD STRUCTURAL PANELS SHALL BEAR LEGIBLE APA STAMPS AND SHALL MEET THE REQUIREMENTS OF THE LATEST EDITION OF VOLUNTARY PRODUCT STANDARD PS1, VOLUNTARY PRODUCT STANDARD PS2, OR APA PRP-108 PERFORMANCE STANDARDS.
   C. SHEATHING PANELS USED FOR STRUCTURAL PURPOSES SHALL BE APA STRUCTURAL 1 RATED SHEATHING EXP 1. PANELS USED FOR PERMANENTLY EXPOSED APPLICATIONS SHALL HAVE MIN GRADE OF EXT. COMBINED SUBFLOOR UNDERLAYMENT PANELS SHALL BE APA RATED STURD-I-FLOOR EXP 1.
   D. ROOF AND FLOOR SHEATHING SHALL BE LAID WITH THE GRAIN OF THE OUTER PLIES PERPENDICULAR TO THE FRAMING MEMBERS AND END JOINTS SHALL BE STAGGERED. WALL SHEATHING SHALL BE APPLIED VERTICALLY. SPACING OF 1/8" IS RECOMMENDED AT ALL PANEL EDGES. SHEATHING SHALL BE APPROVED BY THE BUILDING INSPECTOR PRIOR TO COVERING.

14. USE OF MACHINE NAILING IS SUBJECT TO A SATISFACTORY JOBSITE DEMONSTRATION FOR EACH PROJECT AND THE APPROVAL BY STRUCTURAL ENGINEER. THE APPROVAL IS SUBJECT TO CONTINUED SATISFACTORY PERFORMANCE. MACHINE NAILING WILL NOT BE APPROVED IN PLYWOOD 3/8" OR LESS. IF NAILHEADS PENETRATE THE OUTER PLY MORE THAN 1/8" OR IF MINIMUM ALLOWABLE EDGE DISTANCES ARE LESS THAN 3/8", THE PERFORMANCE WILL BE DEEMED UNSATISFACTORY. ADD AN ADDITIONAL NAIL FOR EACH NAIL THAT IS DEEMED UNSATISFACTORY.

15. FLOOR SHEATHING - UNLESS OTHERWISE NOTED, ALL FLOOR PANELS SHALL HAVE ALL UNSUPPORTED EDGES BLOCKED. REFER TO SECTION ENTITLED "GLUED FLOOR SYSTEM" FOR GLUING REQUIREMENTS. TYPICAL NAILING SHALL BE 10d AT 6"OC AT ALL SUPPORTED EDGES AND OVER SHEAR WALLS (EN & B.N.), AND 10d AT 12"OC AT ALL INTERMEDIATE SUPPORTS (FN), UNLESS OTHERWISE NOTED.

16. ROOF SHEATHING - UNLESS OTHERWISE NOTED, EDGE BLOCKING OF UNSUPPORTED EDGE OF ROOF PANELS MAY BE OMITTED. TYPICAL NAILING SHALL BE 10d AT 6"OC AT ALL SUPPORTED EDGES AND OVER SHEAR WALLS (EN & B.N.), AND 10d AT 12"OC AT ALL INTERMEDIATE SUPPORTS (F.N.), UNLESS OTHERWISE NOTED.

17. WALL SHEATHING - UNLESS OTHERWISE NOTED, ALL WALL PANELS SHALL HAVE ALL UNSUPPORTED EDGES BLOCKED. FASTEN PANELS TO STUDS PER w/ 10d @ 6" OC EDGE NAILING (EN) AND 10d @ 12" OC FIELD NAILING (FN) MINIMUM UNLESS OTHERWISE NOTED.

18. MULTIPLE PENETRATIONS OF ANY SIZE LOCATED WITHIN 4'-0" OF EACH OTHER OR SINGLE PENETRATIONS LARGER THAN 8"x8" ARE NOT ALLOWED IN SHEAR WALLS WITHOUT APPROVAL OF THE ENGINEER. SEE SHEAR WALL SCHEDULE FOR PENETRATION DETAIL AND ADDITIONAL INFORMATION.

19. FIRE STOPPING, BACKING FOR INTERIOR FINISHES, NONBEARING WALLS, AND OTHER NON-STRUCTURAL FRAMING ARE NOT NECESSARILY SHOWN ON STRUCTURAL DRAWINGS. COORDINATE THESE ITEMS WITH THE ARCHITECTURAL DRAWINGS.

20. LUMBER & HARDWARE - THE CONTRACTOR SHALL PROVIDE 5% OF THE TOTAL LUMBER AND HARDWARE (INCLUDING LABOR) AS EXTRA FOR THE ENGINEER TO USE AT THEIR DISCRETION DURING CONSTRUCTION. THE CONTRACTOR SHALL REIMBURSE THE OWNER FOR THE UNUSED PORTION.

21. ALL NAILS FOR CONNECTING WOOD MEMBERS SHALL BE COMMON NAILS. ALL NAILS SHALL BE COLOR CODED OR OTHERWISE MARKED SO THE SIZE AND SHANK DIAMETER OF THE INSTALLED NAIL CAN BE DETERMINED. THE MINIMUM NAILING REQUIREMENTS OUTLINED IN THE NAILING SCHEDULE SHALL BE FOLLOWED UNLESS OTHERWISE NOTED.

WOOD FRAMING (CONT)

NAILING SCHEDULE — FROM CODE TABLE 2304.9.1

CONNECTION	NAILING
JOIST TO SILL OR GIRDER, TOENAIL	(3) 8d
BRIDGING TO JOIST, TOENAIL EACH END	(2) 8d
SOLE PLATE TO JOIST OR BLOCKING, TYP FACE NAIL	16d@16"
SOLE PLATE TO JOIST OR BLOCKING, AT BRACED WALL PANELS	(3) 16d@16"
TOP PLATE TO STUD, END NAIL	(2) 16d
STUD TO SOLE PLATE	(4) 8d, TOENAIL or (2) 16d, END NAIL
DOUBLE STUDS, FACE NAILS	16d@24"
DOUBLED TOP PLATE, TYPICAL FACE NAIL DOUBLED TOP PLATES, LAP SPLICE	16d@16" (8) 16d
BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE, TOENAIL	(3) 8d
RIM JOIST TO TOP PLATE, TOENAIL	8d@6"
TOP PLATES, LAPS & INTERSECTIONS, FACE NAIL	(2) 16d
CONTINUOUS HEADER, TWO PIECES	16d@16" ALONG EACH EDGE
CONTINUOUS HEADER TO STUD, TOENAIL	(4) 8d
RAFTER TO PLATE, TOENAIL	(3) 8d
BUILT-UP CORNER STUDS	16d@24"
BUILT-UP GIRDERS AND BEAMS	20d@32" @ T&B AND STAGGERED, (2) 20d @ ENDS AND @ EACH SPLICE

NAIL SIZE SCHEDULE

COMMON NAIL	SHANK DIA	LENGTH (U.N.O.)
20d	0.192"	4"
16d	0.162"	3 1/2"
10d	0.148"	3"
8d	0.131"	2 1/2"
6d	0.113"	2"

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PRIVATE CONTRACT

PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2

GENERAL STRUCTURAL NOTES

CONSULTANT kpff
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COMPANY PHONE NUMBER: 619-521-8500
COMPANY EMAIL DATE OF: Bryon.Spicer@kpff.com
SIGNING:
REGISTERED PROFESSIONAL ENGINEER FARID MOHSENI No. S4775 Exp. 9/30/24 STRUCTURAL STATE OF CALIFORNIA

SPEC. NO

The City of SAN DIEGO

FOR CITY APPROVAL

DEVELOPMENT SERVICES DEPARTMENT
SHEET 46 OF 61 SHEETS

APPROVED:
FOR CITY ENGINEER — DATE

DESCRIPTION	BY	APPROVED	DATE
ORIGINAL	SP		
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DRAWING NO. S005
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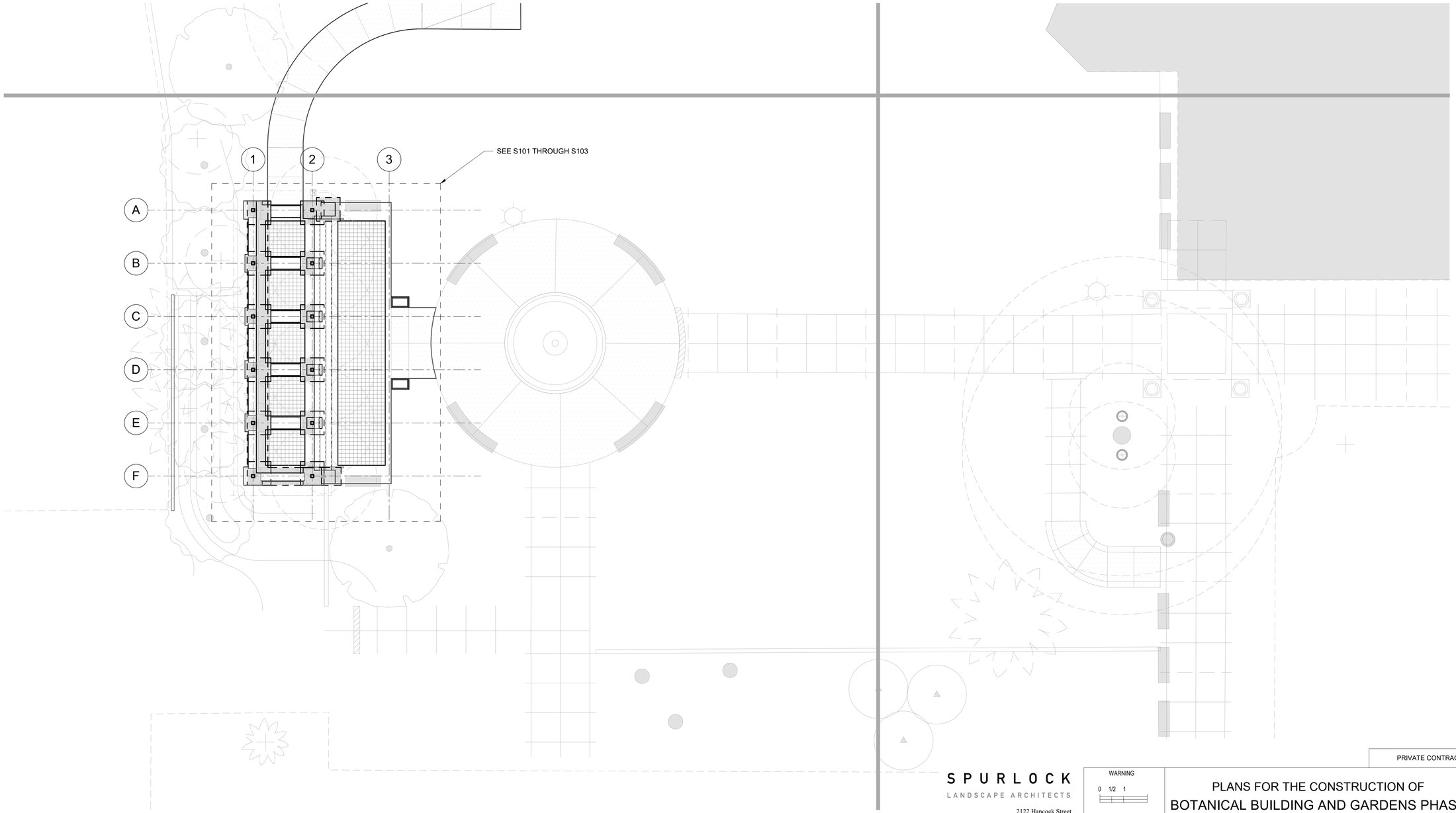

1 SITE PLAN
SCALE: 1/8" = 1'-0"

SITE NOTES:

1. GRADING PER CIVIL AND LANDSCAPE DRAWINGS.
2. ALL PERGOLA RETAINING WALLS TO BE PROPERTY LINE FOUNDATIONS TYPICAL.
3. SEE LANDSCAPE FOR ALL SITE ELEMENTS NOT INCLDING PERGOLA.

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SITE PLAN

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DEVELOPMENT SERVICES DEPARTMENT
SHEET 47 OF 61 SHEETS

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207-1706
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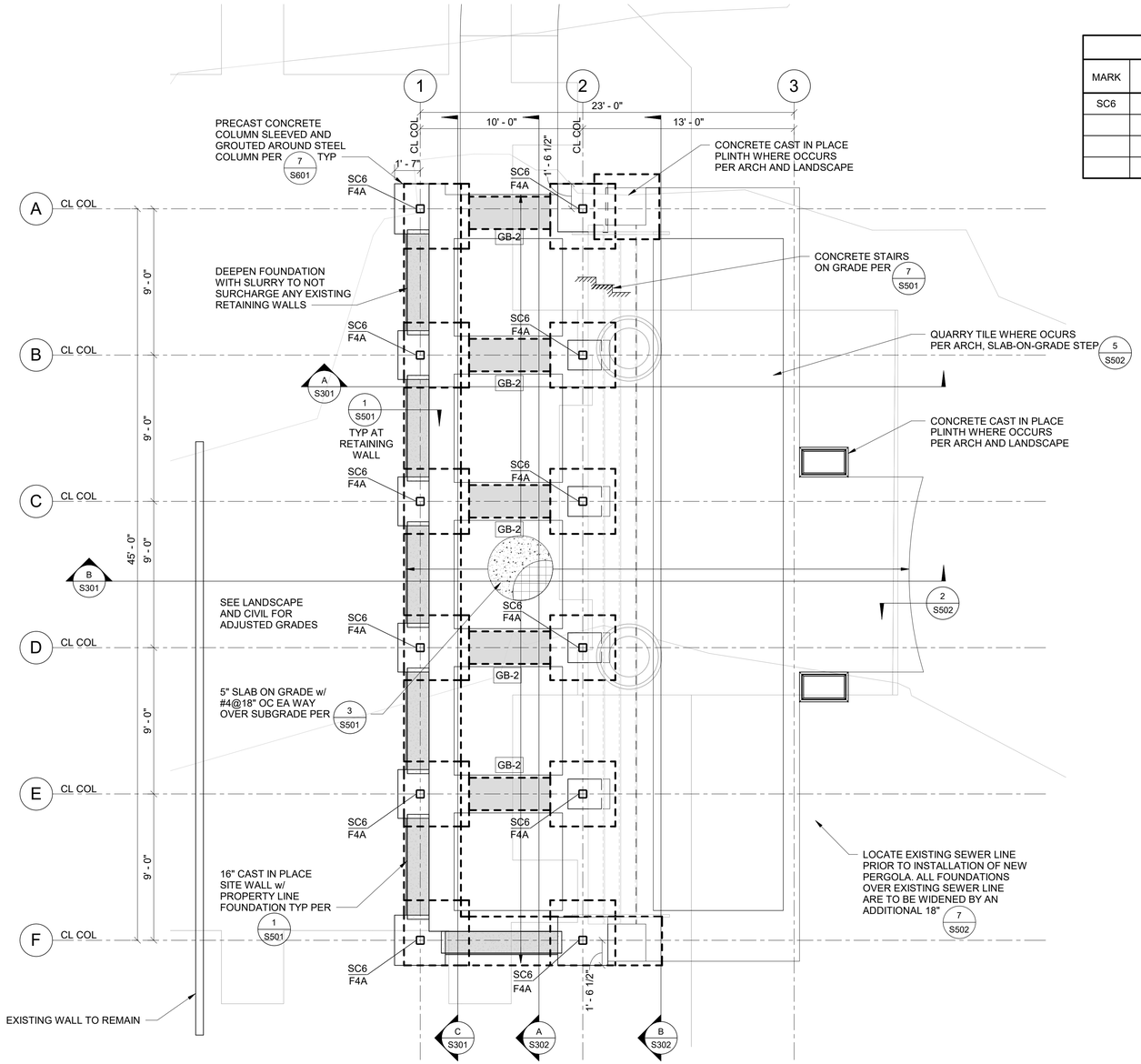
DRAWING NO. SS100
XXXX- 47 - D



1 FOUNDATION PLAN

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

F.F = 0'-0" = +281'-0"

COLUMN SCHEDULE

MARK	SIZE	BASE PLATE t	BASE PLATE W	BASE PLATE L	BASE PLATE x	ANCHOR BOLT DIAMETER	TYPE	DETAIL
SC6	HSS6x6x3/8	0.75"	12"	12"	2"	3/4"	A	3 S801

GRADE BEAM SCHEDULE

MARK	SIZE (WxD)	REINFORCING	TIES
GB-2	2'-0"x18"	(3) #6 T&B	#4 @ 12"

FOOTING SCHEDULE

MARK	SIZE (WxLxD)	REINFORCING
F4A	4'-0"x4'-0"x18"	#6@12" E.W. T&B

FOUNDATION NOTES:

1. TOP OF FOOTING TO BE -(1'-0") FROM GRADE TYPICAL U.N.O. APPROXIMATELY -(4'-0") FROM 0'-0".
2. ALL SITE WALL FOUNDATION TO BE PROPERTY LINE FOOTINGS.
3. FIELD VERIFY THE EXISTING RETAINING WALL LOCATIONS AND FOOTING DEPTHS. DO NOT SURCHARGE EXISTING WALLS. ADD SLURRY OR DEEPEN FOUNDATIONS AS REQUIRED.
4. CONCRETE PRECAST COLUMNS TO BE PER ARCH AND SHAPED PER ARCH PROFILE. GROUT AROUND STEEL COLUMNS ARE TO BE MIN 2", MAX 4" TYPICAL. SEE S102.
5. ALL TOP BARS TO BE HOOKED AT ENDS TYP U.N.O.
6. ALL LAP SPLICE AND HOOK EMBEDMENTS PER 1 S600 7 S600
7. FOUNDATION INTERSECTIONS PER 4 S502

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PRIVATE CONTRACT

PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2
FOUNDATION PLAN

CONSULTANT kpff

COMPANY ADDRESS: KPFF Consulting Engineers
3131 Camino Del Rio North Suite 1080, San Diego Ca. 92108
COMPANY PHONE NUMBER: 619-521-8500
COMPANY EMAIL DATE OF: Bryon.Spicer@kpff.com
SIGNING:
REGISTERED PROFESSIONAL ENGINEER FARID MOHSENI No. S4775 Exp. 9/30/24 STRUCTURAL STATE OF CALIFORNIA

SPEC. NO

The City of SAN DIEGO
FOR CITY APPROVAL

DEVELOPMENT SERVICES DEPARTMENT
SHEET 48 OF 61 SHEETS

APPROVED:
FOR CITY ENGINEER DATE

DESCRIPTION	BY	APPROVED	DATE
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AS BUILTS			

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INSPECTOR DATE COMPLETED

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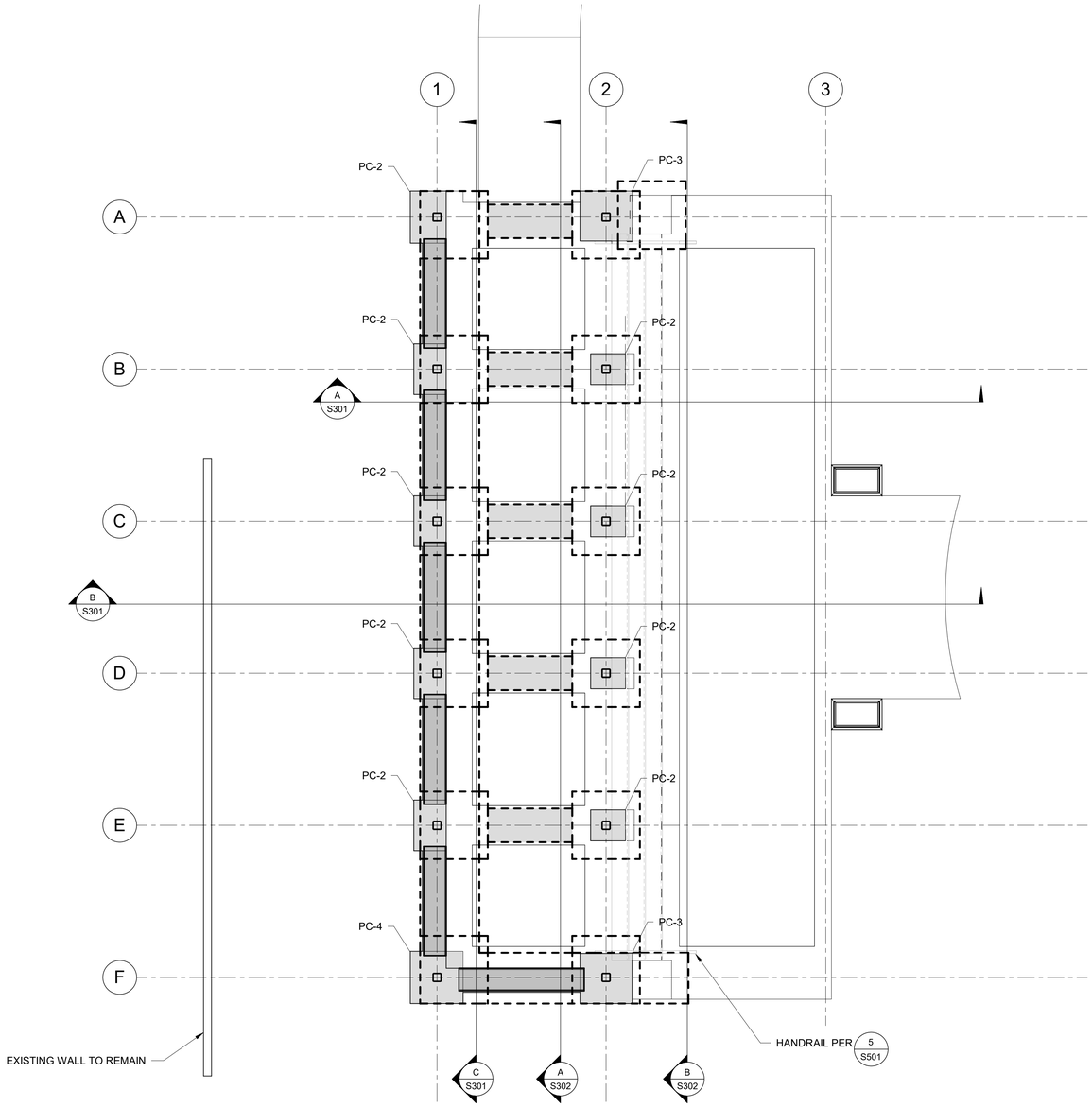
PRJ NO 1119957
1847-6266 NAD83 COORDINATES
207-1706 LAMBERT COORDINATES
DRAWING NO. S101
XXXX- 48 - D



1 PRE-CAST CONCRETE COLUMN PLAN
SCALE: 1/4" = 1'-0"

PRE-CAST CONCRETE NOTES:

1. CONCRETE PRECAST COLUMNS TO BE PER ARCH AND SHAPED PER ARCH PROFILE. GROUT AROUND STEEL COLUMNS ARE TO BE MIN 2", MAX 4" TYPICAL. SEE S102.
2. ALL SITE WALL FOUNDATION TO BE PROPERTY LINE FOOTINGS.
3. FIELD VERIFY THE EXISTING RETAINING WALL LOCATIONS AND FOOTING DEPTHS. DO NOT SURCHARGE EXISTING WALLS. ADD SLURRY OR DEEPEN FOUNDATIONS AS REQUIRED.
4. ALL PRECAST ELEMENTS TO BE MIN 3,000 PSI CONCRETE AT 28 DAY STRENGTH AND HAVE MIN .005% REBAR TYPICAL.
5. INTERLOCKING REBAR AND GROUT HOLES ET CETERA ARE RESPONSIBILITY OF PRE-CAST CONCRETE DESIGN.
6. ALL HSS INSIDE PRE-CAST ELEMENTS ARE HSS 6x6x3/8 UNO.

PRECAST CONC COL SCHEDULE

MARK	SIZE (WxL)	CONC DIAMETER
PC-2	3'-0"x1'-11"	-
PC-3	2'-11 1/2"x3'-1"	-
PC-4	3'-1"x3'-1 1/4"	-

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PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2
PRE-CAST CONCRETE COLUMN PLAN

CONSULTANT kpff

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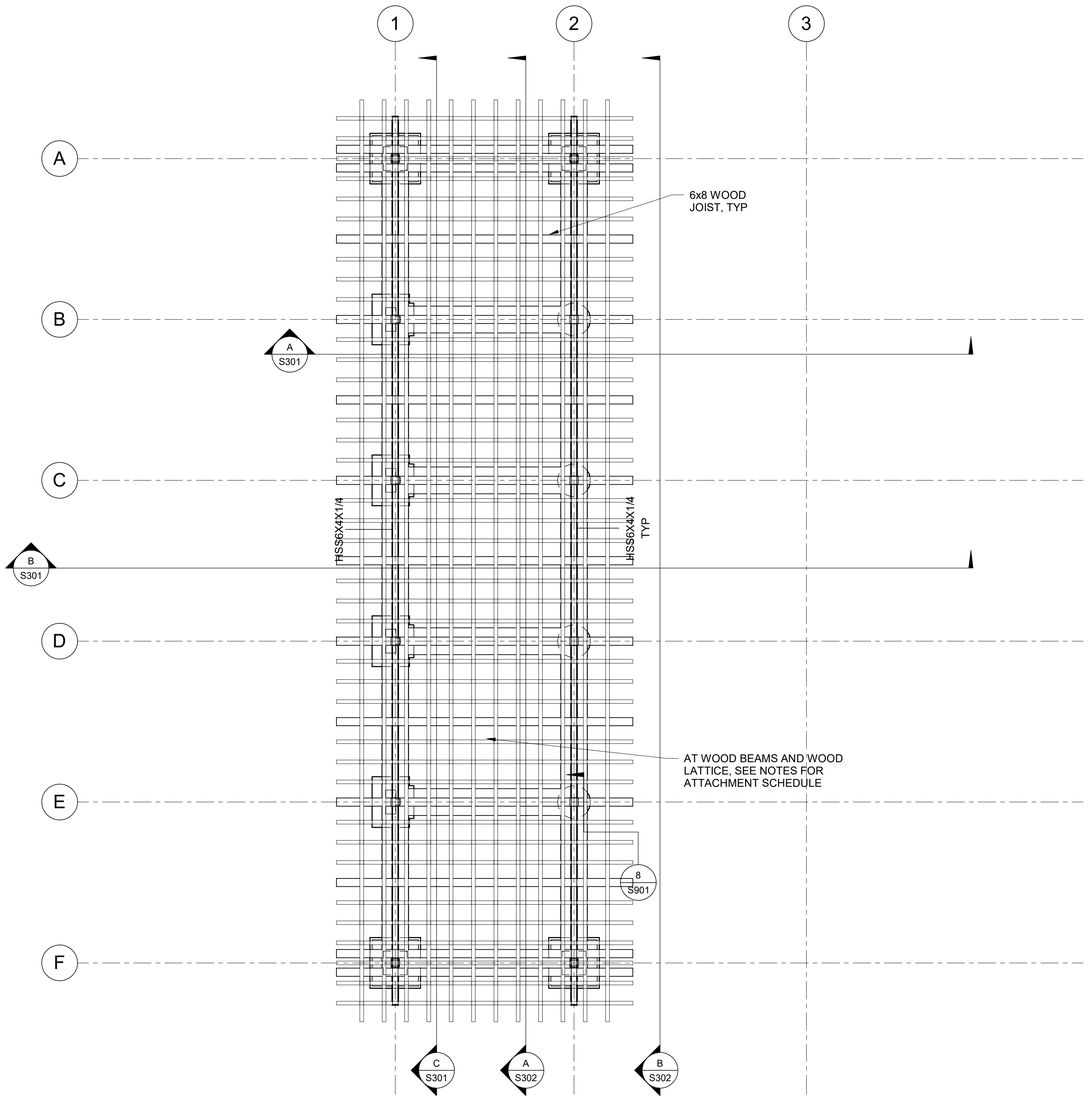
207-1706
LAMBERT COORDINATES
DRAWING NO. S102
XXXX- 49 - D



1 ROOF FRAMING PLAN
SCALE: 1/4" = 1'-0"

FRAMING NOTES:

1. STEEL BEAM TOP OF STEEL PER ARCH.
2. FOR TYPICAL HSS TO HSS CONNECTIONS, SEE S801.
3. SEE ARCH FOR WOOD CLADDING AROUND STEEL BEAMS.
4. ALL WOOD IS TO BE PRESERVATIVE TREATED.
5. AT WOOD BEAMS TO HSS WITH WOOD NAILER, ATTACH WITH (2) 1/4" SDWS SCREWS WITH 2" EMBED INTO NAILER TYPICAL EVERY CROSSING MEMBER.
6. AT WOOD LATTICE TO WOOD BEAM, ATTACH WITH 1/4" SDS SCREWS WITH 1" EMBED MAX 24" ON CENTER.

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PLANS FOR THE CONSTRUCTION OF
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ROOF FRAMING PLAN

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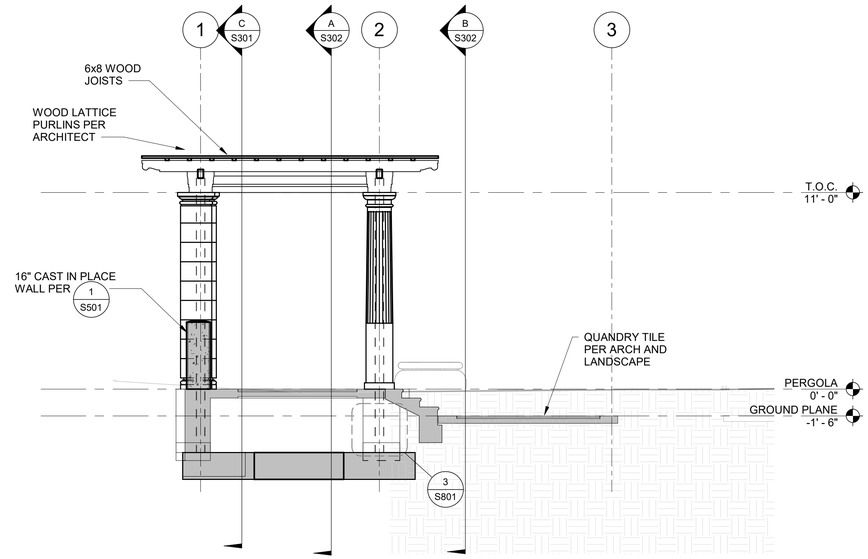
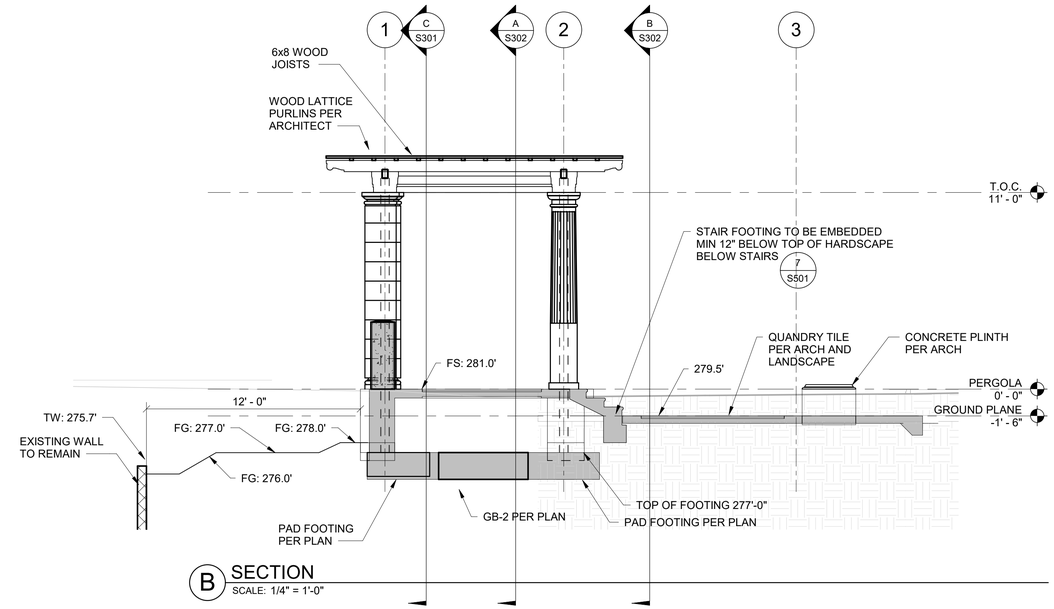
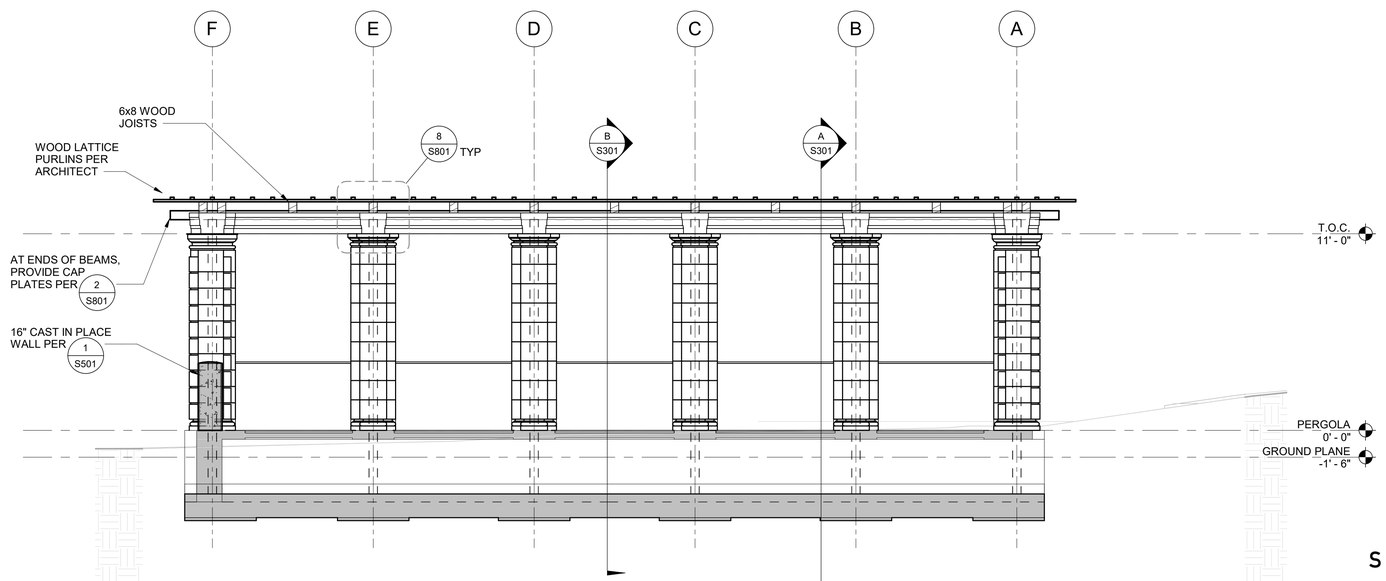
S103



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



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



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

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PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2

SECTIONS

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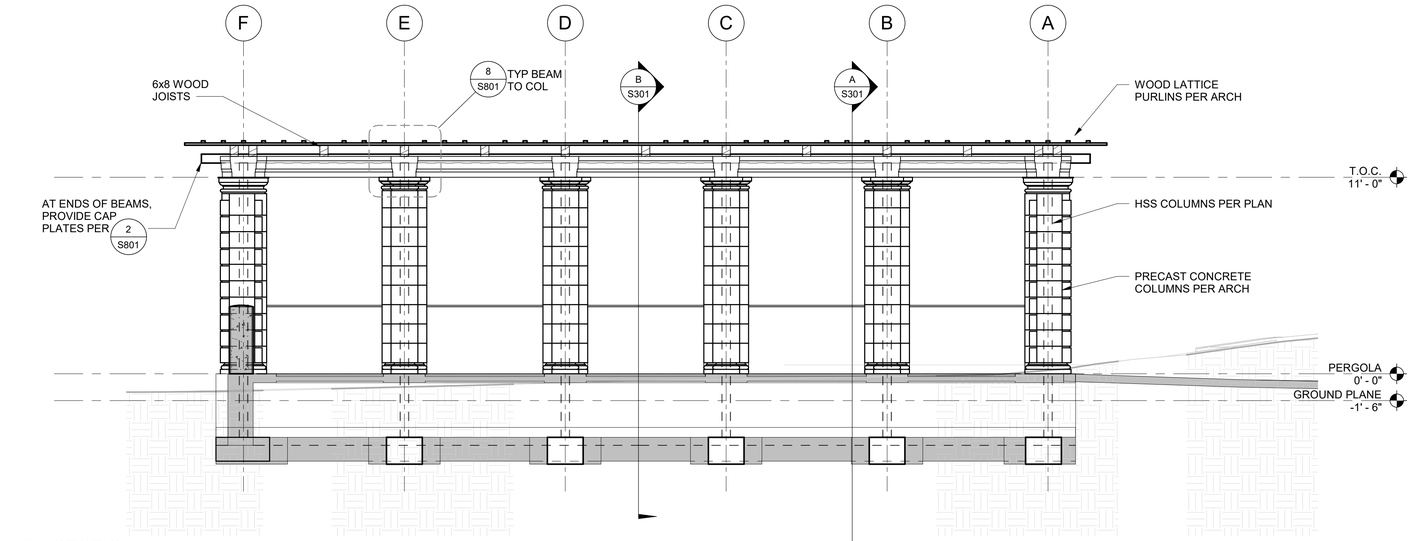
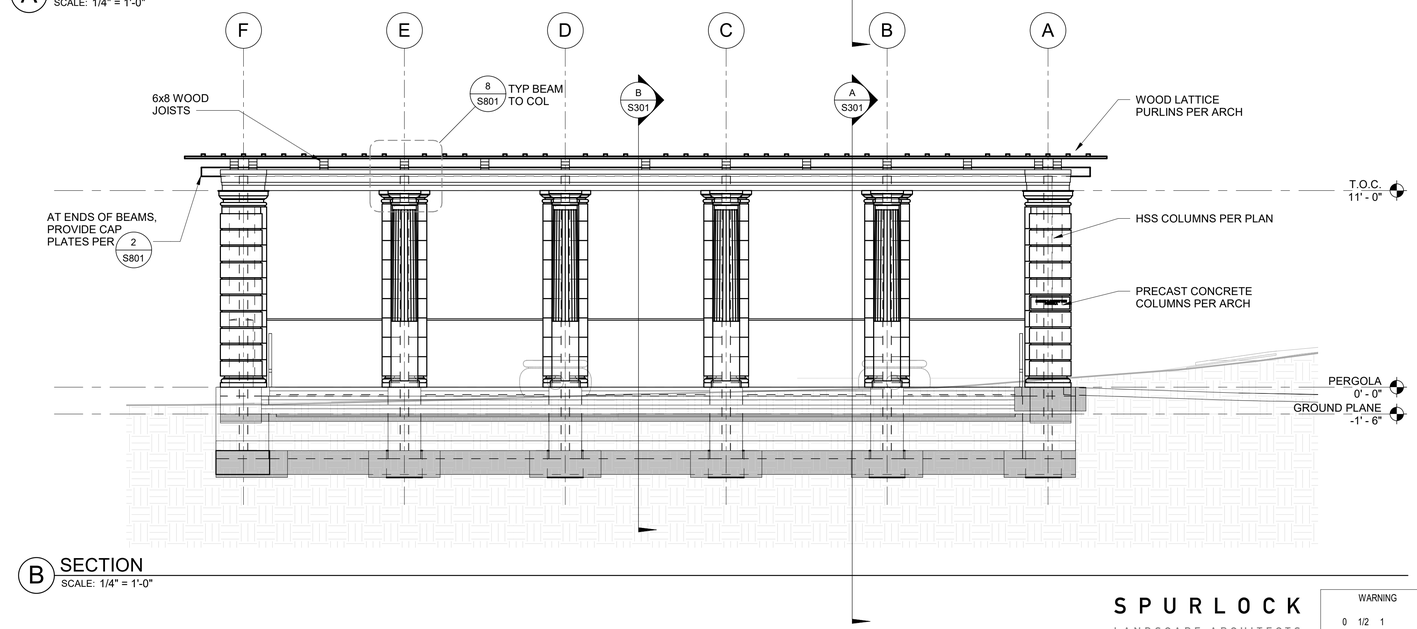


A SECTION
SCALE: 1/4" = 1'-0"



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

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PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2
SECTIONS

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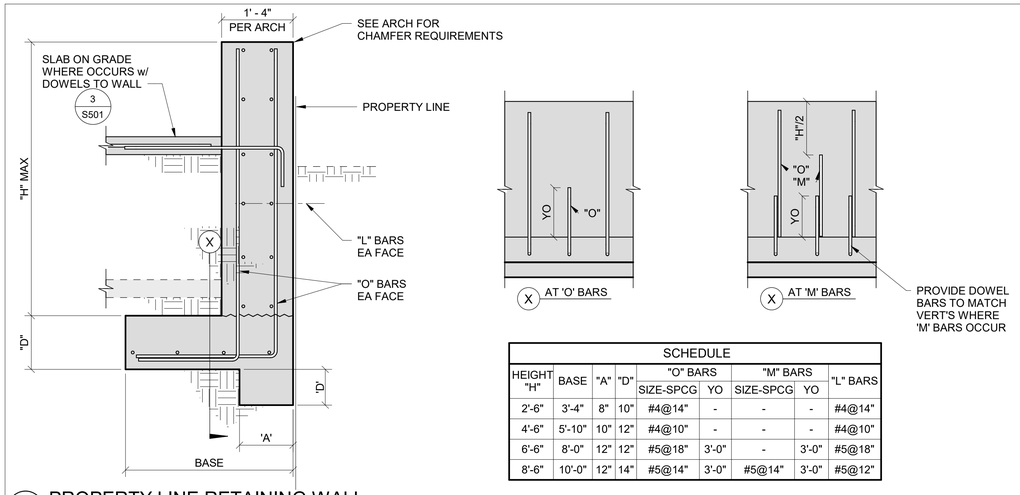
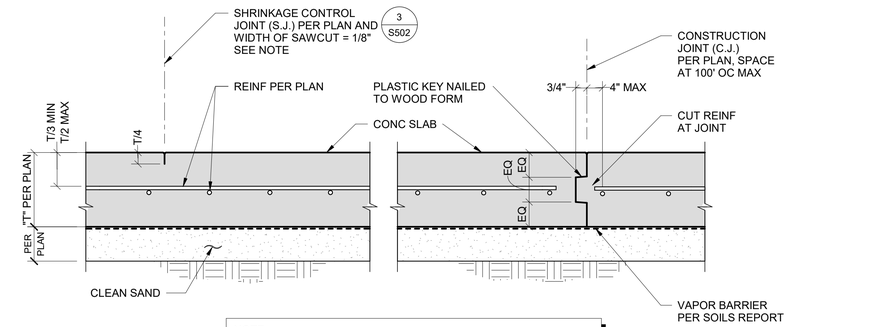
DRAWING NO. S302
XXXX- 52 - D



SCHEDULE								
HEIGHT "H"	BASE	"A"	"D"	"O" BARS		"M" BARS		"L" BARS
				SIZE-SPCG	YO	SIZE-SPCG	YO	
2'-6"	3'-4"	8"	10"	#4@14"	-	-	-	#4@14"
4'-6"	5'-10"	10"	12"	#4@10"	-	-	-	#4@10"
6'-6"	8'-0"	12"	12"	#5@18"	3'-0"	-	3'-0"	#5@18"
8'-6"	10'-0"	12"	14"	#5@14"	3'-0"	#5@14"	3'-0"	#5@12"

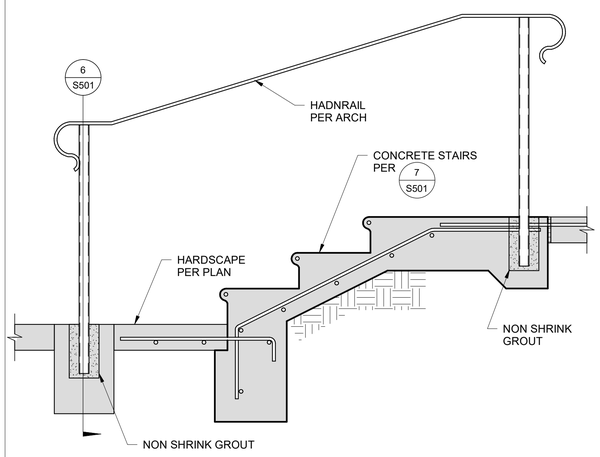
1 PROPERTY LINE RETAINING WALL
SCALE: 3/4" = 1'-0"



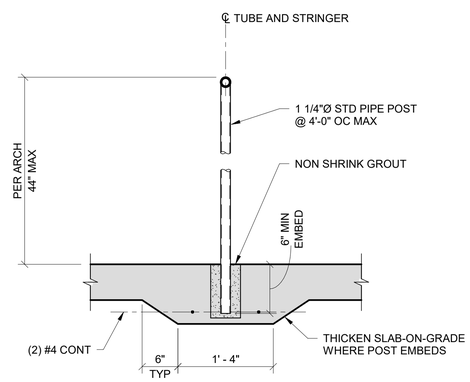
NOTE:
THE CONTRACTOR IS RESPONSIBLE FOR SAW CUTTING THE SLAB IN A TIMELY MANNER TO PREVENT SHRINKAGE CRACKS. IT IS RECOMMENDED TO SAW CUT AS SOON AS THE SLAB IS WALKABLE AND NOT MORE THAN 12 HOURS AFTER CONCRETE PLACEMENT.

NOTE:
FOR REINFORCING AT OPENINGS AND CORNERS SEE 1/S502

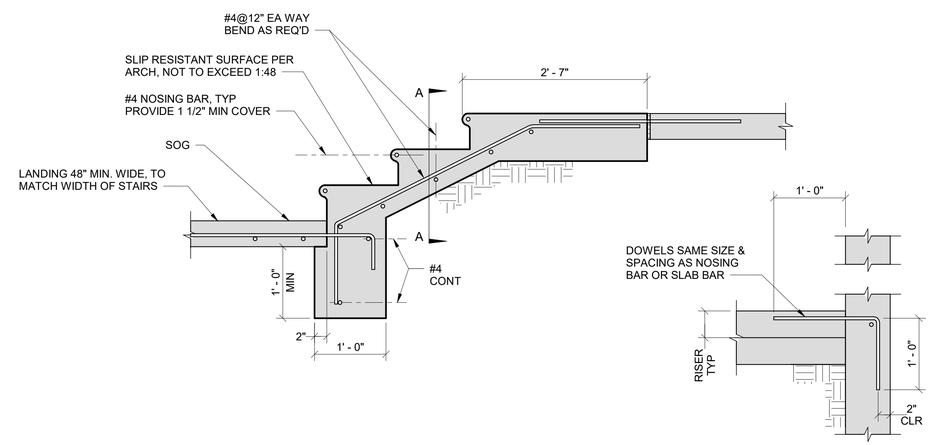
3 TYPICAL SLAB ON GRADE
NO SCALE



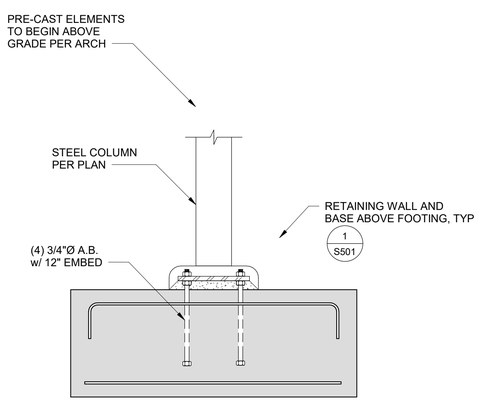
5 STAIR HANRAIL
SCALE: 1" = 1'-0"



6 STAIR HANDRAIL
SCALE: 1" = 1'-0"



7 CONCRETE STAIR ON GRADE
NO SCALE



9 STEEL COLUMN TO PIER
NO SCALE

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PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2
FOUNDATION DETAILS

CONSULTANT kpff
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3131 Camino Del Rio North Suite 1080, San Diego Ca. 92108
COMPANY PHONE NUMBER: 619-521-8500
COMPANY EMAIL DATE OF: Bryon.Spicer@kpff.com
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No. S4775
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SHEET 53 OF 61 SHEETS

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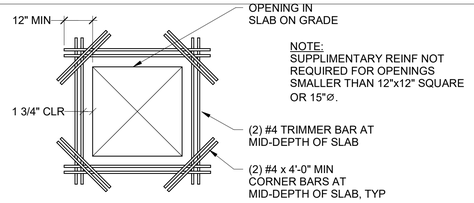
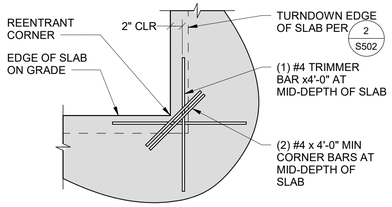
S501



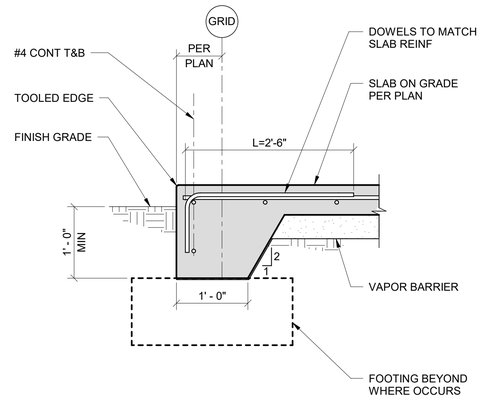
NOTE:
SUPPLIMENTARY REINF NOT REQUIRED FOR OPENINGS SMALLER THAN 12"x12" SQUARE OR 15"ø.

OPENINGS GREATER THAN 12"x12" IN SLAB ON GRADE

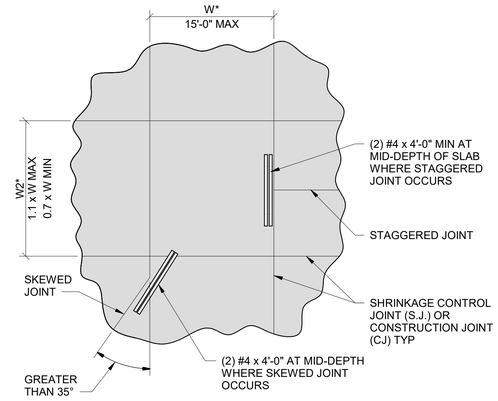


RE-ENTRANT CORNERS IN SLAB ON GRADE

1 REINF AT OPENINGS AND CORNERS
SCALE: 1" = 1'-0"

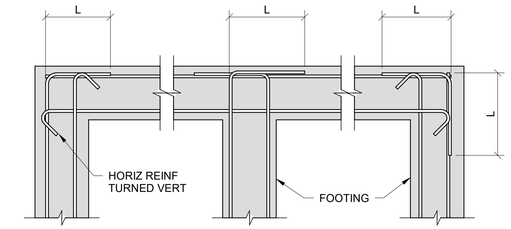


2 EDGE OF SLAB ON GRADE
SCALE: 1" = 1'-0"



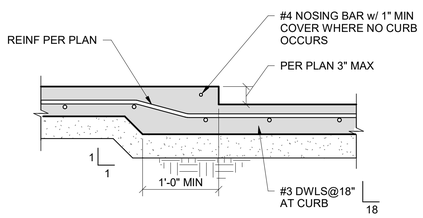
NOTES:
1. VERIFY LOCATION OF ALL SLAB JOINTS WITH ARCH.
2. (*) U.N.O. ON PLANS.

3 CONTROL JOINT LAYOUT
SCALE:N.T.S.

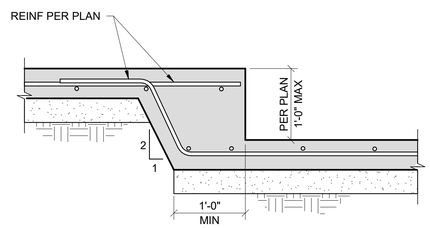


NOTE:
1. L=30d_b OR 1'-6" MINIMUM

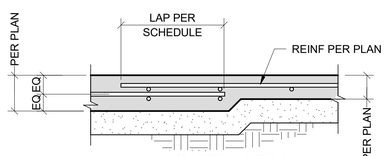
4 TYPICAL FOUNDATION INTERSECTIONS
SCALE: 3/4" = 1'-0"



STEPS LESS THAN OR EQUAL TO 3"

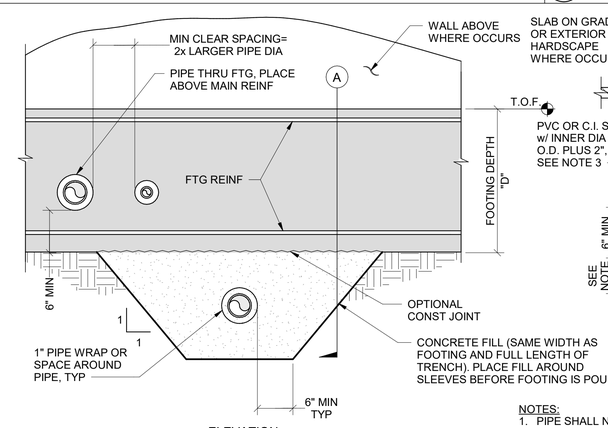


STEPS LESS THAN OR EQUAL TO 12"

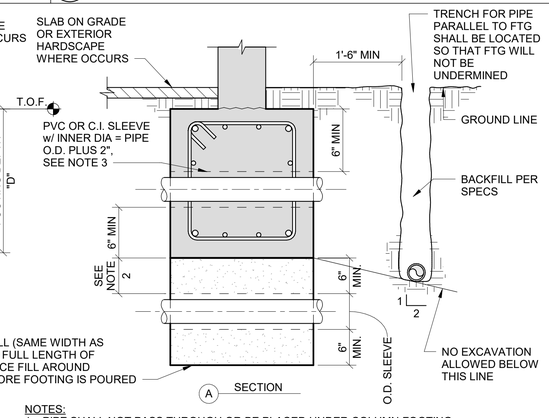


SLAB TRANSITION

5 SLAB ON GRADE TRANSITIONS AND STEPS
SCALE: 1" = 1'-0"



ELEVATION



NOTES:
1. PIPE SHALL NOT PASS THROUGH OR BE PLACED UNDER COLUMN FOOTING.
2. FOR PIPES MORE THAN 3'-0" BELOW BOTTOM OF FOOTING, TRENCH MAY BE BACKFILLED WITH CONTROLLED, COMPACTED FILL PER SPECIFICATIONS OR LEAN CONCRETE.
3. PIPES LARGER THAN 6" O.D. SHALL NOT PASS THROUGH FOOTINGS WITHOUT BEING SPECIFICALLY DETAILED ON THESE PLANS OR APPROVED BY THE ENGINEER OF RECORD.

7 TYPICAL PIPE PENETRATIONS AT FOOTINGS
SCALE: 1" = 1'-0"

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PLANS FOR THE CONSTRUCTION OF
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FOUNDATION DETAILS

CONSULTANT kpff

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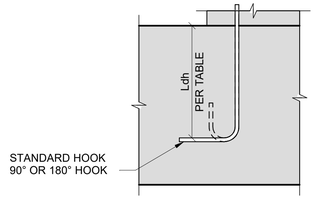

FIG. 1

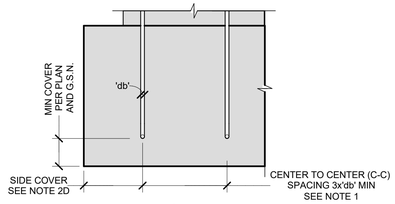

FIG. 2

CASE 1 - BAR CENTER TO CENTER SPACING ≥ 6db (NORMAL WEIGHT, GRADE 60, UNCOATED)

CONCRETE STRENGTH psi	HOOKED BAR EMBED, Ldh					
	#3	#4	#5	#6	#7	#8
3000	0'-6"	0'-6"	0'-8"	0'-11"	1'-2"	1'-4"
4000	0'-6"	0'-6"	0'-8"	0'-10"	1'-1"	1'-3"

CASE 2 - ALL OTHER SPACINGS (NORMAL WEIGHT, GRADE 60, UNCOATED)

CONCRETE STRENGTH psi	HOOKED BAR EMBED, Ldh					
	#3	#4	#5	#6	#7	#8
3000	0'-6"	0'-10"	1'-1"	1'-5"	1'-9"	2'-2"
4000	0'-6"	0'-9"	1'-0"	1'-4"	1'-8"	2'-0"

HOOKED REBAR KEYNOTES:
1. IF THE C-C SPACING IS LESS THAN 6x'db', Ldh SHALL BE PER THE CASE 2 SCHEDULE.
2. INCREASE EMBED DEPTH FOR EACH OF THE FOLLOWING CONDITIONS WHEN THEY OCCUR:
   A. f_y > 60 KSI: MULTIPLY LENGTH BY f_y/60
   B. EPOXY COATED REBAR: MULTIPLY LENGTH BY 1.2
   C. LIGHTWEIGHT CONCRETE: MULTIPLY LENGTH BY 1.33
   D. SIDE COVER < 6db: MULTIPLY LENGTH BY 1.25

1 TYPICAL HOOKED REBAR EMBEDMENT

SCALE: 1" = 1'-0"

CASE 1* - BAR CENTER TO CENTER SPACING ≥ 6" (NORMAL WEIGHT, GRADE 60, UNCOATED)

CONCRETE STRENGTH (PSI)	CLEAR COVER (IN)	BAR SIZE →	#3		#4		#5		#6		#7		#8	
		LAP CLASS →	Ld	LAP	Ld	LAP	Ld	LAP	Ld	LAP	Ld	LAP	Ld	LAP
3000	1.00	TOP	1'-1"	1'-5"	1'-6"	2'-0"	2'-2"	2'-10"	2'-11"	3'-10"	4'-9"	6'-3"	6'-0"	7'-10"
		BOTTOM	1'-0"	1'-4"	1'-2"	1'-7"	1'-8"	2'-2"	2'-3"	3'-0"	3'-8"	4'-10"	4'-7"	6'-0"
	2.00	TOP	1'-1"	1'-5"	1'-6"	2'-0"	1'-10"	2'-5"	2'-2"	2'-10"	3'-2"	4'-2"	3'-7"	4'-8"
		BOTTOM	1'-0"	1'-4"	1'-2"	1'-7"	1'-5"	1'-11"	1'-8"	2'-2"	2'-5"	3'-2"	2'-9"	3'-7"
	3.00	TOP	1'-1"	1'-5"	1'-6"	2'-10"	1'-10"	2'-5"	2'-2"	2'-10"	3'-2"	4'-2"	3'-7"	4'-8"
		BOTTOM	1'-0"	1'-4"	1'-2"	1'-7"	1'-5"	1'-11"	1'-8"	2'-2"	2'-5"	3'-2"	2'-9"	3'-7"
4000	1.00	TOP	1'-0"	1'-4"	1'-3"	1'-8"	1'-11"	2'-6"	2'-7"	3'-5"	4'-2"	5'-5"	5'-2"	6'-9"
		BOTTOM	1'-0"	1'-4"	1'-0"	1'-4"	1'-5"	1'-11"	2'-0"	2'-8"	3'-2"	4'-2"	4'-0"	5'-3"
	2.00	TOP	1'-0"	1'-4"	1'-3"	1'-8"	1'-7"	2'-1"	1'-11"	2'-6"	2'-9"	3'-7"	3'-1"	4'-1"
		BOTTOM	1'-0"	1'-4"	1'-0"	1'-4"	1'-3"	1'-8"	1'-6"	2'-0"	2'-1"	2'-9"	2'-5"	3'-2"
	3.00	TOP	1'-0"	1'-4"	1'-3"	1'-8"	1'-7"	2'-1"	1'-11"	2'-6"	2'-9"	3'-7"	3'-1"	4'-1"
		BOTTOM	1'-0"	1'-4"	1'-0"	1'-4"	1'-3"	1'-8"	1'-6"	2'-0"	2'-1"	2'-9"	2'-5"	3'-2"

CASE 1 KEYNOTES:
1. IF THE DIMENSIONS SHOWN ON FIGURE 1 ARE NOT MET, REBAR DEVELOPMENT AND LAP SPLICE LENGTHS SHALL BE PER THE CASE 2 SCHEDULE.
2. INCREASE DEVELOPMENT AND SPLICE LENGTHS FOR EACH OF THE FOLLOWING CONDITIONS WHEN THEY OCCUR:
   A. EPOXY COATED REBAR: MULTIPLY LENGTH BY 1.2
   B. LIGHTWEIGHT CONCRETE: MULTIPLY LENGTH BY 1.33

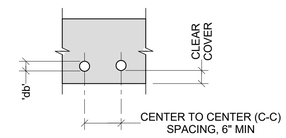

FIG. 1

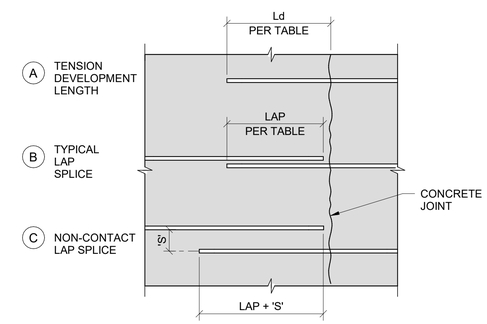

FIG. 2

NOTES:

1. TENSION DEVELOPMENT LENGTHS AND TENSION LAP SPLICES ARE CALCULATED PER ACI 318, SECTION 25.4 AND 25.5, RESPECTIVELY.
2. THESE TABLES ARE BASED ON UNCOATED GRADE 60 REBAR PLACED IN NORMAL WEIGHT CONCRETE. SEE KEYNOTES BELOW THE TABLES FOR ADJUSTMENTS TO TABLE VALUES.
3. THIS SCHEDULE IS NOT APPLICABLE TO DUCTILE MOMENT FRAME MEMBERS RESISTING SEISMIC FORCES.
4. ALL SPLICE LENGTHS SHALL BE PER "LAP" LENGTHS PER TABLE UNLESS NOTED OTHERWISE ON PLANS.
5. WHERE "CLASS A" SPLICE IS CALLED OUT ON PLANS, USE TENSION DEVELOPMENT LENGTHS "Ld" PER TABLE.
6. TOP BARS ARE HORIZONTAL SLAB, BEAM & FOOTING BARS WITH MORE THAN 12 IN. OF CONCRETE CAST BELOW THE BARS AND ALL HORIZONTAL WALL REINFORCEMENT.
7. BOTTOM BARS ARE ALL VERTICAL WALL REINFORCEMENT AND ALL HORIZONTAL SLAB BEAM & FOOTING BARS WITH LESS THAN 12" OF CONCRETE CAST BELOW THE BAR.
8. COVER DESIGNATES CLEAR COVER FROM SPLICED BAR TO FACE OF MEMBER. SPACING DESIGNATES CENTER-TO-CENTER SPACING OF SPLICED BARS.
9. FOR NON-CONTACT LAP SPLICES, ADD THE DISTANCE BETWEEN THE BARS TO THE SPLICE LENGTH IN THE ABOVE TABLE.
10. WHEN BARS OF DIFFERENT SIZES ARE LAP SPLICED, SPLICE LENGTH SHALL BE THE LARGER OF "Ld" OF THE LARGER BAR OR THE "LAP" LENGTH OF THE SMALLER BAR.
11. WHERE #14 OR #18 REBAR IS CALLED OUT ON PLAN, USE TYPE 2 COUPLERS PER GSN.

7 TYPICAL REBAR DEVELOPMENT LENGTHS AND LAP SPLICES

SCALE: 1" = 1'-0"

SPURLOCK
LANDSCAPE ARCHITECTS
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San Diego, California 92110
619.681.0090
spurlock-land.com

WARNING
0 1/2 1
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PRIVATE CONTRACT

PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2
TYPICAL CONCRETE DETAILSS6XX

CONSULTANT kpff
COMPANY ADDRESS: KPFF Consulting Engineers
3131 Camino Del Rio North Suite 1080, San Diego Ca. 92108
COMPANY PHONE NUMBER: 619-521-8500
COMPANY EMAIL DATE OF: Bryon.Spicer@kpff.com
SIGNING:
REGISTERED PROFESSIONAL ENGINEER FARID MOHSEN No. S4775 Exp. 9/30/24 STRUCTURAL STATE OF CALIFORNIA

SPEC. NO

The City of SAN DIEGO
FOR CITY APPROVAL

DEVELOPMENT SERVICES DEPARTMENT
SHEET 55 OF 61 SHEETS

APPROVED: FOR CITY ENGINEER DATE

DESCRIPTION	BY	APPROVED	DATE
ORIGINAL	SP		
AS BUILTS			

CONTRACTOR DATE STARTED
INSPECTOR DATE COMPLETED

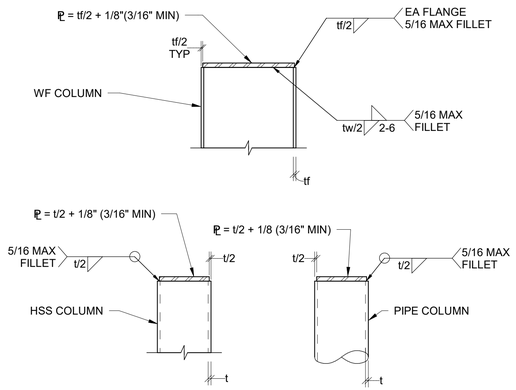
PMT NO.
PRJ NO 1119957
1847-6266 NAD83 COORDINATES
207-1706 LAMBERT COORDINATES
DRAWING NO. S600
XXXX- 55 - D

MAXIMUM SIZES FOR ANCHOR ROD HOLES IN BASE PLATES			
ANCHOR ROD DIAMETER, (IN)	MAX HOLE DIAMETER (IN)	MIN WASHER SIZE (IN)	MIN WASHER THICKNESS (IN)
3/4	1 5/16	2	1/4
7/8	1 9/16	2 1/2	5/16
1	1 7/8	3	3/8
1 1/4	2 1/8	3 1/2	1/2
1 1/2	2 3/8	4	1/2
1 3/4	2 7/8	4 1/2	5/8
2	3 1/4	5	3/4
2 1/2	3 3/4	5 1/2	7/8

NOTES:

1. REF AISC TABLE 14-2.
2. WASHER DIMS ARE GIVEN FOR ASTM A36 WASHERS

1 ANCHOR BOLT HOLE AND WASHER SIZE TABLE
NO SCALE



2 COLUMN CLOSURE PLATE DETAIL
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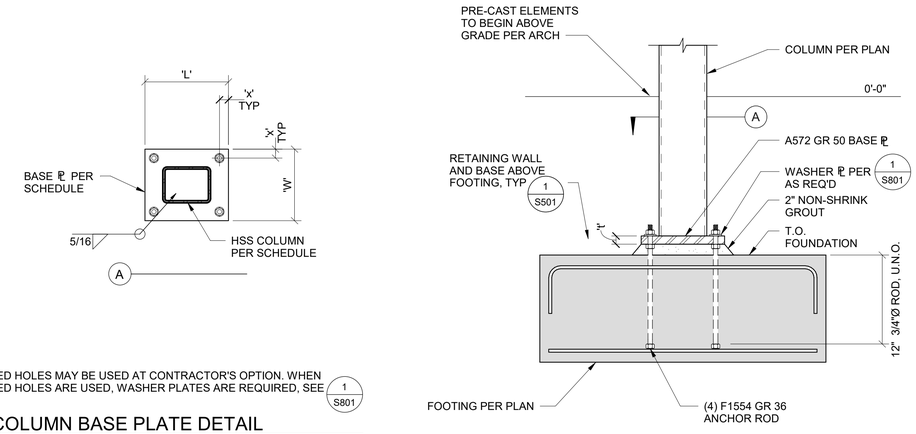
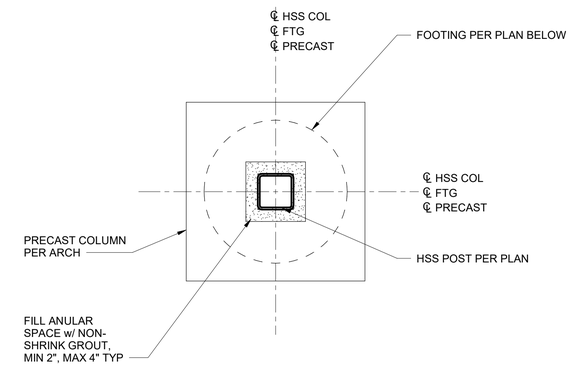
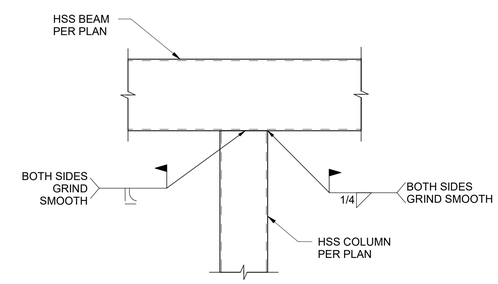


NOTE:
OVERSIZED HOLES MAY BE USED AT CONTRACTOR'S OPTION. WHEN OVERSIZED HOLES ARE USED, WASHER PLATES ARE REQUIRED, SEE 1 S801

3 GRAVITY COLUMN BASE PLATE DETAIL
NO SCALE



7 HSS POST & PRECAST COLUMN
SCALE: 1" = 1'-0"



8 HSS BEAM AT TOP HSS COLUMN
SCALE: 1" = 1'-0"

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PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2

STEEL AND CONCRETE DETAILS

CONSULTANT kpff

COMPANY ADDRESS: KPFF Consulting Engineers
3131 Camino Del Rio North Suite 1080, San Diego Ca. 92108

COMPANY PHONE NUMBER: 619-521-8500

COMPANY EMAIL DATE OF: Bryon.Spicer@kpff.com

SIGNING:

REGISTERED PROFESSIONAL ENGINEER
FARID MOHSENI
No. S4775
Exp. 9/30/24
STRUCTURAL
STATE OF CALIFORNIA

SPEC. NO

The City of SAN DIEGO

FOR CITY APPROVAL

DEVELOPMENT SERVICES DEPARTMENT
SHEET 56 OF 61 SHEETS

APPROVED:
FOR CITY ENGINEER DATE

DESCRIPTION	BY	APPROVED	DATE
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AS BUILTS			

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INSPECTOR DATE COMPLETED

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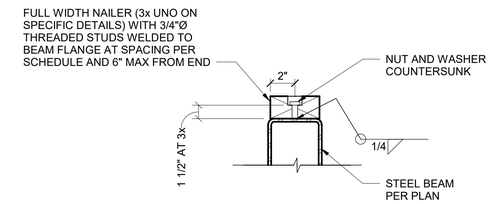
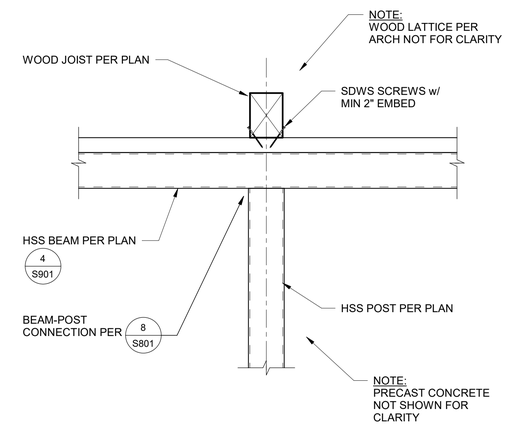
PRJ NO 1119957
1847-6266
NAD83 COORDINATES
207-1706
LAMBERT COORDINATES
DRAWING NO. S801
XXXX- 56 - D

NAILER SCHEDULE	
LOCATION	SPACING
TYPICAL	24"



4 TYPICAL NAILER TO BEAM FLANGE
NO SCALE



8 HSS BEAM TO HSS COL CONN
SCALE: 1" = 1'-0"

PRIVATE CONTRACT

SPURLOCK
LANDSCAPE ARCHITECTS
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San Diego, California 92110
619.681.0090
spurlock-land.com

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PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2
WOOD DETAILS

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COMPANY PHONE NUMBER: 619-521-8500
COMPANY EMAIL DATE OF: Bryon.Spicer@kpff.com
SIGNING:
REGISTERED PROFESSIONAL ENGINEER FARID MOHSEN No. S4775 Exp. 9/30/24 STRUCTURAL STATE OF CALIFORNIA

SPEC. NO

The City of SAN DIEGO
FOR CITY APPROVAL

DEVELOPMENT SERVICES DEPARTMENT
SHEET 57 OF 61 SHEETS

APPROVED:
FOR CITY ENGINEER DATE

DESCRIPTION	BY	APPROVED	DATE
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AS BUILTS			

CONTRACTOR DATE STARTED
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PRJ NO 1119957
1847-6266
NAD83 COORDINATES
207-1706
LAMBERT COORDINATES
DRAWING NO.
XXXX- 57 - D
S901

ELECTRICAL CONSTRUCTION NOTES

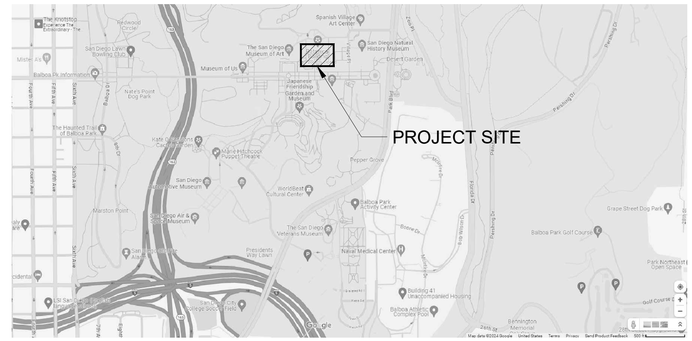
1. THE GENERAL CONDITIONS AND SUPPLEMENTARY GENERAL CONDITIONS SHALL BE CONSIDERED AS PART OF THE SPECIFICATION.
2. FURNISH ALL LABOR, MATERIALS, EQUIPMENT AND TOOLS TO PERFORM ELECTRICAL WORK SHOWN, NOTED OR SCHEDULED FOR A COMPLETE AND FINISHED INSTALLATION.
   A. ALL MATERIALS AND EQUIPMENT SHALL BE COMMERCIAL AND SHALL CARRY A U.L. LABEL.
   B. MATERIALS, PRODUCTS AND EQUIPMENT, INCLUDING ALL COMPONENTS THEREOF, SHALL BE NEW AND SUCH AS APPEAR ON THE UNDERWRITER'S LABORATORIES LIST OF APPROVED ITEMS AND SHALL MEET REQUIREMENTS OF ASTM, IEEE, 2022 NEC, NEMA, AND OTHER RECOGNIZED STANDARDS AND SHALL BE SIZED IN CONFORMITY WITH REQUIREMENTS OF THE NATIONAL ELECTRIC CODE AND OTHER APPLICABLE CODES, WHICHEVER ARE MORE STRINGENT.
3. THE WORD "PROVIDE" AS USED HEREIN MEANS TO FURNISH AND INSTALL COMPLETE.
4. THIS PROJECT SHALL COMPLY WITH THE 2022 CALIFORNIA ENERGY/BUILDING CODE WHICH INCLUDES THE 2021 IBC, AND THE 2022 NEC AND TITLE 24 ENERGY AND DISABLED ACCESS REGULATIONS.
5. SECURE AND PAY FOR ALL REQUIRED PERMITS AND INSPECTION CERTIFICATES.
6. ABOVE GRADE CONDUIT SHALL BE STANDARD RIGID STEEL ACCORDING TO CODE REQUIREMENTS. CONDUIT SHALL BE CONCEALED IN FINISHED AREAS, EXCEPT AS OTHERWISE APPROVED BY ARCHITECT. RIGID CONNECTIONS SHALL BE COMPRESSION TYPE. UNDERGROUND CONDUIT SHALL BE SCHEDULE 40 OR 80 PVC BURIED A MINIMUM OF 24".
7. WIRE SHALL BE SINGLE CONDUCTOR COPPER WITH 600 VOLT INSULATION. ALUMINUM CONDUCTORS ARE NOT PERMITTED. #12 AND SMALLER SHALL BE SOLID. #10 AND LARGER SHALL BE STRANDED. MINIMUM WIRE SIZE SHALL BE #12. ALL WIRE AND CABLE SHALL BE NEW AND SHALL BE BROUGHT TO THE SITE IN UNBROKEN PACKAGES. ALL WIRING OF ANY TYPE SHALL BE IN CONDUIT.
   A. GENERAL WIRING SHALL BE THWN OR THHN.
8. ABOVE GRADE WIRE CONNECTORS SHALL BE BY "SCOTCHLOCK" OR EQUAL FOR #8 OR SMALLER AND T&B "LOCK-TITE" FOR #6 AND LARGER.
9. THIS CONTRACTOR SHALL DO ALL CUTTING, CHASING OR CHANNELING AND PATCHING REQUIRED FOR ANY WORK UNDER THIS DIVISION. ANY CUTTING SHALL HAVE PRIOR APPROVAL OF THE OWNER.
10. PROVIDE SAFETY AND DISCONNECT SWITCHES, SHALL BE FUSED OR NON-FUSED AS CALLED FOR ON DRAWINGS AND AS REQUIRED BY CODE. SWITCHES SHALL BE HEAVY DUTY, LOAD AND HORSEPOWER RATED AS MANUFACTURED BY SQUARE D, GENERAL ELECTRIC OR EQUAL.
11. JUNCTION, PULL BOXES AND COVERS WITHIN BUILDING SHALL BE GALVANIZED STEEL, CODE GAUGE SIZE AND ACCESSIBLE.
12. ELECTRICAL CONTRACTOR SHALL RECORD ALL FIELD CHANGES IN HIS WORK AS THE JOB PROGRESSES, AND UPON COMPLETION SHALL TURN OVER TO THE OWNER A "RECORD" SET OF PRINTS SHOWING THE CHANGES.
13. ALL ELECTRIC WORK SHALL BE INSTALLED SO AS TO BE READILY ACCESSIBLE FOR OPERATING, SERVICING MAINTAINING AND REPAIRING. HANGERS SHALL INCLUDE ALL MISCELLANEOUS STEEL, SUCH AS CHANNELS, RODS, ETC., NECESSARY FOR THE INSTALLATION OF WORK AND SHALL BE FASTENED TO STEEL, CONCRETE OR MASONRY, BUT NOT TO PIPING. ALL CONDUIT SHALL BE CONCEALED WHERE POSSIBLE. EXPOSED CONDUITS SHALL BE IN STRAIGHT LINES PARALLEL WITH OR AT RIGHT ANGLES TO COLUMN LINES OR BEAMS AND SEPARATED AT LEASED 3" FROM WATER LINES WHEREVER THEY RUN ALONGSIDE OR ACROSS SUCH LINES. CONDUCTORS SHALL BE ON CONDUIT, DUCTS, OR APPROVED RACEWAYS.
14. ALL 90 DEGREE ELBOWS TO BE FACTORY MADE BENDS.
15. PRIVATE LIGHTING SYSTEM SHALL NOT BE JOINT TRENCH WITH PUBLIC UTILITY SYSTEM.
16. CONTRACTOR TO MAINTAIN PROPER SEPARATION AS REQUIRED BY THE UTILITY COMPANIES.
17. CONTRACTOR SHALL BE RESPONSIBLE FOR CALLING FOR ANY AND ALL UTILITY AND CITY INSPECTIONS.
18. ALL GROUND CONDUCTORS SHALL BE SPLICED TOGETHER WITH APPROVED CONNECTOR AT PULL BOXES AND CONNECTED TO GROUND LUG INSIDE POLE.
19. SEE IMPROVEMENT PLANS FOR SITE, SEWER AND WATER (ETC.) IMPROVEMENTS PRIOR TO START OF CONSTRUCTION.
20. CONTRACTOR SHALL CONTACT "DIG ALERT" FOR MARK-OUT PRIOR TO TRENCHING AS REQUIRED.
21. THESE PLANS ARE SCHEMATIC AND ARE FOR THE PURPOSE OF SHOWING HOW TO CONNECT THE ELECTRICAL SYSTEM. WHILE THE DRAWING IS AT ACTUAL SCALE, THE SYMBOLS REFERENCED ARE NOT, AND MAY APPEAR TO SHOW THE EQUIPMENT IN PLACES NOT INTENDED. THE CONTRACTOR IS TO FIELD VERIFY ALL UTILITY COMPANY SERVICE POINTS/METER LOCATIONS, POLES, PULL BOXES BUILDING LIGHT LOCATIONS, SERVICE EQUIPMENT LOCATIONS AND OTHER ELECTRICAL APPURTENANCES PRIOR TO START OF CONSTRUCTION. ANY DISCREPANCIES ARE TO BE ADDRESSED TO THE CLIENT BY MEANS OF A "REQUEST FOR INFORMATION" (RFI). CONTRACTOR IS TO VERIFY ALL LIGHT LOCATIONS WITH THE CITY PRIOR TO START OF CONSTRUCTION AND DURING STAKING. REFER TO LIGHT STANDARD DETAIL FOR STANDARDS. CONTRACTOR SHALL CONTACT "DIG ALERT" FOR MARK-OUT PRIOR TO TRENCHING AS REQUIRED.
22. PANEL CIRCUIT DIRECTORY TO COMPLY WITH SECTION 408.4, CEC.
23. NATIVE SOIL SHALL BE ACCEPTABLE FOR TRENCH BACK FILL PROVIDED THAT THE FILL MATERIAL USED SHALL PASS THROUGH A 1" SIEVE (CITY STANDARDS). SEE DETAIL E/EL-3.
24. CONTRACTOR SHALL LABEL EACH CIRCUIT WITH PHENOLIC PLASTIC LABEL TAGS IN ANY DEVICE THAT HAS ACCESS. THIS SHALL INCLUDE LIGHT POLES, PULL BOXES, PANELS, AND ETCETERA. PANEL, CIRCUIT NUMBER AND VOLTAGE SHALL BE IDENTIFIED. TAGS SHALL BE AFFIXED WITH NYLON ZIP-TIES.

SPECIFICATIONS

1. BELOW GRADE PULL BOXES TO BE "OLDCASTLE" MODEL FL12T (OR EQUAL) WITH BOLT DOWN COVER MARKED "ELECTRICAL". LEAVE 2' SLACK OF CONDUCTORS IN PULLBOX. SIZE PER SECTION 314-28, CEC. SEE DETAIL B/EL-3.
2. ALL CONDUIT BELOW GRADE TO BE MINIMUM 3/4" SCHEDULE 40 PVC, UNLESS OTHERWISE NOTED.
3. ALL CONDUIT EXPOSED ABOVE GRADE TO BE MINIMUM 1/2" EMT.
4. ALL SPLICES BELOW GRADE SHALL BE MADE IN APPROVED PULL BOXES AND SHALL BE WATERTIGHT. USE ONLY EPOXY ENCAPSULATED TYPE 3M BAGS OR EQUAL.
5. ALL BELOW GRADE CONDUIT SHALL BE SEALED UPON COMPLETION OF INSTALLATION.
6. ALL ELECTRICIANS TO HAVE PROOF OF CALIFORNIA ELECTRICIANS CERTIFICATE/CREDENTIALS.
7. ALL ABOVE GRADE JUNCTION BOXES TO BE WEATHER-PROOF. SIZE PER SECTION 370-28, CEC.
8. BELOW GRADE JUNCTION BOXES TO BE "OLD CASTLE" MODEL FL08 (OR EQUAL) WITH BOLT-DOWN LID MARKED "ELECTRICAL". SIZE PER SECTION 314-28, CEC. SEE DETAIL C/EL-3.
9. RECEPTACLE PEDESTALS SHALL BE 'PEDOC POWER SOLUTIONS'-SINGLE GANG PEDESTAL SHALL BE #1P18-C-HT-BR. RECEPTACLE SHALL BE GFCI RATED. SEE DETAIL F/EL-3.

LEGEND

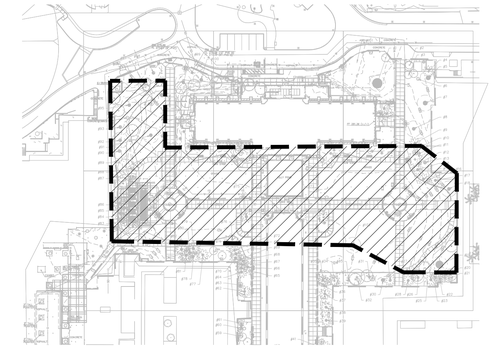
- BELOW GRADE ELECTRICAL CONDUIT AND WIRE RUN. SEE PLANS FOR TYPE AND # OF WIRES.
- A-1 CIRCUIT DESIGNATION. 1ST # INDICATES PANEL. REMAINING #'S INDICATE CIRCUIT POSITIONS.
- EXISTING ELECTRICAL PANEL AND LIGHTING CONTROLS.
- BELOW GRADE PULLBOX. SEE SPEC. 1 AND DETAIL B/EL-3.
- BELOW GRADE JUNCTION BOX. SEE SPEC 8 AND DETAIL C/EL-3.
- RECEPTACLE PEDESTAL. SEE SPEC. 9 AND DETAIL F/EL-3.
- TYPE 'U1' BELOW GRADE UP-LIGHT. SEE LUMINAIRE SCHEDULE AND DETAIL A/EL-3.0.
- TYPE 'D1' TRELLIS DOWN LIGHT. SEE LUMINAIRE SCHEDULE AND DETAIL B/EL-3.1.



VICINITY MAP

N.T.S.

NORTH



KEY MAP

N.T.S.

SCOPE OF WORK

INSTALL NEW PERGOLA AND PATHWAY LIGHTS. ALL LIGHTS ARE PARKS AND RECREATION OWNED AND MAINTAINED. SEE LUMINAIRE SCHEDULE FOR FIXTURE TYPES. LIGHTS SHALL BE CONTROLLED BY A MASTER PHOTOCELL LOCATED IN THE EXISTING ELECTRICAL METER CLOSET.

SHEET INDEX

SHEET #	DRAWING #	DESCRIPTION
58	EL-1	TITLE SHEET
59	EL-2	LIGHTING PLAN
60	EL-3	DETAILS
61	EL-4	LIGHTING CONCEPT

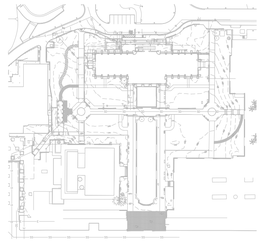
NOTE TO CONTRACTOR

ANY CHANGE OR DEVIATION FROM THE LIGHTING SPECIFICATIONS ON PLAN SHALL NEED TO BE APPROVED BY THE ENGINEER OF RECORD. ALL ASSOCIATED COSTS INCURRED FOR HAVING TO RE-RUN PHOTOMETRIC LIGHTING STUDIES, REVISE ELECTRICAL PLANS AND CIRCUITRY, REVISE ELECTRICAL PANEL SCHEDULES, REVISE LUMINAIRE SCHEDULES, RE-CALCULATE TITLE-24 MANDATORY MEASURES, AND RESUBMIT TO THE BUILDING PLAN CHECK DEPARTMENT SHALL BE PAID BACK TO THE ENGINEER OF RECORD BY THE CONTRACTOR AND ELECTRICAL DISTRIBUTOR. NO REQUEST FOR SUBSTITUTIONS SHALL BE SUBMITTED WITHOUT FIRST HAVING BEEN REQUESTED BY THE PROJECT DEVELOPER. CONTRACTOR SHALL PROVIDE ENGINEER OF RECORD SUBMITTALS FOR APPROVAL FOR ALL LIGHTING PRODUCT SHOWN IN SCHEDULE BELOW PRIOR TO PROCUREMENT.

LUMINAIRE SCHEDULE -BALBOA PARK BOTANICAL GARDENS

SPECIFIED BY: VISUAL CONCEPTS LIGHTING INC. PH: 858-278-4503

TYPE	SYMBOL	FIXTURE									VOLTS						LAMPS		MOUNTING					DESCRIPTION	MFR & CATALOG NO.
	QTY		LUMENS	CBCP	KELVIN	FLOUR	INDUC	LED	LPS	MH	HPS	12	120	208	240	277	480	NO.	TYPE	WATTS	WELL	SURF	SPECIAL	WALL	POLE		
U1	6		749		2700			X					X					1	MULTI LED	12.7	X					IN-GRADE UP-LIGHT SEE DETAIL A/EL-3	HYDREL TIERRA 4"-IGF4 SS LED 80CRI 27K MVOLT 15 DEG 5T FLCSR 34S IHL DNA FIXTURE IS OUTDOOR RATED
U2	12		1677		2700			X					X					1	MULTI LED	16.7	X					IN-GRADE UP-LIGHT SEE DETAIL A/EL-3	HYDREL TIERRA6"-IGF6 SS LED P2 80CRI 27K MVOLT 30DEG 10T FLC 34B IHL BRT FIXTURE IS OUTDOOR RATED
D1	5		618		2700			X					X					1	MULTI LED	11		X				TRELLIS DOWN-LIGHT SEE DETAIL A/EL-3	BEGA B33815 K27 WHT FIXTURE IS OUTDOOR RATED



PRIVATE CONTRACT

VCL
Visual Concepts Lighting
4858 Mercury St. Ste. 210 San Diego CA 92111
858-278-4503 | www.visualconcepts-inc.com

WARNING
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PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2
TITLE SHEET

CONSULTANT
COMPANY ADDRESS:
VCL-INC. 4858 MERCURY ST, STE 210, SAN DIEGO, CA 92111
COMPANY PHONE NUMBER: 858-278-4503
COMPANY EMAIL DATE OF: KPEREZ@VCL-INC.COM
SIGNING:
REGISTERED PROFESSIONAL ENGINEER MARIO A. PEREZ E22246 ELECTRICAL STATE OF CALIFORNIA

SPEC. NO

FOR CITY APPROVAL

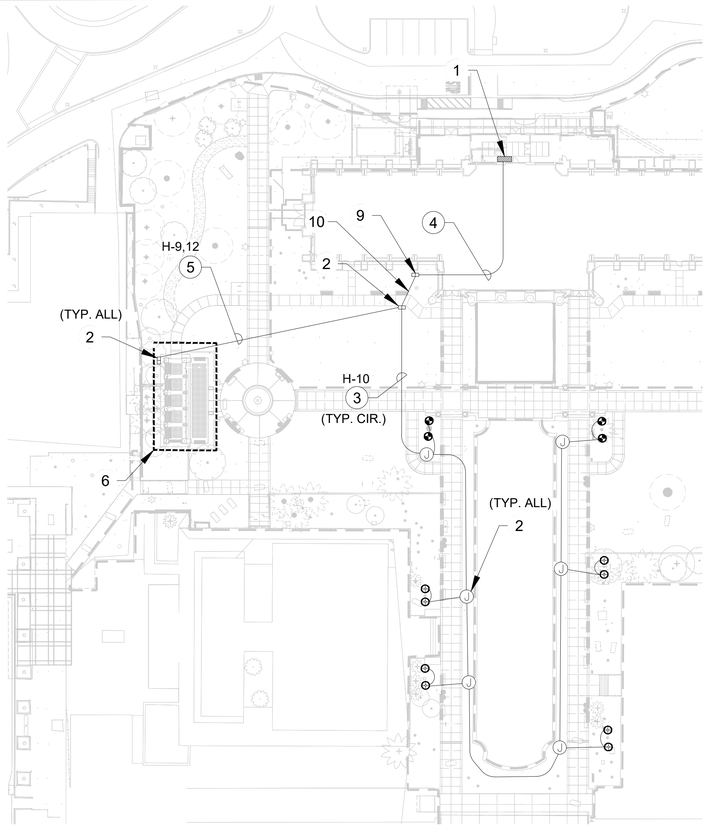
DEVELOPMENT SERVICES DEPARTMENT
SHEET 58 OF 61 SHEETS

APPROVED:
FOR CITY ENGINEER DATE

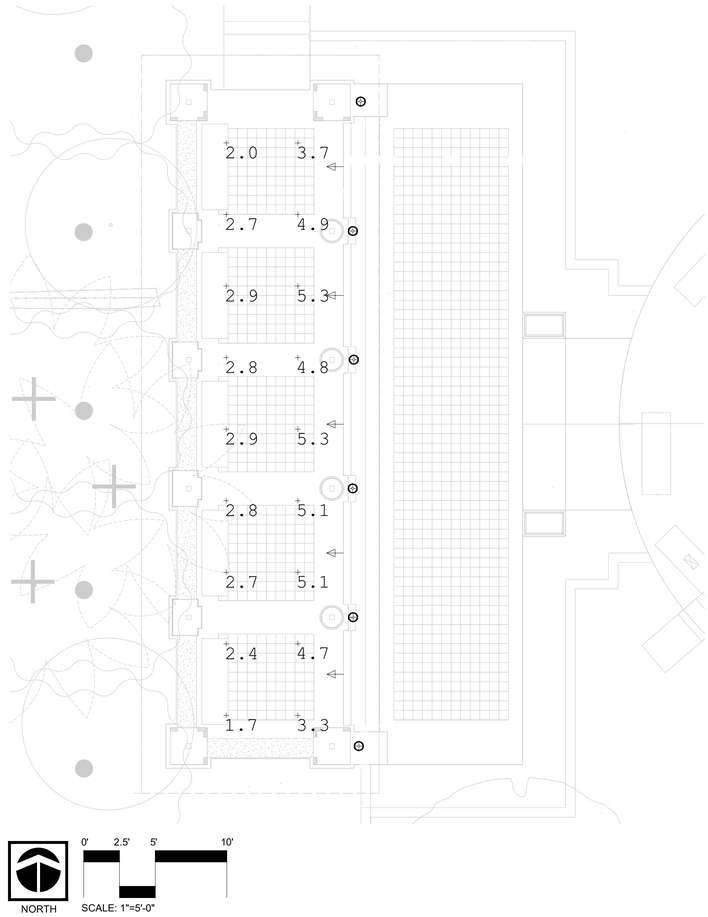
DESCRIPTION	BY	APPROVED	DATE
ORIGINAL	SP		
AS BUILTS			

CONTRACTOR DATE STARTED
INSPECTOR DATE COMPLETED

PMT NO.
PRJ NO. 1119957
1847-6266 NAD83 COORDINATES
207-1706 LAMBERT COORDINATES
DRAWING NO. EL-1
XXXX- 58 - D



ELECTRICAL PLAN



PHOTOMETRIC STUDY

PLAN NOTES

1. EXISTING ELECTRICAL PANEL AND LIGHTING CONTROLS INSTALLED BY PHASE 1 CONTRACT.
2. PROVIDE AND INSTALL BELOW GRADE PULL BOX. SEE SPEC. 1 AND DETAIL B/EL-3 FOR INSTALLATION.
3. PROVIDE AND INSTALL 3/4" C-2#10, 1#10 GND. BURY 24" BELOW GRADE.
4. EXISTING (2) 1" C IN STALLED ON PHASE 1 CONTRACT. ALL REQUIRED CIRCUITS FOR PHASE 2 HAVE BEEN INSTALLED (6#10, 1#10 GND.) AND TERMINATED ON THE LIGHTING CONTROLS AND BREAKERS AS REQUIRED.
5. PROVIDE AND INSTALL 1" C-4#10, 1#10 GND. BURY 24" BELOW GRADE. (1) LIGHTING CIRCUIT (1) POWER CIRCUIT.
6. FOR TRELLIS LIGHTING AND POWER, SEE DETAIL A/EL-3 FOR INSTALLATION.
7. TREE UP-LIGHTING POINT OF CONNECTION SEE DETAIL A/EL-3 FOR INSTALLATION.
8. PROVIDE AND INSTALL 1" C-2#10, 1#10 GND. BURY 24" BELOW GRADE. (1) POWER CIRCUIT. ROUTE TO ELECTRICAL ROOM ELECTRICAL PANEL.
9. EXISTING PULL BOX TO REMAIN INSTALLED ON PHASE 1 CONTRACT. POINT OF CONNECTION FOR PHASE 2 ELECTRICAL.
10. (2) 1"C PROVIDED BY PHASE 1 CONTRACT AND STUBBED TO EDGE OF SIDEWALK. PICK UP BOTH AND EXTEND TO NEW PULL BOX. INSTALL 6#10, 1#10 GND. MAKE CONNECTION TO CIRCUITS PROVIDED IN EXISTING PULLBOX.

INSTALLATION NOTES

NOTE: LOCATION OF ALL UPLIGHTS TO BE DETERMINED IN FIELD BY THE CITY REPRESENTATIVE AND LANDSCAPE ARCHITECT BEFORE ANY ELECTRICAL WORK. ALIGN ELECTRICAL CONDUIT ROUTING WITH THE NEW PAVING WORK OR WATER JET UNDER PAVING.

PANEL ID: B *EXISTING*

LOCATION:	INTERIOR
MAIN:	100A/3P
BUS AMPS	100A
MOUNTING:	SURFACE
AIC RATING	10k

FEEDER/SYSTEM
FED FROM: PANEL "A"
FEEDER 100 AMPS
SYSTEM: 208 /120V, 3-PH, 4W

LOAD TYPES
blank or NON: NON-CONTINUOUS
LCL: LONG-CONTINUOUS
REC: DEMANDABLE RECEPT'S
KIT: KITCHEN PNL: SUB-FED PNL
UNIT: RESID. UNIT MTR: MOTOR

CKT	DESCRIPTION	LOAD TYPE	BKR	LOAD (VA) PH. A		LOAD (VA) PH.B		LOAD (VA) PH.C		BKR	LOAD TYPE	DESCRIPTION	CKT
1	FAR WEST 3 POLE LTS NOTE 1	LCL	20/1	600	600					20/1	LCL	SOUTHWALK 3 POLE LTS NOTE 1	2
3	2-150W PARK 38 LTS AND TIMECLOCK NOTE 1	LCL	20/1			600	600			20/1	LCL	FAR EAST 3 POLE LTS NOTE 1	4
5	EAST/WEST WALKWAY	LCL	20/1					600		20/1	LCL	EXISTING LOAD NOTE 1	6
7	IRRIGATION CONTROLLER	NON	20/1	300						20/1	LCL	EXISTING LOAD NOTE 1	8
9	IRRIGATION CONTROLLER	NON	20/1			300	120			20/1	LCL	TREE LIGHTS	10
11	RECEPTACLES	REC	20/1					720	115	20/1	LCL	PERGOLA	12
13	SPARE		20/1									BUSSED SPACE	14
15	SPARE		20/1									BUSSED SPACE	16
17	SPARE		20/1									BUSSED SPACE	18
19	SPARE		20/1									BUSSED SPACE	20
21	SPARE		20/1									BUSSED SPACE	22
23	SPARE		20/1									BUSSED SPACE	24
25	SPARE		20/1									BUSSED SPACE	26
27	SPARE		20/1									BUSSED SPACE	28
29	SPARE		20/1									BUSSED SPACE	30
31	SPARE		20/1									BUSSED SPACE	32
33	SPARE		20/1									BUSSED SPACE	34
35	SPARE		20/1									BUSSED SPACE	36
37	BUSSED SPACE											BUSSED SPACE	38
39	BUSSED SPACE											BUSSED SPACE	40
41	BUSSED SPACE											BUSSED SPACE	42

	CONNECTED VA	DEMAND VA
GEN'L LOAD:	600	600
LONG CONTIN.:	3235	4044
GEN'L RECEPT:	720	720
MOTOR LOAD:	0	+25% OF LARGEST
KITCHEN LOAD:	0	0

PH A	PH B	PH C	
1500	1620	1435	CONNECTED LOAD PER PHASE
	4555		TOTAL CONNECTED LOAD (VA)
	13		AMPS OF TOTAL CONNECTED LOAD
	5364		TOTAL DEMAND VA (BALANCED)
	16		HIGH PHASE AMPS/LCL

PANEL NOTES:
1. RECONNECT ALL EXISTING LOADS THAT ARE TO REMAIN IN PLACE. PROVIDE APPROPRIATELY SIZED CONDUIT AND WIRING TO RECONNECT EXISTING CIRCUITS.

PANEL B @ J:\2020\2367.500 - Balboa Park Botanical Build Restoration\20367.500 E\Calculations\20367.500 PANEL 8/28/2024 3:14 PM

NO SCALE

A PANEL 'B' SCHEDULE
INSTALLED PER PHASE 1 CONTRACT

DIGALERT Call Toll Free 811 2 Working Days Before You Dig

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PRIVATE CONTRACT

PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2
LIGHTING PLAN

CONSULTANT
COMPANY ADDRESS:
VCL-INC. 4858 MERCURY ST, STE 210, SAN DIEGO, CA 92111
COMPANY PHONE NUMBER: 858-278-4503
COMPANY EMAIL DATE OF: KPEREZ@VCL-INC.COM
SIGNING:
REGISTERED PROFESSIONAL ENGINEER MARIO A. PEREZ E22246 ELECTRICAL STATE OF CALIFORNIA

SPEC. NO

FOR CITY APPROVAL

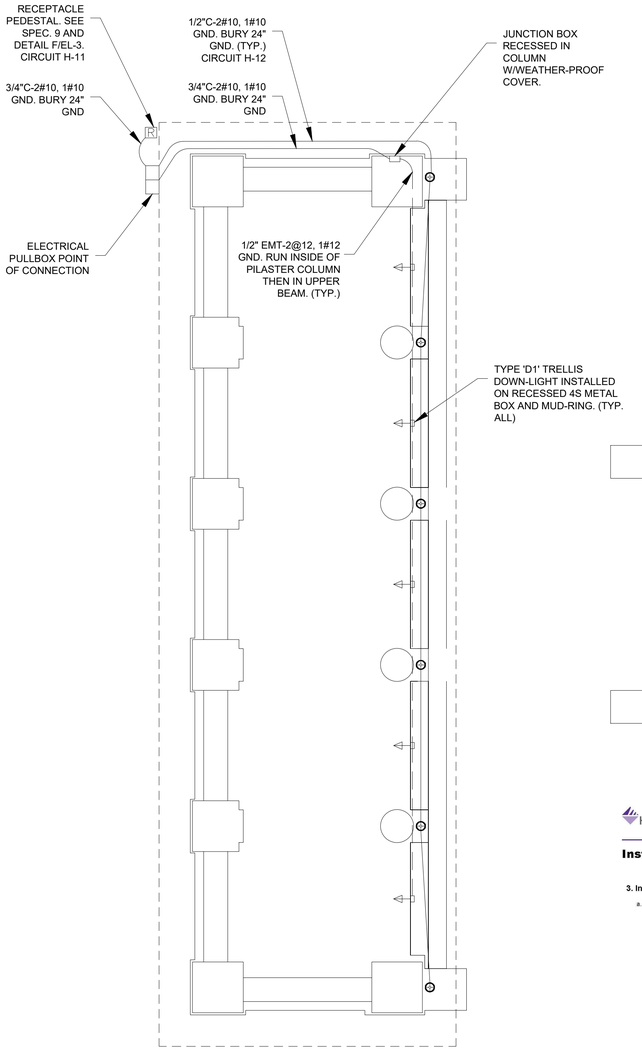
DEVELOPMENT SERVICES DEPARTMENT
SHEET 59 OF 61 SHEETS

APPROVED: FOR CITY ENGINEER DATE

DESCRIPTION	BY	APPROVED	DATE
ORIGINAL	SP		
AS BUILTS			

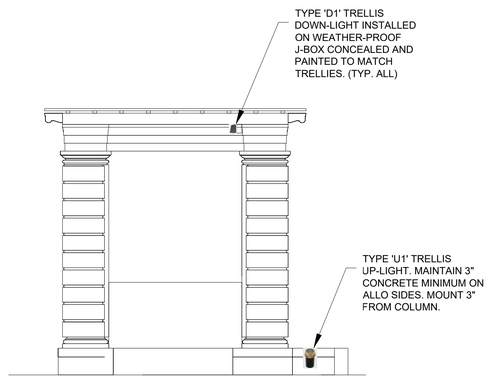
CONTRACTOR DATE STARTED
INSPECTOR DATE COMPLETED

PMT NO.
PRJ NO. 1119957
1847-6266 NAD83 COORDINATES
207-1706 LAMBERT COORDINATES
DRAWING NO. EL-2
XXXX- 59 - D



TYPE 'D1' TRELLIS DOWN-LIGHT

TYPE 'U1' TRELLIS UP-LIGHT



NO SCALE

A TRELLIS TYPE 'U1' UP-LIGHT AND 'D1' DOWN-LIGHT INSTALLATION DETAIL

HYDREL Architectural In-Grade Model IGF4 Installation Manual

Installation Guide 6

3. Install the LED Module

a. Pull electrical supply conductors from lower section of the Rough-in-Section and connect to LED Module conductors.

Use provided silicone filled, waterproof, wire nuts:

For Power Conductors Conductors (3 Provided) Hydrel P/N: 80188-3

For Dimming or DMX (4 Provided) Hydrel P/N: 81078-4

Static White, or Amber, LED Module Conductors:
White Conductor: Power (Neutral)
Black Conductor: Power 120V to 277V
Green Conductor: Ground
Purple Conductor: Dimming +
Gray (or Pink) Conductor: Dimming –

RGBW LED Module Conductors:
White Conductor: Power (Neutral)
Black Conductor: Power 120V to 277V
Green Conductor: Ground
Purple Conductor: DMX –
Gray Conductor: DMX Common
Red Conductor: DMX +

12V LED Module Conductors:
White Conductor: Power (Neutral)
Black Conductor: Power 12Vac

NOTE: HYDREL RESERVES THE RIGHT TO MODIFY SPECIFICATION WITHOUT NOTICE.
Any dimensions on this sheet to be assumed as a reference dimension.
"Good for information purposes only. It does not govern manufacturing or inspection requirements." (IAW I SIA 5-1970)

Model IGFR | 12/12/2009
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Phone: (404) 705-3070 (7078) | www.hydrel.com

HYDREL Architectural In-Grade Model IGF4 Installation Manual

Installation Guide 5

2. Install the Rough-in-Section

Installation should be performed by a qualified electrician in accordance with the National Electrical Code (NEC) and relevant local codes.

a. **For Installation in Concrete:** Dig a hole to appropriate depth allowing for rough-in-section to be secured to conduit. Mount the Rough-in-Section with top of Temporary Cover Plate at grade level (flush with finish grade of concrete).

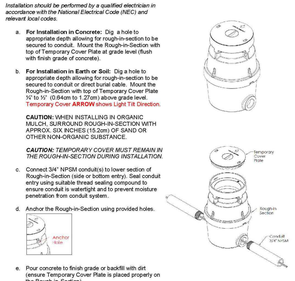
b. **For Installation in Earth or Soil:** Dig a hole to appropriate depth allowing for rough-in-section to be secured to conduit or direct burial cable. Mount the Rough-in-Section with top of Temporary Cover Plate ½" to ½" (0.84cm to 1.27cm) above grade level. Temporary Cover **ARROW** shows Light Tilt Direction.

CAUTION: WHEN INSTALLING IN ORGANIC MULCH, SURROUND ROUGH-IN-SECTION WITH APPROX. SIX INCHES (15.2cm) OF SAND OR OTHER NON-ORGANIC SUBSTANCE.

CAUTION: *TEMPORARY COVER MUST REMAIN IN THE ROUGH-IN-SECTION DURING INSTALLATION*

c. Connect 3/4" NPSM conduit(s) to lower section of Rough-in-Section (side or bottom entry). Seal conduit entry using suitable thread sealing compound to ensure conduit is watertight and to prevent moisture penetration from conduit system.

d. Anchor the Rough-in-Section using provided holes.



e. Pour concrete to finish grade or backfill with dirt (ensure Temporary Cover Plate is placed properly on the Rough-in-Section).

f. Remove temporary cover & clean any debris accumulated under it. Pull electrical supply conductors and make wire splice in accordance with NEC. IMPORTANT ! Use silicone filled wire nuts.

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Model IGFR | 12/12/2009
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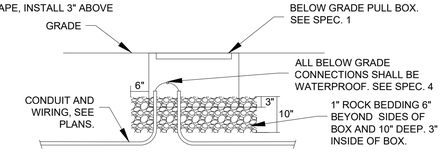
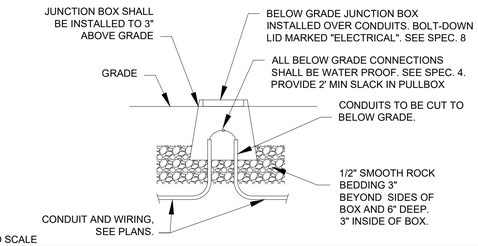
NOTE: IF PULLBOX IS INSTALLED IN CONCRETE, TOP OF PULLBOX TO BE FLUSH WITH GRADE. IF INSTALLED IN SOFTSCAPE, INSTALL 3" ABOVE GRADE.



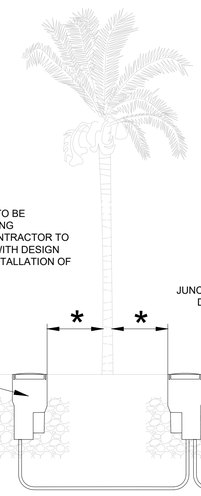
NO SCALE

B BELOW GRADE PULLBOX INSTALLATION DETAIL



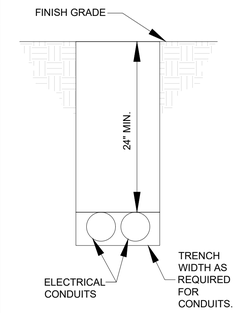
NO SCALE

C BELOW GRADE JUNCTION BOX INSTALLATION DETAIL



NO SCALE

D TYPE 'U1' PALM TREE UP-LIGHTING INSTALLATION DETAIL



BACKFILL MATERIAL:
THE MATERIAL USED FOR BACKFILLING THE TRENCH ABOVE THE SHADING MATERIAL AND EXTENDING UPWARD TO THE SUBGRADE SHALL BE FREE OF ROCKS OR CLODS LARGER THAT 6" IN ANY DIMENSION. THE COARSE MATERIAL SHALL BE WELL DISTRIBUTED THROUGHOUT THE FINER MATERIAL. THE AMOUNT OF ROCKS OR CLODS SHALL BE LIMITED, IN THE OPINION OF THE INSPECTOR. THE BACKFILL MATERIAL SHALL MEET THE REQUIREMENTS OF ALL APPLICABLE CODES, ORDINANCES AND CITY STANDARDS AND BE FREE OF DEBRIS AND ORGANIC MATTER.

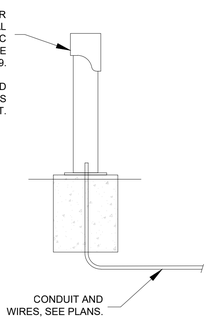
SHADING MATERIAL AND INSTALLATION:
NATURAL SAND, MANUFACTURED SAND, DECOMPOSED GRANITE, ROCK FREE SANDY LOAM, EXISTING NATIVE MATERIAL OR COMBINATION THEREOF. AGGREGATE MATERIAL SHALL BE CAPABLE OF PASSING THROUGH A ½" SIEVE. GRAVEL SHALL NOT AMOUNT TO MORE THAN 50% OF MIXTURE. SCREENING OR OTHER SUITABLE MEANS MAY BE REQUIRED AT THE INSPECTORS DISCRETION. THE EARTH TRENCH BOTTOM SHALL BE STABLE WITH A UNIFORM GRADE CONTAINING NO HARD CLODS, ROCKS, AND ETCETERA. THAT MAY DAMAGE THE CONDUIT. IF IN THE OPINION OF THE INSPECTOR, THE CONDUIT MAY BE DAMAGED DURING COMPACTION, A 3" SHADE OF MATERIAL ABOVE AND BELOW THE CONDUIT MAY BE REQUIRED.

COMPACTION:
SHADING AND BACKFILL SHOULD BE COMPACTED IN ACCORDANCE WITH GOVERNMENTAL AGENCIES AND SHALL HAVE A MINIMUM OF 90% RELATIVE COMPACTION. VERIFY REQUIREMENTS WITH INSPECTOR.

NOTE TO CONTRACTOR:
MAINTAIN PROPER SEPARATION FROM ALL WET AND DRY UTILITIES PER THE UTILITY COMPANY AND CITY JURISDICTION.

NO SCALE

E TRENCH AND CONDUIT INSTALLATION DETAIL



NO SCALE

F RECEPTACLE PEDESTAL INSTALLATION DETAIL

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PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2
DETAIL SHEET

CONSULTANT
COMPANY ADDRESS:
VCL-INC. 4858 MERCURY ST, STE 210, SAN DIEGO, CA 92111
COMPANY PHONE NUMBER: 858-278-4503
COMPANY EMAIL DATE OF: KPEREZ@VCL-INC.COM
SIGNING:

REGISTERED PROFESSIONAL ENGINEER
MARIO A. PEREZ
E22246
STATE OF CALIFORNIA

SPEC. NO

FOR CITY APPROVAL

DEVELOPMENT SERVICES DEPARTMENT
SHEET 60 OF 61 SHEETS

APPROVED:
FOR CITY ENGINEER DATE

DESCRIPTION	BY	APPROVED	DATE
ORIGINAL	SP		

AS BUILTS
CONTRACTOR DATE STARTED
INSPECTOR DATE COMPLETED

PMT NO.
PRJ NO. 1119957
1847-6266 NAD83 COORDINATES
207-1706 LAMBERT COORDINATES
DRAWING NO. EL-3
XXXX- 60 - D

STATE OF CALIFORNIA

Outdoor Lighting

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-E
This document is used to demonstrate compliance with requirements in 110.9, 130.0, 130.2, 140.7, and 141.0(b)2L for outdoor lighting scopes using the prescriptive path for nonresidential and hotel/motel occupancies. It is also used to document compliance with requirements in 160.5, 170.2(e)6, 180.1(a) and 180.2(b)4Bv for outdoor lighting scopes using the prescriptive path for multifamily and mixed-use occupancies. Multifamily includes dormitory and senior living facilities.	
Project Name: BALBOA BOTANICAL GARDEN	**Report Page:** (Page 1 of 7)
Project Address:	**Date Prepared:** 5/2/2024

A. GENERAL INFORMATION

01	Project Location (city)		04 Total Illuminated Hardscape Area (ft^2)	7047
02	Climate Zone	7		
03	Outdoor Lighting Zone per Title 24 Part 1 10.114 or as designated by Authority Having Jurisdiction (AHJ):			
☐ LZ-0: Very Low - Undeveloped Parkland	☒ LZ-2: Moderate - Urban Clusters	☐ LZ-4: High - Must be reviewed by CA Energy Commission for Approval		
☐ LZ-1: Low - Rural Areas	☐ LZ-3: Moderately High - Urban Areas			
05	Occupancy Types within Project			
● All Other Occupancies				

B. PROJECT SCOPE

This table includes outdoor lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.7 / 170.2(e)6 or 141.0(b)2L / 180.2(b)4Bv for alterations.

My Project Consists of:

01	02		
☒ New Lighting System	Must Comply with Allowances from 140.7 / 170.2(e)6		
☐ Altered Lighting System	Is your alteration increasing the connected lighting load (Watts)?	○ Yes	○ No
03	04	05	
% of Existing Luminaires Being Altered[1]	Sum Total of Luminaires Being Added or Altered	Calculation Method	
☐ < 10% ☐ >= 10% and < 50% ☐ >= 50%			

Please proceed to Table F. Outdoor Lighting Fixture Schedule to define the project's luminaires.

[1] FOOTNOTES: % of Existing Luminaires Being Altered = (Sum Total of Luminaires Being Added or Altered / Existing Luminaires within the Scope of the Permit Application) x 100.

STATE OF CALIFORNIA

Outdoor Lighting

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-E
Project Name: BALBOA BOTANICAL GARDEN	**Report Page:** (Page 2 of 7)
	Date Prepared: 5/2/2024

C. COMPLIANCE RESULTS

Results in this table are automatically calculated from data input and calculations in Tables F through N. Note: If any cell on this table says "COMPLIES with Exceptional Conditions" refer to Table D. Exceptional Conditions for guidance or see applicable Table referenced below.

Calculations of Total Allowed Lighting Power (Watts) 140.7 / 170.2(e)6 or 141.0(b)2L / 180.2(b)4Bv											Compliance Results			
01		02		03		04		05		06	07		08	09
General Hardscape Allowance 140.7(d)1 / 170.2(e)6 (See Table I)	+	Per Application 140.7(d)2 / 170.2(e)6 (See Table J)	+	Sales Frontage 140.7(d)2 (See Table K)	+	Ornamental 140.7(d)2 / 170.2(e)6 (See Table L)	+	Per Specific Area 140.7(d)2 / 170.2(e)6 (See Table M)	OR	Existing Power Allowance 141.0(b)2L / 180.2(b)4Bv (See Table N)	= **Total Allowed** (Watts)	≥	**Total Actual** (Watts)	**07 must be >= 08**
470	+	---	+	---	+	---	+	---	OR	---	= 470	≥	235	COMPLIES
Shielding Compliance (See Table G for Details)														N/A
Controls Compliance (See Table H for Details)														COMPLIES

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

STATE OF CALIFORNIA

Outdoor Lighting

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-E
Project Name: BALBOA BOTANICAL GARDEN	**Report Page:** (Page 3 of 7)
	Date Prepared: 5/2/2024

F. OUTDOOR LIGHTING FIXTURE SCHEDULE

For new or altered lighting systems demonstrating compliance with 140.7 / 170.2(e)6 all new luminaires being installed and any existing luminaires remaining or being moved within the spaces covered by the permit application are included in the Table below. For altered lighting systems using the Existing Power method per 141.0(b)2L only new luminaires being installed and replacement luminaires being installed as part of the project scope are included (ie, existing luminaires remaining or existing luminaires being moved are not included). Outdoor lighting attached to multifamily buildings and controlled from the inside of a dwelling unit are included in Table H. and are not included here. All other multifamily outdoor lighting is included here.

Designed Wattage:

01	02		03	04	05	06	07	08	09	10	
Name or Item Tag	Complete Luminaire Description		Watts per luminaire[1, 2]	How is Wattage determined	Total Number Luminaires[2]	Luminaire Status[3]	Excluded per 140.7(a) / 170.2(e)6A	Design Watts	Cutoff Req. > 6,200 initial lumen output 130.2(b) / 160.5(c)[4]	Field Inspector	
										Pass	Fail
TYPE D1	(1) 11W LED TRELLIS LIGHT	☐ Linear	11	Mfr. Spec	5	New	☐	55	NA: < 6200 lumens	☐	☐
TYPE U1	(1) 10W LED BELOW GRADE UP-LIGHT	☐ Linear	10	Mfr. Spec	18	New	☐	180	NA: < 6200 lumens	☐	☐
							Total Design Watts:	235			

* NOTES: Selections with a * require a note in the space below explaining how compliance is achieved.
EX: Luminaire is lighting a statue; EXCEPTION 2 to 130.2(b)

[1] FOOTNOTES: Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per 130.0(c) / 160.5(b)
[2] For linear luminaires, wattage should be indicated as W/lf instead of Watts/luminaire. Total linear feet should be indicated in column 05 instead of number of luminaires.
[3] Select "New" for new luminaires in a new outdoor lighting project, or for added luminaires in an alteration. Select "Altered" for replacement luminaires in an alteration. Select "Existing to Remain" for existing luminaires within the project scope that are not being altered and are remaining. Select "Existing Reinstalled" for existing luminaires which are being removed and reinstalled as part of the project scope.
[4] Compliance with mandatory shielding requirements is required for luminaires with initial lumen output >= 6,200 unless exempted by 130.2(b)/ 160.5(c)

G. SHIELDING REQUIREMENTS (BUG)

This section does not apply to this project.

STATE OF CALIFORNIA

Outdoor Lighting

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-E
Project Name: BALBOA BOTANICAL GARDEN	**Report Page:** (Page 4 of 7)
	Date Prepared: 5/2/2024

H. OUTDOOR LIGHTING CONTROLS

This table demonstrates compliance with controls requirements for all new or altered luminaires installed as part of the permit application. For alteration projects, luminaires which are existing to remain (ie untouched) and luminaires which are removed and reinstalled (wiring only) do not need to be included in this table even if they are within the spaces covered by the permit application.
Outdoor lighting for nonresidential buildings, parking garages and common service areas in multifamily buildings must be documented separately from outdoor lighting attached to multifamily buildings and controlled from the inside of a dwelling unit

Mandatory Controls for Nonresidential Occupancies, Parking Garages & Common Areas in Multifamily Buildings

01	02	03	04	05	
Area Description	Shut-Off 130.2(c)1 / 160.5(c)	Auto-Schedule 130.2(c)2 / 160.5(c)	Motion Sensor 130.2(c)3 / 160.5(c)	Field Inspector	
				Pass	Fail
SITE LIGHTING	Photocontrol	Provided	EXEMPT: UNDER 41 WATTS	☐	☐
SITE LIGHTING	Astronomical Timer	Provided	EXEMPT: UNDER 41 WATTS	☐	☐

[1] FOOTNOTE: Text has been abbreviated, please refer to Table 160.5-A to confirm compliance with the specific light source technologies listed.
[2] Authority having jurisdiction may ask for cutsheets or other documentation to confirm compliance of light source.
[3] Recessed luminaires marked for use in fire-rated installations, and recessed luminaires installed in non-insulated ceilings are excepted from ii and iii.

STATE OF CALIFORNIA

Outdoor Lighting

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-E
Project Name: BALBOA BOTANICAL GARDEN	**Report Page:** (Page 5 of 7)
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I. LIGHTING POWER ALLOWANCE (per 140.7 / 170.2(e))

This table includes areas using allowance calculations per 140.7 / 170.2(e). General Hardscape Allowance is per Table 140.7-A/Table 170.2-R while "Use it or lose it" Allowances are per Table 140.7-B /Table 170.2-S. Indicate which allowances are being used to expand sections for user input. Luminaires that qualify for one of the "Use it or lose it" allowances shall not qualify for another "Use it or lose it" allowance.
Outdoor lighting attached to multifamily buildings and controlled from the inside of a dwelling unit are included in Table H. and are not included here. All other multifamily outdoor lighting is included here.

	01			
		"Use it or lose it" Allowance (select all that apply) (select all that apply)		
	☒ General Hardscape Allowance Table I (below)	☐ Per Application Table J	☐ Sales Frontage Table K	☐ Ornamental Table L	☐ Per Specific Area Table M

Calculated General Hardscape Lighting Power Allowance per Table 140.7-A for Nonresidential & Hotel/Motel

02	03	04	05	06	07	08	09
Area Description	Area Wattage Allowance (AWA)			Linear Wattage Allowance (LWA)			Total General AWA + LWA (Watts)
	Illuminated Area (ft^2)	Allowed Density (W/ft^2)	Area Allowance (Watts)	Perimeter Length (lf)	Allowed Density (W/lf)	Linear Allowance (Watts)	
PEDESTRIAN	7047	0.019	133.9	907	0.2	136	270
Initial Wattage Allowance for Entire Site (Watts):							200
Instances of Initial Wattage Allowance (LZ 0 only)[1]							
Total General Hardscape Allowance (Watts):							470

J. LIGHTING ALLOWANCE: PER APPLICATION

This section does not apply to this project.

K. LIGHTING ALLOWANCE: SALES FRONTAGE

This section does not apply to this project.

L. LIGHTING ALLOWANCE: ORNAMENTAL

This section does not apply to this project.

STATE OF CALIFORNIA

Outdoor Lighting

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-E
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	Date Prepared: 5/2/2024

M. LIGHTING ALLOWANCE: PER SPECIFIC AREA

This section does not apply to this project.

N. EXISTING CONDITIONS POWER ALLOWANCE (alterations only)

This section does not apply to this project.

O. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selection has been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online

Form/Title
NRCI-LTO-E - Must be submitted for all buildings

P. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Selections have been made based on information provided in this document. If any selection has been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit: http://www.energy.ca.gov/title24/attcp/providers.html

Form/Title	Systems/Spaces To Be Field Verified
NRCA-LTO-02-A - Must be submitted for all outdoor lighting controls except for alterations where controls are added to <= 20 luminaires.	SITE LIGHTING ; SITE LIGHTING ;

STATE OF CALIFORNIA

Outdoor Lighting

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-E
Project Name: BALBOA BOTANICAL GARDEN	**Report Page:** (Page 7 of 7)
Project Address:	**Date Prepared:** 5/2/2024

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: TORI FIELDS	Documentation Author Signature:
Company: Visual Concepts INC	Signature Date: 2024-05-02
Address: 4858 MERCURY STREET	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: SAN DIEGO CA 92111	Phone: 8582784503

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: MARIO PEREZ	Responsible Designer Signature:
Company: VISUAL CONCEPTS LIGHTING	Date Signed: 2024-05-02
Address: 4858 MERCURY STREET STE #210	License: E22246
City/State/Zip: SAN DIEGO CA 92111	Phone: 8582784503

PRIVATE CONTRACT

VCL
Visual Concepts Lighting
4858 Mercury St. Ste. 210 San Diego CA 92111
858-278-4503 | www.visualconcepts-inc.com

WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

PLANS FOR THE CONSTRUCTION OF BOTANICAL BUILDING AND GARDENS PHASE 2

CONSULTANT

COMPANY ADDRESS:
VCL-INC. 4858 MERCURY ST, STE 210, SAN DIEGO, CA 92111
COMPANY PHONE NUMBER: 858-278-4503
COMPANY EMAIL DATE OF: KPEREZ@VCL-INC.COM
SIGNING:

REGISTERED PROFESSIONAL ENGINEER
MARIO A. PEREZ
E22246
ELECTRICAL
STATE OF CALIFORNIA

SPEC. NO

FOR CITY APPROVAL

DEVELOPMENT SERVICES DEPARTMENT
SHEET 61 OF 61 SHEETS

APPROVED:
FOR CITY ENGINEER ____ DATE ____

DESCRIPTION	BY	APPROVED	DATE
ORIGINAL	SP		
AS BUILTS			

CONTRACTOR ____ DATE STARTED ____
INSPECTOR ____ DATE COMPLETED ____

PMT NO. ____
PRJ NO. 1119957
1847-6266
NAD83 COORDINATES
207-1706
LAMBERT COORDINATES
DRAWING NO. XXXX- 61 - D
EL-4

GENERAL NOTES

1. APPROVAL OF THESE PLANS BY THE CITY ENGINEER DOES NOT AUTHORIZE ANY WORK TO BE PERFORMED UNTIL A PERMIT HAS BEEN ISSUED.

2. UPON ISSUANCE OF A PERMIT, NO WORK WILL BE PERMITTED ON WEEKENDS OR HOLIDAYS UNLESS APPROVED BY TRAFFIC CONTROL PERMIT FROM THE DEVELOPMENT SERVICES DEPARTMENT.

3. THE APPROVAL OF THIS PLAN OR ISSUANCE OF A PERMIT BY THE CITY OF SAN DIEGO DOES NOT AUTHORIZE THE PERMIT HOLDER OR OWNER TO VIOLATE ANY FEDERAL, STATE OR CITY LAWS, ORDINANCES, REGULATIONS, OR POLICIES.

4. IMPORTANT NOTICE: SECTION 4216 OF THE GOVERNMENT CODE REQUIRES A DIG ALERT IDENTIFICATION NUMBER ISSUED BEFORE A "PERMIT TO EXCAVATE" WILL BE VALID. FOR YOUR DIG ALERT I.D. NUMBER, CALL UNDERGROUND SERVICE ALERT, TOLL FREE (800) 422-4133, TWO DAYS BEFORE YOU DIG.

5. CONTRACTOR SHALL BE RESPONSIBLE FOR POTHOLING AND LOCATING ALL EXISTING UTILITIES THAT CROSS THE PROPOSED TRENCH LINE WHILE MAINTAINING A 1 FOOT VERTICAL CLEARANCE.

6. "PUBLIC IMPROVEMENT SUBJECT TO DESUETUDE OR DAMAGE." IF REPAIR OR REPLACEMENT OF SUCH PUBLIC IMPROVEMENTS IS REQUIRED, CONTRACTOR SHALL OBTAIN THE REQUIRED PERMITS FOR WORK IN THE PUBLIC RIGHT-OF-WAY, SATISFACTORY TO THE PERMIT ISSUING AUTHORITY.

7. DEVIATIONS FROM THESE SIGNED PLANS WILL NOT BE ALLOWED UNLESS A CONSTRUCTION CHANGE IS APPROVED BY THE CITY ENGINEER OR THE CHANGE IS REQUIRED BY THE RESIDENT ENGINEER.

8. CONTRACTOR SHALL REPLACE OR REPAIR ALL TRAFFIC SIGNAL LOOPS, CONDUITS, AND LANE STRIPING DAMAGED DURING CONSTRUCTION.

9. PRIOR TO SITE DISTURBANCE, CONTRACTOR SHALL MAKE ARRANGEMENTS FOR A PRECONSTRUCTION MEETING WITH THE CITY OF SAN DIEGO, CONSTRUCTION MANAGEMENT AND FIELD SERVICES DIVISION (858) 627-3200.

10. CONTRACTOR SHALL ONLY PERFORM SITE SURVEY AND UTILITY MARK OUT SERVICES PRIOR TO THE PRECONSTRUCTION MEETING.

11. CONTRACTOR SHALL IMPLEMENT AN EROSION CONTROL PROGRAM DURING THE PROJECT CONSTRUCTION ACTIVITIES. THE PROGRAM SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS OF THE STATE WATER RESOURCE CONTROL BOARD.

12. CONTRACTOR SHALL HAVE EMERGENCY MATERIAL AND EQUIPMENT ON HAND FOR UNFORESEEN SITUATIONS, SUCH AS DAMAGE TO UNDERGROUND WATER, SEWER, AND STORM DRAIN FACILITIES WHERE FLOW MAY GENERATE EROSION AND SEDIMENT POLLUTION.

13. MANHOLES, VAULTS AND PULL BOX COVERS SHALL BE LABELED WITH THE "NAME OF COMPANY"AND HAVE A SLIP RESISTANT LID WITH A MINIMUM STATIC COEFFICIENT OF FRICTION OF 0.5.

14. AS-BUILT DRAWINGS MUST BE SUBMITTED TO THE RESIDENT ENGINEER PRIOR TO ACCEPTANCE OF THIS PROJECT BY THE CITY OF SAN DIEGO.

15. CONTRACTOR SHALL PROVIDE RED-LINES DRAWINGS IN ACCORDANCE WITH 2-5.4 OF THE WHITEBOOK, "RED-LINES AND RECORD DOCUMENTS.

16. CONTRACTOR SHALL MAINTAIN A MINIMUM OF 1 FOOT VERTICAL SEPARATION TO ALL UTILITIES UNLESS OTHERWISE SPECIFIED ON THE PLANS.

17. CONTRACTOR SHALL REMOVE AND REPLACE ALL UTILITY BOXES SERVING AS HANDHOLES THAT ARE NOT IN "AS-NEW" CONDITION IN PROPOSED SIDEWALK, DAMAGED BOXES, OR THOSE THAT ARE NOT IN COMPLIANCE WITH CURRENT CODE SHALL BE REMOVED AND REPLACED WITH NEW BOXES, INCLUDING WATER, SEWER, TRAFFIC SIGNALS, STREET LIGHTS, DRY UTILITIES-SDG&E, COX, ETC. ALL NEW METAL LIDS SHALL BE SLIP RESISTANT AND INSTALLED FLUSH WITH PROPOSED SIDEWALK GRADE. IF A SLIP RESISTANT METAL LID IS NOT COMMERCIALLY AVAILABLE FOR THAT USE, NEW BOXES AND LIDS SHALL BE INSTALLED.

18. CONTRACTOR SHALL INSTALL CITY APPROVED TEMPORARY VIDEO OR RADAR DETECTION WHEN EXISTING TRAFFIC SIGNAL DETECTION SYSTEMS ARE DAMAGED, DISABLED, OR BECOME INEFFECTIVE DUE TO CONSTRUCTION ACTIVITIES FOR A PERIOD OF GIVE (5) OR MORE DAYS, SATISFACTORY TO THE CITY ENGINEER. THE CONTRACTOR SHALL COMPLETELY REMOVE ALL TEMPORARY TRAFFIC SIGNAL DETECTION EQUIPMENT AND RESTORE/INSTALL A CITY APPROVED PERMANENT VEHICLE DETECTION SYSTEM UPON COMPLETION OF CONSTRUCTION, SATISFACTORY TO THE CITY ENGINEER.

19. PRIOR TO CONSTRUCTION, SURVEY MONUMENTS (HORIZONTAL AND VERTICAL) THAT ARE LOCATED IN THE CONSTRUCTION AREA SHALL BE TIED-OUT AND REFERENCED BY A LAND SURVEYOR.

20. UPON COMPLETION OF CONSTRUCTION, ALL DESTROYED SURVEY MONUMENTS ARE REQUIRED TO BE REPLACED, AND A CORNER RECORD OR RECORD OF SURVEY SHALL BE PREPARED AND FILED WITH THE COUNTY SURVEYOR AS REQUIRED BY THE PROFESSIONAL LAND SURVEYOR ACT, SECTION 8771 OF THE BUSINESS AND PROFESSIONS CODE OF THE STATE OF CALIFORNIA.

GROUND WATER DISCHARGE NOTES *

1. ALL GROUND WATER EXTRACTIONS AND SIMILAR WASTE DISCHARGES TO SURFACE WATERS NOT TRIBUTARY TO THE SAN DIEGO BAY ARE PROHIBITED UNTIL IT CAN BE DEMONSTRATED THAT THE OWNER HAS APPLIED AND OBTAINED AUTHORIZATION FROM THE STATE OF CALIFORNIA VIA AN OFFICIAL "ENROLLMENT LETTER" FROM THE REGIONAL WATER QUALITY CONTROL BOARD IN ACCORDANCE WITH THE TERMS, PROVISIONS AND CONDITIONS OF STATE ORDER NO R9-2015-0013 NPDES CAG919003.

2. THE ESTIMATED MAXIMUM DISCHARGE RATES MUST NOT EXCEED THE LIMITS SET IN THE OFFICIAL "ENROLLMENT LETTER" FROM THE REGIONAL BOARD UNLESS PRIOR NOTIFICATION AND SUBSEQUENT AUTHORIZATION HAS BEEN OBTAINED, AND DISCHARGE OPERATIONS MODIFIED TO ACCOMMODATE THE INCREASED RATES.

3. ALL GROUND WATER EXTRACTIONS AND SIMILAR WASTE DISCHARGES TO SURFACE WATERS TRIBUTARY TO THE SAN DIEGO BAY ARE PROHIBITED UNTIL IT CAN BE DEMONSTRATED THAT THE OWNER HAS APPLIED AND OBTAINED AUTHORIZATION FROM THE STATE OF CALIFORNIA VIA AN OFFICIAL "ENROLLMENT LETTER" FROM THE REGIONAL WATER QUALITY CONTROL BOARD IN ACCORDANCE WITH THE TERMS, PROVISIONS AND CONDITIONS OF STATE ORDER NO R9-2015-0013 NPDES NO. CAG919003.

DECLARATION OF RESPONSIBLE CHARGE

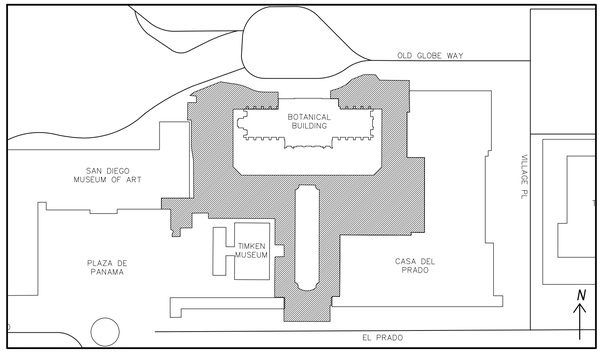
I HEREBY DECLARE THAT I AM THE ENGINEER OF WORK FOR THIS PROJECT, THAT I HAVE EXERCISED RESPONSIBLE CHARGE OVER THE DESIGN OF THE PROJECT AS DEFINED IN SECTION 6703 OF THE BUSINESS AND PROFESSIONS CODE, AND THAT THE DESIGN IS CONSISTENT WITH CURRENT STANDARDS.

I UNDERSTAND THAT THE CHECK OF PROJECT DRAWINGS AND SPECIFICATIONS BY THE CITY OF SAN DIEGO IS CONFINED TO A REVIEW ONLY AND DOES NOT RELIEVE ME, AS ENGINEER OF WORK, OF MY RESPONSIBILITIES FOR PROJECT DESIGN.

LEIGH KYLE P.L.A. NO. 6137 EXP. 06-30-2025 DATE

PLANTING AND IRRIGATION PLANS FOR:

BALBOA PARK BOTANICAL BUILDING AND GARDENS PHASE II



VICINITY MAP

MONUMENT PRESERVATION CERTIFICATION

THE PERMITTEE SHALL BE RESPONSIBLE FOR THE COST OF REPLACING ALL SURVEY MONUMENTS DESTROYED BY CONSTRUCTION. IF A VERTICAL CONTROL MONUMENT IS TO BE DISTURBED OR DESTROYED, THE CITY OF SAN DIEGO FIELD SURVEY SECTION SHALL BE NOTIFIED IN WRITING AT LEAST 7 DAYS PRIOR TO DEMOLITION/CONSTRUCTION.

THE TYPE OF CONSTRUCTION WILL NOT AFFECT ANY SURVEY MONUMENTS (THIS LINE IS FOR PROJECTS THAT ARE PROPOSING NO DEMOLITION, TRENCHING, ASSOCIATED WITH A CIP, ETC)

NAME DATE

PRIOR TO PERMIT ISSUANCE, THE PERMITTEE SHALL RETAIN THE SERVICE OF A PROFESSIONAL LAND SURVEYOR OR CIVIL ENGINEER AUTHORIZED TO PRACTICE LAND SURVEYING WHO WILL BE RESPONSIBLE FOR MONUMENT PRESERVATION AND SHALL PROVIDE A CORNER RECORD OR RECORD OF SURVEY TO THE COUNTY SURVEYOR AS REQUIRED BY THE PROFESSIONAL LAND SURVEYORS ACT, IF APPLICABLE. (SECTION 8771 OF THE BUSINESS AND PROFESSIONS CODE OF THE STATE OF CALIFORNIA)

I HAVE INSPECTED THE SITE AND DETERMINED THAT:

- ☒ NO SURVEY MONUMENTS WERE FOUND WITHIN THE LIMITS OF WORK
- ☐ SURVEY MONUMENTS EXISTING IN OR NEAR LIMITS OF WORK WILL BE PROTECTED IN PLACE
- ☐ SURVEY MONUMENTS HAVE BEEN TIED OUT AND A FINAL OR PARCEL MAP WILL BE FILED (NO CORNER RECORD OR RECORD OF SURVEY WILL BE REQUIRED)
- ☐ OTHER AGENCY SURVEY MONUMENT (CORNER RECORD OR RECORD OF SURVEY MAY NOT BE REQUIRED).
- ☐ AGENCY HAS BEEN NOTIFIED OF POSSIBLE MONUMENT DESTRUCTION AND A LETTER PROVIDED TO CITY A PRE-CONSTRUCTION CORNER RECORD (OR RECORD OF SURVEY) FOR SURVEY MONUMENTS FOUND WITHIN THE LIMITS OF WORK HAS BEEN FILED.

CORNER RECORD #_____ OR RECORD OF SURVEY #_____

NAME P.L.S. / R.C.E. NO. XXXXX EXP. XX-XX-XX DATE

POST CONSTRUCTION CORNER RECORD (AS-BUILT ITEM)

- ☐ POST CONSTRUCTION CORNER RECORD FOR SURVEY MONUMENTS DESTROYED DURING CONSTRUCTION AND REPLACED AFTER CONSTRUCTION.

CORNER RECORD #_____ OR RECORD OF SURVEY #_____

NAME P.L.S. / R.C.E. NO. XXXXX EXP. XX-XX-XX DATE

OWNER/APPLICANT

CITY OF SAN DIEGO
525 B STREET, SUITE 750
SAN DIEGO, CALIFORNIA 92101
(619) 533-3450

REFERENCE DRAWINGS

4" SEWER (41947-D), 6" STORM DRAIN (41947-D), 2-1/2" WATER (41947-D), 12" WATER (40041-D), 18" STORM DRAIN (40041-D), 8" SEWER (28573-D), 8" SEWER (20961-D), STORM DRAIN (11772-D), 4" WATER (11657-D), 8" WATER (11657-D)

SITE ADDRESS

BALBOA PARK - BOTANICAL BUILDING
1549 EL PRADO
SAN DIEGO, CA 92101

BENCHMARK

THE BASIS OF ELEVATIONS FOR THIS SURVEY IS THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29) PER CITY OF SAN DIEGO VERTICAL CONTROL NETWORK.
BENCHMARK DESIGNATION: NORTHWEST BRASS PLUG LOCATED AT PARK BLVD & VILLAGE PLACE.
ELEVATION: 284.65 (NGVD29)

EXISTING LEGAL DESCRIPTION

AS STATED ON RECORDED DOCUMENT FOR PROPERTY PROPOSING IMPROVEMENT.

ASSESSORS PARCEL NUMBER

APN 534-450-09

TOPOGRAPHY SOURCE

MICHAEL BAKER INTERNATIONAL
9635 GRANITE RIDGE DR. UNIT 300
SAN DIEGO, CA 92123
PARTIAL GROUND SURVEY
TOPO SOURCE DATE: OCTOBER 14, 2021
ADDITIONAL TOPO SOURCE DATE: JANUARY 12, 2024

CONSTRUCTION STORM WATER PROTECTION NOTES

1. TOTAL SITE DISTURBANCE AREA (ACRES) 0.14 ACRES
   WATERSHED: PUEBLO SAN DIEGO HU/SAN DIEGO BAY WATERSHED
   HYDRAULIC SUB AREA NAME AND NUMBER: LINDBERGH 908.21
2. THE PROJECT SHALL COMPLY WITH THE REQUIREMENTS OF THE
   - ☒ WPCP
     THE PROJECT IS SUBJECT TO MUNICIPAL STORM WATER PERMIT NUMBER R9-2013-0001 AND SUBSEQUENT AMENDMENTS..
   - ☐ SWPPP
     THE PROJECT IS SUBJECT TO MUNICIPAL STORM WATER PERMIT NUMBER R9-2013-0001 AND CONSTRUCTION GENERAL PERMIT ORDER NUMBER 2009-009-DWQ AS AMENDED BY ORDER 2010-0014 DWQ AND 2012-0006-DWQ

   TRADITIONAL: RISK LEVEL ☐ 1 ☐ 2 ☐ 3
   LUP RISK LEVEL ☐ 1 ☐ 2 ☐ 3
   WDID NO: _____
3. CONSTRUCTION SITE PRIORITY
   ☐ ASBS ☐ HIGH ☐ MEDIUM ☒ LOW

CONSULTANTS

SPURLOCK LANDSCAPE ARCHITECTS
2122 HANCOCK STREET
SAN DIEGO, CA 92110
PHONE #: 619.681.0090

SWEENEY & ASSOCIATES
38730 SKY CANYON DRIVE, SUITE C.
MURRIETA, CA 92563
PHONE #: 951.763.7985

WORK TO BE DONE

THE PUBLIC IMPROVEMENTS SHOWN ON THESE PLANS SHALL BE CONSTRUCTED ACCORDING TO THE FOLLOWING STANDARD SPECIFICATIONS AND STANDARD DRAWINGS OF THE CITY OF SAN DIEGO.

STANDARD SPECIFICATIONS:

DOCUMENT NO.	DESCRIPTION
PWPI010119-01	STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (GREENBOOK), 2018 EDITION
PWPI010119-02	CITY OF SAN DIEGO STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (WHITEBOOK), 2018 EDITION
PWPI010119-04	CITYWIDE COMPUTER AIDED DESIGN AND DRAFTING (CADD) STANDARDS, 2018 EDITION
PWPI060121-10	CALIFORNIA MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES REVISION 6(CA MUTCD REV6), 2014 EDITION
PWPI030119-05	CALIFORNIA DEPARTMENT OF TRANSPORTATION U.S CUSTOMARY STANDARD SPECIFICATIONS, 2018 EDITION

STANDARD DRAWINGS:

DOCUMENT NO.	DESCRIPTION
PWPI010119-03	CITY OF SAN DIEGO STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION, 2018 EDITION
PWPI030119-06	CALIFORNIA DEPARTMENT OF TRANSPORTATION U.S CUSTOMARY STANDARD PLANS, 2018 EDITION

APPLICABLE STANDARD DRAWINGS AND SPECIFICATIONS

GREENBOOK - STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION INCLUDING THE CITY OF SAN DIEGO "WHITEBOOK" SUPPLEMENT TO THE GREENBOOK (CURRENT EDITION).

CITY OF SAN DIEGO STANDARD DRAWINGS (CURRENT EDITION).

AMERICAN WITH DISABILITIES ACT (ADA), TITLE II REGULATIONS 28 CFR PART 35 AND 35, 151, INCLUDING THE 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN, (APPENDIX A OF 28 CFR PART 36) (ADAS);

THE STATE OF CALIFORNIA CODE OF REGULATIONS (CCR), INCLUDING THE CURRENT CALIFORNIA BUILDING CODE (CBC) AND THE CURRENT CALIFORNIA ACCESS COMPLIANCE REFERENCE MANUAL; AND THE CITY OF SAN DIEGO ACCESS MEMOS.

MANUAL OF TRAFFIC CONTROLS FOR CONSTRUCTION AND MAINTENANCE WORK ZONES, STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION (CURRENT EDITION).

NOTE: THE MOST CURRENT EDITIONS OF THE PRECEDING DOCUMENTS SHALL BE USED, WHERE ONE OR MORE SETS OF SPECIFICATIONS OR DRAWINGS ARE APPLICABLE, THE MORE RESTRICTIVE SHALL TAKE PRECEDENCE. FOR EXAMPLE, WHEN A CONFLICT EXISTS BETWEEN THE ADAS AND CBC, DEVELOPER SHALL COMPLY WITH THE MOST RESTRICTIVE REQUIREMENT (I.E., THAT WHICH PROVIDES THE MOST ACCESS).

SHEET INDEX

#	SHEET NUMBER	SHEET NAME
	GENERAL	
1	T000	TITLE SHEET & SHEET INDEX
2	T001	TITLE SHEET & ADD ALTERNATES PLAN
3	L100	TREE PROTECTION PLAN
	IRRIGATION	
4-10	L201-L207	IRRIGATION PLAN
11	L208	IRRIGATION LEGEND
12	L209	IRRIGATION DETAILS
	LANDSCAPE	
13-19	L301-L307	PLANTING PLAN
20-22	L308-L310	PLANTING LEGEND
23	L311	PLANTING DETAILS

CONSTRUCTION CHANGE

CHANGE	BY	AFFECTED OR ADDED SHEET NUMBERS	APPROVED	DATE		

SPURLOCK LANDSCAPE ARCHITECTS
2122 Hancock Street
San Diego, California 92110
619.681.0090
spurlock-land.com

WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

PRIVATE CONTRACT

PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2
TITLE SHEET

CONSULTANT
COMPANY ADDRESS: SPURLOCK LANDSCAPE ARCHITECTS, 2122 HANCOCK ST, SAN DIEGO, CA 92110
COMPANY PHONE NUMBER: 619-681-0090
COMPANY EMAIL DATE OF: AARMOUR@SPURLOCK-LAND.COM
SIGNING:

LICENSED LANDSCAPE ARCHITECT
LEIGH KYLE - 6137
Signature
06/30/25
Renewal Date
11/01/24
Date
STATE OF CALIFORNIA

SPEC. NO

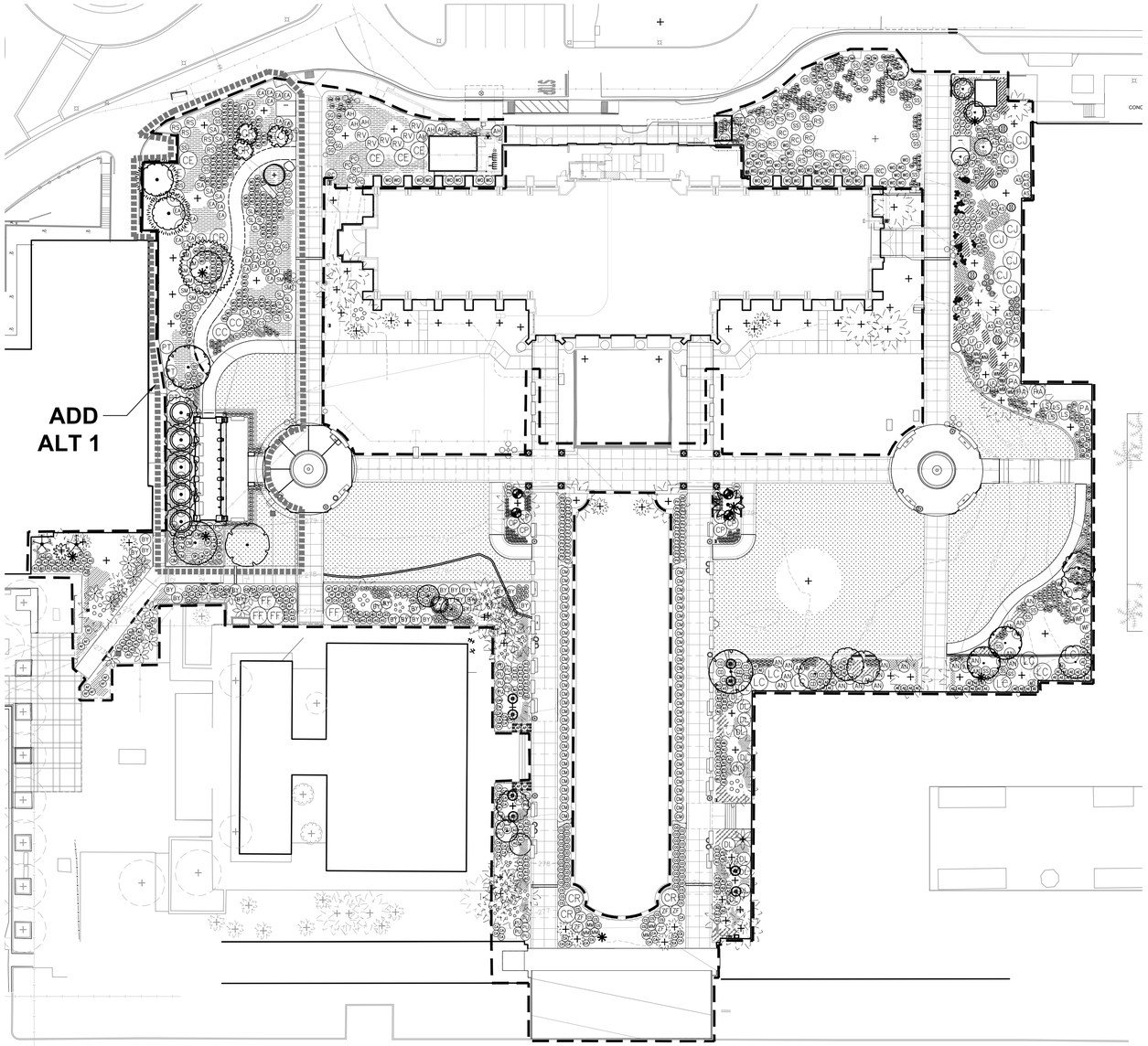
The City of SAN DIEGO
FOR CITY APPROVAL

PARKS & RECREATION DEPARTMENT
SHEET 1 OF 23 SHEETS

1847-6266
NAD83 COORDINATES

207-1706
LAMBERT COORDINATES

DRAWING NO.
T000



CONSTRUCTION INSPECTION STAGES AND INSPECTION TEAM:

INSPECTION TEAM

A. SITE SUPERINTENDENT (CONTRACTOR'S REPRESENTATIVE)
B. CONTRACTOR(S)
C. FOREVER BALBOA PARK PROJECT MANAGER
D. PARKS AND RECREATION ASSET MANAGER
E. CONSULTANT(S) REPRESENTATIVE
F. BALBOA PARK HORTICULTURIST
G. PARKS AND RECREATION IRRIGATION SPECIALIST

CONSTRUCTION INSPECTION STAGES (MINIMUM – SEE REFERENCE DOCUMENTS AND SUPPLEMENTAL SPECIFICATIONS FOR ADDITIONAL):

1. PRE-CONSTRUCTION MEETING
2. DEMOLITION MARK-OUT (IF APPLICABLE)
3. PROTECTION OF EXISTING PLANT MATERIALS.
4. IRRIGATION POINT OF CONNECTION (POC) MARK-OUT, VERIFICATION OF SLEEVE LOCATIONS, AND VALVE MANIFOLDS MARK-OUT
5. IRRIGATION MAINLINE PRESSURE TEST PRIOR TO BACKFILLING TRENCHES.
6. WIRING PRIOR TO BACKFILLING TRENCHES.
7. IRRIGATION LATERAL LINE PRESSURE TEST PRIOR TO BACKFILLING TRENCHES.
8. ROUGH GRADING AND SOIL & PERCOLATION TESTS.
9. FINISH GRADING AND SOIL PREPARATION.
10. IRRIGATION COVERAGE TEST.
11. PLANT MATERIAL (WHEN DELIVERED) AND PLACEMENT APPROVAL.
12. PROJECT CONSTRUCTION 90 PERCENT COMPLETE (DEVELOP PUNCH LIST AND SUBMIT RED-LINE AS-BUILTS).
13. 90-DAY PLANT MAINTENANCE PERIOD (THIS INSPECTION IS TO BE HELD WHEN THE PUNCH LIST ITEMS ARE COMPLETE).
14. FINAL WALK-THROUGH, ACCEPTANCE BY THE CITY. CONTRACTOR TO SUBMIT FINAL APPROVED AS-BUILT DRAWINGS TO THE CITY.

ADD ALTERNATE 1:

BASE SCOPE:
NO IMPROVEMENTS IN CLOUDED AREA.

ADD ALT 1:
ALL SCOPE WITHIN CLOUDED AREA INCLUDES ALL DISCIPLINES.

CONSTRUCTION CHANGE

CHANGE	BY	AFFECTED OR ADDED SHEET NUMBERS	APPROVED	DATE		

SPURLOCK
LANDSCAPE ARCHITECTS
2122 Hancock Street
San Diego, California 92110
619.681.0090
spurlock-land.com

WARNING
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IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

PRIVATE CONTRACT

PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2
TITLE SHEET & ADD ALTERNATES PLAN

CONSULTANT

COMPANY ADDRESS: SPURLOCK LANDSCAPE ARCHITECTS, 2122 HANCOCK ST, SAN DIEGO, CA 92110
COMPANY PHONE NUMBER: 619-681-0090
COMPANY EMAIL DATE OF: AARMOUR@SPURLOCK-LAND.COM
SIGNING:

LICENSED LANDSCAPE ARCHITECT
LEIGH KYLE – 6173
STATE OF CALIFORNIA
Signature
06/30/25
Renewal Date
11/01/24
Date

SPEC. NO

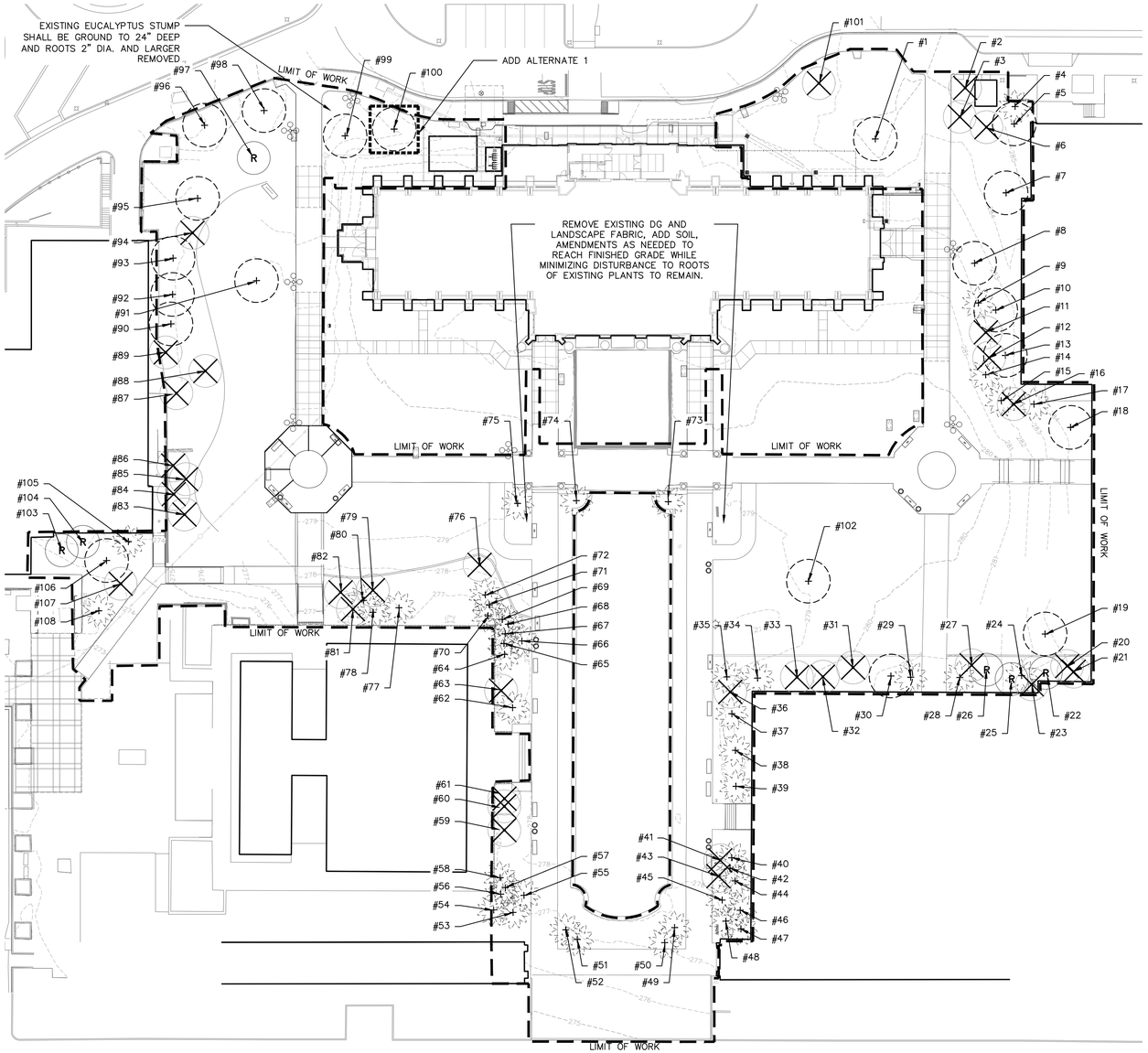
The City of SAN DIEGO
FOR CITY APPROVAL

PARKS & RECREATION DEPARTMENT
SHEET 2 OF 23 SHEETS

1847-6266
NAD83 COORDINATES

207-1706
LAMBERT COORDINATES

DRAWING NO.
T001



TREE PROTECTION LEGEND

SYMBOL	DESCRIPTION
	EXISTING TREE OR PALM TO BE REMOVED
R	EXISTING TREE OR PALM TO BE RELOCATED
+	EXISTING TREE OR PALM TO REMAIN, PROTECT IN PLACE

SYMBOL	PLAN GRAPHICS
	LIMIT OF WORK

#	TREE SPECIES	TREE COMMON NAME	TRUNK DIAMETER (INCHES)	HEIGHT (FEET)	SPREAD (FEET)	FATE
1	FICUS MICROPHYLLA	MORETON BAY FIG	12			TREE TO REMAIN
2	ERIOBOTRYA DEFLEXA	BRONZE LOQUAT				TO BE REMOVED
3	MAGNOLIA GRANDIFLORA	SOUTHERN MAGNOLIA				TO BE REMOVED
4	HOWEA FORSTERIANA	KENTIA PALM				TREE TO REMAIN
5	PISONIA BRUNONIANA	BIRDTRAP TREE	60			TREE TO REMAIN
6	ERIOBOTRYA DEFLEXA	BRONZE LOQUAT				TO BE REMOVED
7	CUSSONIA SPICATA	SPIKED CABBAGE TREE	60			TREE TO REMAIN
8	PTEROSPERMUM ACERIFOLIUM	KARNIKARA	24			TREE TO REMAIN
9	LIVISTONA CHINENSIS	CHINESE FAN PALM	30			TREE TO REMAIN
10	SYZYGIUM SMITHII	LILLY PILLY	18			TREE TO REMAIN
11	WASHINGTONIA ROBUSTA	MEXICAN FAN PALM				TO BE REMOVED
12	LIVISTONA CHINENSIS	CHINESE FAN PALM				TO BE REMOVED
13	FICUS LYRATA	FIDDLELEAF FIG				TREE TO REMAIN
14	LIVISTONA CHINENSIS	CHINESE FAN PALM	24			TREE TO REMAIN
15	LIVISTONA CHINENSIS	CHINESE FAN PALM				TREE TO REMAIN
16	SCHEFFLERA PUECKLERI	TUPIDANTHUS				TO BE REMOVED
17	LIVISTONA CHINENSIS	CHINESE FAN PALM	24			TREE TO REMAIN
18	BAUHINIA X BLAKEANA	HONG KONG ORCHID TREE	24			TREE TO REMAIN
19	EUCALYPTUS CLADOCALYX	SUGAR GUM	96			TREE TO REMAIN
20	KENTIA PALM	HOWEA FORSTERIANA				TO BE REMOVED
21	FICUS MACROPHYLLA	MORETON BAY FIG				TO BE REMOVED
22	KENTIA PALM	HOWEA FORSTERIANA				TO BE RELOCATED
23	KENTIA PALM	HOWEA FORSTERIANA				TO BE REMOVED
24	ARCHONTOPHOENIX CUNNINGHAMIANA	KING PALM				TREE TO REMAIN
25	RHAPIS EXELSA	RHAPIS PALM				TO BE RELOCATED
26	DYPSIS DECARYI	TRIANGLE PALM				TO BE RELOCATED
27	WASHINGTONIA ROBUSTA	MEXICAN FAN PALM				TO BE REMOVED
28	ARCHONTOPHOENIX CUNNINGHAMIANA	KING PALM				TREE TO REMAIN
29	ARCHONTOPHOENIX CUNNINGHAMIANA	KING PALM				TREE TO REMAIN
30	EUCALYPTUS CLADOCALYX	SUGAR GUM	48			TREE TO REMAIN
31	STRELITZIA NICOLAI	GIANT BIRD OF PARADAISE				TO BE REMOVED
32	SCHEFFLERA					TO BE DETERMINED
33	STRELITZIA NICOLAI	GIANT BIRD OF PARADAISE				TO BE REMOVED
34	CHAMAEROPS HUMILIS	MEDITERRANEAN FAN PALM				TREE TO REMAIN
35	CHAMAEROPS HUMILIS	MEDITERRANEAN FAN PALM				TREE TO REMAIN
36	LIVISTONA CHINENSIS	CHINESE FAN PALM				TREE TO REMAIN
37	BRAHEA EDULIS	GUADALUPE PALM				TREE TO REMAIN
38	BRAHEA EDULIS	GUADALUPE PALM				TREE TO REMAIN
39	PHOENIX RECLINATA	SENEGAL DATE PALM				TREE TO REMAIN
40	TRACHYCARPUS FORTUNEI	WINDMILL PALM				TREE TO REMAIN
41	SABAL PALMETTO	SABAL PALM				TO BE REMOVED
42	TRACHYCARPUS FORTUNEI	WINDMILL PALM				TREE TO REMAIN
43	SABAL PALMETTO	SABAL PALM				TO BE REMOVED
44	BRAHEA EDULIS	GUADALUPE PALM				TREE TO REMAIN
45	BRAHEA ARMATA	MEXICAN BLUE PALM				TREE TO REMAIN
46	LIVISTONA CHINENSIS	CHINESE FAN PALM				TREE TO REMAIN
47	LIVISTONA CHINENSIS	CHINESE FAN PALM				TREE TO REMAIN
48	LIVISTONA CHINENSIS	CHINESE FAN PALM				TREE TO REMAIN
49	CHAMAEROPS HUMILIS VAR. ARGENTEA	BLUE MEDITERRANEAN FAN PALM				TREE TO REMAIN
50	CHAMAEROPS HUMILIS VAR. ARGENTEA	BLUE MEDITERRANEAN FAN PALM				TREE TO REMAIN
51	CHAMAEROPS HUMILIS VAR. ARGENTEA	BLUE MEDITERRANEAN FAN PALM				TREE TO REMAIN
52	CHAMAEROPS HUMILIS VAR. ARGENTEA	BLUE MEDITERRANEAN FAN PALM				TREE TO REMAIN

#	TREE SPECIES	TREE COMMON NAME	TRUNK DIAMETER (INCHES)	HEIGHT (FEET)	SPREAD (FEET)	FATE
53	CHAMAEROPS HUMILIS	MEDITERRANEAN FAN PALM				TREE TO REMAIN
54	CHAMAEROPS HUMILIS	MEDITERRANEAN FAN PALM				TREE TO REMAIN
55	CHAMAEROPS HUMILIS	MEDITERRANEAN FAN PALM				TREE TO REMAIN
56	LIVISTONA CHINENSIS	CHINESE FAN PALM				TREE TO REMAIN
57	LIVISTONA CHINENSIS	CHINESE FAN PALM				TREE TO REMAIN
58	CHAMAEROPS HUMILIS	MEDITERRANEAN FAN PALM				TREE TO REMAIN
59	ALOIDENDRON BARBERAE	TREE ALOE				TO BE REMOVED
60	ALOIDENDRON BARBERAE	TREE ALOE				TO BE REMOVED
61	ALOIDENDRON BARBERAE	TREE ALOE				TO BE REMOVED
62	BISMARCKIA NOBILIS	BISMARK PALM				TREE TO REMAIN
63	ALOIDENDRON BARBERAE	TREE ALOE				TO BE REMOVED
64	CHAMAEROPS HUMILIS	MEDITERRANEAN FAN PALM				TREE TO REMAIN
65	LIVISTONA CHINENSIS	CHINESE FAN PALM				TREE TO REMAIN
66	CHAMAEROPS HUMILIS	MEDITERRANEAN FAN PALM				TREE TO REMAIN
67	LIVISTONA CHINENSIS	CHINESE FAN PALM				TREE TO REMAIN
68	CHAMAEROPS HUMILIS	MEDITERRANEAN FAN PALM				TREE TO REMAIN
69	CHAMAEROPS HUMILIS	MEDITERRANEAN FAN PALM				TREE TO REMAIN
70	LIVISTONA CHINENSIS	CHINESE FAN PALM				TREE TO REMAIN
71	CHAMAEROPS HUMILIS	MEDITERRANEAN FAN PALM				TREE TO REMAIN
72	CHAMAEROPS HUMILIS	MEDITERRANEAN FAN PALM				TREE TO REMAIN
73	ACOELORRHAPHE WRIGHTII	EVERGLADES PALM				TREE TO REMAIN
74	ACOELORRHAPHE WRIGHTII	EVERGLADES PALM				TREE TO REMAIN
75	ROYSTONEA REGIA	ROYAL PALM	36			TREE TO REMAIN
76	CHAMAEROPS HUMILIS	MEDITERRANEAN FAN PALM				TO BE REMOVED
77	CHAMAEROPS HUMILIS	MEDITERRANEAN FAN PALM				TREE TO REMAIN
78	CHAMAEROPS HUMILIS	MEDITERRANEAN FAN PALM				TREE TO REMAIN
79	LIVISTONA CHINENSIS	CHINESE FAN PALM	30			TO BE REMOVED
80	CHAMAEROPS HUMILIS	MEDITERRANEAN FAN PALM				TREE TO REMAIN
81	LIVISTONA CHINENSIS	CHINESE FAN PALM	30			TO BE REMOVED
82	LIVISTONA CHINENSIS	CHINESE FAN PALM	30			TO BE REMOVED
83	BISCHOFIA JAVANICA	TOOG				TO BE REMOVED
84	WASHINGTONIA FILIFERA	CALIFORNIA FAN PALM				TO BE REMOVED
85	WASHINGTONIA FILIFERA	CALIFORNIA FAN PALM				TO BE REMOVED
86	WASHINGTONIA FILIFERA	CALIFORNIA FAN PALM				TO BE REMOVED
87	PINUS THUNBERGII	JAPANESE BLACK PINE				TO BE REMOVED
88	PINUS CANARIENSIS	CANARY ISLAND PINE				TO BE REMOVED
89	PINUS CANARIENSIS	CANARY ISLAND PINE				TO BE REMOVED
90	PINUS CANARIENSIS	CANARY ISLAND PINE	12			TREE TO REMAIN
91	PINUS CANARIENSIS	CANARY ISLAND PINE	36			TREE TO REMAIN
92	PINUS CANARIENSIS	CANARY ISLAND PINE	12			TREE TO REMAIN
93	PINUS CANARIENSIS	CANARY ISLAND PINE	12			TREE TO REMAIN
94	PITTOSPORUM UNDULATUM	VICTORIAN BOX				TO BE REMOVED
95	CEDRUS DEODARA	DEODAR CEDAR	18			TREE TO REMAIN
96	QUERCUS TOMENTELLA	ISLAND OAK	12			TREE TO REMAIN
97	CUPRESSUS CASHMERIANA	KASHMIR CYPRESS				TO BE RELOCATED
98	QUERCUS TOMENTELLA	ISLAND OAK	12			TREE TO REMAIN
99	CEDRUS DEODARA	DEODAR CEDAR	30			TREE TO REMAIN
100	CEDRUS DEODARA	DEODAR CEDAR	24			TREE TO REMAIN
101	BAMBOO					TO BE REMOVED
102	FICUS MACLELLANDII	BANANA LEAF FIG	60			TREE TO REMAIN
103	BISMARCKIA NOBILIS	BISMARCK PALM				TO BE RELOCATED
104	RAVENALA MADAGASCARIENSIS	TRAVELER'S PALM				TO BE RELOCATED
105	RAVENALA MADAGASCARIENSIS	TRAVELER'S PALM				TREE TO REMAIN
106	BISCHOFIA JAVANICA	BISHOPWOOD				TREE TO REMAIN
107	CHAMAEROPS HUMILIS	EUROPEAN FAN PALM				TREE TO REMOVED
108	CHAMAEROPS HUMILIS	EUROPEAN FAN PALM				TREE TO REMAIN

PRIVATE CONTRACT

GENERAL TREE PROTECTION, SALVAGE, AND REMOVAL NOTES:

1. ALL EXTERIOR TREES AND PALMS (OUTSIDE BOTANIC BUILDING) TO REMAIN UNLESS OTHERWISE NOTED ON PLANS. CONTRACTOR SHALL PROTECT IN PLACE AND MAINTAIN DURING CONSTRUCTION PER WHITEBOOK SPECS.
2. ANY EXISTING TREES OR PALMS DAMAGED BY THE CONTRACTOR INSIDE OR OUTSIDE THE IDENTIFIED LIMITS OF WORK DURING CONSTRUCTION ARE TO BE REPLACED IN KIND (EXACT VARIETY AND SIZE) AT THE EXPENSE OF THE CONTRACTOR. PAYMENT WILL BE REQUIRED PER WHITEBOOK WHERE THERE IS A DIFFERENCE IN VALUE BETWEEN THE TREE LOST AND THE REPLACEMENT TREE.
3. FOR PLANTS TO BE RELOCATED AND/OR PROTECTED IN PLACE, CONTRACTOR TO CONFIRM WITH CITY OF SAN DIEGO LOCATION, SIZE, SPECIES AND QUANTITY OF PLANTS TO BE RELOCATED AND/OR PROTECTED IN PLACE.
4. CONTRACTOR TO FIELD VERIFY QUANTITIES OF TREES TO BE RELOCATED, PROTECTED AND REMOVED SHOWN AND NOTIFY CITY OF SAN DIEGO OF ANY DISCREPANCIES.
5. NO TREES SHALL BE REMOVED UNLESS INDICATED ON THIS PLAN AND CONFIRMED WITH CITY ARBORIST AND LANDSCAPE ARCHITECT.
6. EXISTING TREES TO BE REMOVED SHALL BE REVIEWED WITH THE CITY ARBORIST AND LANDSCAPE ARCHITECT PRIOR TO REMOVAL.
7. CONTRACTOR TO EXERT EXTREME CAUTION AROUND TREES TO REMAIN AND AROUND CRITICAL ROOT ZONE OF TREES TO REMAIN.
8. FOR TREE RELOCATION, CONTRACTOR SHALL FOLLOW RECOMMENDATIONS OF REPORT 10613 FROM RECON DATED SEPTEMBER 18, 2024.

ADD ALTERNATE 1:

REMOVAL OF EXISTING CEDRUS DEODORA #100, INCLUDING STUMP AND ROOTS 2" IN DIAMETER AND LARGER. REPLACE IN KIND WITH SPECIMEN 36" BOX TREE IN THE SAME LOCATION.

N 30' 15' 0' 30'

SPURLOCK
LANDSCAPE ARCHITECTS
2122 Hancock Street
San Diego, California 92110
619.681.0090
spurlock-land.com

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PLANS FOR THE CONSTRUCTION OF BOTANICAL BUILDING AND GARDENS PHASE 2
TREE PROTECTION PLAN

CONSULTANT

COMPANY ADDRESS: SPURLOCK LANDSCAPE ARCHITECTS, 2122 HANCOCK ST, SAN DIEGO, CA 92110
COMPANY PHONE NUMBER: 619-681-0090
COMPANY EMAIL DATE OF: AARMOUR@SPURLOCK-LAND.COM
SIGNING:

LICENSED LANDSCAPE ARCHITECT
LEIGH KYLE 6137
STATE OF CALIFORNIA
Signature
06/30/25
Renewal Date
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Date

SPEC. NO

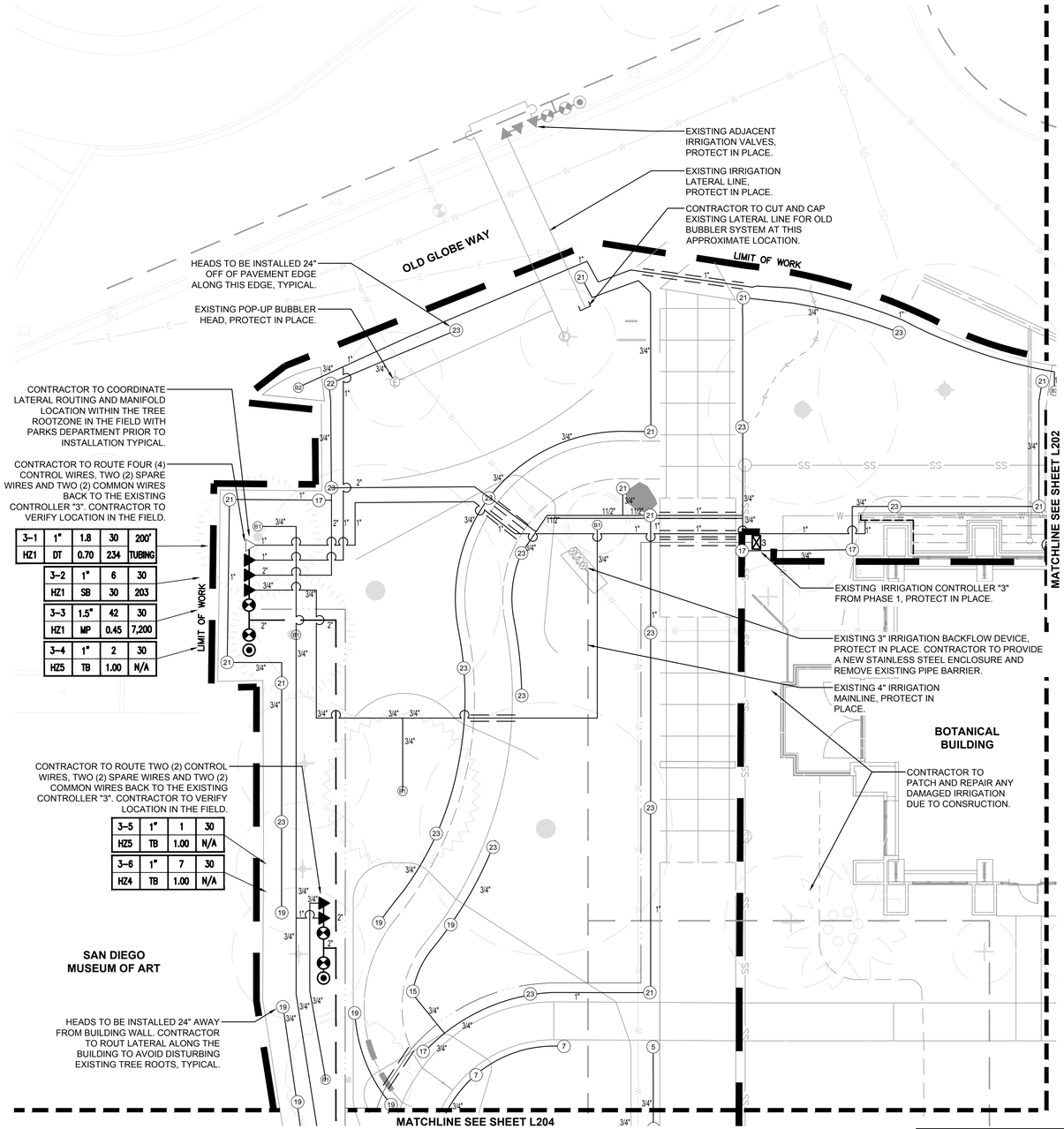
The City of SAN DIEGO
FOR CITY APPROVAL

PARKS & RECREATION DEPARTMENT
SHEET 3 OF 23 SHEETS

1847-6266
NAD83 COORDINATES

207-1706
LAMBERT COORDINATES

DRAWING NO. L100



ABBREVIATED IRRIGATION MATERIAL LEGEND

(REFER TO SHEET L203 FOR COMPLETE MATERIAL LEGEND)

SYMBOL	MANUFACTURER	MODEL NO. / DESCRIPTION
1 2 3 4	HUNTER	PROS-06-PRS40-CV 6" POP-UP W / MP1000 NOZZLE
5 6 7 8	HUNTER	PROS-06-PRS40-CV 6" POP-UP W / MP2000 NOZZLE
9 10 11 12	HUNTER	PROS-06-PRS40-CV 6" POP-UP W / MP3000 NOZZLE
13 14 15 16	HUNTER	PROS-12-PRS40-CV 12" POP-UP W / MP1000 NOZZLE
17 18 19 20	HUNTER	PROS-12-PRS40-CV 12" POP-UP W / MP2000 NOZZLE
21 22 23 24	HUNTER	PROS-12-PRS40-CV 12" POP-UP W / MP3000 NOZZLE
B1	RAIN BIRD	PROS-04-PRS30-CV 4" POP-UP W / MSBN-50Q NOZZLE
B2	HUNTER / RAIN BIRD	PROS-04-PRS30-CV 4" POP-UP W / 5-CST-B STREAM BUBBLER NOZZLE
B3	HUNTER / RAIN BIRD	PROS-04-PRS30-CV 4" POP-UP W /5F-B STREAM BUBBLER NOZZLE
	NETAFIM	TLHCVXR5-12 SUBSURFACE DRIP TUBING
	AS APPROVED	PVC SUPPLY AND DISCHARGE HEADERS
FV	NETAFIM	TL050MFV-1 AUTOMATIC FLUSH VALVE
	EXISTING	EXISTING BACK FLOW PREVENTION DEVICE
	EXISTING	EXISTING PUMP AND ENCLOSURE, PROTECT IN PLACE
	NIBCO	T-211-YK SERIES, BRASS GLOBE VALVE
	EXISTING	EXISTING BRASS GLOVE VALVE, PROTECT IN PLACE
	NIBCO	T-113-K SERIES, 3" BRASS GATE VALVE
	RAIN BIRD	44LRC 1" QUICK COUPLER VALVE
	EXISTING	EXISTING QUICK COUPLER VALVE, PROTECT IN PLACE
	RAIN BIRD	XXX-EFB-CP, BRASS REMOTE CONTROL VALVE (RCV),
	RAIN BIRD	XXX-EFB-CP , BRASS DRIP REMOTE CONTROL VALVE (DRCV),
	EXISTING	EXISTING BRASS REMOTE CONTROL VALVE (RCV), PROTECT IN PLACE
	IRRITROL/ITS	EXISTING TORO MCE CONTROLLER, PROTECT IN PLACE
	AS APPROVED	PVC PIPE 3/4" - 2 1/2" SCH. 40, AS LATERAL LINES
	AS APPROVED	PVC PIPE 2" - 3" CL. 315, AS MAINLINES
	AS APPROVED	EXISTING MAINLINE, PROTECT IN PLACE
	AS APPROVED	PVC PIPE SCH. 40 AS SLEEVING
	AS APPROVED	CONTROL WIRES

NOTE A:
THESE PLANS ARE DIAGRAMMATIC, THE MAINLINE AND RELATED IRRIGATION EQUIPMENT IS SHOWN WITHIN THE PAVING FOR CLARITY ONLY. THE ACTUAL LOCATION OF MAINLINE AND RELATED IRRIGATION EQUIPMENT SHALL BE WITHIN PLANTER AND A MINIMUM OF 18" OFF ADJACENT HARDSCAPE AND OTHER OBSTACLES, TYPICAL.

NOTE B:
CONTRACTOR SHALL ADJUST ALL HEADS AS REQUIRED TO ACCOMMODATE ANY VERTICAL OBSTRUCTIONS THAT MAY OCCUR IN THE LANDSCAPE, INCLUDING BUT NOT LIMITED TO LIGHT POLES, FIRE HYDRANTS, TREES, ETC. WHEN A SLIGHT RELOCATION OF THE HEAD IS NOT SUFFICIENT TO CLEAR THE OBSTACLE, OR IF IT NEGATIVELY AFFECTS THE COVERAGE, AN ADDITIONAL HEAD SHALL BE INSTALLED TO PLACE ONE HEAD ON EITHER SIDE OF THE OBSTACLE. THE NOZZLES OF THESE TWO HEADS SHALL HAVE ARC PATTERNS THAT ADD UP TO THE ORIGINAL ARC PATTERN OF THE HEAD INDICATED ON THE PLANS. THE CONTRACTOR SHALL VERIFY ALL HEAD LAYOUT WITH RESIDENT ENGINEER PRIOR TO STARTING WORK.

NOTE C:
THESE PLANS ARE DIAGRAMMATIC, TREE BUBBLERS AND LATERAL LINES ARE SHOWN WITHIN THE PAVING FOR CLARITY ONLY, THE ACTUAL LOCATIONS SHALL BE WITHIN THE PLANTER. THE TREE BUBBLERS SHALL BE ALIGNED WITH TREES AS SHOWN ON THE PLANTING PLANS, AND AS DIRECTED BY RESIDENT ENGINEER. THE CONTRACTOR SHALL CONFIRM ALL LAYOUT IN FIELD WITH RESIDENT ENGINEER PRIOR TO STARTING WORK.

NOTE D:
PRIOR TO START OF CONSTRUCTION THE CONTRACTOR SHALL SUBMIT TO THE OWNER AND RESIDENT ENGINEER A SCALED SHOP DRAWING INDICATING THE PROPOSED LOCATIONS FOR THE IRRIGATION EQUIPMENT LISTED BELOW. THE SHOP DRAWING SHALL BE PREPARED TO THE SATISFACTION OF THE RESIDENT ENGINEER AND THE RESIDENT ENGINEER. SHOP DRAWINGS MUST INCLUDE THE PROPOSED LOCATIONS FOR THE FOLLOWING ITEMS:

1. POINT OF CONNECTION (INCLUDING WATER POC, BACK FLOW DEVICES, MASTER CONTROL VALVES, FLOW SENSORS, ETC.)
2. ISOLATION VALVES
3. AUTOMATIC CONTROL VALVES (INDICATE STATION NUMBER)
4. QUICK COUPLING VALVES
5. IRRIGATION CONTROLLER(S)
6. RELATED EQUIPMENT (AS MAY BE DIRECTED).

EACH PIECE OF AFOREMENTIONED EQUIPMENT SHALL HAVE IT'S PROPOSED INSTALLED LOCATION SHOWN ON THE SHOP DRAWINGS. THE SYMBOL FOR EACH PRODUCT SHALL BE A SCALED REPRESENTATION OF THE FOOTPRINT OF THE EQUIPMENT OR THE VALVE BOX IN WHICH THE EQUIPMENT IS INSTALLED. CONTRACTOR SHALL INSTALL ALL VALVE BOXES AND RELATED EQUIPMENT PER THE OWNER APPROVED SHOP DRAWINGS. ONCE THE SHOP DRAWING LOCATIONS ARE APPROVED, THE RESIDENT ENGINEER OR RESIDENT ENGINEER WILL ALLOW NO ADJUSTMENTS TO THE APPROVED VALVE BOX PLACEMENT WITHOUT PRIOR WRITTEN ACCEPTANCE. ANY IRRIGATION EQUIPMENT INSTALLED WITHOUT PRIOR APPROVAL WITH SHOP DRAWINGS WILL BE SUBJECT TO RELOCATION BASED ON DIRECTION BY THE RESIDENT ENGINEER AND RESIDENT ENGINEER AT THE CONTRACTOR'S EXPENSE.

EXISTING IRRIGATION NOTES

NOTE 1:
CONTRACTOR SHALL MAINTAIN EXISTING MAINLINES IN WORKING ORDER. COORDINATE ALL INTERRUPTIONS OF OPERATION OF THE EXISTING IRRIGATION TO A MINIMUM. COORDINATE ALL INTERRUPTIONS WITH THE RESIDENT ENGINEER.

NOTE 2:
CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXISTING IRRIGATION EQUIPMENT DAMAGED DURING CONSTRUCTION AND IF DAMAGED, SHALL REPLACE WITH SAME MANUFACTURER AND MODEL.

NOTE 3:
ANY EXISTING IRRIGATION CONTROL VALVES CONNECTED TO EXISTING CONTROLLER SHALL BE RECONNECTED TO EXISTING CONTROLLER. CONFIRM PROPER CONTROLLER OPERATION AND INSTALLATION WITH RESIDENT ENGINEER PRIOR TO STARTING WORK AND UPON COMPLETION OF WORK.

NOTE 4:
CONTRACTOR SHALL CONFIRM THE EXISTING CONTROLLER MAKE AND MODEL AND SHALL CONFIRM THAT SAID CONTROLLER HAS ADEQUATE OPEN STATIONS TO OPERATE ANY ADJUSTED AND ALL PROPOSED IRRIGATION SYSTEM MODIFICATIONS. NOTIFY RESIDENT ENGINEER SHOULD ANY DISCREPANCIES BE NOTED.

NOTE 5:
CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR/MODIFICATION/REROUTING OF ALL ADJACENT IRRIGATION SYSTEM EQUIPMENT THAT IS AFFECTED BY NEW CONSTRUCTION IMPROVEMENTS. CONTRACTOR SHALL REPAIR SAID SYSTEMS TO A LIKE NEW MANNER, PROVIDING NO LESS THAN 100% OF HEAD RADIUS COVERAGE IN ALL AREAS WITH SYSTEM LAYOUT AS APPROVED BY RESIDENT ENGINEER. CONTRACTOR SHALL CONFIRM ALL AREAS REQUIRING MODIFICATION WITH OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO BIDDING WORK AND PRIOR TO STARTING WORK.

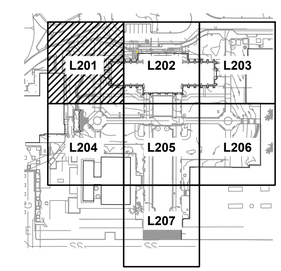
NOTE 6:
CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE REMOVAL AND DISPOSAL OF ALL EXISTING IRRIGATION EQUIPMENT AFFECTED BY THE NEW CONSTRUCTION IMPROVEMENTS, IF NECESSARY. CONTRACTOR SHALL VERIFY ALL EQUIPMENT TO BE REMOVED AND DISPOSED OF IN FIELD PRIOR TO BIDDING WORK AND PRIOR TO STARTING WORK.

NOTE 7:
CONTRACTOR SHALL FIELD VERIFY DEPTH AND LOCATION OF ALL EXISTING UTILITIES PRIOR TO BIDDING WORK AND AGAIN PRIOR TO STARTING WORK. VERIFICATION SHALL BE DOCUMENTED AND DELIVERED TO RESIDENT ENGINEER.

NOTE 8:
CONTRACTOR SHALL BE RESPONSIBLE FOR THE PLACEMENT OF ALL SCH 40 PVC SLEEVING UNDER PAVING, WALLS AND CURBS AT NO LESS THAN 24" BELOW GRADE AND NO LESS THAN 2X DIAMETER OF IRRIGATION PIPE IN AREAS WHERE PIPE CROSSING WILL OCCUR. WHEN PIPE SIZE IS NOT AVAILABLE USE 6" SLEEVING MATERIAL. CONFIRM CROSSINGS WITH RESIDENT ENGINEER PRIOR TO PAVING AND HARDSCAPE CONSTRUCTION.

NOTE 9:
EXISTING IRRIGATION IN THIS AREA SHALL BE PROTECTED IN PLACE FOR CONTINUED USE. CONTRACTOR SHALL VERIFY THE EXTENT OF THE EXISTING SYSTEM AND MAKE ADJUSTMENTS TO CAP OFF OR MODIFY THE EXISTING SYSTEM TO MEET THE NEW LANDSCAPE CONDITION IF NECESSARY.

NOTE 10:
CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN WORKING WITHIN THE DRIPLINE OF EXISTING TREES. NO MECHANICAL TRENCHING WITHIN THE DRIPLINE OF THE EXISTING TREE WILL BE ALLOWED. AIR SPADE SHALL BE UTILIZED FOR ALL TRENCHING WITHIN THE DRIPLINE OF TREES. CONTRACTOR SHALL REFER TO ARBORIST REPORT FOR ADDITIONAL PRECAUTIONS REQUIRED FOR THE EXISTING TREES. VERIFY ALL LAYOUT IN FIELD WITH RESIDENT ENGINEER.



PHASING NOTE:
THE CONTRACTOR SHALL INSTALL THE IRRIGATION SYSTEMS TO ACCOMMODATE THE PROPOSED PROJECT PHASING. PROVIDE LATERAL LINE STUB-OUTS, WIRE STUB-OUTS, TEMPORARY BATTERY POWERED ACTUATORS, AND ANY ADDITIONAL ADJUSTMENTS AS REQUIRED TO ACCOMMODATE THE PROPOSED PHASING. THE EXISTING IRRIGATION SYSTEMS SHALL BE MAINTAINED UNTIL THE AREA IS DEMOLISHED. ALL SYSTEMS SHALL BE INSTALLED COMPLETELY PER PLAN AT TIME OF COMPLETION WITH ALL IRRIGATION SYSTEMS OPERATING AUTOMATICALLY FROM THE CONTROLLERS PER PLAN TYPICAL. VERIFY ALL PHASING IN THE FIELD WITH THE CITY AT THE START OF WORK TYPICAL.

I HAVE COMPLIED WITH THE CRITERIA OF THE IRRIGATION GUIDELINES AND APPLIED THEM ACCORDINGLY FOR THE EFFICIENT USE OF WATER IN THE IRRIGATION DESIGN PLAN

sweeney + associates
IRRIGATION DESIGN AND CONSULTING
38730 Sky Canyon Drive, Suite C
Murrieta, Ca 92563
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w: www.sweeneyassoc.com f: (951) 461-6850

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SPURLOCK
LANDSCAPE ARCHITECTS
2122 Hancock Street
San Diego, California 92110
619.681.0090
spurlock-land.com

WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

PRIVATE CONTRACT

PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2
IRRIGATION PLAN

CONSULTANT

COMPANY ADDRESS: SPURLOCK LANDSCAPE ARCHITECTS, 2122 HANCOCK ST, SAN DIEGO, CA 92110
COMPANY PHONE NUMBER: 619-681-0090
COMPANY EMAIL DATE OF: AARMOUR@SPURLOCK-LAND.COM
SIGNING:

LICENSED LANDSCAPE ARCHITECT
LEIGH KYLE - 6173
Signature
06/30/25
Renewal Date
11/01/24
Date
STATE OF CALIFORNIA

SPEC. NO

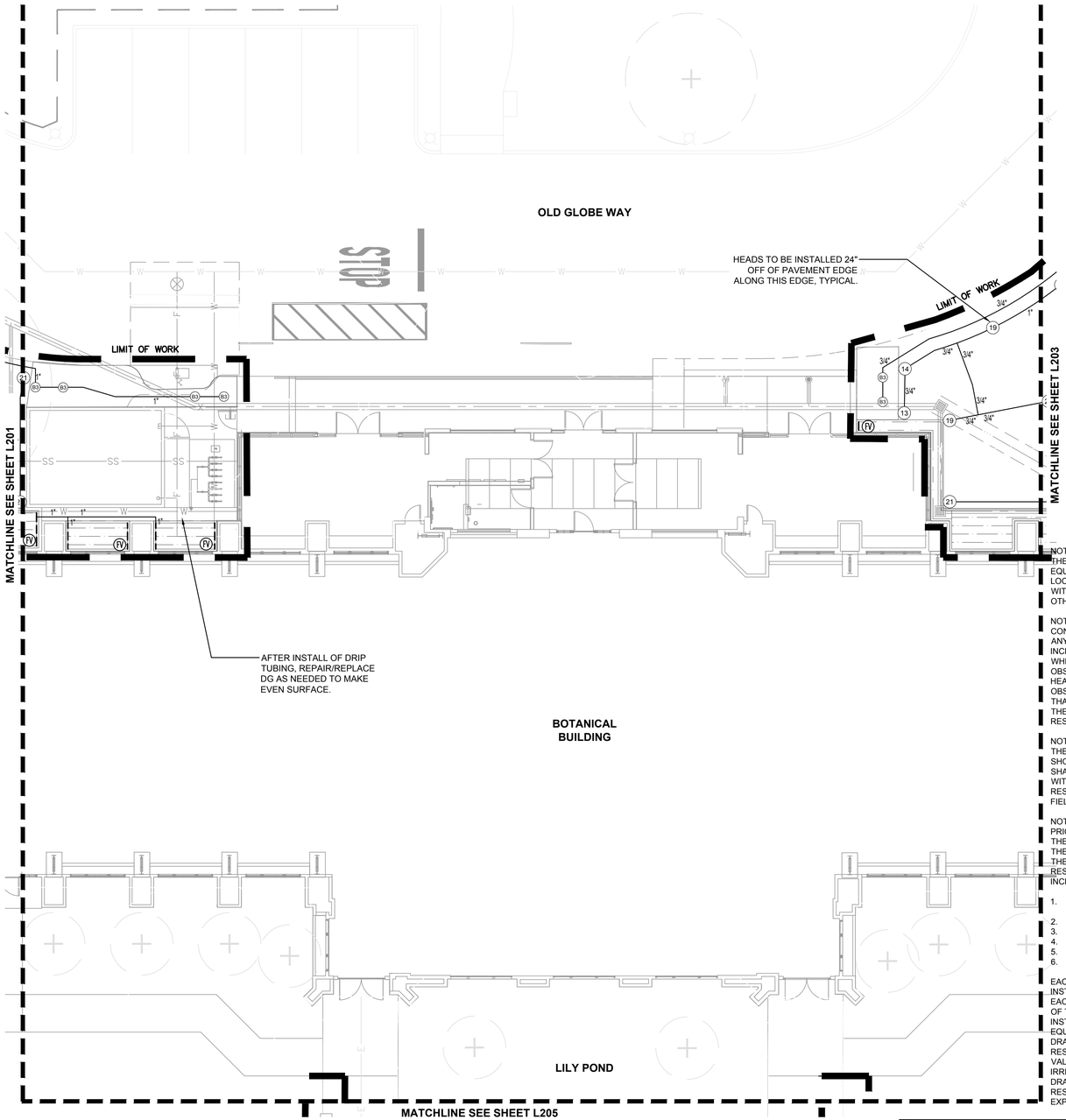
FOR CITY APPROVAL

PARKS & RECREATION DEPARTMENT
SHEET 4 OF 23 SHEETS

1847-6266
NAD83 COORDINATES

207-1706
LAMBERT COORDINATES

DRAWING NO.
L201



ABBREVIATED IRRIGATION MATERIAL LEGEND

(REFER TO SHEET L203 FOR COMPLETE MATERIAL LEGEND)

SYMBOL	MANUFACTURER	MODEL NO. / DESCRIPTION
1 2 3 4	HUNTER	PROS-06-PRS40-CV 6" POP-UP W / MP1000 NOZZLE
5 6 7 8	HUNTER	PROS-06-PRS40-CV 6" POP-UP W / MP2000 NOZZLE
9 10 11 12	HUNTER	PROS-06-PRS40-CV 6" POP-UP W / MP3000 NOZZLE
13 14 15 16	HUNTER	PROS-12-PRS40-CV 12" POP-UP W / MP1000 NOZZLE
17 18 19 20	HUNTER	PROS-12-PRS40-CV 12" POP-UP W / MP2000 NOZZLE
21 22 23 24	HUNTER	PROS-12-PRS40-CV 12" POP-UP W / MP3000 NOZZLE
B1	RAIN BIRD	PROS-04-PRS30-CV 4" POP-UP W / MSBN-50Q NOZZLE
B2	HUNTER / RAIN BIRD	PROS-04-PRS30-CV 4" POP-UP W / 5-CST-B STREAM BUBBLER NOZZLE
B3	HUNTER / RAIN BIRD	PROS-04-PRS30-CV 4" POP-UP W /5F-B STREAM BUBBLER NOZZLE
	NETAFIM	TLHCVXR5-12 SUBSURFACE DRIP TUBING
	AS APPROVED	PVC SUPPLY AND DISCHARGE HEADERS
FV	NETAFIM	TL050MFV-1 AUTOMATIC FLUSH VALVE
	EXISTING	EXISTING BACK FLOW PREVENTION DEVICE
	EXISTING	EXISTING PUMP AND ENCLOSURE, PROTECT IN PLACE
	NIBCO	T-211-YK SERIES, BRASS GLOBE VALVE
	EXISTING	EXISTING BRASS GLOVE VALVE, PROTECT IN PLACE
	NIBCO	T-113-K SERIES, 3" BRASS GATE VALVE
	RAIN BIRD	44LRC 1" QUICK COUPLER VALVE
	EXISTING	EXISTING QUICK COUPLER VALVE, PROTECT IN PLACE
	RAIN BIRD	XXX-EFB-CP, BRASS REMOTE CONTROL VALVE (RCV),
	RAIN BIRD	XXX-EFB-CP , BRASS DRIP REMOTE CONTROL VALVE (DRCV),
	EXISTING	EXISTING BRASS REMOTE CONTROL VALVE (RCV), PROTECT IN PLACE
	IRRITROL/ITS	EXISTING TORO MCE CONTROLLER, PROTECT IN PLACE
	AS APPROVED	PVC PIPE 3/4" - 2 1/2" SCH. 40, AS LATERAL LINES
	AS APPROVED	PVC PIPE 2" - 3" CL. 315, AS MAINLINES
	AS APPROVED	EXISTING MAINLINE, PROTECT IN PLACE
	AS APPROVED	PVC PIPE SCH. 40 AS SLEEVING
	AS APPROVED	CONTROL WIRES

NOTE A:
THESE PLANS ARE DIAGRAMMATIC, THE MAINLINE AND RELATED IRRIGATION EQUIPMENT IS SHOWN WITHIN THE PAVING FOR CLARITY ONLY. THE ACTUAL LOCATION OF MAINLINE AND RELATED IRRIGATION EQUIPMENT SHALL BE WITHIN PLANTER AND A MINIMUM OF 18" OFF ADJACENT HARDSCAPE AND OTHER OBSTACLES, TYPICAL.

NOTE B:
CONTRACTOR SHALL ADJUST ALL HEADS AS REQUIRED TO ACCOMMODATE ANY VERTICAL OBSTRUCTIONS THAT MAY OCCUR IN THE LANDSCAPE, INCLUDING BUT NOT LIMITED TO LIGHT POLES, FIRE HYDRANTS, TREES, ETC. WHEN A SLIGHT RELOCATION OF THE HEAD IS NOT SUFFICIENT TO CLEAR THE OBSTACLE, OR IF IT NEGATIVELY AFFECTS THE COVERAGE, AN ADDITIONAL HEAD SHALL BE INSTALLED TO PLACE ONE HEAD ON EITHER SIDE OF THE OBSTACLE. THE NOZZLES OF THESE TWO HEADS SHALL HAVE ARC PATTERNS THAT ADD UP TO THE ORIGINAL ARC PATTERN OF THE HEAD INDICATED ON THE PLANS. THE CONTRACTOR SHALL VERIFY ALL HEAD LAYOUT WITH RESIDENT ENGINEER PRIOR TO STARTING WORK.

NOTE C:
THESE PLANS ARE DIAGRAMMATIC, TREE BUBBLERS AND LATERAL LINES ARE SHOWN WITHIN THE PAVING FOR CLARITY ONLY, THE ACTUAL LOCATIONS SHALL BE WITHIN THE PLANTER. THE TREE BUBBLERS SHALL BE ALIGNED WITH TREES AS SHOWN ON THE PLANTING PLANS, AND AS DIRECTED BY RESIDENT ENGINEER. THE CONTRACTOR SHALL CONFIRM ALL LAYOUT IN FIELD WITH RESIDENT ENGINEER PRIOR TO STARTING WORK.

NOTE D:
PRIOR TO START OF CONSTRUCTION THE CONTRACTOR SHALL SUBMIT TO THE OWNER AND RESIDENT ENGINEER A SCALED SHOP DRAWING INDICATING THE PROPOSED LOCATIONS FOR THE IRRIGATION EQUIPMENT LISTED BELOW. THE SHOP DRAWING SHALL BE PREPARED TO THE SATISFACTION OF THE RESIDENT ENGINEER AND THE RESIDENT ENGINEER. SHOP DRAWINGS MUST INCLUDE THE PROPOSED LOCATIONS FOR THE FOLLOWING ITEMS:

1. POINT OF CONNECTION (INCLUDING WATER POC, BACK FLOW DEVICES, MASTER CONTROL VALVES, FLOW SENSORS, ETC.)
2. ISOLATION VALVES
3. AUTOMATIC CONTROL VALVES (INDICATE STATION NUMBER)
4. QUICK COUPLING VALVES
5. IRRIGATION CONTROLLER(S)
6. RELATED EQUIPMENT (AS MAY BE DIRECTED).

EACH PIECE OF AFOREMENTIONED EQUIPMENT SHALL HAVE IT'S PROPOSED INSTALLED LOCATION SHOWN ON THE SHOP DRAWINGS. THE SYMBOL FOR EACH PRODUCT SHALL BE A SCALED REPRESENTATION OF THE FOOTPRINT OF THE EQUIPMENT OR THE VALVE BOX IN WHICH THE EQUIPMENT IS INSTALLED. CONTRACTOR SHALL INSTALL ALL VALVE BOXES AND RELATED EQUIPMENT PER THE OWNER APPROVED SHOP DRAWINGS. ONCE THE SHOP DRAWING LOCATIONS ARE APPROVED, THE RESIDENT ENGINEER OR RESIDENT ENGINEER WILL ALLOW NO ADJUSTMENTS TO THE APPROVED VALVE BOX PLACEMENT WITHOUT PRIOR WRITTEN ACCEPTANCE. ANY IRRIGATION EQUIPMENT INSTALLED WITHOUT PRIOR APPROVAL WITH SHOP DRAWINGS WILL BE SUBJECT TO RELOCATION BASED ON DIRECTION BY THE RESIDENT ENGINEER AND RESIDENT ENGINEER AT THE CONTRACTOR'S EXPENSE.

EXISTING IRRIGATION NOTES

NOTE 1:
CONTRACTOR SHALL MAINTAIN EXISTING MAINLINES IN WORKING ORDER. COORDINATE ALL INTERRUPTIONS OF OPERATION OF THE EXISTING IRRIGATION TO A MINIMUM. COORDINATE ALL INTERRUPTIONS WITH THE RESIDENT ENGINEER.

NOTE 2:
CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXISTING IRRIGATION EQUIPMENT DAMAGED DURING CONSTRUCTION AND IF DAMAGED, SHALL REPLACE WITH SAME MANUFACTURER AND MODEL.

NOTE 3:
ANY EXISTING IRRIGATION CONTROL VALVES CONNECTED TO EXISTING CONTROLLER SHALL BE RECONNECTED TO EXISTING CONTROLLER. CONFIRM PROPER CONTROLLER OPERATION AND INSTALLATION WITH RESIDENT ENGINEER PRIOR TO STARTING WORK AND UPON COMPLETION OF WORK.

NOTE 4:
CONTRACTOR SHALL CONFIRM THE EXISTING CONTROLLER MAKE AND MODEL AND SHALL CONFIRM THAT SAID CONTROLLER HAS ADEQUATE OPEN STATIONS TO OPERATE ANY ADJUSTED AND ALL PROPOSED IRRIGATION SYSTEM MODIFICATIONS. NOTIFY RESIDENT ENGINEER SHOULD ANY DISCREPANCIES BE NOTED.

NOTE 5:
CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR/MODIFICATION/REROUTING OF ALL ADJACENT IRRIGATION SYSTEM EQUIPMENT THAT IS AFFECTED BY NEW CONSTRUCTION IMPROVEMENTS. CONTRACTOR SHALL REPAIR SAID SYSTEMS TO A LIKE NEW MANNER, PROVIDING NO LESS THAN 100% OF HEAD RADIUS COVERAGE IN ALL AREAS WITH SYSTEM LAYOUT AS APPROVED BY RESIDENT ENGINEER. CONTRACTOR SHALL CONFIRM ALL AREAS REQUIRING MODIFICATION WITH OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO BIDDING WORK AND PRIOR TO STARTING WORK.

NOTE 6:
CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE REMOVAL AND DISPOSAL OF ALL EXISTING IRRIGATION EQUIPMENT AFFECTED BY THE NEW CONSTRUCTION IMPROVEMENTS, IF NECESSARY. CONTRACTOR SHALL VERIFY ALL EQUIPMENT TO BE REMOVED AND DISPOSED OF IN FIELD PRIOR TO BIDDING WORK AND PRIOR TO STARTING WORK.

NOTE 7:
CONTRACTOR SHALL FIELD VERIFY DEPTH AND LOCATION OF ALL EXISTING UTILITIES PRIOR TO BIDDING WORK AND AGAIN PRIOR TO STARTING WORK. VERIFICATION SHALL BE DOCUMENTED AND DELIVERED TO RESIDENT ENGINEER.

NOTE 8:
CONTRACTOR SHALL BE RESPONSIBLE FOR THE PLACEMENT OF ALL SCH 40 PVC SLEEVING UNDER PAVING, WALLS AND CURBS AT NO LESS THAN 24" BELOW GRADE AND NO LESS THAN 2X DIAMETER OF IRRIGATION PIPE IN AREAS WHERE PIPE CROSSING WILL OCCUR. WHEN PIPE SIZE IS NOT AVAILABLE USE 6" SLEEVING MATERIAL. CONFIRM CROSSINGS WITH RESIDENT ENGINEER PRIOR TO PAVING AND HARDSCAPE CONSTRUCTION.

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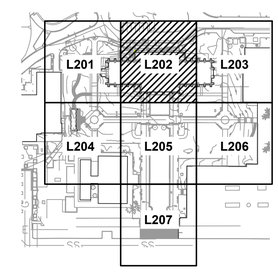

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spurlock-land.com

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PRIVATE CONTRACT

PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2
IRRIGATION PLAN

CONSULTANT
COMPANY ADDRESS: SPURLOCK LANDSCAPE ARCHITECTS, 2122 HANCOCK ST, SAN DIEGO, CA 92110
COMPANY PHONE NUMBER: 619-681-0090
COMPANY EMAIL DATE OF: AARMOUR@SPURLOCK-LAND.COM
SIGNING:

LICENSED LANDSCAPE ARCHITECT
LEIGH KYLE - 6177
Signature
06/30/25
Renewal Date
11/01/24
Date
STATE OF CALIFORNIA

SPEC. NO

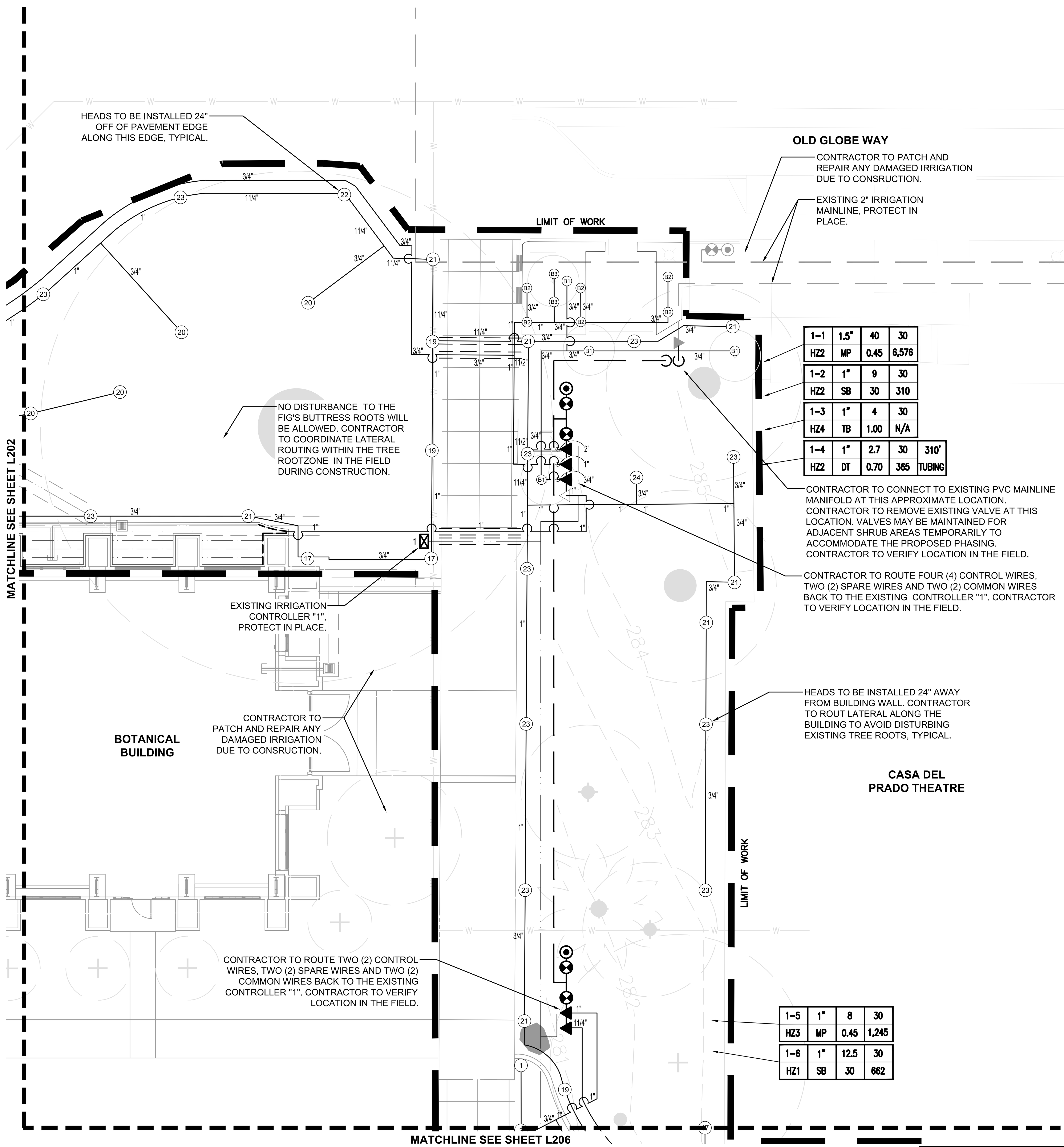
FOR CITY APPROVAL

PARKS & RECREATION DEPARTMENT
SHEET 5 OF 23 SHEETS

1847-6266
NAD83 COORDINATES

207-1706
LAMBERT COORDINATES

DRAWING NO.
L202



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ABBREVIATED IRRIGATION MATERIAL LEGEND

(REFER TO SHEET L203 FOR COMPLETE MATERIAL LEGEND)

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	RAIN BIRD	XXX-EFB-CP, BRASS REMOTE CONTROL VALVE (RCV),
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	EXISTING	EXISTING BRASS REMOTE CONTROL VALVE (RCV), PROTECT IN PLACE
	IRRITROL/ITS	EXISTING TORO MCE CONTROLLER, PROTECT IN PLACE
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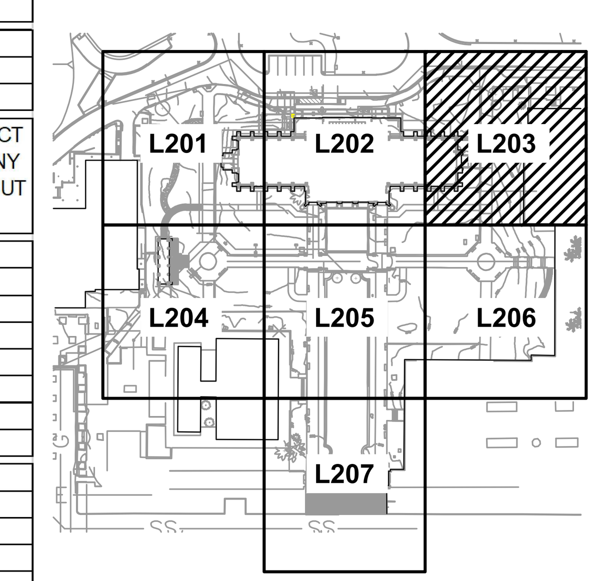
WATER PRESSURE LOSS CALCULATIONS

WATER METER NUMBER	N/A	WATER METER SIZE (Inches)	N/A
HYDRAULIC GRADE LINE (FT)	0	WATER METER ELEVATION (FT)	0
ELEVATION DIFFERENCE (FT)	0	MIN. REQ. PRESSURE @ POC (PSI)	43.0
REMOTE CONTROL VALVE #	1-1	REMOTE CONTROL VALVE SIZE (In.)	1.50
R.C.V. DEMAND (GPM)	40	TOTAL DEMAND (GPM)	28
HIGHEST HEAD SERVED (FT)	0	STATIC PRESSURE AT HIGHEST HEAD	43.0

sweeney + associates IRRIGATION DESIGN AND CONSULTING

PRESSURE LOSS CALCULATION IS PROVIDED FOR THIS PROJECT BY SWEENEY & ASSOCIATES, INC. UNAUTHORIZED USE BY ANY OTHER PERSON, COMPANY OR PROJECT IS FORBIDDEN WITHOUT WRITTEN PERMISSION.

SIZE (Inches)	DESCRIPTION	FLOW	#	LOSS	
3.00	ISOLATION VALVES (BALL TYPE)	28	9	1.00	PSI
3.00	150 FEET OF MAINLINE: CL. 315 PVC	28	10	0.30	PSI
3.00	10 - 90 DEGREE ELBOWS	28	13	0.34	PSI
1.50	REMOTE CONTROL VALVE ASSEMBLY	40	14	3.50	PSI
10%	LATERAL LINE LOSSES	40	15	3.00	PSI
20%	FITTING LOSS (IN ADDITION TO ELBOWS SHOWN)	N/A	16	0.06	PSI
0.00	ELEVATION CHANGE (P.O.C. TO HIGHEST HEAD)	N/A	17	0.00	PSI
	TOTAL SYSTEM PRESSURE LOSS (SUM OF #1 THRU #17)		18	8.2	PSI
	PRESSURE REQUIRED AT HEAD (OPERATING PRESSURE)		19	30.0	PSI
	TOTAL PRESSURE REQUIRED (SUM OF #18 AND #19)		20	38.2	PSI
	STATIC WATER PRESSURE (FROM ABOVE)		21	43.0	PSI
	RESIDUAL PRESSURE (SUBTRACT #20 FROM #21)		22	4.8	PSI
	SET PRV OR MCV AT (#20 PLUS 10 PSI)		23	N/A	PSI
	PRESSURE BOOST, IF REQUIRED (SET TO ACHIEVE 20 PSI RESIDUAL)		24	N/A	PSI



PHASING NOTE:
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I HAVE COMPLIED WITH THE CRITERIA OF THE IRRIGATION GUIDELINES AND APPLIED THEM ACCORDINGLY FOR THE EFFICIENT USE OF WATER IN THE IRRIGATION DESIGN PLAN

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CONSULTANT

SPEC. NO

COMPANY ADDRESS: SPURLOCK LANDSCAPE ARCHITECTS,
2122 HANCOCK ST, SAN DIEGO, CA 92110
COMPANY PHONE NUMBER: 619-681-0090
COMPANY EMAIL DATE OF: AARMOUR@SPURLOCK-LAND.COM

SIGNING:

LICENSED LANDSCAPE ARCHITECT
LEIGH KYLE - 6137
Signature
06/30/25
Renewal Date
11/01/24
Date
STATE OF CALIFORNIA

FOR CITY APPROVAL

WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

PRIVATE CONTRACT

PLANS FOR THE CONSTRUCTION OF BOTANICAL BUILDING AND GARDENS PHASE 2

IRRIGATION PLAN

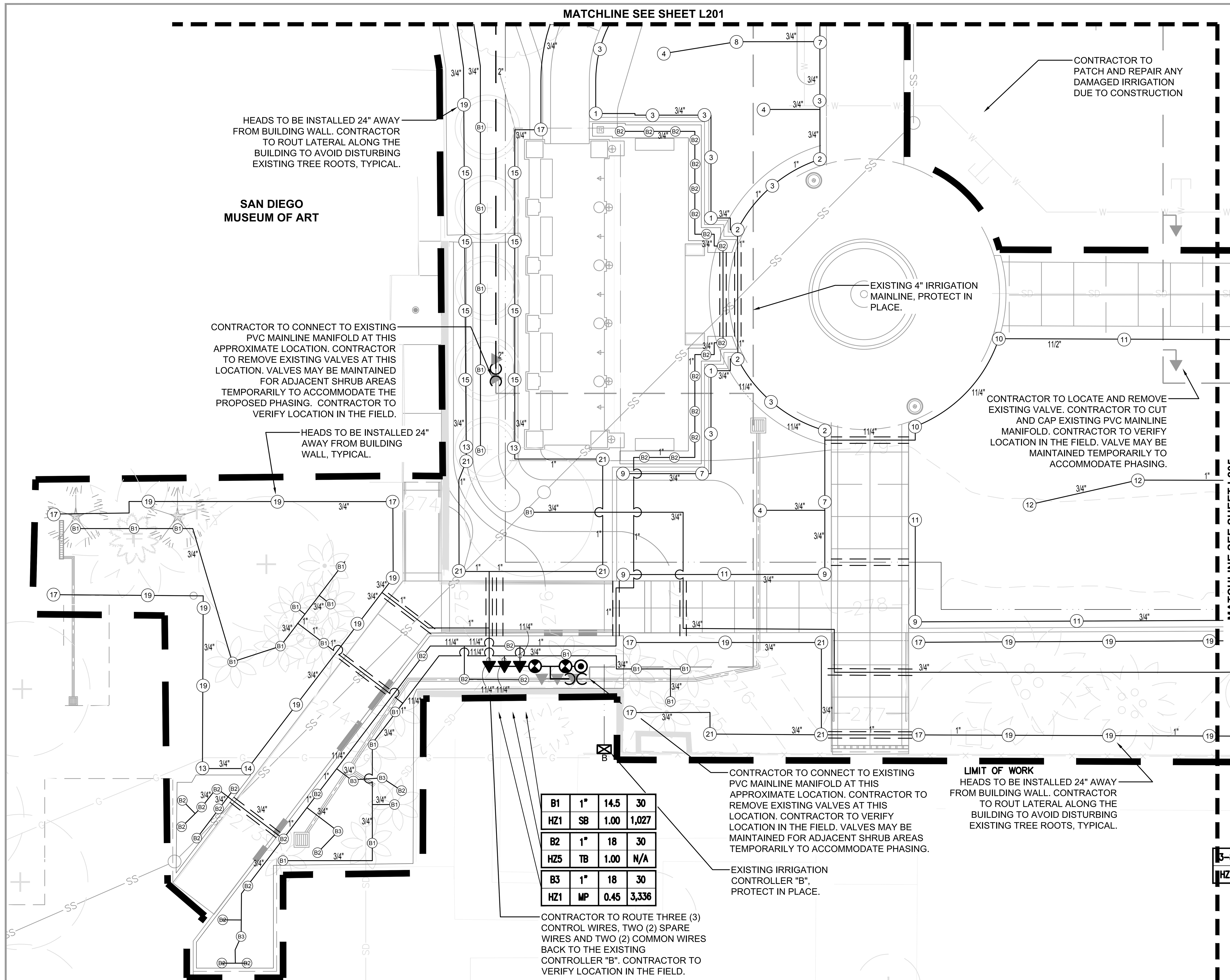
PARKS & RECREATION DEPARTMENT

SHEET 6 OF 23 SHEETS

1847-6266
NAD83 COORDINATES

207-1706
LAMBERT COORDINATES

DRAWING NO.
L203



ABBREVIATED IRRIGATION MATERIAL LEGEND

(REFER TO SHEET L203 FOR COMPLETE MATERIAL LEGEND)

SYMBOL	MANUFACTURER	MODEL NO. / DESCRIPTION
1 2 3 4	HUNTER	PROS-06-PRS40-CV 6" POP-UP W / MP1000 NOZZLE
5 6 7 8	HUNTER	PROS-06-PRS40-CV 6" POP-UP W / MP2000 NOZZLE
9 10 11 12	HUNTER	PROS-06-PRS40-CV 6" POP-UP W / MP3000 NOZZLE
13 14 15 16	HUNTER	PROS-12-PRS40-CV 12" POP-UP W / MP1000 NOZZLE
17 18 19 20	HUNTER	PROS-12-PRS40-CV 12" POP-UP W / MP2000 NOZZLE
21 22 23 24	HUNTER	PROS-12-PRS40-CV 12" POP-UP W / MP3000 NOZZLE
B1	RAIN BIRD	PROS-04-PRS30-CV 4" POP-UP W / MSBN-50Q NOZZLE
B2	HUNTER / RAIN BIRD	PROS-04-PRS30-CV 4" POP-UP W / 5-CST-B STREAM BUBBLER NOZZLE
B3	HUNTER / RAIN BIRD	PROS-04-PRS30-CV 4" POP-UP W /5F-B STREAM BUBBLER NOZZLE
	NETAFIM	TLHCVXR5-12 SUBSURFACE DRIP TUBING
	AS APPROVED	PVC SUPPLY AND DISCHARGE HEADERS
FV	NETAFIM	TL050MFV-1 AUTOMATIC FLUSH VALVE
	EXISTING	EXISTING BACK FLOW PREVENTION DEVICE
	EXISTING	EXISTING PUMP AND ENCLOSURE, PROTECT IN PLACE
	NIBCO	T-211-YK SERIES, BRASS GLOBE VALVE
	EXISTING	EXISTING BRASS GLOVE VALVE, PROTECT IN PLACE
	NIBCO	T-113-K SERIES, 3" BRASS GATE VALVE
	RAIN BIRD	44LRC 1" QUICK COUPLER VALVE
	EXISTING	EXISTING QUICK COUPLER VALVE, PROTECT IN PLACE
	RAIN BIRD	XXX-EFB-CP, BRASS REMOTE CONTROL VALVE (RCV),
	RAIN BIRD	XXX-EFB-CP , BRASS DRIP REMOTE CONTROL VALVE (DRCV),
	EXISTING	EXISTING BRASS REMOTE CONTROL VALVE (RCV), PROTECT IN PLACE
	IRRITROL/ITS	EXISTING TORO MCE CONTROLLER, PROTECT IN PLACE
	AS APPROVED	PVC PIPE 3/4" - 2 1/2" SCH. 40, AS LATERAL LINES
	AS APPROVED	PVC PIPE 2" - 3" CL. 315, AS MAINLINES
	AS APPROVED	EXISTING MAINLINE, PROTECT IN PLACE
	AS APPROVED	PVC PIPE SCH. 40 AS SLEEVING
	AS APPROVED	CONTROL WIRES

NOTE A:
THESE PLANS ARE DIAGRAMMATIC, THE MAINLINE AND RELATED IRRIGATION EQUIPMENT IS SHOWN WITHIN THE PAVING FOR CLARITY ONLY. THE ACTUAL LOCATION OF MAINLINE AND RELATED IRRIGATION EQUIPMENT SHALL BE WITHIN PLANTER AND A MINIMUM OF 18" OFF ADJACENT HARDSCAPE AND OTHER OBSTACLES, TYPICAL.

NOTE B:
CONTRACTOR SHALL ADJUST ALL HEADS AS REQUIRED TO ACCOMMODATE ANY VERTICAL OBSTRUCTIONS THAT MAY OCCUR IN THE LANDSCAPE, INCLUDING BUT NOT LIMITED TO LIGHT POLES, FIRE HYDRANTS, TREES, ETC. WHEN A SLIGHT RELOCATION OF THE HEAD IS NOT SUFFICIENT TO CLEAR THE OBSTACLE, OR IF IT NEGATIVELY AFFECTS THE COVERAGE, AN ADDITIONAL HEAD SHALL BE INSTALLED TO PLACE ONE HEAD ON EITHER SIDE OF THE OBSTACLE. THE NOZZLES OF THESE TWO HEADS SHALL HAVE ARC PATTERNS THAT ADD UP TO THE ORIGINAL ARC PATTERN OF THE HEAD INDICATED ON THE PLANS. THE CONTRACTOR SHALL VERIFY ALL HEAD LAYOUT WITH RESIDENT ENGINEER PRIOR TO STARTING WORK.

NOTE C:
THESE PLANS ARE DIAGRAMMATIC, TREE BUBBLERS AND LATERAL LINES ARE SHOWN WITHIN THE PAVING FOR CLARITY ONLY, THE ACTUAL LOCATIONS SHALL BE WITHIN THE PLANTER. THE TREE BUBBLERS SHALL BE ALIGNED WITH TREES AS SHOWN ON THE PLANTING PLANS, AND AS DIRECTED BY RESIDENT ENGINEER. THE CONTRACTOR SHALL CONFIRM ALL LAYOUT IN FIELD WITH RESIDENT ENGINEER PRIOR TO STARTING WORK.

NOTE D:
PRIOR TO START OF CONSTRUCTION THE CONTRACTOR SHALL SUBMIT TO THE OWNER AND RESIDENT ENGINEER A SCALED SHOP DRAWING INDICATING THE PROPOSED LOCATIONS FOR THE IRRIGATION EQUIPMENT LISTED BELOW. THE SHOP DRAWING SHALL BE PREPARED TO THE SATISFACTION OF THE RESIDENT ENGINEER AND THE RESIDENT ENGINEER. SHOP DRAWINGS MUST INCLUDE THE PROPOSED LOCATIONS FOR THE FOLLOWING ITEMS:

1. POINT OF CONNECTION (INCLUDING WATER POC, BACK FLOW DEVICES, MASTER CONTROL VALVES, FLOW SENSORS, ETC.)
2. ISOLATION VALVES
3. AUTOMATIC CONTROL VALVES (INDICATE STATION NUMBER)
4. QUICK COUPLING VALVES
5. IRRIGATION CONTROLLER(S)
6. RELATED EQUIPMENT (AS MAY BE DIRECTED).

EACH PIECE OF AFOREMENTIONED EQUIPMENT SHALL HAVE IT'S PROPOSED INSTALLED LOCATION SHOWN ON THE SHOP DRAWINGS. THE SYMBOL FOR EACH PRODUCT SHALL BE A SCALED REPRESENTATION OF THE FOOTPRINT OF THE EQUIPMENT OR THE VALVE BOX IN WHICH THE EQUIPMENT IS INSTALLED. CONTRACTOR SHALL INSTALL ALL VALVE BOXES AND RELATED EQUIPMENT PER THE OWNER APPROVED SHOP DRAWINGS. ONCE THE SHOP DRAWING LOCATIONS ARE APPROVED, THE RESIDENT ENGINEER OR RESIDENT ENGINEER WILL ALLOW NO ADJUSTMENTS TO THE APPROVED VALVE BOX PLACEMENT WITHOUT PRIOR WRITTEN ACCEPTANCE. ANY IRRIGATION EQUIPMENT INSTALLED WITHOUT PRIOR APPROVAL WITH SHOP DRAWINGS WILL BE SUBJECT TO RELOCATION BASED ON DIRECTION BY THE RESIDENT ENGINEER AND RESIDENT ENGINEER AT THE CONTRACTOR'S EXPENSE.

EXISTING IRRIGATION NOTES

NOTE 1:
CONTRACTOR SHALL MAINTAIN EXISTING MAINLINES IN WORKING ORDER. COORDINATE ALL INTERRUPTIONS OF OPERATION OF THE EXISTING IRRIGATION TO A MINIMUM. COORDINATE ALL INTERRUPTIONS WITH THE RESIDENT ENGINEER.

NOTE 2:
CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXISTING IRRIGATION EQUIPMENT DAMAGED DURING CONSTRUCTION AND IF DAMAGED, SHALL REPLACE WITH SAME MANUFACTURER AND MODEL.

NOTE 3:
ANY EXISTING IRRIGATION CONTROL VALVES CONNECTED TO EXISTING CONTROLLER SHALL BE RECONNECTED TO EXISTING CONTROLLER. CONFIRM PROPER CONTROLLER OPERATION AND INSTALLATION WITH RESIDENT ENGINEER PRIOR TO STARTING WORK AND UPON COMPLETION OF WORK.

NOTE 4:
CONTRACTOR SHALL CONFIRM THE EXISTING CONTROLLER MAKE AND MODEL AND SHALL CONFIRM THAT SAID CONTROLLER HAS ADEQUATE OPEN STATIONS TO OPERATE ANY ADJUSTED AND ALL PROPOSED IRRIGATION SYSTEM MODIFICATIONS. NOTIFY RESIDENT ENGINEER SHOULD ANY DISCREPANCIES BE NOTED.

NOTE 5:
CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR/MODIFICATION/REROUTING OF ALL ADJACENT IRRIGATION SYSTEM EQUIPMENT THAT IS AFFECTED BY NEW CONSTRUCTION IMPROVEMENTS. CONTRACTOR SHALL REPAIR SAID SYSTEMS TO A LIKE NEW MANNER, PROVIDING NO LESS THAN 100% OF HEAD RADIUS COVERAGE IN ALL AREAS WITH SYSTEM LAYOUT AS APPROVED BY RESIDENT ENGINEER. CONTRACTOR SHALL CONFIRM ALL AREAS REQUIRING MODIFICATION WITH OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO BIDDING WORK AND PRIOR TO STARTING WORK.

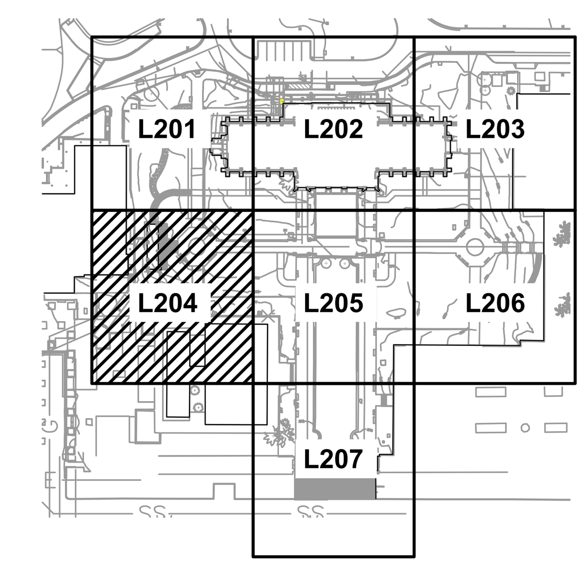
NOTE 6:
CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE REMOVAL AND DISPOSAL OF ALL EXISTING IRRIGATION EQUIPMENT AFFECTED BY THE NEW CONSTRUCTION IMPROVEMENTS, IF NECESSARY. CONTRACTOR SHALL VERIFY ALL EQUIPMENT TO BE REMOVED AND DISPOSED OF IN FIELD PRIOR TO BIDDING WORK AND PRIOR TO STARTING WORK.

NOTE 7:
CONTRACTOR SHALL FIELD VERIFY DEPTH AND LOCATION OF ALL EXISTING UTILITIES PRIOR TO BIDDING WORK AND AGAIN PRIOR TO STARTING WORK. VERIFICATION SHALL BE DOCUMENTED AND DELIVERED TO RESIDENT ENGINEER.

NOTE 8:
CONTRACTOR SHALL BE RESPONSIBLE FOR THE PLACEMENT OF ALL SCH 40 PVC SLEEVING UNDER PAVING, WALLS AND CURBS AT NO LESS THAN 24" BELOW GRADE AND NO LESS THAN 2X DIAMETER OF IRRIGATION PIPE IN AREAS WHERE PIPE CROSSING WILL OCCUR. WHEN PIPE SIZE IS NOT AVAILABLE USE 6" SLEEVING MATERIAL. CONFIRM CROSSINGS WITH RESIDENT ENGINEER PRIOR TO PAVING AND HARDSCAPE CONSTRUCTION.

NOTE 9:
EXISTING IRRIGATION IN THIS AREA SHALL BE PROTECTED IN PLACE FOR CONTINUED USE. CONTRACTOR SHALL VERIFY THE EXTENT OF THE EXISTING SYSTEM AND MAKE ADJUSTMENTS TO CAP OFF OR MODIFY THE EXISTING SYSTEM TO MEET THE NEW LANDSCAPE CONDITION IF NECESSARY.

NOTE 10:
CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN WORKING WITHIN THE DRIPLINE OF EXISTING TREES. NO MECHANICAL TRENCHING WITHIN THE DRIPLINE OF THE EXISTING TREE WILL BE ALLOWED. AIR SPADE SHALL BE UTILIZED FOR ALL TRENCHING WITHIN THE DRIPLINE OF TREES. CONTRACTOR SHALL REFER TO ARBORIST REPORT FOR ADDITIONAL PRECAUTIONS REQUIRED FOR THE EXISTING TREES. VERIFY ALL LAYOUT IN FIELD WITH RESIDENT ENGINEER.



WATER PRESSURE LOSS CALCULATIONS

WATER METER NUMBER	N/A	WATER METER SIZE (Inches)	N/A
HYDRAULIC GRADE LINE (FT)	0	WATER METER ELEVATION (FT)	0
ELEVATION DIFFERENCE (FT)	0	MIN. REQ. PRESSURE @ POC (PSI)	43.0
REMOTE CONTROL VALVE #	3-7	REMOTE CONTROL VALVE SIZE (In.)	1.50
R.C.V. DEMAND (GPM)	45	TOTAL DEMAND (GPM)	45
HIGHEST HEAD SERVED (FT)	0	STATIC PRESSURE AT HIGHEST HEAD	43.0

sweeney + associates IRRIGATION DESIGN AND CONSULTING

PRESSURE LOSS CALCULATION IS PROVIDED FOR THIS PROJECT BY SWEENEY & ASSOCIATES, INC. UNAUTHORIZED USE BY ANY OTHER PERSON, COMPANY OR PROJECT IS FORBIDDEN WITHOUT WRITTEN PERMISSION.

SIZE (Inches)	DESCRIPTION	FLOW	#	LOSS	
3.00	ISOLATION VALVES (BALL TYPE)	45	9	1.00	PSI
3.00	20 FEET OF MAINLINE: CL. 315 PVC	45	10	0.04	PSI
3.00	10 - 90 DEGREE ELBOWS	45	13	0.37	PSI
1.50	REMOTE CONTROL VALVE ASSEMBLY	45	14	3.50	PSI
10%	LATERAL LINE LOSSES	45	15	3.00	PSI
20%	FITTING LOSS (IN ADDITION TO ELBOWS SHOWN)	N/A	16	0.01	PSI
0.00	ELEVATION CHANGE (P.O.C. TO HIGHEST HEAD)	N/A	17	0.00	PSI
TOTAL SYSTEM PRESSURE LOSS (SUM OF #1 THRU #17)			18	7.9	PSI
PRESSURE REQUIRED AT HEAD (OPERATING PRESSURE)			19	30.0	PSI
TOTAL PRESSURE REQUIRED (SUM OF #18 AND #19)			20	37.9	PSI
STATIC WATER PRESSURE (FROM ABOVE)			21	43.0	PSI
RESIDUAL PRESSURE (SUBTRACT #20 FROM #21)			22	5.1	PSI
SET PRV OR MCV AT (#20 PLUS 10 PSI)			23	N/A	PSI
PRESSURE BOOST, IF REQUIRED (SET TO ACHIEVE 20 PSI RESIDUAL)			24	N/A	PSI

PHASING NOTE:
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811

sweeney + associates
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Murrieta, Ca 92563
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PRIVATE CONTRACT

WARNING
0 1/2 1
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PLANS FOR THE CONSTRUCTION OF BOTANICAL BUILDING AND GARDENS PHASE 2

IRRIGATION PLAN

CONSULTANT

SPEC. NO

PARKS & RECREATION DEPARTMENT

SHEET 7 OF 23 SHEETS

COMPANY ADDRESS: SPURLOCK LANDSCAPE ARCHITECTS,
2122 HANCOCK ST, SAN DIEGO, CA 92110
COMPANY PHONE NUMBER: 619-681-0090
COMPANY EMAIL DATE OF: AARMOUR@SPURLOCK-LAND.COM
SIGNING:

LICENSED LANDSCAPE ARCHITECT
LEIGH KYLE – 6137
Signature
06/30/25
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11/01/24
Date
STATE OF CALIFORNIA

FOR CITY APPROVAL

1847-6266
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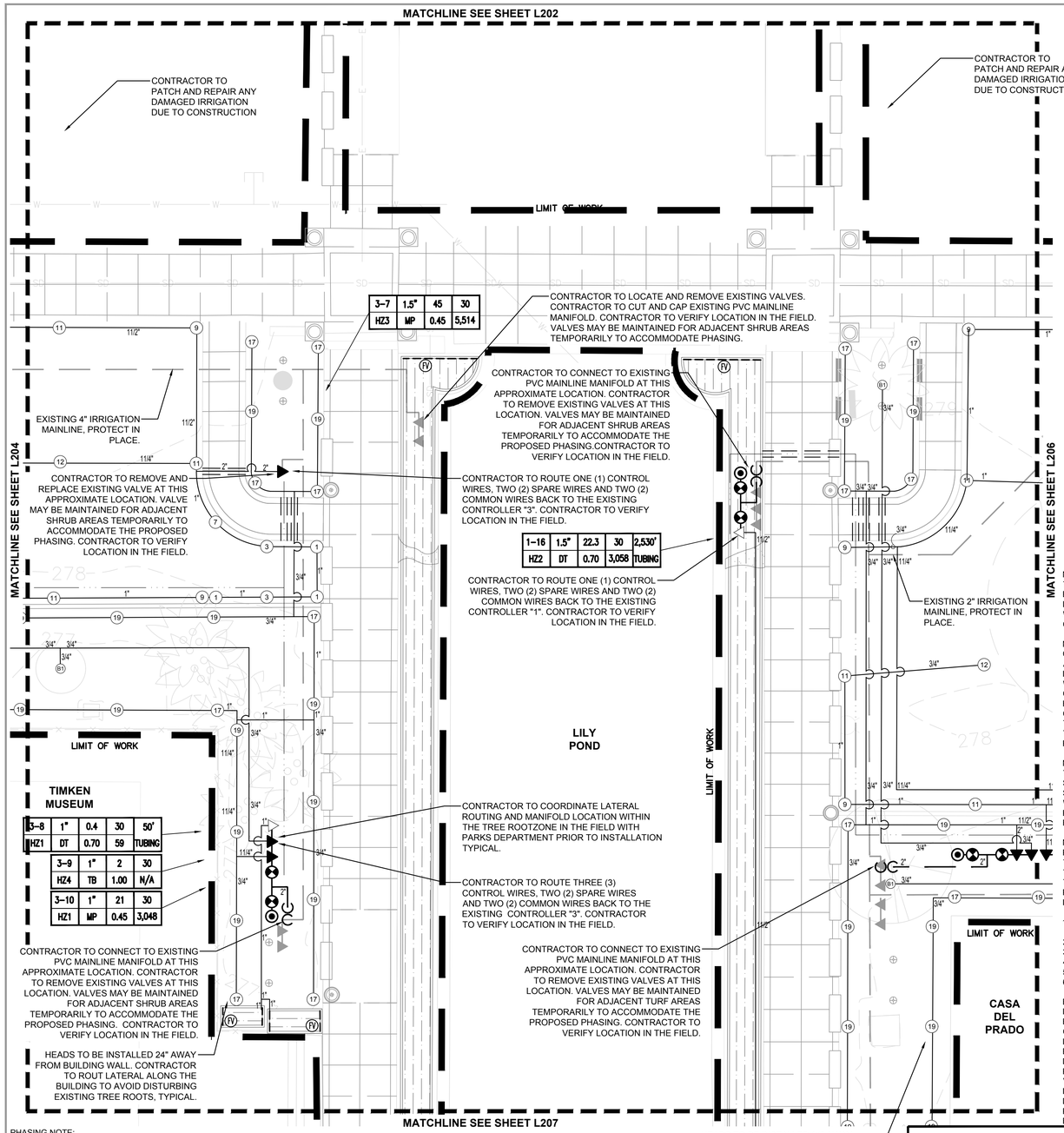
207-1706
LAMBERT COORDINATES

DRAWING NO.
L204



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ABBREVIATED IRRIGATION MATERIAL LEGEND

(REFER TO SHEET L203 FOR COMPLETE MATERIAL LEGEND)

SYMBOL	MANUFACTURER	MODEL NO. / DESCRIPTION
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	EXISTING	EXISTING PUMP AND ENCLOSURE, PROTECT IN PLACE
	NIBCO	T-211-YK SERIES, BRASS GLOBE VALVE
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	RAIN BIRD	XXX-EFB-CP, BRASS REMOTE CONTROL VALVE (RCV),
	RAIN BIRD	XXX-EFB-CP , BRASS DRIP REMOTE CONTROL VALVE (DRCV),
	EXISTING	EXISTING BRASS REMOTE CONTROL VALVE (RCV), PROTECT IN PLACE
	IRRITROL/ITS	EXISTING TORO MCE CONTROLLER, PROTECT IN PLACE
	AS APPROVED	PVC PIPE 3/4" - 2 1/2" SCH. 40, AS LATERAL LINES
	AS APPROVED	PVC PIPE 2" - 3" CL. 315, AS MAINLINES
	AS APPROVED	EXISTING MAINLINE, PROTECT IN PLACE
	AS APPROVED	PVC PIPE SCH. 40 AS SLEEVING
	AS APPROVED	CONTROL WIRES

NOTE A:
THESE PLANS ARE DIAGRAMMATIC, THE MAINLINE AND RELATED IRRIGATION EQUIPMENT IS SHOWN WITHIN THE PAVING FOR CLARITY ONLY. THE ACTUAL LOCATION OF MAINLINE AND RELATED IRRIGATION EQUIPMENT SHALL BE WITHIN PLANTER AND A MINIMUM OF 18" OFF ADJACENT HARDSCAPE AND OTHER OBSTACLES, TYPICAL.

NOTE B:
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NOTE D:
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1. POINT OF CONNECTION (INCLUDING WATER POC, BACK FLOW DEVICES, MASTER CONTROL VALVES, FLOW SENSORS, ETC.)
2. ISOLATION VALVES
3. AUTOMATIC CONTROL VALVES (INDICATE STATION NUMBER)
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NOTE 6:
CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE REMOVAL AND DISPOSAL OF ALL EXISTING IRRIGATION EQUIPMENT AFFECTED BY THE NEW CONSTRUCTION IMPROVEMENTS, IF NECESSARY. CONTRACTOR SHALL VERIFY ALL EQUIPMENT TO BE REMOVED AND DISPOSED OF IN FIELD PRIOR TO BIDDING WORK AND PRIOR TO STARTING WORK.

NOTE 7:
CONTRACTOR SHALL FIELD VERIFY DEPTH AND LOCATION OF ALL EXISTING UTILITIES PRIOR TO BIDDING WORK AND AGAIN PRIOR TO STARTING WORK. VERIFICATION SHALL BE DOCUMENTED AND DELIVERED TO RESIDENT ENGINEER.

NOTE 8:
CONTRACTOR SHALL BE RESPONSIBLE FOR THE PLACEMENT OF ALL SCH 40 PVC SLEEVING UNDER PAVING, WALLS AND CURBS AT NO LESS THAN 24" BELOW GRADE AND NO LESS THAN 2X DIAMETER OF IRRIGATION PIPE IN AREAS WHERE PIPE CROSSING WILL OCCUR. WHEN PIPE SIZE IS NOT AVAILABLE USE 6" SLEEVING MATERIAL. CONFIRM CROSSINGS WITH RESIDENT ENGINEER PRIOR TO PAVING AND HARDSCAPE CONSTRUCTION.

NOTE 9:
EXISTING IRRIGATION IN THIS AREA SHALL BE PROTECTED IN PLACE FOR CONTINUED USE. CONTRACTOR SHALL VERIFY THE EXTENT OF THE EXISTING SYSTEM AND MAKE ADJUSTMENTS TO CAP OFF OR MODIFY THE EXISTING SYSTEM TO MEET THE NEW LANDSCAPE CONDITION IF NECESSARY.

NOTE 10:
CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN WORKING WITHIN THE DRIPLINE OF EXISTING TREES. NO MECHANICAL TRENCHING WITHIN THE DRIPLINE OF THE EXISTING TREE WILL BE ALLOWED. AIR SPADE SHALL BE UTILIZED FOR ALL TRENCHING WITHIN THE DRIPLINE OF TREES. CONTRACTOR SHALL REFER TO ARBORIST REPORT FOR ADDITIONAL PRECAUTIONS REQUIRED FOR THE EXISTING TREES. VERIFY ALL LAYOUT IN FIELD WITH RESIDENT ENGINEER.

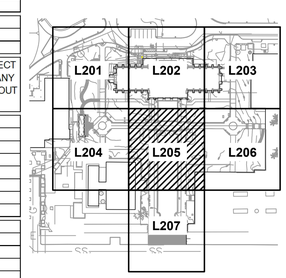
WATER PRESSURE LOSS CALCULATIONS

WATER METER NUMBER	N/A	WATER METER SIZE (Inches)	N/A
HYDRAULIC GRADE LINE (FT)	0	WATER METER ELEVATION (FT)	0
ELEVATION DIFFERENCE (FT)	0	MIN. REQ. PRESSURE @ POC (PSI)	43.0
REMOTE CONTROL VALVE #	3-7	REMOTE CONTROL VALVE SIZE (In.)	1.50
R.C.V. DEMAND (GPM)	42	TOTAL DEMAND (GPM)	42
HIGHEST HEAD SERVED (FT)	0	STATIC PRESSURE AT HIGHEST HEAD	43.0

sweeney + associates
IRRIGATION DESIGN AND CONSULTING

PRESSURE LOSS CALCULATION IS PROVIDED FOR THIS PROJECT BY SWEENEY & ASSOCIATES, INC. UNAUTHORIZED USE BY ANY OTHER PERSON, COMPANY OR PROJECT IS FORBIDDEN WITHOUT WRITTEN PERMISSION.

SIZE (Inches)	DESCRIPTION	FLOW	#	LOSS	
3.00	ISOLATION VALVES (BALL TYPE)	42	9	1.00	PSI
3.00	20 FEET OF MAINLINE: CL. 315 PVC	42	10	0.04	PSI
3.00	10 - 90 DEGREE ELBOWS	42	13	0.37	PSI
1.50	REMOTE CONTROL VALVE ASSEMBLY	42	14	3.50	PSI
10%	LATERAL LINE LOSSES	42	15	3.00	PSI
20%	FITTING LOSS (IN ADDITION TO ELBOWS SHOWN)	N/A	16	0.01	PSI
0.00	ELEVATION CHANGE (P.O.C. TO HIGHEST HEAD)	N/A	17	0.00	PSI
TOTAL SYSTEM PRESSURE LOSS (SUM OF #1 THRU #17)			18	7.9	PSI
PRESSURE REQUIRED AT HEAD (OPERATING PRESSURE)			19	30.0	PSI
TOTAL PRESSURE REQUIRED (SUM OF #18 AND #19)			20	37.9	PSI
STATIC WATER PRESSURE (FROM ABOVE)			21	43.0	PSI
RESIDUAL PRESSURE (SUBTRACT #20 FROM #21)			22	5.1	PSI
SET PRV OR MCV AT (#20 PLUS 10 PSI)			23	N/A	PSI
PRESSURE BOOST, IF REQUIRED (SET TO ACHIEVE 20 PSI RESIDUAL)			24	N/A	PSI



PRIVATE CONTRACT

SPURLOCK
LANDSCAPE ARCHITECTS
2122 Hancock Street
San Diego, California 92110
619.681.0090
spurlock-land.com

WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

PLANS FOR THE CONSTRUCTION OF BOTANICAL BUILDING AND GARDENS PHASE 2 IRRIGATION PLAN

CONSULTANT

COMPANY ADDRESS: SPURLOCK LANDSCAPE ARCHITECTS, 2122 HANCOCK ST, SAN DIEGO, CA 92110
COMPANY PHONE NUMBER: 619-681-0090
COMPANY EMAIL DATE OF: AARMOUR@SPURLOCK-LAND.COM
SIGNING:

LICENSED LANDSCAPE ARCHITECT
LEIGH KYLE - 6177
Signature
06/30/25
Renewal Date
11/01/24
Date
STATE OF CALIFORNIA

SPEC. NO

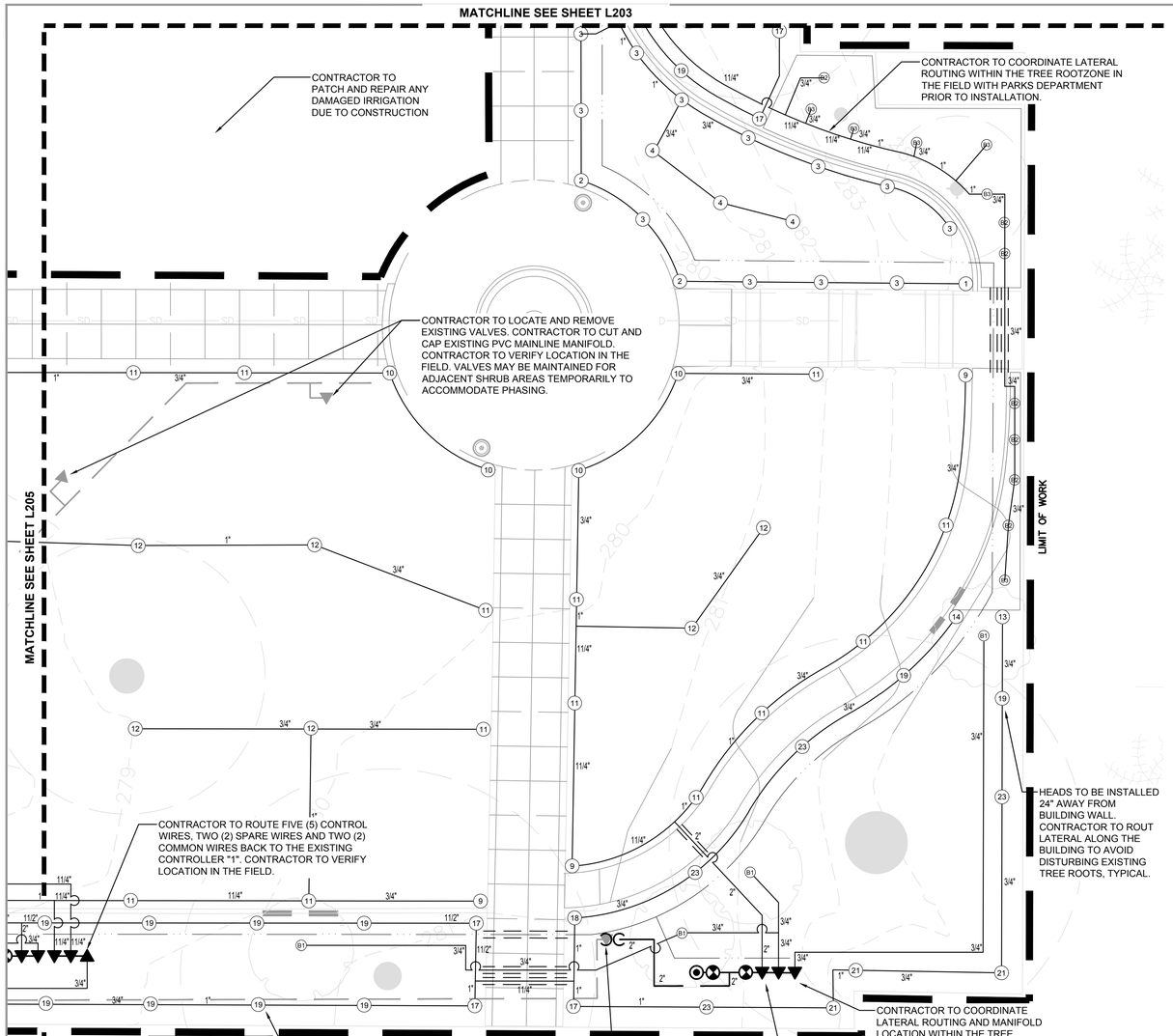
FOR CITY APPROVAL

PARKS & RECREATION DEPARTMENT
SHEET 8 OF 23 SHEETS

1847-6266
NAD83 COORDINATES

207-1706
LAMBERT COORDINATES

DRAWING NO. L205



1–10	1"	1	30
HZ6	TB	1.00	N/A
1–11	1"	19	30
HZ3	MP	0.45	3,143
1–12	1"	22	30
HZ3	MP	0.45	3,640
1–13	1"	1	30
HZ4	TB	1.00	N/A
1–14	1.5"	29	30
HZ2	MP	0.45	4,657

1–7	1"	1	30
HZ4	TB	1.00	N/A
1–8	1"	3	30
HZ5	TB	1.00	N/A
1–9	1.5"	24	30
HZ3	MP	0.45	2,858

PHASING NOTE:
THE CONTRACTOR SHALL INSTALL THE IRRIGATION SYSTEMS TO ACCOMMODATE THE PROPOSED PROJECT PHASING. PROVIDE LATERAL LINE STUB-OUTS, WIRE STUB-OUTS, TEMPORARY BATTERY POWERED ACTUATORS, AND ANY ADDITIONAL ADJUSTMENTS AS REQUIRED TO ACCOMMODATE THE PROPOSED PHASING. THE EXISTING IRRIGATION SYSTEMS SHALL BE MAINTAINED UNTIL THE AREA IS DEMOLISHED. ALL SYSTEMS SHALL BE INSTALLED COMPLETELY PER PLAN AT TIME OF COMPLETION WITH ALL IRRIGATION SYSTEMS OPERATING AUTOMATICALLY FROM THE CONTROLLERS PER PLAN TYPICAL. VERIFY ALL PHASING IN THE FIELD WITH THE CITY AT THE START OF WORK TYPICAL.

I HAVE COMPLIED WITH THE CRITERIA OF THE IRRIGATION GUIDELINES AND APPLIED THEM ACCORDINGLY FOR THE EFFICIENT USE OF WATER IN THE IRRIGATION DESIGN PLAN

811

sweeney + associates
IRRIGATION DESIGN AND CONSULTING
38730 Sky Canyon Drive, Suite C
Murrieta, Ca 92563
e: info@sweeneyassoc.com | t: (951) 461-6830
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N
10' 5' 0' 10'

ABBREVIATED IRRIGATION MATERIAL LEGEND

(REFER TO SHEET L203 FOR COMPLETE MATERIAL LEGEND)

SYMBOL	MANUFACTURER	MODEL NO. / DESCRIPTION
1 2 3 4	HUNTER	PROS-06-PRS40-CV 6" POP-UP W / MP1000 NOZZLE
5 6 7 8	HUNTER	PROS-06-PRS40-CV 6" POP-UP W / MP2000 NOZZLE
9 10 11 12	HUNTER	PROS-06-PRS40-CV 6" POP-UP W / MP3000 NOZZLE
13 14 15 16	HUNTER	PROS-12-PRS40-CV 12" POP-UP W / MP1000 NOZZLE
17 18 19 20	HUNTER	PROS-12-PRS40-CV 12" POP-UP W / MP2000 NOZZLE
21 22 23 24	HUNTER	PROS-12-PRS40-CV 12" POP-UP W / MP3000 NOZZLE
B1	RAIN BIRD	PROS-04-PRS30-CV 4" POP-UP W / MSBN-50Q NOZZLE
B2	HUNTER / RAIN BIRD	PROS-04-PRS30-CV 4" POP-UP W / 5-CST-B STREAM BUBBLER NOZZLE
B3	HUNTER / RAIN BIRD	PROS-04-PRS30-CV 4" POP-UP W /5F-B STREAM BUBBLER NOZZLE
	NETAFIM	TLHCVXR5-12 SUBSURFACE DRIP TUBING
	AS APPROVED	PVC SUPPLY AND DISCHARGE HEADERS
FV	NETAFIM	TL050MFV-1 AUTOMATIC FLUSH VALVE
	EXISTING	EXISTING BACK FLOW PREVENTION DEVICE
	EXISTING	EXISTING PUMP AND ENCLOSURE, PROTECT IN PLACE
	NIBCO	T-211-YK SERIES, BRASS GLOBE VALVE
	EXISTING	EXISTING BRASS GLOVE VALVE, PROTECT IN PLACE
	NIBCO	T-113-K SERIES, 3" BRASS GATE VALVE
	RAIN BIRD	44LRC 1" QUICK COUPLER VALVE
	EXISTING	EXISTING QUICK COUPLER VALVE, PROTECT IN PLACE
	RAIN BIRD	XXX-EFB-CP, BRASS REMOTE CONTROL VALVE (RCV),
	RAIN BIRD	XXX-EFB-CP , BRASS DRIP REMOTE CONTROL VALVE (DRCV),
	EXISTING	EXISTING BRASS REMOTE CONTROL VALVE (RCV), PROTECT IN PLACE
	IRRITROL/ITS	EXISTING TORO MCE CONTROLLER, PROTECT IN PLACE
	AS APPROVED	PVC PIPE 3/4" - 2 1/2" SCH. 40, AS LATERAL LINES
	AS APPROVED	PVC PIPE 2" - 3" CL. 315, AS MAINLINES
	AS APPROVED	EXISTING MAINLINE, PROTECT IN PLACE
	AS APPROVED	PVC PIPE SCH. 40 AS SLEEVING
	AS APPROVED	CONTROL WIRES

NOTE A:
THESE PLANS ARE DIAGRAMMATIC, THE MAINLINE AND RELATED IRRIGATION EQUIPMENT IS SHOWN WITHIN THE PAVING FOR CLARITY ONLY. THE ACTUAL LOCATION OF MAINLINE AND RELATED IRRIGATION EQUIPMENT SHALL BE WITHIN PLANTER AND A MINIMUM OF 18" OFF ADJACENT HARDSCAPE AND OTHER OBSTACLES, TYPICAL.

NOTE B:
CONTRACTOR SHALL ADJUST ALL HEADS AS REQUIRED TO ACCOMMODATE ANY VERTICAL OBSTRUCTIONS THAT MAY OCCUR IN THE LANDSCAPE, INCLUDING BUT NOT LIMITED TO LIGHT POLES, FIRE HYDRANTS, TREES, ETC. WHEN A SLIGHT RELOCATION OF THE HEAD IS NOT SUFFICIENT TO CLEAR THE OBSTACLE, OR IF IT NEGATIVELY AFFECTS THE COVERAGE, AN ADDITIONAL HEAD SHALL BE INSTALLED TO PLACE ONE HEAD ON EITHER SIDE OF THE OBSTACLE. THE NOZZLES OF THESE TWO HEADS SHALL HAVE ARC PATTERNS THAT ADD UP TO THE ORIGINAL ARC PATTERN OF THE HEAD INDICATED ON THE PLANS. THE CONTRACTOR SHALL VERIFY ALL HEAD LAYOUT WITH RESIDENT ENGINEER PRIOR TO STARTING WORK.

NOTE C:
THESE PLANS ARE DIAGRAMMATIC, TREE BUBBLERS AND LATERAL LINES ARE SHOWN WITHIN THE PAVING FOR CLARITY ONLY, THE ACTUAL LOCATIONS SHALL BE WITHIN THE PLANTER. THE TREE BUBBLERS SHALL BE ALIGNED WITH TREES AS SHOWN ON THE PLANTING PLANS, AND AS DIRECTED BY RESIDENT ENGINEER. THE CONTRACTOR SHALL CONFIRM ALL LAYOUT IN FIELD WITH RESIDENT ENGINEER PRIOR TO STARTING WORK.

NOTE D:
PRIOR TO START OF CONSTRUCTION THE CONTRACTOR SHALL SUBMIT TO THE OWNER AND RESIDENT ENGINEER A SCALED SHOP DRAWING INDICATING THE PROPOSED LOCATIONS FOR THE IRRIGATION EQUIPMENT LISTED BELOW. THE SHOP DRAWING SHALL BE PREPARED TO THE SATISFACTION OF THE RESIDENT ENGINEER AND THE RESIDENT ENGINEER. SHOP DRAWINGS MUST INCLUDE THE PROPOSED LOCATIONS FOR THE FOLLOWING ITEMS:

1. POINT OF CONNECTION (INCLUDING WATER POC, BACK FLOW DEVICES, MASTER CONTROL VALVES, FLOW SENSORS, ETC.)
2. ISOLATION VALVES
3. AUTOMATIC CONTROL VALVES (INDICATE STATION NUMBER)
4. QUICK COUPLING VALVES
5. IRRIGATION CONTROLLER(S)
6. RELATED EQUIPMENT (AS MAY BE DIRECTED).

EACH PIECE OF AFOREMENTIONED EQUIPMENT SHALL HAVE IT'S PROPOSED INSTALLED LOCATION SHOWN ON THE SHOP DRAWINGS. THE SYMBOL FOR EACH PRODUCT SHALL BE A SCALED REPRESENTATION OF THE FOOTPRINT OF THE EQUIPMENT OR THE VALVE BOX IN WHICH THE EQUIPMENT IS INSTALLED. CONTRACTOR SHALL INSTALL ALL VALVE BOXES AND RELATED EQUIPMENT PER THE OWNER APPROVED SHOP DRAWINGS. ONCE THE SHOP DRAWING LOCATIONS ARE APPROVED, THE RESIDENT ENGINEER OR RESIDENT ENGINEER WILL ALLOW NO ADJUSTMENTS TO THE APPROVED VALVE BOX PLACEMENT WITHOUT PRIOR WRITTEN ACCEPTANCE. ANY IRRIGATION EQUIPMENT INSTALLED WITHOUT PRIOR APPROVAL WITH SHOP DRAWINGS WILL BE SUBJECT TO RELOCATION BASED ON DIRECTION BY THE RESIDENT ENGINEER AND RESIDENT ENGINEER AT THE CONTRACTOR'S EXPENSE.

WATER PRESSURE LOSS CALCULATIONS

WATER METER NUMBER	N/A	WATER METER SIZE (Inches)	N/A
HYDRAULIC GRADE LINE (FT)	0	WATER METER ELEVATION (FT)	0
ELEVATION DIFFERENCE (FT)	0	MIN. REQ. PRESSURE @ POC (PSI)	43.0
REMOTE CONTROL VALVE #	1-10	REMOTE CONTROL VALVE SIZE (In.)	1.50
R.C.V. DEMAND (GPM)	24	TOTAL DEMAND (GPM)	24
HIGHEST HEAD SERVED (FT)	0	STATIC PRESSURE AT HIGHEST HEAD	43.0

s+a sweeney + associates IRRIGATION DESIGN AND CONSULTING

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SIZE (Inches)	DESCRIPTION	FLOW	#	LOSS	
3.00	ISOLATION VALVES (BALL TYPE)	24	9	1.00	PSI
3.00	40 FEET OF MAINLINE: CL. 315 PVC	24	10	0.03	PSI
3.00	10 - 90 DEGREE ELBOWS	24	13	0.14	PSI
1.50	REMOTE CONTROL VALVE ASSEMBLY	24	14	3.50	PSI
10%	LATERAL LINE LOSSES	24	15	3.00	PSI
20%	FITTING LOSS (IN ADDITION TO ELBOWS SHOWN)	N/A	16	0.01	PSI
0.00	ELEVATION CHANGE (P.O.C. TO HIGHEST HEAD)	N/A	17	0.00	PSI
TOTAL SYSTEM PRESSURE LOSS (SUM OF #1 THRU #17)			18	7.7	PSI
PRESSURE REQUIRED AT HEAD (OPERATING PRESSURE)			19	30.0	PSI
TOTAL PRESSURE REQUIRED (SUM OF #18 AND #19)			20	37.7	PSI
STATIC WATER PRESSURE (FROM ABOVE)			21	43.0	PSI
RESIDUAL PRESSURE (SUBTRACT #20 FROM #21)			22	5.3	PSI
SET PRV OR MCV AT (#20 PLUS 10 PSI)			23	N/A	PSI
PRESSURE BOOST, IF REQUIRED (SET TO ACHIEVE 20 PSI RESIDUAL)			24	N/A	PSI

EXISTING IRRIGATION NOTES

NOTE 1:
CONTRACTOR SHALL MAINTAIN EXISTING MAINLINES IN WORKING ORDER. COORDINATE ALL INTERRUPTIONS OF OPERATION OF THE EXISTING IRRIGATION TO A MINIMUM. COORDINATE ALL INTERRUPTIONS WITH THE RESIDENT ENGINEER.

NOTE 2:
CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXISTING IRRIGATION EQUIPMENT DAMAGED DURING CONSTRUCTION AND IF DAMAGED, SHALL REPLACE WITH SAME MANUFACTURER AND MODEL.

NOTE 3:
ANY EXISTING IRRIGATION CONTROL VALVES CONNECTED TO EXISTING CONTROLLER SHALL BE RECONNECTED TO EXISTING CONTROLLER. CONFIRM PROPER CONTROLLER OPERATION AND INSTALLATION WITH RESIDENT ENGINEER PRIOR TO STARTING WORK AND UPON COMPLETION OF WORK.

NOTE 4:
CONTRACTOR SHALL CONFIRM THE EXISTING CONTROLLER MAKE AND MODEL AND SHALL CONFIRM THAT SAID CONTROLLER HAS ADEQUATE OPEN STATIONS TO OPERATE ANY ADJUSTED AND ALL PROPOSED IRRIGATION SYSTEM MODIFICATIONS. NOTIFY RESIDENT ENGINEER SHOULD ANY DISCREPANCIES BE NOTED.

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NOTE 9:
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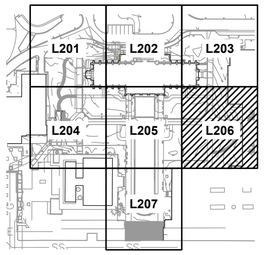


PRIVATE CONTRACT

SPURLOCK
LANDSCAPE ARCHITECTS
2122 Hancock Street
San Diego, California 92110
619.681.0090
spurlock-land.com

WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2
IRRIGATION PLAN

CONSULTANT

COMPANY ADDRESS: SPURLOCK LANDSCAPE ARCHITECTS, 2122 HANCOCK ST, SAN DIEGO, CA 92110
COMPANY PHONE NUMBER: 619-681-0090
COMPANY EMAIL DATE OF: AARMOUR@SPURLOCK-LAND.COM
SIGNING:

LICENSED LANDSCAPE ARCHITECT
LEIGH KYLE - 6173
Signature
06/30/25
Renewal Date
11/01/24
Date
STATE OF CALIFORNIA

SPEC. NO

FOR CITY APPROVAL

PARKS & RECREATION DEPARTMENT
SHEET 9 OF 23 SHEETS

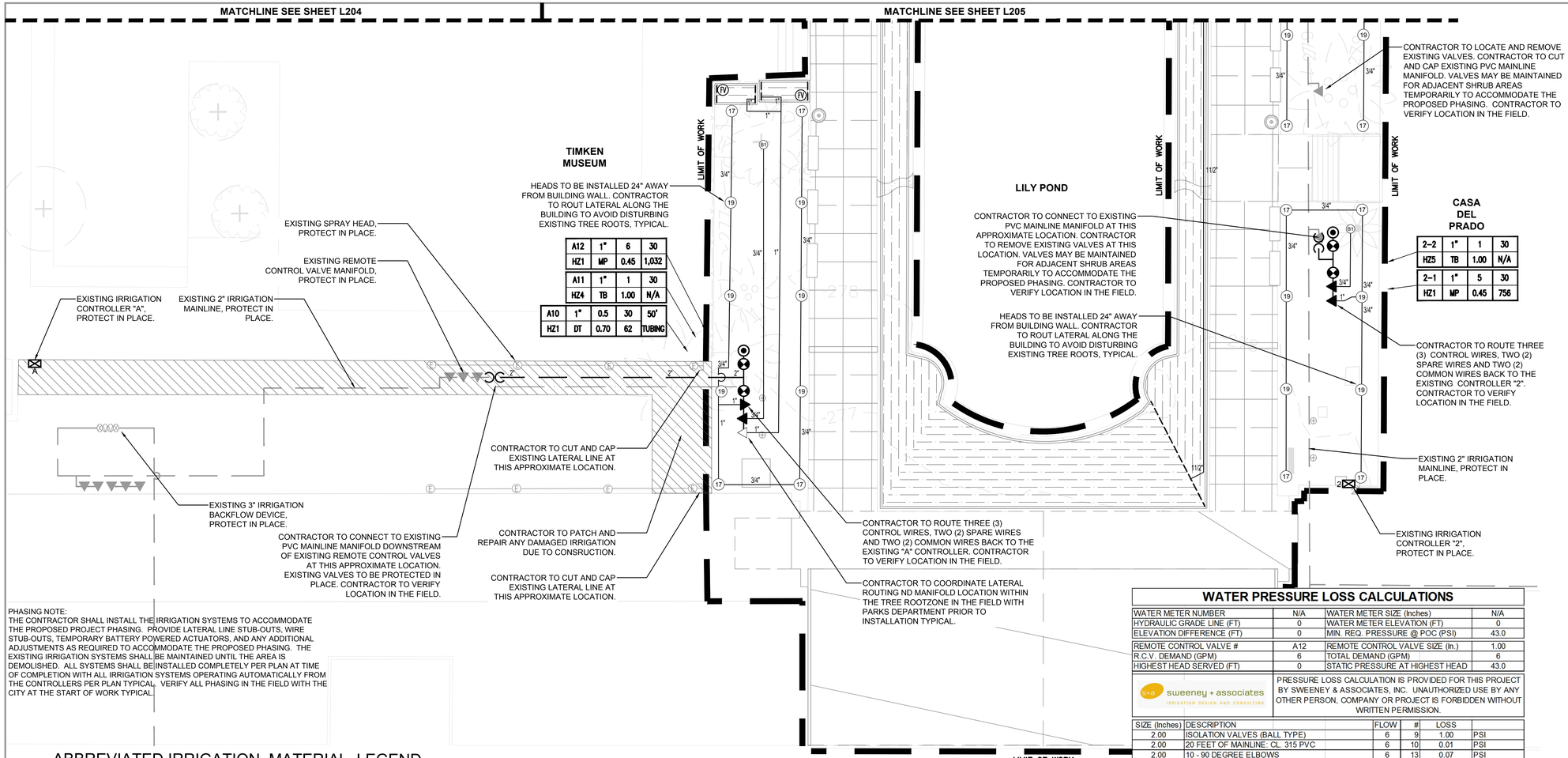
1847-6268
NAD83 COORDINATES

207-1706
LAMBERT COORDINATES

DRAWING NO. L206

MATCHLINE SEE SHEET L204

MATCHLINE SEE SHEET L205



PHASING NOTE:
THE CONTRACTOR SHALL INSTALL THE IRRIGATION SYSTEMS TO ACCOMMODATE THE PROPOSED PROJECT PHASING. PROVIDE LATERAL LINE STUB-OUTS, WIRE STUB-OUTS, TEMPORARY BATTERY POWERED ACTUATORS, AND ANY ADDITIONAL ADJUSTMENTS AS REQUIRED TO ACCOMMODATE THE PROPOSED PHASING. THE EXISTING IRRIGATION SYSTEMS SHALL BE MAINTAINED UNTIL THE AREA IS DEMOLISHED. ALL SYSTEMS SHALL BE INSTALLED COMPLETELY PER PLAN AT TIME OF COMPLETION WITH ALL IRRIGATION SYSTEMS OPERATING AUTOMATICALLY FROM THE CONTROLLERS PER PLAN TYPICAL. VERIFY ALL PHASING IN THE FIELD WITH THE CITY AT THE START OF WORK TYPICAL.

WATER PRESSURE LOSS CALCULATIONS

WATER METER NUMBER	N/A	WATER METER SIZE (Inches)	N/A
HYDRAULIC GRADE LINE (FT)	0	WATER METER ELEVATION (FT)	0
ELEVATION DIFFERENCE (FT)	0	MIN. REQ. PRESSURE @ POC (PSI)	43.0
REMOTE CONTROL VALVE #	A12	REMOTE CONTROL VALVE SIZE (In.)	1.00
R.C.V. DEMAND (GPM)	6	TOTAL DEMAND (GPM)	6
HIGHEST HEAD SERVED (FT)	0	STATIC PRESSURE AT HIGHEST HEAD	43.0

sweeney + associates IRRIGATION DESIGN AND CONSULTING

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SIZE (Inches)	DESCRIPTION	FLOW	#	LOSS	
2.00	ISOLATION VALVES (BALL TYPE)	6	9	1.00	PSI
2.00	20 FEET OF MAINLINE: CL. 315 PVC	6	10	0.01	PSI
2.00	10 - 90 DEGREE ELBOWS	6	13	0.07	PSI
1.00	REMOTE CONTROL VALVE ASSEMBLY	6	14	3.50	PSI
10%	LATERAL LINE LOSSES	6	15	3.00	PSI
20%	FITTING LOSS (IN ADDITION TO ELBOWS SHOWN)	N/A	16	0.00	PSI
0.00	ELEVATION CHANGE (P.O.C. TO HIGHEST HEAD)	N/A	17	0.00	PSI
TOTAL SYSTEM PRESSURE LOSS (SUM OF #1 THRU #17)			18	7.6	PSI
PRESSURE REQUIRED AT HEAD (OPERATING PRESSURE)			19	30.0	PSI
TOTAL PRESSURE REQUIRED (SUM OF #18 AND #19)			20	37.6	PSI
STATIC WATER PRESSURE (FROM ABOVE)			21	43.0	PSI
RESIDUAL PRESSURE (SUBTRACT #20 FROM #21)			22	5.4	PSI
SET PRV OR MCV AT (#20 PLUS 10 PSI)			23	N/A	PSI
PRESSURE BOOST, IF REQUIRED (SET TO ACHIEVE 20 PSI RESIDUAL)			24	N/A	PSI

EXISTING IRRIGATION NOTES

NOTE 1:
CONTRACTOR SHALL MAINTAIN EXISTING MAINLINES IN WORKING ORDER. COORDINATE ALL INTERRUPTIONS OF OPERATION OF THE EXISTING IRRIGATION TO A MINIMUM. COORDINATE ALL INTERRUPTIONS WITH THE RESIDENT ENGINEER.

NOTE 2:
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NOTE 4:
CONTRACTOR SHALL CONFIRM THE EXISTING CONTROLLER MAKE AND MODEL AND SHALL CONFIRM THAT SAID CONTROLLER HAS ADEQUATE OPEN STATIONS TO OPERATE ANY ADJUSTED AND ALL PROPOSED IRRIGATION SYSTEM MODIFICATIONS. NOTIFY RESIDENT ENGINEER SHOULD ANY DISCREPANCIES BE NOTED.

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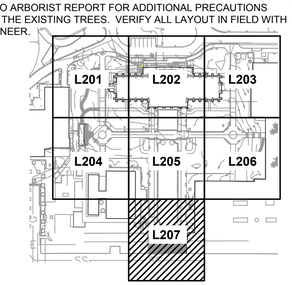
CONTRACTOR SHALL FIELD VERIFY DEPTH AND LOCATION OF ALL EXISTING UTILITIES PRIOR TO BIDDING WORK AND AGAIN PRIOR TO STARTING WORK. VERIFICATION SHALL BE DOCUMENTED AND DELIVERED TO RESIDENT ENGINEER.

NOTE 8:
CONTRACTOR SHALL BE RESPONSIBLE FOR THE PLACEMENT OF ALL SCH 40 PVC SLEEVING UNDER PAVING, WALLS AND CURBS AT NO LESS THAN 24" BELOW GRADE AND NO LESS THAN 2X DIAMETER OF IRRIGATION PIPE IN AREAS WHERE PIPE CROSSING WILL OCCUR. WHEN PIPE SIZE IS NOT AVAILABLE USE 6" SLEEVING MATERIAL. CONFIRM CROSSINGS WITH RESIDENT ENGINEER PRIOR TO PAVING AND HARDSCAPE CONSTRUCTION.

NOTE 9:
EXISTING IRRIGATION IN THIS AREA SHALL BE PROTECTED IN PLACE FOR CONTINUED USE. CONTRACTOR SHALL VERIFY THE EXTENT OF THE EXISTING SYSTEM AND MAKE ADJUSTMENTS TO CAP OFF OR MODIFY THE EXISTING SYSTEM TO MEET THE NEW LANDSCAPE CONDITION IF NECESSARY.

NOTE 10:
CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN WORKING WITHIN THE DRIPLINE OF EXISTING TREES. NO MECHANICAL TRENCHING WITHIN THE DRIPLINE OF THE EXISTING TREE WILL BE ALLOWED. AIR SPADE SHALL BE UTILIZED FOR ALL TRENCHING WITHIN THE DRIPLINE OF TREES. CONTRACTOR SHALL REFER TO ARBORIST REPORT FOR ADDITIONAL PRECAUTIONS REQUIRED FOR THE EXISTING TREES. VERIFY ALL LAYOUT IN FIELD WITH RESIDENT ENGINEER.



ABBREVIATED IRRIGATION MATERIAL LEGEND

(REFER TO SHEET L203 FOR COMPLETE MATERIAL LEGEND)

SYMBOL	MANUFACTURER	MODEL NO. / DESCRIPTION
1 2 3 4	HUNTER	PROS-06-PRS40-CV 6" POP-UP W / MP1000 NOZZLE
5 6 7 8	HUNTER	PROS-06-PRS40-CV 6" POP-UP W / MP2000 NOZZLE
9 10 11 12	HUNTER	PROS-06-PRS40-CV 6" POP-UP W / MP3000 NOZZLE
13 14 15 16	HUNTER	PROS-12-PRS40-CV 12" POP-UP W / MP1000 NOZZLE
17 18 19 20	HUNTER	PROS-12-PRS40-CV 12" POP-UP W / MP2000 NOZZLE
21 22 23 24	HUNTER	PROS-12-PRS40-CV 12" POP-UP W / MP3000 NOZZLE
B1	RAIN BIRD	PROS-04-PRS30-CV 4" POP-UP W / MSBN-50Q NOZZLE
B2	HUNTER / RAIN BIRD	PROS-04-PRS30-CV 4" POP-UP W / 5-CST-B STREAM BUBBLER NOZZLE
B3	HUNTER / RAIN BIRD	PROS-04-PRS30-CV 4" POP-UP W /5F-B STREAM BUBBLER NOZZLE
	NETAFIM	TLHCVXR5-12 SUBSURFACE DRIP TUBING
	AS APPROVED	PVC SUPPLY AND DISCHARGE HEADERS
FV	NETAFIM	TL050MFV-1 AUTOMATIC FLUSH VALVE
	EXISTING	EXISTING BACK FLOW PREVENTION DEVICE
	EXISTING	EXISTING PUMP AND ENCLOSURE, PROTECT IN PLACE
	NIBCO	T-211-YK SERIES, BRASS GLOBE VALVE
	EXISTING	EXISTING BRASS GLOVE VALVE, PROTECT IN PLACE
	NIBCO	T-113-K SERIES, 3" BRASS GATE VALVE
	RAIN BIRD	44LRC 1" QUICK COUPLER VALVE
	EXISTING	EXISTING QUICK COUPLER VALVE, PROTECT IN PLACE
	RAIN BIRD	XXX-EFB-CP, BRASS REMOTE CONTROL VALVE (RCV),
	RAIN BIRD	XXX-EFB-CP , BRASS DRIP REMOTE CONTROL VALVE (DRCV),
	EXISTING	EXISTING BRASS REMOTE CONTROL VALVE (RCV), PROTECT IN PLACE
	IRRITROL/ITS	EXISTING TORO MCE CONTROLLER, PROTECT IN PLACE
	AS APPROVED	PVC PIPE 3/4" - 2 1/2" SCH. 40, AS LATERAL LINES
	AS APPROVED	PVC PIPE 2" - 3" CL. 315, AS MAINLINES
	AS APPROVED	EXISTING MAINLINE, PROTECT IN PLACE
	AS APPROVED	PVC PIPE SCH. 40 AS SLEEVING
	AS APPROVED	CONTROL WIRES

NOTE A:
THESE PLANS ARE DIAGRAMMATIC, THE MAINLINE AND RELATED IRRIGATION EQUIPMENT IS SHOWN WITHIN THE PAVING FOR CLARITY ONLY. THE ACTUAL LOCATION OF MAINLINE AND RELATED IRRIGATION EQUIPMENT SHALL BE WITHIN PLANTER AND A MINIMUM OF 18" OFF ADJACENT HARDSCAPE AND OTHER OBSTACLES, TYPICAL.

NOTE B:
CONTRACTOR SHALL ADJUST ALL HEADS AS REQUIRED TO ACCOMMODATE ANY VERTICAL OBSTRUCTIONS THAT MAY OCCUR IN THE LANDSCAPE, INCLUDING BUT NOT LIMITED TO LIGHT POLES, FIRE HYDRANTS, TREES, ETC. WHEN A SLIGHT RELOCATION OF THE HEAD IS NOT SUFFICIENT TO CLEAR THE OBSTACLE, OR IF IT NEGATIVELY AFFECTS THE COVERAGE, AN ADDITIONAL HEAD SHALL BE INSTALLED TO PLACE ONE HEAD ON EITHER SIDE OF THE OBSTACLE. THE NOZZLES OF THESE TWO HEADS SHALL HAVE ARC PATTERNS THAT ADD UP TO THE ORIGINAL ARC PATTERN OF THE HEAD INDICATED ON THE PLANS. THE CONTRACTOR SHALL VERIFY ALL HEAD LAYOUT WITH RESIDENT ENGINEER PRIOR TO STARTING WORK.

NOTE C:
THESE PLANS ARE DIAGRAMMATIC, TREE BUBBLERS AND LATERAL LINES ARE SHOWN WITHIN THE PAVING FOR CLARITY ONLY, THE ACTUAL LOCATIONS SHALL BE WITHIN THE PLANTER. THE TREE BUBBLERS SHALL BE ALIGNED WITH TREES AS SHOWN ON THE PLANTING PLANS, AND AS DIRECTED BY RESIDENT ENGINEER. THE CONTRACTOR SHALL CONFIRM ALL LAYOUT IN FIELD WITH RESIDENT ENGINEER PRIOR TO STARTING WORK.

NOTE D:
PRIOR TO START OF CONSTRUCTION THE CONTRACTOR SHALL SUBMIT TO THE OWNER AND RESIDENT ENGINEER A SCALED SHOP DRAWING INDICATING THE PROPOSED LOCATIONS FOR THE IRRIGATION EQUIPMENT LISTED BELOW. THE SHOP DRAWING SHALL BE PREPARED TO THE SATISFACTION OF THE RESIDENT ENGINEER AND THE RESIDENT ENGINEER. SHOP DRAWINGS MUST INCLUDE THE PROPOSED LOCATIONS FOR THE FOLLOWING ITEMS:

1. POINT OF CONNECTION (INCLUDING WATER POC, BACK FLOW DEVICES, MASTER CONTROL VALVES, FLOW SENSORS, ETC.)
2. ISOLATION VALVES
3. AUTOMATIC CONTROL VALVES (INDICATE STATION NUMBER)
4. QUICK COUPLING VALVES
5. IRRIGATION CONTROLLER(S)
6. RELATED EQUIPMENT (AS MAY BE DIRECTED).

EACH PIECE OF AFOREMENTIONED EQUIPMENT SHALL HAVE IT'S PROPOSED INSTALLED LOCATION SHOWN ON THE SHOP DRAWINGS. THE SYMBOL FOR EACH PRODUCT SHALL BE A SCALED REPRESENTATION OF THE FOOTPRINT OF THE EQUIPMENT OR THE VALVE BOX IN WHICH THE EQUIPMENT IS INSTALLED. CONTRACTOR SHALL INSTALL ALL VALVE BOXES AND RELATED EQUIPMENT PER THE OWNER APPROVED SHOP DRAWINGS. ONCE THE SHOP DRAWING LOCATIONS ARE APPROVED, THE RESIDENT ENGINEER OR RESIDENT ENGINEER WILL ALLOW NO ADJUSTMENTS TO THE APPROVED VALVE BOX PLACEMENT WITHOUT PRIOR WRITTEN ACCEPTANCE. ANY IRRIGATION EQUIPMENT INSTALLED WITHOUT PRIOR APPROVAL WITH SHOP DRAWINGS WILL BE SUBJECT TO RELOCATION BASED ON DIRECTION BY THE RESIDENT ENGINEER AND RESIDENT ENGINEER AT THE CONTRACTOR'S EXPENSE.

I HAVE COMPLIED WITH THE CRITERIA OF THE IRRIGATION GUIDELINES AND APPLIED THEM ACCORDINGLY FOR THE EFFICIENT USE OF WATER IN THE IRRIGATION DESIGN PLAN

N
10' 5' 0' 10'

SPURLOCK
LANDSCAPE ARCHITECTS
2122 Hancock Street
San Diego, California 92110
619.681.0090
spurlock-land.com

811

sweeney + associates
IRRIGATION DESIGN AND CONSULTING
38730 Sky Canyon Drive, Suite C
Murrieta, Ca 92563
e: info@sweeneyassoc.com|t: (951) 461-6830
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WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

PRIVATE CONTRACT

PLANS FOR THE CONSTRUCTION OF BOTANICAL BUILDING AND GARDENS PHASE 2 IRRIGATION PLAN

CONSULTANT

COMPANY ADDRESS: SPURLOCK LANDSCAPE ARCHITECTS, 2122 HANCOCK ST, SAN DIEGO, CA 92110
COMPANY PHONE NUMBER: 619-681-0090
COMPANY EMAIL DATE OF: AARMOUR@SPURLOCK-LAND.COM
SIGNING:

LICENSED LANDSCAPE ARCHITECT
LEIGH KYLE - 6132
Signature
06/30/25
Renewal Date
11/01/24
Date
STATE OF CALIFORNIA

SPEC. NO

FOR CITY APPROVAL

PARKS & RECREATION DEPARTMENT
SHEET 10 OF 23 SHEETS

1847-6266
NAD83 COORDINATES

207-1706
LAMBERT COORDINATES

DRAWING NO. L207

IRRIGATION MATERIAL LEGEND (PARKS AND REC.)

SYMBOL Q	T	H	F	MANUFACTURER	MODEL NO. / DESCRIPTION	FLOW RATE (GPM)	PSI	RADIUS	P.R. (TRI.)	DETAIL
1	2	3	4	HUNTER	PROS-06-PRS40-CV 6" POP-UP TURF HEAD WITH A MP1000-90(Q/T/H)/360 ADJUSTABLE NOZZLE	.19, .28, .37, .75	30	12 FT	0.45 IN./HR.	SDI-103
5	6	7	8	HUNTER	PROS-06-PRS40-CV 6" POP-UP TURF HEAD WITH A MP2000-90(Q/T/H)/360 ADJUSTABLE NOZZLE	.40, .57, .74, 1.47	30	17 FT	0.45 IN./HR.	SDI-103
9	10	11	12	HUNTER	PROS-06-PRS40-CV 6" POP-UP TURF HEAD WITH A MP3000-90(Q/T/H)/360 ADJUSTABLE NOZZLE	.86, 1.34, 1.82, 3.64	30	27 FT	0.45 IN./HR.	SDI-103
13	14	15	16	HUNTER	PROS-12-PRS40-CV 12" POP-UP SHRUB HEAD WITH A MP1000-90(Q/T/H)/360 ADJUSTABLE NOZZLE	.19, .28, .37, .75	30	12 FT	0.45 IN./HR.	SDI-103
17	18	19	20	HUNTER	PROS-12-PRS40-CV 12" POP-UP SHRUB HEAD WITH A MP2000-90(Q/T/H)/360 ADJUSTABLE NOZZLE	.40, .57, .74, 1.47	30	17 FT	0.45 IN./HR.	SDI-103
21	22	23	24	HUNTER	PROS-12-PRS40-CV 12" POP-UP SHRUB HEAD WITH A MP3000-90(Q/T/H)/360 ADJUSTABLE NOZZLE	.86, 1.34, 1.82, 3.64	30	27 FT	0.45 IN./HR.	SDI-103
B1				RAIN BIRD	PROS-04-PRS30-CV 4" POP-UP BUBBLER HEAD WITH MSBN-50Q BUBBLER NOZZLE AND 1402 DEEP WELL BUBBLER, PROVIDE TWO (2) BUBBLERS, ONE (1) OF EACH PER TREE.	.50 (1.00)	30	N/A	1.00 IN./HR.	SDI-103,SDI-104
B2				HUNTER / RAIN BIRD	PROS-04-PRS30-CV 4" POP-UP BUBBLER HEAD WITH A RAIN BIRD 5-CST-B STREAM BUBBLER NOZZLE, EACH SYMBOL REPRESENTS ONE (1) BUBBLER. ADJUST BUBBLER STREAMS TO WET THE ROOT BALL AND ADJACENT AMENDED SOIL.	.50	30	N/A	0.50 IN./HR.	SDI-103
B3				HUNTER / RAIN BIRD	PROS-04-PRS30-CV 4" POP-UP BUBBLER HEAD WITH 5F-B STREAM BUBBLER NOZZLE, EACH SYMBOL REPRESENTS ONE (1) BUBBLER. ADJUST BUBBLER STREAMS TO WET THE ROOT BALL AND ADJACENT AMENDED SOIL.	1.5	30	N/A	0.50 IN./HR.	SDI-103
				NETAFIM	TLHCVXR5-12 SUBSURFACE DRIP TUBING WITH 0.53 GPH, PRESSURE COMPENSATING EMITTERS INTERNALLY INSTALLED IN THE DRIP TUBING AT 12" O.C. SPACING. DRIP TUBING SHALL BE EQUIPPED WITH COPPER OXIDE INFUSED EMITTERS AND A PHYSICAL BARRIER TO PREVENT ROOT INTRUSION INTO THE DRIP EMITTER. DRIP EMITTERS SHALL BE CONTINUOUS FLUSHING TYPE AND EQUIPPED WITH A CHECK VALVE AND ANTI- SIPHON FEATURE. DRIP TUBING SHALL BE INSTALLED 4" BELOW FINISHED SOIL GRADE (NOT COUNTING MULCH) AND IN PARALLEL ROWS A MAXIMUM OF 16" ON CENTER. THE PERIMETER ROW OF DRIP TUBING SHALL BE INSTALLED A MAXIMUM OF 4" FROM THE EDGE OF ANY HARDSCAPE OR TURF EDGE. ALL SUBSEQUENT INTERIOR ROWS SHALL BE ADJUSTED TO PROVIDE AN EVEN SPACING ACROSS THE PLANTER WITHOUT EXCEEDING 16" MAXIMUM SPACING. INSTALL 9" PVC COATED GALVANIZED TUBING STAKES A MAXIMUM OF FIVE (5) FEET ON CENTER ALONG THE LENGTH OF THE TUBING. TUBING STAKES SHALL BE MODEL #GDTS140900 AS MANUFACTURED BY GPH IRRIGATION PRODUCTS (866) 582-9684. THE HATCH PATTERN SYMBOLS ON THE PLANS REPRESENT THE APPROXIMATE DIRECTION AND SPACING OF THE DRIP TUBING ROWS, SEE SPACING REQUIREMENTS ABOVE AND IN DETAILS.					A,B,C
					CONNECTION BETWEEN HCVXR DRIP TUBING AND PVC SUPPLY AND DISCHARGE HEADERS SHALL BE MADE USING TL DRIP LINE BARBED FITTINGS, SCH. 40 PVC THREADED FITTINGS, SCH. 80 NIPPLES AND FLEXIBLE NIPPLES. WHEN THE CONNECTION IS AT THE END RUN OF THE TUBING USE A 1/2" SCH. 40 PVC THREADED 90° ELBOW, A 1/2" X LENGTH AS REQUIRED SCH. 80 PVC THREADED NIPPLE, A 1/2" X 6" MIPT X FIPT FLEXIBLE NIPPLE, AND A TL050MA 17mm BARB X 1/2" MIPT ADAPTER FITTING. WHEN THE CONNECTION IS IN THE MIDDLE OF THE TUBING RUN USE A 1/2" SCH. 40 PVC THREADED TEE FITTING, A 1/2" X LENGTH AS REQUIRED SCH. 80 PVC THREADED NIPPLE, A 1/2" X 6" MIPT X FIPT FLEXIBLE NIPPLE, AND TWO (2) TL050MA 17mm BARB X 1/2" MIPT ADAPTERS. ALL END RUNS OF TUBING SHALL BE CONNECTED WITH A PVC DISCHARGE HEADER. FLEXIBLE NIPPLES SHALL BE MODEL #GFN050600 AS MANUFACTURED BY GPH IRRIGATION PRODUCTS (866) 582-9684.					A,B,C
NO SYMBOL				NETAFIM	TL SERIES 17mm BARBED FITTINGS FOR CONNECTIONS BETWEEN DRIP TUBING (TUBING-TO-TUBING ONLY). NO HEATING OF TUBING SHALL BE ALLOWED.					A,B,C
				AS APPROVED	PVC SUPPLY AND DISCHARGE HEADERS SHALL BE PVC LATERAL LINE PIPE (AS SHOWN BELOW), 1" MINIMUM SIZE WITH SCH. 40 PVC FITTINGS.					A,B,C
FV				NETAFIM	TL050MFV-1 AUTOMATIC FLUSH VALVE WITH THREADED 1/2" MPT INLET, INSTALLED WITH SCH. 40 PVC MALE ADAPTOR, FOR USE AS A DRIP TUBING FLUSH VALVE, SEE PLANS FOR LOCATIONS. INSTALL INSIDE A 6" ROUND VALVE BOX.					SDI-129,A
				EXISTING	EXISTING BACKFLOW DEVICE, PROTECT IN PLACE. CONTRACTOR TO PROVIDE A NEW STAINLESS STEEL ENCLOSURE AND REMOVE PIPE BARRIER.					N/A
				NIBCO	T-211-YK SERIES, BRASS GLOBE VALVE, 1" SIZE FOR QUICK COUPLERS, SIZE TO MATCH LARGEST RCV IN MANIFOLD FOR RCV SIDE OF MANIFOLD					SDI-106,SDI-126
				EXISTING	EXISTING BRASS GLOVE VALVE, PROTECT IN PLACE					N/A
				NIBCO	T-113-K SERIES, 2" BRASS GATE VALVE WITH BRONZE CROSS HANDLE, FOR MAINLINE ISOLATION					SDI-107
				RAIN BIRD	44LRC 1" QUICK COUPLER VALVE WITH LOCKING VINYL COVER.					SDI-105,SDI-126
				EXISTING	EXISTING QUICK COUPLER VALVE, PROTECT IN PLACE					N/A
				RAIN BIRD	XXX-EFB-CP, BRASS REMOTE CONTROL VALVE (RCV), SIZE AS SHOWN (1", 1 1/2" AND 2" SIZES)					SDI-114,SDI-126
				RAIN BIRD	XXX-EFB-CP, BRASS DRIP REMOTE CONTROL VALVE, SIZE AS SHOWN (1" AND 1 1/2" SIZES). INSTALL A DISC FILTER AND AN INLINE PRESSURE REGULATOR ON THE DOWNSTREAM SIDE OF EACH DRIP REMOTE CONTROL VALVE (DRCV). FOR 1" DRCV'S INSTALL A RAIN BIRD LCRBY-100D DISC FILTER AND A SENNINGER 1" PMR-40-MF PRESSURE REGULATOR. FOR 1 1/2" DRCV'S INSTALL A RAIN BIRD LCRBY-150D DISC FILTER AND A SENNINGER 1 1/4" PMR-40-HF PRESSURE REGULATOR. USE A 1 1/2" SCH. 40 PVC THREADED COUPLING, A 1 1/2" X 1 1/4" PVC THREADED REDUCER BUSHING, AND A 1 1/4" X 2" SCH. 80 PVC NIPPLE AS REQUIRED TO CONNECT THE 1 1/4" REGULATOR TO THE DOWNSTREAM SIDE OF THE 1 1/2" FILTER. INSTALL THE DRCV ASSEMBLY INSIDE A JUMBO RECTANGULAR VALVE BOX.					SDI-114,SDI-126, SDI-127
				EXISTING	EXISTING BRASS REMOTE CONTROL VALVE (RCV), PROTECT IN PLACE					N/A
				EXISTING	EXISTING TORO MCE IRRIGATION CONTROLLER, PROTECT IN PLACE. CONTRACTOR TO FIELD VERIFY USED AND AVAILABLE OPEN STATIONS AVAILABLE.					N/A
				AS APPROVED	PVC PIPE 3/4" - 2 1/2" SCH. 40, SOLVENT WELD WITH SCH. 40 PVC FITTINGS, AS LATERAL LINES					SDI-110
				AS APPROVED	PVC PIPE 2" - 3" CL. 315, SOLVENT WELD WITH SCH. 80 PVC FITTINGS, AS MAINLINES					SDI-110,SDW-151
				EXISTING	EXISTING IRRIGATION MAINLINE, PROTECT IN PLACE					N/A
				AS APPROVED	PVC PIPE SCH. 40 AS SLEEVING, 2 TIMES THE DIAMETER OF PIPE OR WIRE BUNDLE CARRIED (2" MINIMUM SIZE) INSTALL ALL PIPE AND WIRE UNDER PAVING, HARDSCAPE, ETC. (OR AS DIRECTED BY OWNER'S AUTHORIZED REPRESENTATIVE) INSIDE SLEEVES.					SDI-110
				PAIGE ELECTRIC	P7079D POLYETHYLENE INSULATED, SOLID COPPER CONDUCTOR IRRIGATION CONTROL WIRE #14UF AWG , COMMON WIRES SHALL BE #12UF AWG DIRECT BURIAL (U.L. APPROVED). REFER TO WHITEBOOK SECTION 800-3.2.2 FOR WIRE COLOR REQUIREMENTS. THE CONTRACTOR SHALL ROUTE TWO (2) SPARE CONTROL WIRES FROM THE CONTROLLER ALONG THE FURTHEST MANIFOLDS ON THE MAINLINE IN ALL DIRECTIONS AWAY FROM THE CONTROLLER. LOOP SPARE WIRES UP AND INTO EACH VALVE BOX ALONG THE MAINLINE, PROVIDING A 3 FOOT MINIMUM LOOP.					SDI-110, SDI-110,SDI-119, D
NO SYMBOL				SPEARS	DS-100 WIRE CONNECTION WITH DS-300 SEALER FOR USE ON ALL WIRE SPLICES AND CONNECTIONS					D
NO SYMBOL				BROOKS PROD.	CONCRETE VALVE BOXES WITH HINGED, LOCKING CAST IRON LIDS, MODEL 3-HL, 39MB JUMBO VALVE BOX WITH CAST IRON LOCKING LID FOR DRIP VALVE ASSEMBLIES, 1-RD 7" ROUND VALVE BOX WITH CAST IRON LID FOR DRIP FLUSH VALVES. FOR USE IN NON-VEHICULAR TRAFFIC SITUATIONS ONLY. DO NOT INSTALL IN CONCRETE OR ASPHALT.					N/A

CONTRACTOR TO REFER TO THE CURRENT CITY OF SAN DIEGO STANDARD DRAWINGS 2021 EDITION FOR INSTALLATION DETAILS

WATER EFFICIENT LANDSCAPE WORKSHEET

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

sweeney + associates IRRIGATION DESIGN AND CONSULTING

Project Name: Balboa Park Boctanical Gardens Ph2

Project Address: San Diego, California

Reference Evapotranspiration (ETo) 46.5 **In./Yr.** **Residential Project?** No

Hydrozone # / Planting Description[a]	Plant Factor	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							
1. Low Water Use Plantings	0.20	Overhead / Bubblers / Drip	0.75	0.27	17,711	4,782	137,864
2. Moderate Water Use Plantings	0.40	Overhead / Bubblers / Drip	0.75	0.54	14,966	8,082	232,994
3. High Water Use Turf (See SLA Below)	0.70	Overhead	0.75	0.94	0	0	0
4. Low Water Use Trees / Palms	0.30	Bubblers	0.81	0.38	2,000	760	21,911
5. Medium Water Use Trees / Palms	0.40	Bubblers	0.81	0.50	3,125	1,563	45,047
6. High Water Use Trees	0.70	Bubblers	0.81	0.87	125	109	3,135
				Totals:	**37,927**	**15,295**	
Special Landscape Areas							
3. Active Turf				1.00	16,400	16,400	472,812
				Totals:	**16,400**	**16,400**	
				Estimated Total Water Use (ETWU) Total:			**913,763**
				Maximum Applied Water Allowance (MAWA)[e]:			**964,858**

[a] Hydrozone # / Planting Description	[b] Irrigation Method	[c] Irrigation Efficiency
E.g.	*Overhead Spray of*	*0.75 for Spray*
1.) Front Lawn	*Drip*	*0.81 for Drip*
2.) Low Water Use Plantings		
3.) Medium Water Use Plantings		

[d] ETWU (Annual Gallons Required) *= ETo x 0.62 x ETAF x Area*

Where 0.62 is a conversion factor that converts acre-inches/acre/year to gallons/square foot/year.

[e] MAWA (Annual Gallons Allowed) *= ETo x 0.62 x [(ETAF x LA) + ((1 - ETAF) x SLA)]*

Where 0.62 is a conversion factor that converts acre-inches/acre/year to gallons/square foot/year,
LA is the total landscape area in square feet, SLA is the total special landscape area in square feet,
and ETAF is 0.55 for residential projects and 0.45 for non-residential projects.

Evapotranspiration Adjustment Factor (ETAF) Calculations

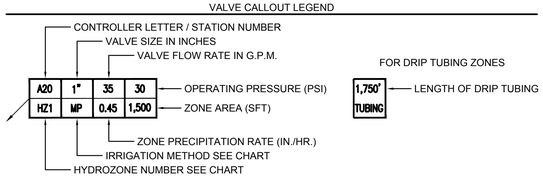
This non-residential project complies with the WELO and its average ETAF is less than ***0.45***

Regular Landscape Areas		**All Landscape Areas**	
Total ETAF x Area	15,295	Total ETAF x Area	31,695
Total Area	37,927	Total Area	54,327
Average ETAF	**0.4**	**Average ETAF**	**0.58**

IRRIGATION NOTES

1. ALL LOCAL MUNICIPAL AND STATE LAWS, RULES AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK ARE HEREBY INCORPORATED INTO AND MADE A PART OF THESE SPECIFICATIONS AND THEIR PROVISIONS SHALL BE CARRIED OUT BY THE CONTRACTOR.
2. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES, STRUCTURES AND SERVICES BEFORE COMMENCING WORK. THE LOCATIONS OF UTILITIES, STRUCTURES AND SERVICES SHOWN IN THESE PLANS ARE APPROXIMATE ONLY. ANY DISCREPANCIES BETWEEN THESE PLANS AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE.
3. THE CONTRACTOR SHALL OBTAIN THE PERTINENT ENGINEERING OR ARCHITECTURAL PLANS BEFORE BEGINNING WORK.
4. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS REQUIRED TO PERFORM THE WORK INDICATED HEREIN BEFORE BEGINNING WORK.
5. THIS DESIGN IS DIAGRAMMATIC. ALL EQUIPMENT SHOWN IN PAVED AREAS IS FOR DESIGN CLARITY ONLY AND IS TO BE INSTALLED WITHIN PLANTING AREAS.
6. THE CONTRACTOR SHALL NOT WILLFULLY INSTALL ANY EQUIPMENT AS SHOWN ON THE PLANS WHEN IT IS OBVIOUS IN THE FIELD THAT UNKNOWN CONDITIONS EXIST THAT WERE NOT EVIDENT AT THE TIME THESE PLANS WERE PREPARED. ANY SUCH CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE PRIOR TO ANY WORK OR THE IRRIGATION CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR ANY FIELD CHANGES DEEMED NECESSARY BY THE OWNER.
7. INSTALL ALL EQUIPMENT AS SHOWN IN THE DETAILS AND SPECIFICATIONS. CONTRACTOR SHALL BE RESPONSIBLE TO COMPLY WITH LOCAL CITY, COUNTY AND STATE REQUIREMENTS FOR BOTH EQUIPMENT AND INSTALLATION.
8. ACTUAL LOCATION FOR THE INSTALLATION OF THE BACKFLOW PREVENTER AND THE AUTOMATIC CONTROLLER IS TO BE DETERMINED IN THE FIELD BY THE RESIDENT ENGINEER.
9. CONTRACTOR IS TO PROVIDE AN ADDITIONAL PILOT WIRE FROM CONTROLLER ALONG ENTIRETY OF MAIN LINE TO THE LAST RCV ON EACH AND EVERY LEG OF MAIN LINE. LABEL SPARE WIRES AT BOTH ENDS.
10. ALL PIPE UNDER PAVED AREAS TO BE INSTALLED IN SLEEVING TWICE THE DIAMETER OF THE PIPE CARRIED. SEE LEGEND FOR TYPE. ALL WIRE UNDER PAVED AREAS TO BE INSTALLED IN A SCH. 40 SLEEVE THE SIZE REQUIRED TO EASILY PULL WIRE THROUGH. ALL SLEEVES TO BE INSTALLED WITH A MINIMUM DEPTH AS SHOWN ON THE SLEEVING DETAILS. SLEEVES TO EXTEND AT LEAST 12" PAST THE EDGE OF THE PAVING.
11. ALL QUICK COUPLER AND REMOTE CONTROL VALVES TO BE INSTALLED IN SHRUB OR GROUND COVER AREAS WHERE POSSIBLE. ALL QUICK COUPLER AND REMOTE CONTROL VALVES TO BE INSTALLED AS SHOWN ON THE INSTALLATION DETAILS. INSTALL ALL QUICK COUPLER AND REMOTE CONTROL VALVES WITHIN 18" OF HARDSCAPE.
12. ALL HEADS ARE TO BE INSTALLED WITH THE NOZZLE, SCREEN AND ARCS SHOWN ON THE PLANS. ALL HEADS ARE TO BE ADJUSTED TO PREVENT OVERSPRAY ONTO BUILDINGS, WALLS, FENCES AND HARDSCAPE. THIS INCLUDES, BUT NOT LIMITED TO, ADJUSTMENT OF DIFFUSER PIN OR ADJUSTMENT SCREW, REPLACEMENT OF PRESSURE COMPENSATING SCREENS, REPLACEMENT OF NOZZLES WITH MORE APPROPRIATE RADIUS UNITS AND THE REPLACEMENT OF NOZZLES WITH ADJUSTABLE ARC UNITS.
13. CONTRACTOR SHALL INSTALL ADDITIONAL CHECK VALVES TO HEADS AND LATERALS AS REQUIRED TO PREVENT LOW HEAD DRAINAGE.
14. THE CONTRACTOR SHALL USE PROPER GROUNDING TECHNIQUES FOR GROUNDING THE CONTROLLER AND RELATED EQUIPMENT PER MANUFACTURERS SPECIFICATIONS. SWEENEY AND ASSOCIATES RECOMMENDS MEASURING FOR PROPER GROUND AT LEAST ONCE ANNUALLY, AND NECESSARY ADJUSTMENTS MADE TO COMPLY WITH MANUFACTURER SPECIFICATIONS.
15. THE CONTRACTOR IS REQUIRED TO CONTACT DIGALERT OR 811 A MINIMUM OF TWO (2) DAYS PRIOR TO THE START OF ANY EXCAVATIONS ON THE PROJECT AND SPECIFICALLY PRIOR TO THE INSTALLATION OF ANY GROUNDING RODS. DIAL 811 OR LOG ONTO WWW.DIGALERT.ORG TO START A PROJECT TICKET. DIGALERT AND 811 IS A FREE SERVICE PROVIDED TO THE PROJECT. FAILURE TO CONTACT AND HAVE THE EXISTING UTILITIES IDENTIFIED, LOCATED AND MARKED SHALL MAKE THE CONTRACTOR SOLELY RESPONSIBLE FOR ANY AND ALL DAMAGES.
16. REFER TO (PLANTING NOTES OR ARBORIST ASSESSMENT?) FOR REQUIREMENTS OF IRRIGATION WORK AROUND EXISTING TREES TO REMAIN AND BE PROTECTED IN PLACE. NO MECHANICAL TRENCHING OR WITHIN THE DRIPLINE OF EXISTING TREES TO REMAIN AND TO BE PROTECTED IN PLACE. ONLY HAND TOOLS OR AN AIR SPADE SHALL BE USED WITHIN THE DRIP LINE OF EXISTING TREES TO REMAIN AND TO BE PROTECTED IN PLACE.

VALVE CALLOUT LEGEND



HYDROZONE DESCRIPTION CHART			
NUMBER	DESCRIPTION OF THE HYDROZONE	WUCOLS	PLANT FACTOR
HZ 1	LOW WATER USE PLANTINGS	L	0.30
HZ 2	MODERATE WATER USE PLANTINGS	M	0.40
HZ 3	MODERATE WATER USE TURF	M	0.70
HZ 4	LOW WATER USE TREES / PALMS	L	0.30
HZ 5	MOD. WATER USE TREES / PALMS	M	0.50
HZ 6	HIGH WATER USE TREES	H	0.90

IRRIGATION METHOD DESCRIPTION CHART			
LETTERS	DESCRIPTION OF THE IRRIGATION	TYPE	IR. EFFICIENCY
MP	MP ROTATORS	SPRAY	0.75
DT	DRIP TUBING	DRIP	0.81
SB	SHRUB BUBBLERS	DRIP	0.81
TB	TREE BUBBLERS	DRIP	0.81

I HAVE COMPLIED WITH THE CRITERIA OF THE IRRIGATION GUIDELINES AND APPLIED THEM ACCORDINGLY FOR THE EFFICIENT USE OF WATER IN THE IRRIGATION DESIGN PLAN

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WARNING
0 1/2 1
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PRIVATE CONTRACT

PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2
IRRIGATION LEGEND AND NOTES

CONSULTANT

COMPANY ADDRESS: SPURLOCK LANDSCAPE ARCHITECTS, 2122 HANCOCK ST, SAN DIEGO, CA 92110
COMPANY PHONE NUMBER: 619-681-0090
COMPANY EMAIL DATE OF: AARMOUR@SPURLOCK-LAND.COM
SIGNING:

LICENSED LANDSCAPE ARCHITECT
KEION KYLE
STATE OF CALIFORNIA
Signature
06/30/25
Renewal Date
11/01/24
Date

SPEC. NO

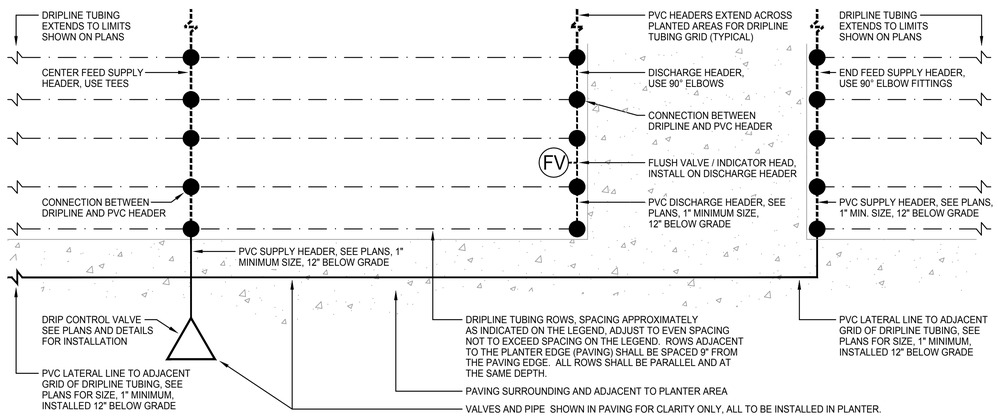
FOR CITY APPROVAL

PARKS & RECREATION DEPARTMENT
SHEET 11 OF 23 SHEETS

1847-6266
NAD83 COORDINATES

207-1706
LAMBERT COORDINATES

DRAWING NO. L208



PLAN VIEW - N.T.S.

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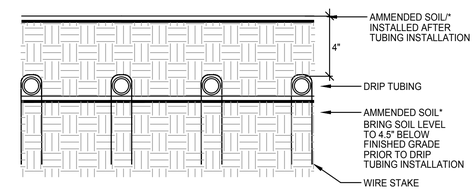
(A) DRIP TUBING LAYOUT (PLAN VIEW)



* AS PER LANDSCAPE DRAWINGS

RECOMMENDED INSTALLATION:

TO INSURE EVEN PARALLEL AND LEVEL TUBING ROWS IT IS RECOMMENDED THAT THE SOIL LEVEL IN THE PLANTER AREAS BE BROUGHT TO 4.5" BELOW FINISHED GRADE AND PROPERLY COMPACTED AS PER THE LANDSCAPED DRAWINGS PRIOR TO THE INSTALLATION OF THE TUBING.

INSTALL TUBING AS INDICATED ON THESE DRAWINGS AND SECURE TO GRADE USING WIRE HOOP STAKES AT 5 FEET ON CENTER SPACING.

BACKFILL FINAL 4.5" OF SOIL/BARK MULCH OVER THE TUBING AFTER INSTALLATION OF THE TUBING AND OBSERVATION BY THE OWNER'S AUTHORIZED REPRESENTATIVE.

SECTION VIEW - N.T.S.

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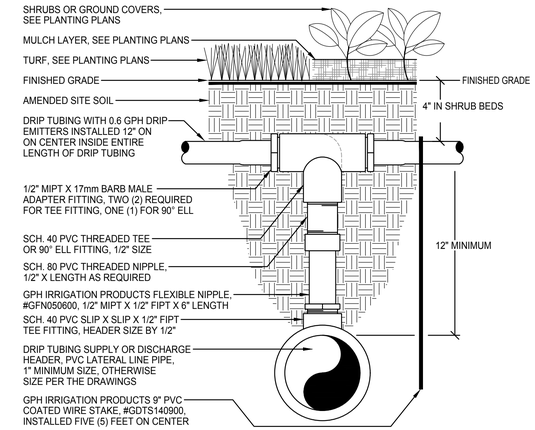
(B) DRIP TUBING LAYOUT (SECTION VIEW)



NOTE:
DRIP TUBING CONNECTION REQUIRED FOR ALL CONNECTIONS BETWEEN DRIP TUBING AND PVC HEADERS.
FOR CONNECTIONS AT END RUNS OF TUBING, USE A 90° ELL FITTING AND ONE ADAPTER FITTING FOR CONNECTION.
FOR CONNECTIONS IN THE MIDDLE OF RUNS OF TUBING, USE A TEE FITTING AND TWO ADAPTER FITTINGS FOR THE CONNECTION.

SECTION VIEW - N.T.S.

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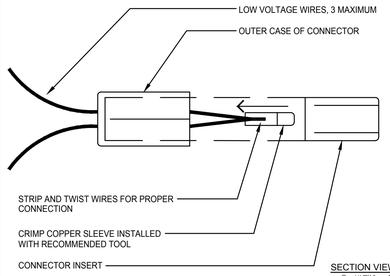
(C) DRIP CONNECTION



SECTION VIEW - N.T.S.

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(D) WIRE CONNECTION

IRRIGATION CONTROLLER RUN TIMES

POC or Controller's		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total / Avg.
1,2,3,A,B	ETo / Month (Inches):	2.10	2.40	3.40	4.60	5.10	5.30	5.70	5.60	4.30	3.60	2.40	2.00	**46.50**
	ETo / Day (Inches):	0.07	0.09	0.11	0.15	0.16	0.18	0.18	0.18	0.14	0.12	0.08	0.06	**0.13**
	Irrigation Days / Week:	3	4	4	5	5	5	5	5	4	4	3	3	

Plant / Irrig. Type	AKc	Pr Rate	IE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
Low Water Use Shrubs	0.20	0.45	0.75	5.6	5.3	6.8	7.6	8.2	8.8	9.2	9.0	8.9	7.2	6.6	5.4	Min./Day/Zone
MP Rotator	Number of Zones:		5	**28.1**	**26.7**	**34.1**	**38.2**	**40.9**	**44.0**	**45.8**	**45.0**	**44.6**	**36.1**	**33.2**	**26.8**	**Total Min./Day**
Low Water Use Shrubs	0.20	0.50	0.81	4.7	4.4	5.7	6.4	6.8	7.3	7.6	7.5	7.4	6.0	5.5	4.5	Min./Day/Zone
Bubblers	Number of Zones:		3	**14.1**	**13.3**	**17.1**	**19.1**	**20.5**	**22.0**	**22.9**	**22.5**	**22.3**	**18.1**	**16.6**	**13.4**	**Total Min./Day**
Low Water Use Shrubs	0.20	0.70	0.81	3.3	3.2	4.1	4.5	4.9	5.2	5.4	5.4	5.3	4.3	4.0	3.2	Min./Day/Zone
Drip Tubing	Number of Zones:		3	**10.0**	**9.5**	**12.2**	**13.6**	**14.6**	**15.7**	**16.3**	**16.1**	**15.9**	**12.9**	**11.9**	**9.6**	**Total Min./Day**
Moderate Water Use Shrubs	0.40	0.45	0.75	11.2	10.7	13.6	15.3	16.4	17.6	18.3	18.0	17.8	14.5	13.3	10.7	Min./Day/Zone
MP Rotator	Number of Zones:		2	**22.5**	**21.3**	**27.3**	**30.5**	**32.8**	**35.2**	**36.6**	**36.0**	**35.7**	**28.9**	**26.5**	**21.4**	**Total Min./Day**
Moderate Water Use Shrubs	0.40	0.50	0.81	9.4	8.9	11.4	12.7	13.6	14.7	15.3	15.0	14.9	12.0	11.1	8.9	Min./Day/Zone
Bubblers	Number of Zones:		1	**9.4**	**8.9**	**11.4**	**12.7**	**13.6**	**14.7**	**15.3**	**15.0**	**14.9**	**12.0**	**11.1**	**8.9**	**Total Min./Day**
Moderate Water Use Shrubs	0.40	0.70	0.81	6.7	6.3	8.1	9.1	9.7	10.5	10.9	10.7	10.6	8.6	7.9	6.4	Min./Day/Zone
Drip Tubing	Number of Zones:		2	**13.4**	**12.7**	**16.2**	**18.2**	**19.5**	**20.9**	**21.8**	**21.4**	**21.2**	**17.2**	**15.8**	**12.7**	**Total Min./Day**
High Water Use Turf	0.70	0.45	0.75	19.7	18.7	23.9	26.7	28.7	30.8	32.0	31.5	31.2	25.3	23.2	18.7	Min./Day/Zone
MP Rotator	Number of Zones:		5	**98.4**	**93.3**	**119.4**	**133.6**	**143.3**	**153.9**	**160.2**	**157.4**	**156.1**	**126.5**	**116.1**	**93.7**	**Total Min./Day**
Low Water Use Trees	0.30	1.00	0.81	3.5	3.3	4.3	4.8	5.1	5.5	5.7	5.6	5.6	4.5	4.1	3.3	Min./Day/Zone
Bubblers	Number of Zones:		6	**21.1**	**20.0**	**25.6**	**28.6**	**30.7**	**33.0**	**34.3**	**33.7**	**33.4**	**27.1**	**24.9**	**20.1**	**Total Min./Day**
Moderate Water Use Trees	0.40	1.00	0.81	4.7	4.4	5.7	6.4	6.8	7.3	7.6	7.5	7.4	6.0	5.5	4.5	Min./Day/Zone
Bubblers	Number of Zones:		5	**23.4**	**22.2**	**28.4**	**31.8**	**34.1**	**36.6**	**38.1**	**37.5**	**37.2**	**30.1**	**27.7**	**22.3**	**Total Min./Day**
High Water Use Trees	0.70	1.00	0.81	8.2	7.8	10.0	11.1	11.9	12.8	13.3	13.1	13.0	10.5	9.7	7.8	Min./Day/Zone
Bubblers	Number of Zones:		1	**8.2**	**7.8**	**10.0**	**11.1**	**11.9**	**12.8**	**13.3**	**13.1**	**13.0**	**10.5**	**9.7**	**7.8**	**Total Min./Day**
	Total Number of Zones:		**33**	248	236	302	337	362	389	405	398	394	319	293	237	Total Min./Day
	Total Controller Run Time in Hours:			**4.14**	**3.93**	**5.03**	**5.62**	**6.03**	**6.48**	**6.74**	**6.63**	**6.57**	**5.32**	**4.89**	**3.94**	**Total Hrs./Day**
				JAN	**FEB**	**MAR**	**APR**	**MAY**	**JUN**	**JUL**	**AUG**	**SEP**	**OCT**	**NOV**	**DEC**	

Note: These schedules are intended only for compliance with local municipal codes and the water efficient landscape ordinance. These calculations represent the MAXIMUM REASONABLE run times and are used to ensure that all irrigation may be completed during the specific watering window allowed. These schedules do not include rainfall, site soil types, specific exposures (shade versus sun), actual irrigation days, or specific slope position. It is solely the responsibility of the irrigation contractor to program the controller as required to apply the correct amount of irrigation water for the landscape. All smart controllers shall be programmed using the specified ET or weather sensing equipment, satellite provided ET data, soil moisture sensors, and rain shut off devices as required. Contractor shall provide a controller schedule inside the controller cabinet prior to final turnover of the project to the owner.

I HAVE COMPLIED WITH THE CRITERIA OF THE IRRIGATION GUIDELINES AND APPLIED THEM ACCORDINGLY FOR THE EFFICIENT USE OF WATER IN THE IRRIGATION DESIGN PLAN

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N
10' 5' 0' 10'

SPURLOCK
LANDSCAPE ARCHITECTS
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San Diego, California 92110
619.681.0090
spurlock-land.com

WARNING
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PRIVATE CONTRACT

PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2
IRRIGATION DETAILS

CONSULTANT
COMPANY ADDRESS: SPURLOCK LANDSCAPE ARCHITECTS, 2122 HANCOCK ST, SAN DIEGO, CA 92110
COMPANY PHONE NUMBER: 619-681-0090
COMPANY EMAIL DATE OF: AARMOUR@SPURLOCK-LAND.COM
SIGNING:

LICENSED LANDSCAPE ARCHITECT
LEIGH KYLE - 6177
Signature
06/30/25
Renewal Date
11/01/24
Date
STATE OF CALIFORNIA

SPEC. NO

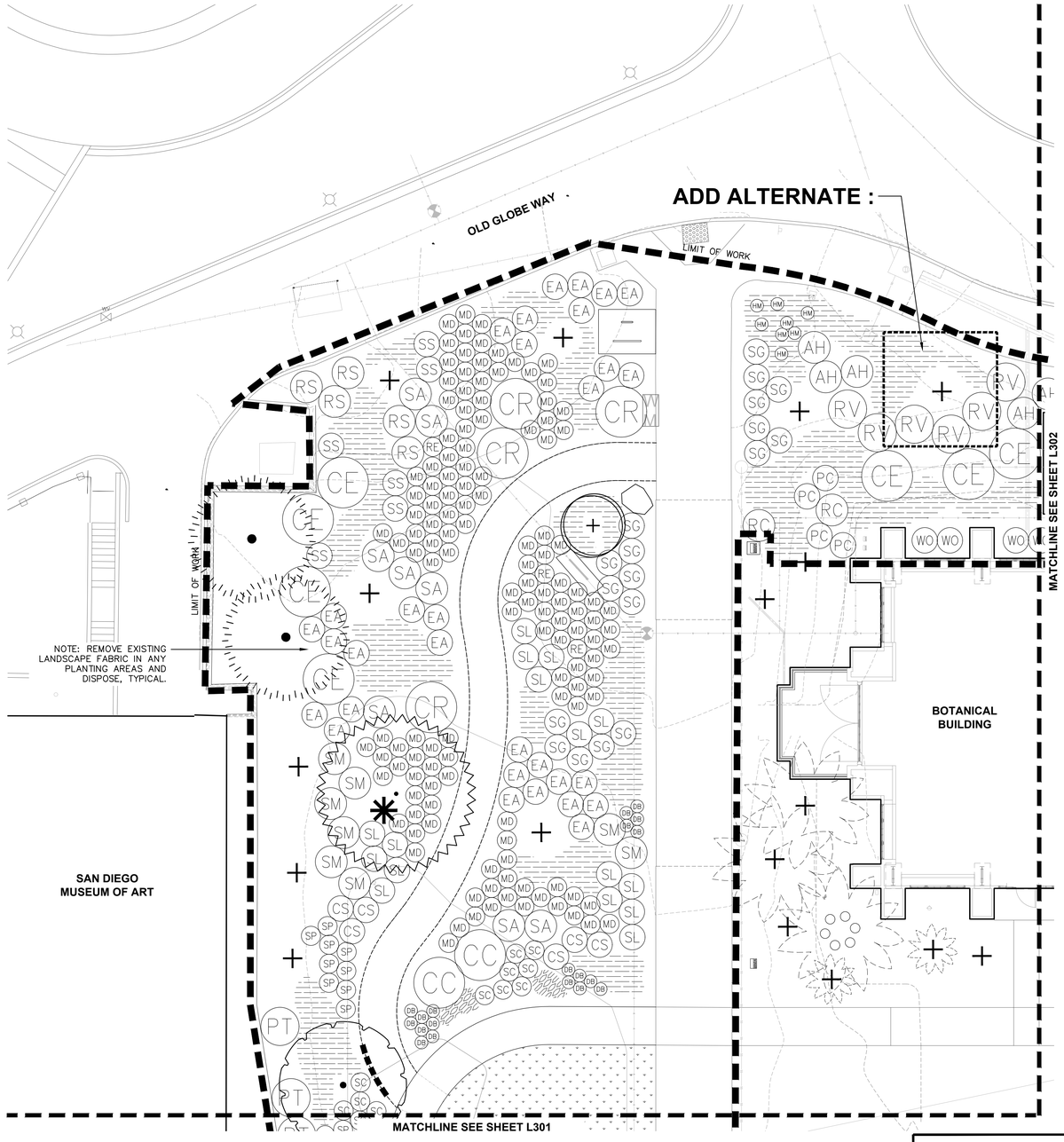
FOR CITY APPROVAL

PARKS & RECREATION DEPARTMENT
SHEET 12 OF 23 SHEETS

1847-6266
NAD83 COORDINATES

207-1706
LAMBERT COORDINATES

DRAWING NO.
L209



PLANT KEY

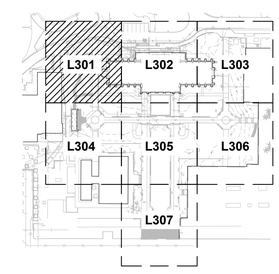
SEE SHEET L308–L310 FOR COMPLETE PLANTING LEGEND

SYMBOL	BOTANICAL / COMMON NAME
EXISTING TREE TO REMAIN	
	_EXISTING MULTI TRUNK PALM TREE TO REMAIN
	_EXISTING PALM TREE TO REMAIN
	_EXISTING TREE TO REMAIN
RELOCATED TREES	
	_RELOCATED EXISTING CUPRESSUS CASHMERIANA
PROPOSED TREES	
	CUPRESSUS FORBESII TECATE CYPRESS
	PINUS CANARIENSIS CANARY ISLAND PINE
	VITEX AGNUS–CASTUS CHASTE TREE

SYMBOL	BOTANICAL / COMMON NAME
SHRUBS	
AH	ARCTOSTAPHYLOS X 'HOWARD MCMINN' HOWARD MCMINN MANZANITA
CS	CEANOTHUS RIGIDUS 'SNOWBALL' SNOWBALL MONTEREY CEANOTHUS
CC	CEANOTHUS X 'CONCHA' CONCHA WILD LILAC
CR	CEANOTHUS X 'RAY HARTMAN' RAY HARTMAN WILD LILAC
CE	CERCOCARPUS MINUTIFLORUS MOUNTAIN MAHOGANY
DB	DUDLEYA BRITTONII GIANT CHALK DUDLEYA
EA	ERIOGONUM ARBORESCENS SANTA CRUZ ISLAND BUCKWHEAT
HM	HEUCHERA MAXIMA ISLAND ALUM ROOT
MD	MUHLENBERGIA DUBIA PINE MUHLY
PC	PITTOSPORUM CRASSIFOLIUM 'COMPACTUM' DWARF KARO PITTOSPORUM
PT	PITTOSPORUM TOBIRA JAPANESE PITTOSPORUM
RC	RHAMNUS CALIFORNICA 'EVE CASE' EVE CASE COFFEEBERRY
RS	RIBES SANGUINEUM RED FLOWERING CURRANT
RV	RIBES VIBURNIFOLIUM EVERGREEN CURRANT
RE	ROMNEYA COULTERI MATILIJA POPPY
SA	SALVIA APIANA WHITE SAGE
SC	SALVIA CHAMAEDRYOIDES GERMANDER SAGE
SG	SALVIA GREGGII 'ALBA' WHITE TEXAS SAGE
SL	SALVIA LEUCANTHA 'SANTA BARBARA' SANTA BARBARA MEXICAN BUSH SAGE
SM	SALVIA MELLIFERA BLACK SAGE
SS	SALVIA SPATHACEA HUMMINGBIRD SAGE
SP	SALVIA X 'POZO BLUE' POZO BLUE SAGE
WO	WOODWARDIA FIMBRIATA GIANT CHAIN FERN

SHRUB AREAS

	CAREX DIVULSA EUROPEAN GREY SEDGE
	GERANIUM X 'ANN FOLKARD' ANN FOLKARD GERANIUM



ROOT BARRIER

PERCOLATIONS/SOIL TEST SITE

LIMIT OF WORK

NOTES:

1. PROVIDE IRRIGATION TO ALL PLANTING AREAS
2. ALL PLANTING AREAS EXCEPT TURF TO RECEIVE A 3" LAYER OF BARK MULCH PER SPECIFICATIONS UNLESS OTHERWISE NOTED.
3. ROOT BARRIERS TO BE INSTALLED IN ALL INSTANCES WHERE A TREE WILL BE PLANTED WITHIN 5' OF ADJACENT CURBS, SIDEWALKS, WALLS OR ANY FLATWORK OR HARDSCAPE.

ADD ALTERNATE 1:

REMOVAL OF EXISTING CEDRUS DEODORA #100, INCLUDING STUMP AND ROOTS 2" IN DIAMETER AND LARGER. REPLACE IN KIND WITH SPECIMEN 36" BOX TREE IN THE SAME LOCATION.

N

10' 5' 0' 10'

SPURLOCK
LANDSCAPE ARCHITECTS

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San Diego, California 92110

619.681.0090
spurlock-land.com

WARNING

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PRIVATE CONTRACT

PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2
PLANTING PLAN

CONSULTANT

COMPANY ADDRESS: SPURLOCK LANDSCAPE ARCHITECTS, 2122 HANCOCK ST, SAN DIEGO, CA 92110

COMPANY PHONE NUMBER: 619-681-0090

COMPANY EMAIL DATE OF: AARMOUR@SPURLOCK-LAND.COM

SIGNING:

LICENSED LANDSCAPE ARCHITECT
LEIGH KYLE – 6173
Signature
06/30/25
Renewal Date
11/01/24
Date
STATE OF CALIFORNIA

SPEC. NO

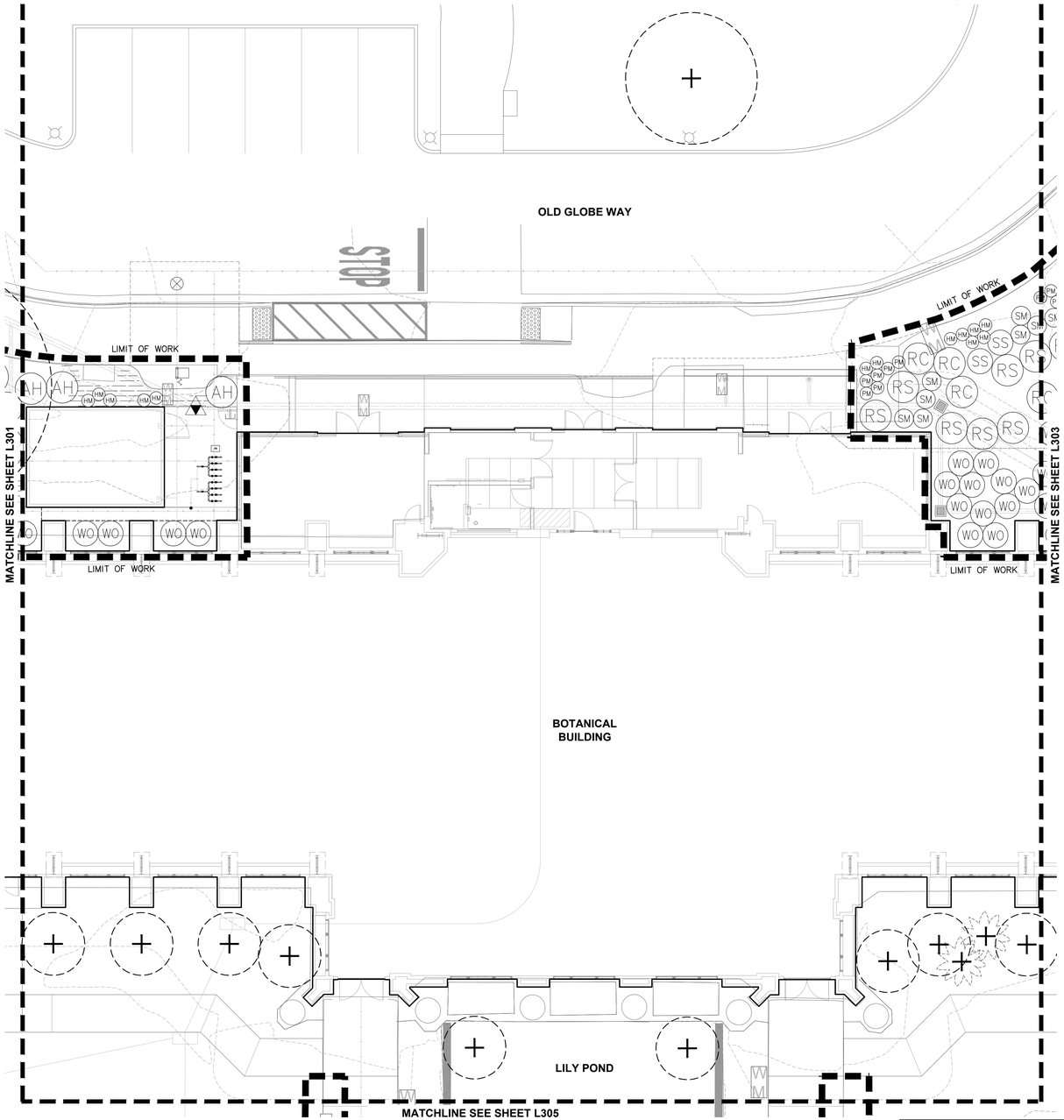
FOR CITY APPROVAL

PARKS & RECREATION DEPARTMENT
SHEET 13 OF 23 SHEETS

1847-6266
NAD83 COORDINATES

207-1706
LAMBERT COORDINATES

DRAWING NO.
L301

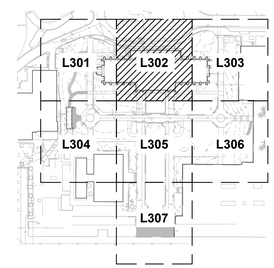


SYMBOL	BOTANICAL / COMMON NAME
EXISTING TREE TO REMAIN	
+	_EXISTING PALM TREE TO REMAIN
+	_EXISTING TREE TO REMAIN

PLANT KEY

SEE SHEET L308–L310 FOR COMPLETE PLANTING LEGEND

SYMBOL	BOTANICAL / COMMON NAME
SHRUBS	
AH	ARCTOSTAPHYLOS X 'HOWARD MCMINN' HOWARD MCMINN MANZANITA
HM	HEUCHERA MAXIMA ISLAND ALUM ROOT
PM	POLYSTICHUM MUNITUM WESTERN SWORD FERN
RC	RHAMNUS CALIFORNICA 'EVE CASE' EVE CASE COFFEEBERRY
RS	RIBES SANGUINEUM RED FLOWERING CURRANT
SS	SALVIA SPATHACEA HUMMINGBIRD SAGE
SM	SYMPHORICARPOS MOLLIS CREEPING SNOWBERRY
WO	WOODWARDIA FIMBRIATA GIANT CHAIN FERN
VINES	
▲▼	CLEMATIS LIGUSTICIFOLIA WESTERN WHITE CLEMATIS
SHRUB AREAS	
	CAREX DIVULSA EUROPEAN GREY SEDGE



- ROOT BARRIER
- PERCOLATIONS/SOIL TEST SITE
- LIMIT OF WORK

NOTES:

1. PROVIDE IRRIGATION TO ALL PLANTING AREAS
2. ALL PLANTING AREAS EXCEPT TURF TO RECEIVE A 3" LAYER OF BARK MULCH PER SPECIFICATIONS UNLESS OTHERWISE NOTED.
3. ROOT BARRIERS TO BE INSTALLED IN ALL INSTANCES WHERE A TREE WILL BE PLANTED WITHIN 5' OF ADJACENT CURBS, SIDEWALKS, WALLS OR ANY FLATWORK OR HARDSCAPE.

N 10' 5' 0' 10'

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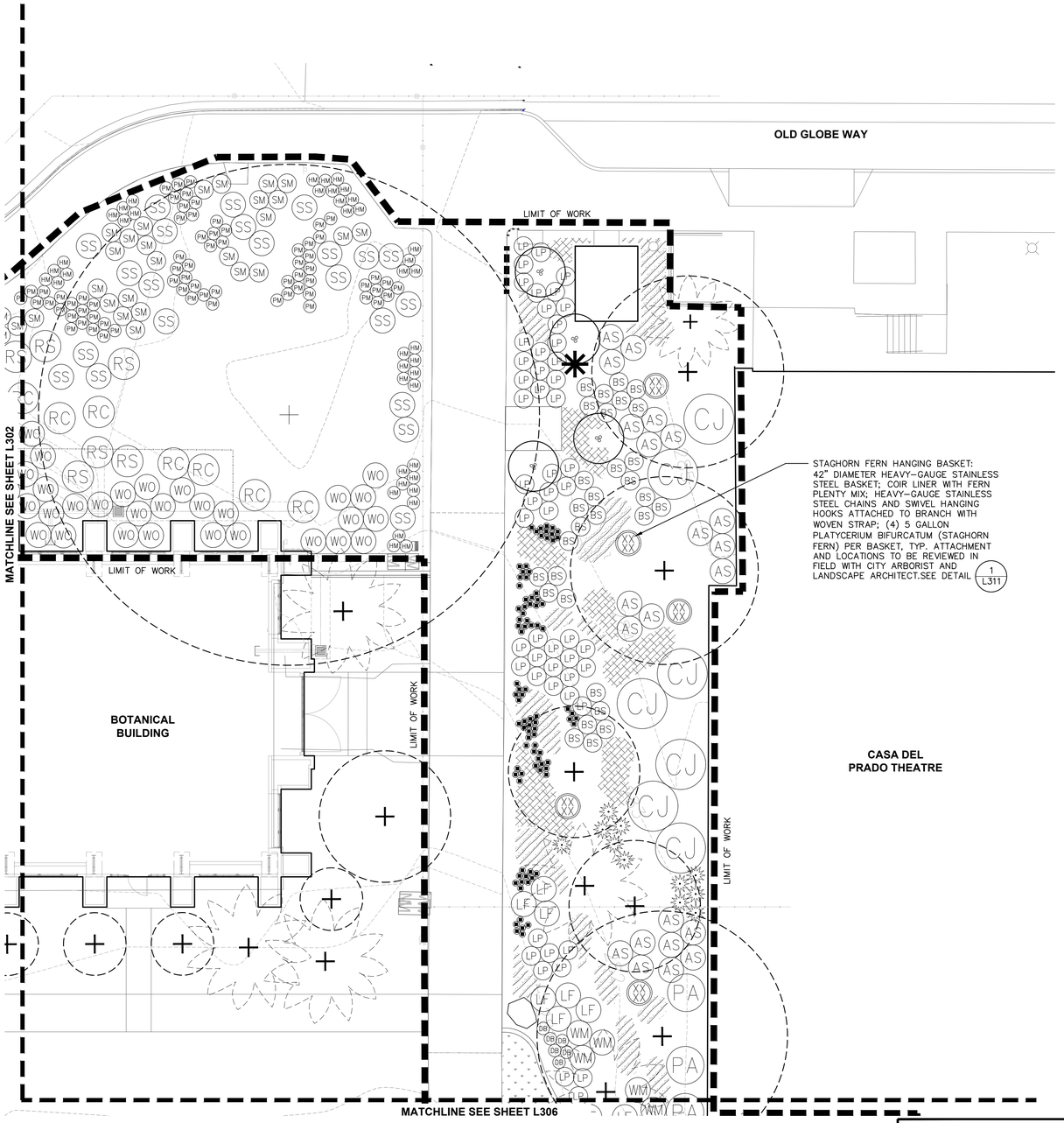
PRIVATE CONTRACT

PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2
PLANTING PLAN

CONSULTANT	SPEC. NO		PARKS & RECREATION DEPARTMENT SHEET 14 OF 23 SHEETS	
COMPANY ADDRESS: SPURLOCK LANDSCAPE ARCHITECTS, 2122 HANCOCK ST, SAN DIEGO, CA 92110 COMPANY PHONE NUMBER: 619-681-0090 COMPANY EMAIL DATE OF: AARMOUR@SPURLOCK-LAND.COM SIGNING:		FOR CITY APPROVAL		1847-6266 NAD83 COORDINATES 207-1706 LAMBERT COORDINATES
LICENSED LANDSCAPE ARCHITECT LEIGH KYLE – 6132 STATE OF CALIFORNIA Signature 06/30/25 Renewal Date 11/01/24 Date				DRAWING NO. L302



PLANT KEY

SEE SHEET L308–L310 FOR COMPLETE PLANTING LEGEND

SYMBOL	BOTANICAL / COMMON NAME
EXISTING TREE TO REMAIN	
	_EXISTING PALM TREE TO REMAIN
	_EXISTING TREE TO REMAIN

SYMBOL	BOTANICAL / COMMON NAME
PROPOSED TREES	
	OSMANTHUS FRAGRANS SWEET OLIVE

SYMBOL	BOTANICAL / COMMON NAME
SHRUBS	
AS	ACANTHUS SPINOSUS SPINY BEAR'S BREECH
BS	BLECHNUM GIBBUM 'SILVER LADY' SILVER LADY DWARF TREE FERN
CJ	CAMELLIA JAPONICA 'ALBA PLENA' ALBA PLENA CAMELLIA
DB	DUDLEYA BRITTONII GIANT CHALK DUDLEYA
	ENCEPHALARTOS HORRIDUS EASTERN CAPE BLUE CYCAD
HM	HEUCHERA MAXIMA ISLAND ALUM ROOT
LF	LEPECHINIA FRAGRANS ISLAND PITCHERSAGE
LP	LOMANDRA X 'PLATINUM BEAUTY' PLATINUM BEAUTY LOMANDRA
XX	PLATYCERIUM BIFURCATUM STAGHORN FERN
PA	PLECTRANTHUS ARGENTATUS 'SILVER SHIELD' SILVER SHIELD PLECTRANTHUS
PM	POLYSTICHUM MUNITUM WESTERN SWORD FERN
RC	RHAMNUS CALIFORNICA 'EVE CASE' EVE CASE COFFEEBERRY
RS	RIBES SANGUINEUM RED FLOWERING CURRANT
SS	SALVIA SPATHACEA HUMMINGBIRD SAGE
SM	SYMPHORICARPOS MOLLIS CREEPING SNOWBERRY
WM	WESTRINGIA FRUTICOSA 'MUNDI' COASTAL ROSEMARY
WO	WOODWARDIA FIMBRIATA GIANT CHAIN FERN

BULBS

LEUCOJUM AESTIVUM
SUMMER SNOWFLAKE (GROUPS OF 5)

SHRUB AREAS

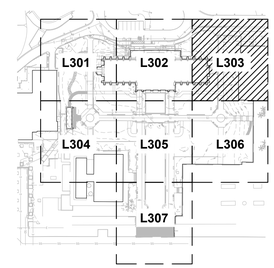
SANSEVIERIA TRIFASCIATA 'MOONSHINE'
MOONSHINE SNAKE PLANT

GROUND COVERS

CRASSULA MULTICAVA 'FAIRY'
FAIRY CRASSULA

SOD

BANDERA BERMUDA TURF
OVERSEEDED WITH RYE GRASS



ROOT BARRIER

PERCOLATIONS/SOIL TEST SITE

LIMIT OF WORK

NOTES:

1. PROVIDE IRRIGATION TO ALL PLANTING AREAS
2. ALL PLANTING AREAS EXCEPT TURF TO RECEIVE A 3" LAYER OF BARK MULCH PER SPECIFICATIONS UNLESS OTHERWISE NOTED.
3. ROOT BARRIERS TO BE INSTALLED IN ALL INSTANCES WHERE A TREE WILL BE PLANTED WITHIN 5' OF ADJACENT CURBS, SIDEWALKS, WALLS OR ANY FLATWORK OR HARDSCAPE.

N

10' 5' 0' 10'

SPURLOCK
LANDSCAPE ARCHITECTS

2122 Hancock Street
San Diego, California 92110

619.681.0090
spurlock-land.com

WARNING
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IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

PRIVATE CONTRACT

PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2
PLANTING PLAN

CONSULTANT

COMPANY ADDRESS: SPURLOCK LANDSCAPE ARCHITECTS, 2122 HANCOCK ST, SAN DIEGO, CA 92110

COMPANY PHONE NUMBER: 619-681-0090

COMPANY EMAIL DATE OF: AARMOUR@SPURLOCK-LAND.COM

SIGNING:

LICENSED LANDSCAPE ARCHITECT
LEIGH KYLE – 6747
STATE OF CALIFORNIA
Signature
06/30/25
Renewal Date
11/01/24
Date

SPEC. NO

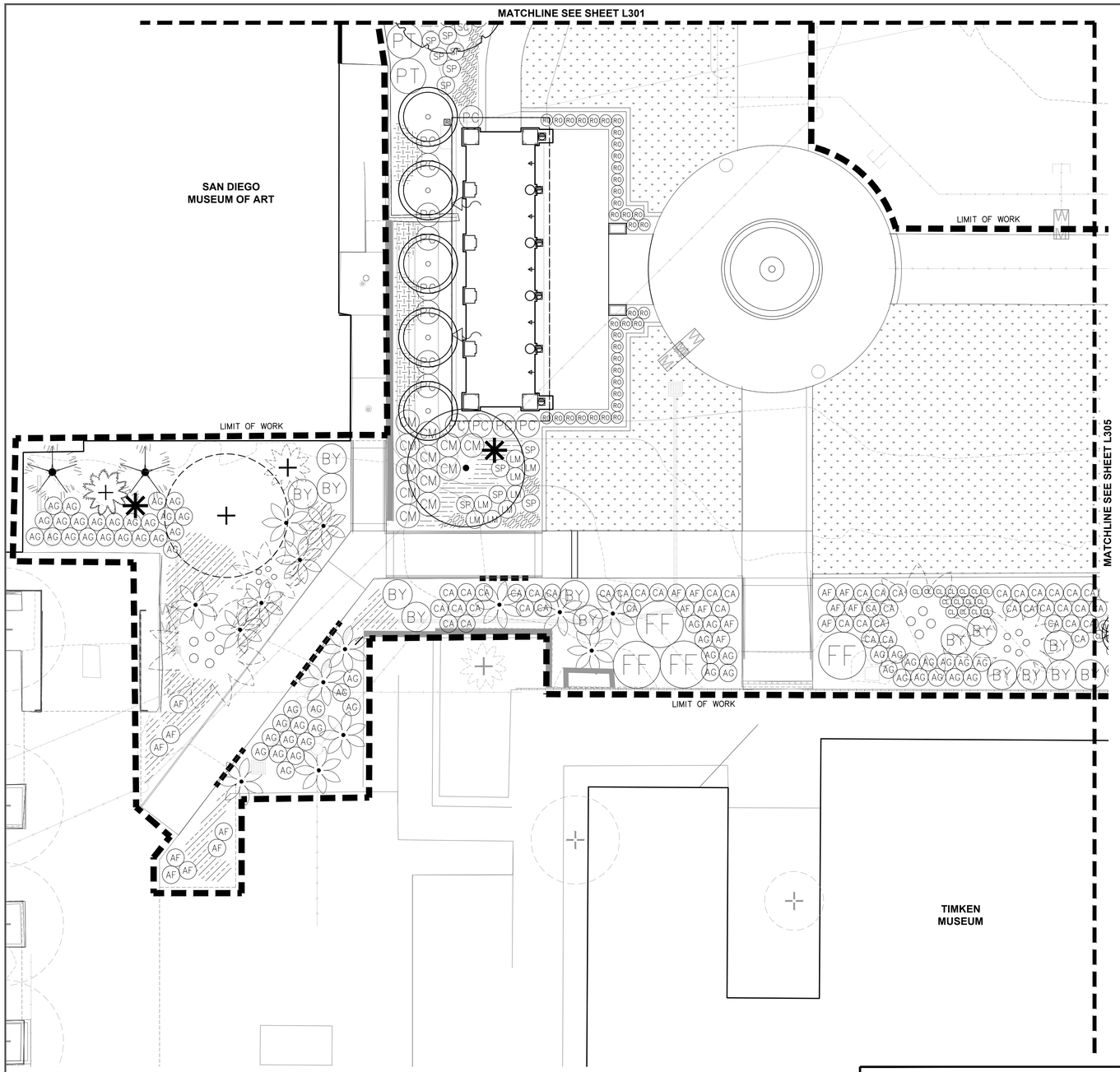
FOR CITY APPROVAL

PARKS & RECREATION DEPARTMENT
SHEET 15 OF 23 SHEETS

1847-6266
NAD83 COORDINATES

207-1706
LAMBERT COORDINATES

DRAWING NO. L303

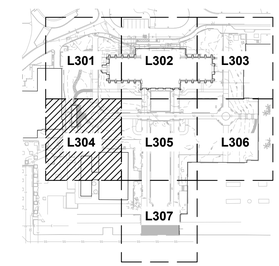


PLANT KEY

SEE SHEET L308–L310 FOR COMPLETE PLANTING LEGEND

SYMBOL	BOTANICAL / COMMON NAME
EXISTING TREE TO REMAIN	
	_EXISTING MULTI TRUNK PALM TREE TO REMAIN
	_EXISTING PALM TREE TO REMAIN
RELOCATED TREES	
	_RELOCATED EXISTING RHAPIS EXCELSA
PROPOSED TREES	
	BAUHINIA ACULEATA WHITE ORCHID TREE
	DIOON EDULE MEXICAN CYCAD
	JUNIPERUS CHINENSIS 'TORULOSA' HOLLYWOOD JUNIPER
	RHAPIS EXCELSA LADY PALM

SYMBOL	BOTANICAL / COMMON NAME
SHRUBS	
AG	AGAVE GEMINIFLORA TWIN FLOWERED AGAVE
AF	ALOE FEROX BITTER TREE ALOE
BY	BESCHORNERIA YUCCOIDES AMOLE
CM	CARISSA MACROCARPA 'GREEN CARPET' GREEN CARPET NATAL PLUM
CL	CLIVIA MINIATA BUSH LILY
CA	CRASSULA ARBORESCENS 'BLUE WAVES' SILVER DOLLAR JADE
FF	FURCRAEA FOETIDA 'MEDIOPICTA' MAURITIUS HEMP
LM	LAVANDULA X ALLARDII 'MEERLO' MEERLO LAVENDER
PC	PITTOSPORUM CRASSIFOLIUM "COMPACTUM" DWARF KARO PITTOSPORUM
PT	PITTOSPORUM TOBIRA JAPANESE PITTOSPORUM
RO	ROSMARINUS OFFICINALIS 'BOULE' BOULE ROSEMARY
SC	SALVIA CHAMAEDRYOIDES GERMANDER SAGE
SP	SALVIA X 'POZO BLUE' POZO BLUE SAGE
VINES	
	WISTERIA FLORIBUNDA JAPANESE WISTERIA
SHRUB AREAS	
	CAREX DIVULSA EUROPEAN GREY SEDGE
	CARISSA MACROCARPA 'GREEN CARPET' GREEN CARPET NATAL PLUM
	GERANIUM X 'ANN FOLKARD' ANN FOLKARD GERANIUM
	TRACHELOSPERMUM JASMINOIDES CHINESE STAR JASMINE
SOD	
	BANDERA BERMUDA TURF OVERSEEDED WITH RYE GRASS



PRIVATE CONTRACT

SPURLOCK
LANDSCAPE ARCHITECTS

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San Diego, California 92110
619.681.0090
spurlock-land.com

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PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2
PLANTING PLAN

- ROOT BARRIER
- PERCOLATIONS/SOIL TEST SITE
- LIMIT OF WORK

NOTES:

1. PROVIDE IRRIGATION TO ALL PLANTING AREAS
2. ALL PLANTING AREAS EXCEPT TURF TO RECEIVE A 3" LAYER OF BARK MULCH PER SPECIFICATIONS UNLESS OTHERWISE NOTED.
3. ROOT BARRIERS TO BE INSTALLED IN ALL INSTANCES WHERE A TREE WILL BE PLANTED WITHIN 5' OF ADJACENT CURBS, SIDEWALKS, WALLS OR ANY FLATWORK OR HARDSCAPE.

N
10' 5' 0' 10'

CONSULTANT

COMPANY ADDRESS: SPURLOCK LANDSCAPE ARCHITECTS,
2122 HANCOCK ST, SAN DIEGO, CA 92110
COMPANY PHONE NUMBER: 619-681-0090
COMPANY EMAIL DATE OF: AARMOUR@SPURLOCK-LAND.COM
SIGNING:

LICENSED LANDSCAPE ARCHITECT
LEIGH KYLE
STATE OF CALIFORNIA
Signature
06/30/25
Renewal Date
11/01/24
Date

SPEC. NO

The City of SAN DIEGO

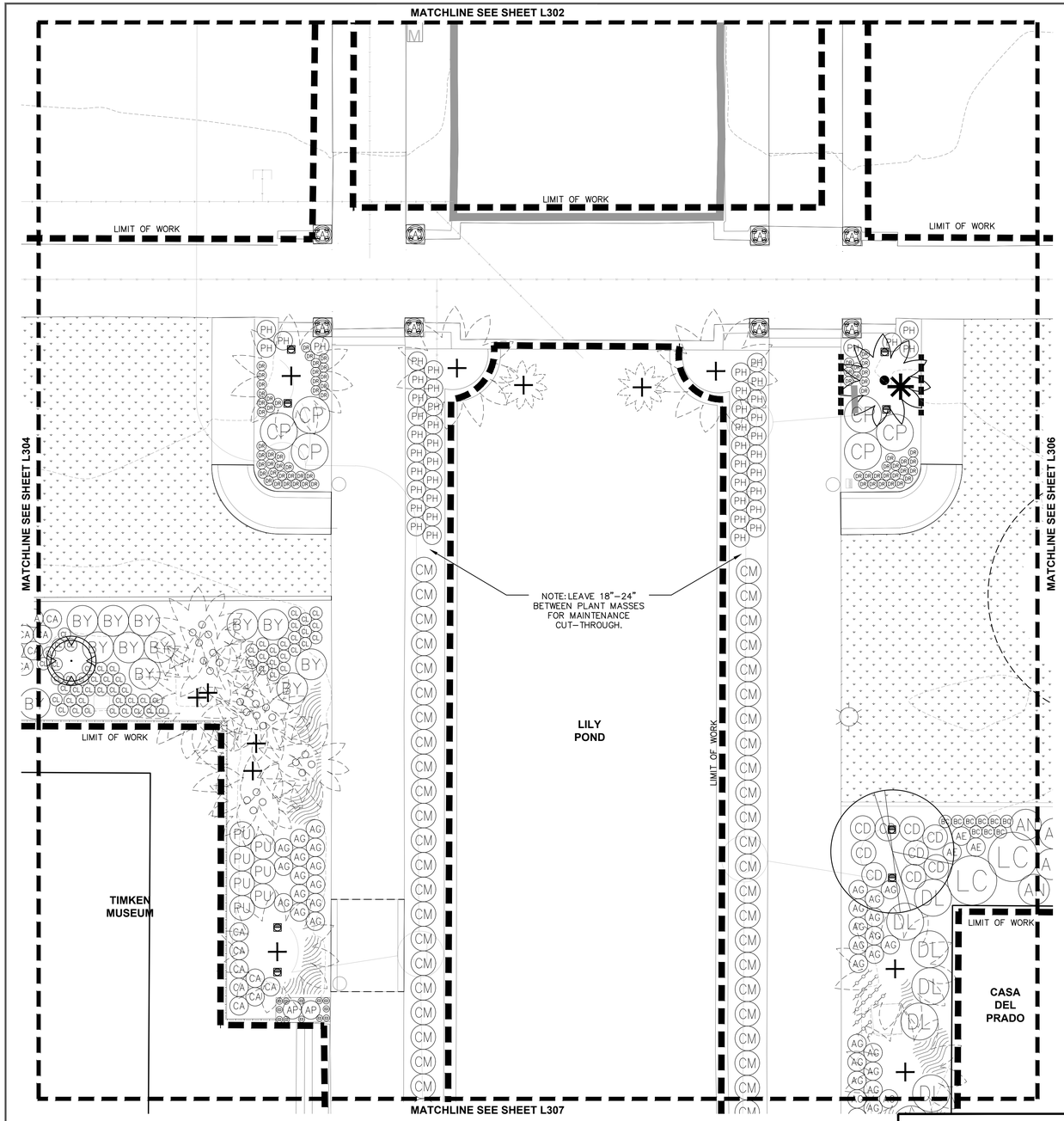
FOR CITY APPROVAL

PARKS & RECREATION DEPARTMENT
SHEET 16 OF 23 SHEETS

1847-6266
NAD83 COORDINATES

207-1706
LAMBERT COORDINATES

DRAWING NO.
L304



PLANT KEY

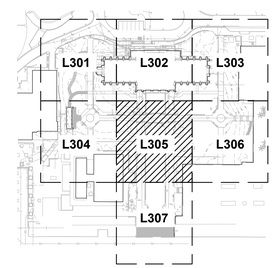
SEE SHEET L308–L310 FOR COMPLETE PLANTING LEGEND

SYMBOL	BOTANICAL / COMMON NAME
EXISTING TREE TO REMAIN	
	_EXISTING MULTI TRUNK PALM TREE TO REMAIN
	_EXISTING PALM TREE TO REMAIN

SYMBOL	BOTANICAL / COMMON NAME
PROPOSED TREES	
	DOMBEYA WALLICHII PINK BALL TREE
	ROYSTONEA REGIA ROYAL PALM
	XANTHORRHOEA PREISSII AUSTRALIAN GRASS TREE

SYMBOL	BOTANICAL / COMMON NAME
SHRUBS	
A	AGAVE ANGUSTIFOLIA 'MARGINATA' CARIBBEAN AGAVE
AG	AGAVE GEMINIFLORA TWIN FLOWERED AGAVE
AP	ALOE PLICATILIS FAN ALOE
AE	ASPIDISTRA ELATIOR CAST IRON PLANT
AN	ASPLENIUM NIDUS BIRDS NEST FERN
BC	BERGENIA CORDIFOLIA HEARTLEAF BERGENIA
BY	BESCHORNERIA YUCCOIDES AMOLE
CM	CARISSA MACROCARPA 'GREEN CARPET' GREEN CARPET NATAL PLUM
CD	CEANOTHUS X 'DIAMOND HEIGHTS' VARIEGATED CARMEL CREEPER
CP	CISTUS X PURPUREUS ORCHID ROCKROSE
CL	CLIVIA MINIATA BUSH LILY
CA	CRASSULA ARBORESCENS 'BLUE WAVES' SILVER DOLLAR JADE
DL	DASYLIRION LONGIFOLIUM TOOTHLESS DESERT SPOON
DR	DIANELLA REVOLUTA 'BABY BLISS' FLAX LILY
EC	ECHEVERIA DERENBERGII BABY ECHEVERIA
GP	GRAPTOPETALUM PARAGUAYENSE GHOST PLANT
LC	LOROPETALUM CHINENSE CHINESE FRINGE FLOWER
PH	PHORMIUM X 'YELLOW WAVE' YELLOW WAVE NEW ZEALAND FLAX
PU	PUYA CHILENSIS CHILEAN PUYA

GROUND COVERS	
	EUPHORBIA RESINIFERA MOROCCAN MOUND
	SENECIO SERPENS BLUE CHALKSTICKS
SOD	
	BANDERA BERMUDA TURF OVERSEEDED WITH RYE GRASS



ROOT BARRIER

PERCOLATIONS/SOIL TEST SITE

LIMIT OF WORK

NOTES:

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N 10' 5' 0' 10'

SPURLOCK
LANDSCAPE ARCHITECTS
2122 Hancock Street
San Diego, California 92110
619.681.0090
spurlock-land.com

WARNING
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PRIVATE CONTRACT

PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2
PLANTING PLAN

CONSULTANT

COMPANY ADDRESS: SPURLOCK LANDSCAPE ARCHITECTS, 2122 HANCOCK ST, SAN DIEGO, CA 92110

COMPANY PHONE NUMBER: 619-681-0090

COMPANY EMAIL DATE OF: AARMOUR@SPURLOCK-LAND.COM

SIGNING:

LICENSED LANDSCAPE ARCHITECT
LEIGH KYLE – 6173
STATE OF CALIFORNIA
Signature
06/30/25
Renewal Date
11/01/24
Date

SPEC. NO

The City of SAN DIEGO

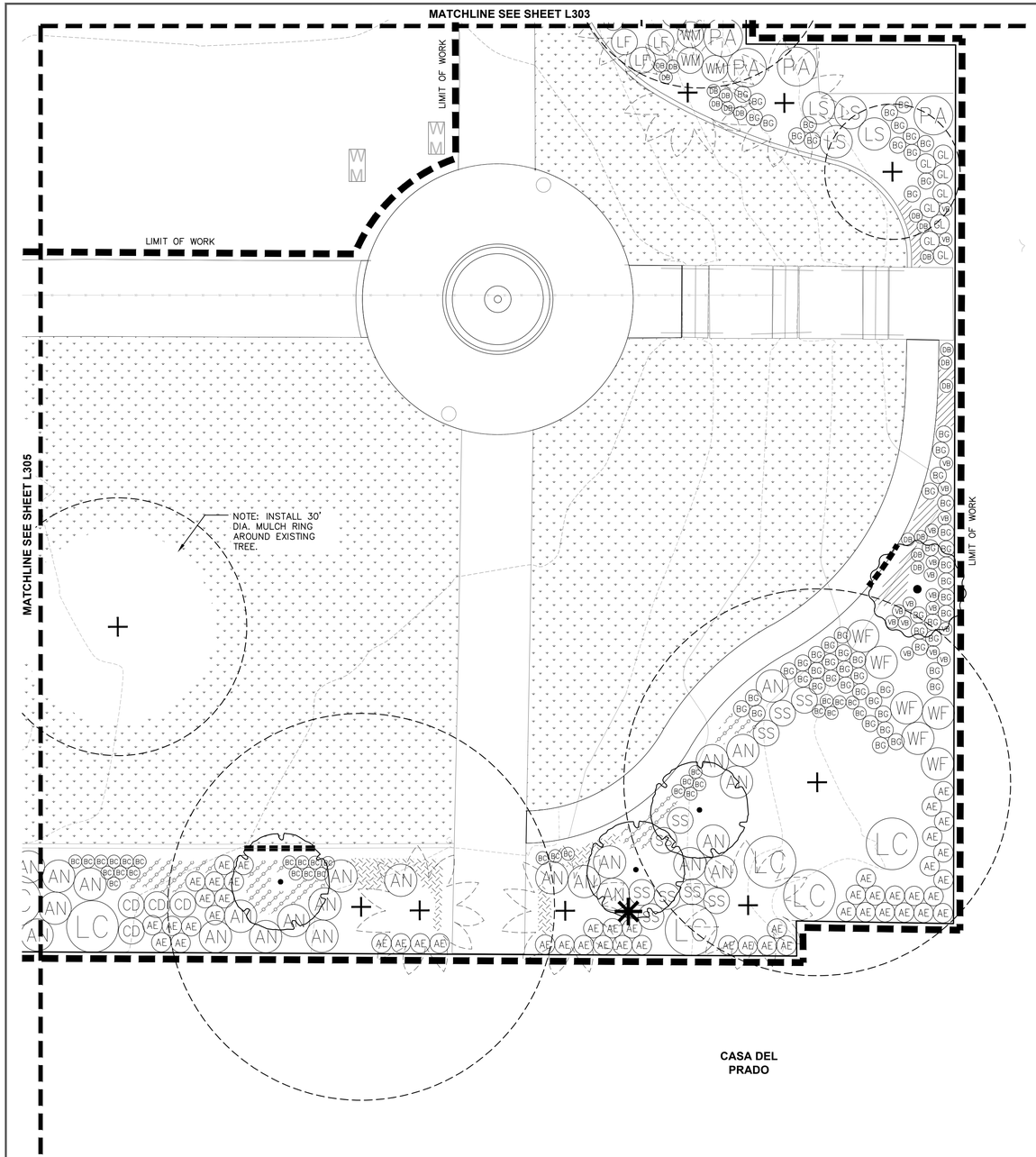
FOR CITY APPROVAL

PARKS & RECREATION DEPARTMENT
SHEET 17 OF 23 SHEETS

1847-6266
NAD83 COORDINATES

207-1706
LAMBERT COORDINATES

DRAWING NO.
L305



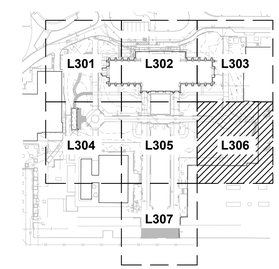
PLANT KEY

SEE SHEET L308–L310 FOR COMPLETE PLANTING LEGEND

SYMBOL	BOTANICAL / COMMON NAME
EXISTING TREE TO REMAIN	
	_EXISTING PALM TREE TO REMAIN
	_EXISTING TREE TO REMAIN

SYMBOL	BOTANICAL / COMMON NAME
PROPOSED TREES	
	CERCIS CANADENSIS 'FOREST PANSY' FOREST PANSY EASTERN REDBUD
	LEPTOSPERMUM LAEVIGATUM AUSTRALIAN TEA TREE

SYMBOL	BOTANICAL / COMMON NAME
SHRUBS	
AE	ASPIDISTRA ELATIOR CAST IRON PLANT
AN	ASPLENIUM NIDUS BIRDS NEST FERN
BC	BERGENIA CORDIFOLIA HEARTLEAF BERGENIA
BG	BOUTELOUA GRACILIS 'BLONDE AMBITION' BLONDE AMBITION BLUE GRAMA
CD	CEANOTHUS X 'DIAMOND HEIGHTS' VARIEGATED CARMEL CREEPER
DB	DUDLEYA BRITTONII GIANT CHALK DUDLEYA
GL	GAURA LINDHEIMERI 'WHIRLING BUTTERFLIES' WHIRLING BUTTERFLIES GAURA
LF	LEPECHINIA FRAGRANS ISLAND PITCHERSAGE
LS	LEPTOSPERMUM SCOPARIUM 'SNOW WHITE' SNOW WHITE TEA TREE
LC	LOROPETALUM CHINENSE CHINESE FRINGE FLOWER
PA	PLECTRANTHUS ARGENTATUS 'SILVER SHIELD' SILVER SHIELD PLECTRANTHUS
SS	SALVIA SPATHACEA HUMMINGBIRD SAGE
VB	VERBENA BONARIENSIS TALL VERBENA
WF	WESTRINGIA FRUTICOSA 'BLUE GEM' BLUE GEM COAST ROSEMARY
WM	WESTRINGIA FRUTICOSA 'MUNDI' COASTAL ROSEMARY
SHRUB AREAS	
	AGAPANTHUS AFRICANUS 'PETER PAN' PETER PAN AFRICAN LILY
	CEANOTHUS X 'DIAMOND HEIGHTS' VARIEGATED CARMEL CREEPER
	ERIGERON KARVINSKIANUS SANTA BARBARA DAISY
SOD	
	BANDERA BERMUDA TURF OVERSEEDED WITH RYE GRASS



ROOT BARRIER

PERCOLATIONS/SOIL TEST SITE

LIMIT OF WORK

NOTES:

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2. ALL PLANTING AREAS EXCEPT TURF TO RECEIVE A 3" LAYER OF BARK MULCH PER SPECIFICATIONS UNLESS OTHERWISE NOTED.
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N

10' 5' 0' 10'

SPURLOCK
LANDSCAPE ARCHITECTS

2122 Hancock Street
San Diego, California 92110
619.681.0090
spurlock-land.com

WARNING

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PRIVATE CONTRACT

PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2
PLANTING PLAN

CONSULTANT

COMPANY ADDRESS: SPURLOCK LANDSCAPE ARCHITECTS, 2122 HANCOCK ST, SAN DIEGO, CA 92110
COMPANY PHONE NUMBER: 619-681-0090
COMPANY EMAIL DATE OF: AARMOUR@SPURLOCK-LAND.COM

SIGNING:

LICENSED LANDSCAPE ARCHITECT
LEIGH KYLE – 6137
Signature
06/30/25
Renewal Date
11/01/24
Date
STATE OF CALIFORNIA

SPEC. NO

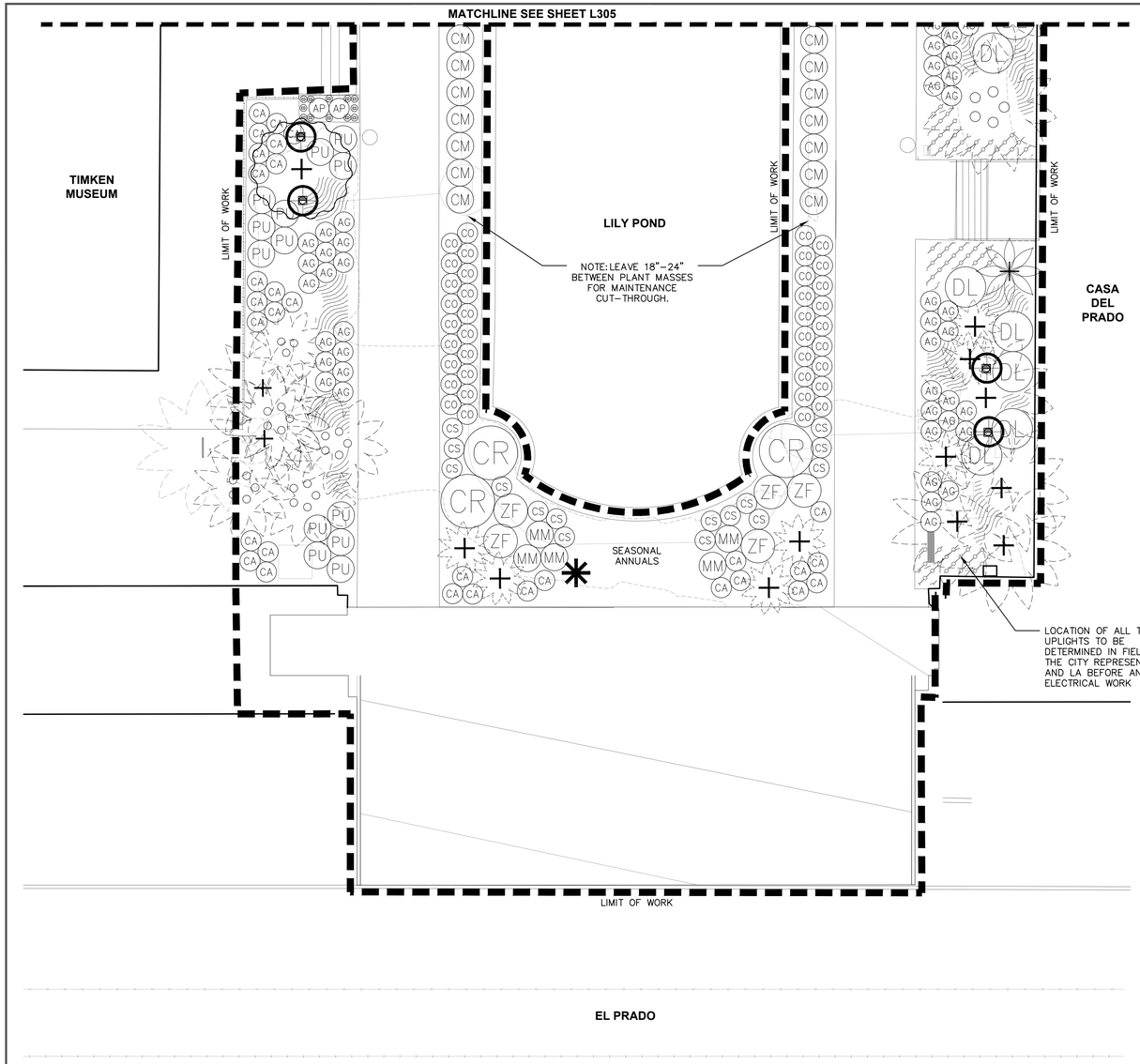
FOR CITY APPROVAL

PARKS & RECREATION DEPARTMENT
SHEET 18 OF 23 SHEETS

1847-6266
NAD83 COORDINATES

207-1706
LAMBERT COORDINATES

DRAWING NO. L306



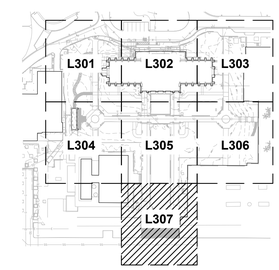
PLANT KEY

SEE SHEET L308–L310 FOR COMPLETE PLANTING LEGEND

SYMBOL	BOTANICAL / COMMON NAME
EXISTING TREE TO REMAIN	
	_EXISTING PALM TREE TO REMAIN
	_EXISTING TREE TO REMAIN

SYMBOL	BOTANICAL / COMMON NAME
RELOCATED TREES	
	_RELOCATED EXISTING BISMARCKIA NOBILIS
	_RELOCATED EXISTING RAVENALA MADAGASCA

SYMBOL	BOTANICAL / COMMON NAME
SHRUBS	
AG	AGAVE GEMINIFLORA TWIN FLOWERED AGAVE
AP	ALOE PLICATILIS FAN ALOE
CS	CALANDRINIA SPECTABILIS PINK CALANDRINIA
CM	CARISSA MACROCARPA 'GREEN CARPET' GREEN CARPET NATAL PLUM
CO	COPROSMA X 'LEMON & LIME' LEMON & LIME COPROSMA
CA	CRASSULA ARBORESCENS 'BLUE WAVES' SILVER DOLLAR JADE
CR	CYCAS REVOLUTA SAGO PALM
DL	DASYLIRION LONGIFOLIUM TOOTHLESS DESERT SPOON
	ECHEVERIA DERENBERGII BABY ECHEVERIA
PU	PUYA CHILENSIS CHILEAN PUYA
MM	X MANGAVE X 'MISSION TO MARS' MISSION TO MARS MANGAVE
ZF	ZAMIA FURFURACEA CARDBOARD PALM
GROUND COVERS	
	EUPHORBIA RESINIFERA MOROCCAN MOUND
	SENECIO SERPENS BLUE CHALKSTICKS



PRIVATE CONTRACT

SPURLOCK
LANDSCAPE ARCHITECTS
2122 Hancock Street
San Diego, California 92110
619.681.0090
spurlock-land.com

WARNING
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PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2
PLANTING PLAN

ROOT BARRIER
PERCOLATIONS/SOIL TEST SITE
LIMIT OF WORK

NOTES:

1. PROVIDE IRRIGATION TO ALL PLANTING AREAS
2. ALL PLANTING AREAS EXCEPT TURF TO RECEIVE A 3" LAYER OF BARK MULCH PER SPECIFICATIONS UNLESS OTHERWISE NOTED.
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N
10' 5' 0' 10'

CONSULTANT

COMPANY ADDRESS: SPURLOCK LANDSCAPE ARCHITECTS, 2122 HANCOCK ST, SAN DIEGO, CA 92110
COMPANY PHONE NUMBER: 619-681-0090
COMPANY EMAIL DATE OF: AARMOUR@SPURLOCK-LAND.COM
SIGNING:

LICENSED LANDSCAPE ARCHITECT
LEIGH KYLE – 6137
Signature
06/30/25
Renewal Date
11/01/24
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STATE OF CALIFORNIA

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FOR CITY APPROVAL

PARKS & RECREATION DEPARTMENT
SHEET 19 OF 23 SHEETS

1847-6266
NAD83 COORDINATES

207-1706
LAMBERT COORDINATES

DRAWING NO.
L307

PLANT SCHEDULE BOTANICAL BUILDING & GARDENS PHASE 2

SYMBOL	BOTANICAL / COMMON NAME	CONTAINER	MATURE SIZE	O.C. SPACING	WATER USE	FORM	QTY
EXISTING TREE TO REMAIN							
	_EXISTING MULTI TRUNK PALM TREE TO REMAIN	N/A					
	_EXISTING PALM TREE TO REMAIN	N/A					
	_EXISTING TREE TO REMAIN	N/A					
RELOCATED TREES							
	_RELOCATED EXISTING BISMARCKIA NOBILIS	N/A					
	_RELOCATED EXISTING CUPRESSUS CASHMERIANA	N/A					
	_RELOCATED EXISTING RAVENALA MADAGASCARIENSIS	N/A					
	_RELOCATED EXISTING RHAPIS EXCELSA	N/A					
PROPOSED TREES							
	BAUHINIA ACULEATA WHITE ORCHID TREE	36" BOX	20' H X 20' W	PER PLAN	LOW	STANDARD	1
	CERCIS CANADENSIS 'FOREST PANSY' FOREST PANSY EASTERN REDBUD	24" BOX	20'-30' H X 20-35' W	PER PLAN	MODERATE	STANDARD	3
	CUPRESSUS FORBESII TECATE CYPRESS	36" BOX	20'-30' H X 15'-20' W	PER PLAN	LOW	STANDARD	2
	DIOON EDULE MEXICAN CYCAD	24" BOX	8' H X 6' W	PER PLAN	MEDIUM		15

SYMBOL	BOTANICAL / COMMON NAME	CONTAINER	MATURE SIZE	O.C. SPACING	WATER USE	FORM	QTY
	DOMBEYA WALLICHII PINK BALL TREE	48" BOX	30' H X 15' W	PER PLAN	HIGH	STANDARD	1
	JUNIPERUS CHINENSIS 'TORULOSA' HOLLYWOOD JUNIPER	36" BOX	10'-15' H X 10'-15' W	PER PLAN	LOW	STANDARD	5
	LEPTOSPERMUM LAEVIGATUM AUSTRALIAN TEA TREE	24" BOX	20'-30' H X 10'-20' W	PER PLAN	LOW	STANDARD	1
	OSMANTHUS FRAGRANS SWEET OLIVE	15 GAL	10' H X 8' W	PER PLAN	MODERATE	NATURAL	4
	PINUS CANARIENSIS CANARY ISLAND PINE	36" BOX	80'-100' H X 20'-40' W	PER PLAN	MEDIUM	STANDARD	1
	RHAPIS EXCELSA LADY PALM	36" BOX	10'-15' H X 10'-15' W	PER PLAN	MEDIUM	STANDARD	2
	ROYSTONEA REGIA ROYAL PALM	18' BTH	60'-80' H X 12'-18' W	PER PLAN	LOW	STANDARD	1
	VITEX AGNUS-CASTUS CHASTE TREE	36" BOX	20' H X 20' W	PALM	MEDIUM	STANDARD	1
	XANTHORRHOEA PREISSII AUSTRALIAN GRASS TREE	24" BOX	15'-20' H X 6'-8' W	PER PLAN	VERY LOW	STANDARD	1

PRIVATE CONTRACT

SPURLOCK
LANDSCAPE ARCHITECTS

2122 Hancock Street
San Diego, California 92110
619.681.0090
spurlock-land.com

WARNING
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PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2
PLANTING LEGEND

CONSULTANT

COMPANY ADDRESS: SPURLOCK LANDSCAPE ARCHITECTS,
2122 HANCOCK ST, SAN DIEGO, CA 92110
COMPANY PHONE NUMBER: 619-681-0090
COMPANY EMAIL DATE OF: AARMOUR@SPURLOCK-LAND.COM

SIGNING:

LICENSED LANDSCAPE ARCHITECT
LEIGH KYLE - 6137
Signature
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Renewal Date
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STATE OF CALIFORNIA

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FOR CITY APPROVAL

PARKS & RECREATION DEPARTMENT
SHEET 20 OF 23 SHEETS

1847-6266
NAD83 COORDINATES

207-1706
LAMBERT COORDINATES

DRAWING NO. L308

PLANT SCHEDULE BOTANICAL BUILDING & GARDENS PHASE 2

SYMBOL	BOTANICAL / COMMON NAME	CONTAINER	MATURE SIZE	O.C. SPACING	PAV OFFSET	WATER USE	QTY
SHRUBS							
AS	ACANTHUS SPINOSUS SPINY BEAR'S BREECH	1 GAL	3–4' H X 2–3' W	48"	54"	VERY LOW	22
A	AGAVE ANGUSTIFOLIA 'MARGINATA' CARIBBEAN AGAVE	6" POT	3'–4' H X 3'–4' W	36"	36"	LOW	8
AG	AGAVE GEMINIFLORA TWIN FLOWERED AGAVE	5 GAL	2'–3' H X 2'–3' W	36"	42"	VERY LOW	130
AF	ALOE FEROX BITTER TREE ALOE	15 GAL	6'–8' H X 3'–5' W	36"	42"	LOW	19
AP	ALOE PLICATILIS FAN ALOE	15 GAL	4'–8' H X 4'–6' W	36"	42"	VERY LOW	4
AH	ARCTOSTAPHYLOS X 'HOWARD MCMINN' HOWARD MCMINN MANZANITA	5 GAL	3' H X 6' W	60"	60"	LOW	7
AE	ASPIDISTRA ELATIOR CAST IRON PLANT	5 GAL	2' H X 2'–3' W	36"	42"	MODERATE	53
AN	ASPLENIUM NIDUS BIRDS NEST FERN	15 GAL	1.5'–2' H X 1'–2' W	60"	60"	MODERATE	24
BC	BERGENIA CORDIFOLIA HEARTLEAF BERGENIA	6" POT	1'–2' H X 1'–2' W	24"	24"	MODERATE	40
BY	BESCHORNERIA YUCCOIDES AMOLE	15 GAL	3–4' H X 3–4' W	60"	42"	VERY LOW	25
BS	BLECHNUM GIBBUM 'SILVER LADY' SILVER LADY DWARF TREE FERN	1 GAL	3'–4' H X 3' W	36"	42"	MODERATE	30
BG	BOUTELOUA GRACILIS 'BLONDE AMBITION' BLONDE AMBITION BLUE GRAMA	1 GAL	2'–3' H X 1'–2' W	30"	36"	LOW	61
CS	CALANDRINIA SPECTABILIS PINK CALANDRINIA	5 GAL	2'–3' H X 2–3' W	3'	36"	MODERATE	15
CJ	CAMELLIA JAPONICA 'ALBA PLENA' ALBA PLENA CAMELLIA	15 GAL	6'–8' H X 6'–8' W	96"	96"	MODERATE	7
CM	CARISSA MACROCARPA 'GREEN CARPET' GREEN CARPET NATAL PLUM	5 GAL	1'–2' H X 3'–4' W	48"	52"	LOW	70
CS	CEANOTHUS RIGIDUS 'SNOWBALL' SNOWBALL MONTEREY CEANOTHUS	3 GAL	4' H X 4' W	48"	54"	LOW	6
CC	CEANOTHUS X 'CONCHA' CONCHA WILD LILAC	3 GAL	4'–8' H X 6'–10' W	72"	96"	LOW	2
CD	CEANOTHUS X 'DIAMOND HEIGHTS' VARIEGATED CARMEL CREEPER	1 GAL	1' H X 4'–6' W	36"	48"	VERY LOW	13
CR	CEANOTHUS X 'RAY HARTMAN' RAY HARTMAN WILD LILAC	15 GAL	12' H X 8'–10' W	84"	108"	LOW	4
CE	CERCOCARPUS MINUTIFLORUS MOUNTAIN MAHOGANY	15 GAL	12' H X 6'–8' W	8'	8'	VERY LOW	7
CP	CISTUS X PURPUREUS ORCHID ROCKROSE	15 GAL	4' H X 4' W	72"	72"	VERY LOW	6
CL	CLIVIA MINIATA BUSH LILY	1 GAL	1'–2' H X 2'–3' W	24"	32"	MODERATE	72
CO	COPROSMA X 'LEMON & LIME' LEMON & LIME COPROSMA	5 GAL	3–4' H X 3–4' W	36"	42"	MODERATE	38
CA	CRASSULA ARBORESCENS 'BLUE WAVES' SILVER DOLLAR JADE	5 GAL	2'–4' H X 2'–4' W	36"	42"	LOW	87
CR	CYCAS REVOLUTA SAGO PALM	25 GAL	3'–10' H X 2'–8' W	96"	96"	LOW	3

SYMBOL	BOTANICAL / COMMON NAME	CONTAINER	MATURE SIZE	O.C. SPACING	PAV OFFSET	WATER USE	QTY
DL	DASYLIRION LONGIFOLIUM TOOTHLESS DESERT SPOON	15 GAL	4'–10' H X 4' W	72"	72"	VERY LOW	12
DR	DIANELLA REVOLUTA 'BABY BLISS' FLAX LILY	1 GAL	1'–2' H X 1'–2' W	18"	24"	LOW	69
DB	DUDLEYA BRITTONII GIANT CHALK DUDLEYA	1 GAL	1' H X 1'–2' W	24"	30"	LOW	43
⊚	ECHEVERIA DERENBERGII BABY ECHEVERIA	6" POT	0.5' H X 1'–3' W	12"		LOW	24
✺	ENCEPHALARTOS HORRIDUS EASTERN CAPE BLUE CYCAD	1 GAL	2' H X 3'–4' W	48"	54"	LOW	11
EA	ERIOGONUM ARBORESCENS SANTA CRUZ ISLAND BUCKWHEAT	5 GAL	2'–3' H X 3'–5' W	48"	60"	VERY LOW	31
FF	FURCRAEA FOETIDA 'MEDIOPICTA' MAURITIUS HEMP	15 GAL	5' H X 8' W	96"	108"	VERY LOW	4
GL	GAURA LINDHEIMERI 'WHIRLING BUTTERFLIES' WHIRLING BUTTERFLIES GAURA	1 GAL	3' H X 3' W	36"	42"	LOW	8
⊖	GRAPTOPETALUM PARAGUAYENSE GHOST PLANT	6" POT	1' H X 1'–3' W	12"		LOW	32
HM	HEUCHERA MAXIMA ISLAND ALUM ROOT	1 GAL	3' H X 2' W	24"	30"	LOW	62
LM	LAVANDULA X ALLARDII 'MEERLO' MEERLO LAVENDER	5 GAL	2'–3' H X 2–3' W	36"	42"	LOW	8
LF	LEPECHINIA FRAGRANS ISLAND PITCHERSAGE	1 GAL	3'–5' H X 3'–5' W	48"	54"	MODERATE	10
LS	LEPTOSPERMUM SCOPARIUM 'SNOW WHITE' SNOW WHITE TEA TREE	5 GAL	4'–5' H X 4'–5' W	60"	60"	LOW	4
LP	LOMANDRA X 'PLATINUM BEAUTY' PLATINUM BEAUTY LOMANDRA	1 GAL	2'–3' H X 2'–3' W	36"	42"	LOW	53
LC	LOROPETALUM CHINENSE CHINESE FRINGE FLOWER	15 GAL	4'–8' H X 6'–10' W	8'	8'	MODERATE	7
MD	MUHLENBERGIA DUBIA PINE MUHLY	1 GAL	3' H X 3' W	36"	42"	VERY LOW	134
PH	PHORMIUM X 'YELLOW WAVE' YELLOW WAVE NEW ZEALAND FLAX	5 GAL	3' H X 3' W	36"	42"	MODERATE	48
PC	PITTOSPORUM CRASSIFOLIUM 'COMPACTUM' DWARF KARO PITTOSPORUM	5 GAL	2'–3' H X 4'–6' W	48"	54"	LOW	17
PT	PITTOSPORUM TOBIRA JAPANESE PITTOSPORUM	5 GAL	10'–15' H X 10'–15' W	72"	72"	VERY LOW	4
XX	PLATYCERIUM BIFURCATUM STAGHORN FERN	5 GAL	2'–2.5' H X 2'–2.5' W	AS SHOWN	–	MODERATE	5
PA	PLECTRANTHUS ARGENTATUS 'SILVER SHIELD' SILVER SHIELD PLECTRANTHUS	5 GAL	2'–3' H X 4'–6' W	60"	60"	MODERATE	6
PM	POLYSTICHUM MUNITUM WESTERN SWORD FERN	1 GAL	2–3' H X 3–4' W	24"	30"	MODERATE	75
PU	PUYA CHILENSIS CHILEAN PUYA	5 GAL	2'–3' H X 4'–6' W	48"	54"	LOW	20
RC	RHAMNUS CALIFORNICA 'EVE CASE' EVE CASE COFFEEBERRY	5 GAL	3'–6' H X 4'–6' W	60"	60"	VERY LOW	12

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PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2
PLANTING LEGEND

CONSULTANT

COMPANY ADDRESS: SPURLOCK LANDSCAPE ARCHITECTS, 2122 HANCOCK ST, SAN DIEGO, CA 92110
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COMPANY EMAIL DATE OF: AARMOUR@SPURLOCK-LAND.COM
SIGNING:

LICENSED LANDSCAPE ARCHITECT
KEIGH KYLE – 6124
Signature
06/30/25
Renewal Date
11/01/24
Date
STATE OF CALIFORNIA

SPEC. NO

The City of SAN DIEGO
FOR CITY APPROVAL

PARKS & RECREATION DEPARTMENT
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PLANT SCHEDULE BOTANICAL BUILDING & GARDENS PHASE 2

SYMBOL	BOTANICAL / COMMON NAME	CONTAINER	MATURE SIZE	O.C. SPACING	PAV OFFSET	WATER USE	QTY
RS	RIBES SANGUINEUM RED FLOWERING CURRANT	5 GAL	6'–12' H X 7' W	60"	60"	LOW	17
RV	RIBES VIBURNIFOLIUM EVERGREEN CURRANT	1 GAL	3'–6' H X 6'–10' W	60"	72"	LOW	6
RE	ROMNEYA COULTERI MATILIJA POPPY	5 GAL	5' H X 8' W	AS SHOWN	108"	VERY LOW	3
RO	ROSMARINUS OFFICINALIS 'BOULE' BOULE ROSEMARY	5 GAL	2' H X 2' W	24"	30"	VERY LOW	38
SA	SALVIA APIANA WHITE SAGE	1 GAL	6' H X 6' W	60"	66"	VERY LOW	8
SC	SALVIA CHAMAEDRYOIDES GERMANDER SAGE	1 GAL	2' H X 2' W	24"	30"	VERY LOW	12
SG	SALVIA GREGGII 'ALBA' WHITE TEXAS SAGE	1 GAL	4' H X 4' W	48"	54"	LOW	18
SL	SALVIA LEUCANTHA 'SANTA BARBARA' SANTA BARBARA MEXICAN BUSH SAGE	1 GAL	3–4' H X 3–4' W	42"	48"	LOW	16
SM	SALVIA MELLIFERA BLACK SAGE	5 GAL	3'–6' H X 6'–8' W	36"	48"	VERY LOW	8
SS	SALVIA SPATHACEA HUMMINGBIRD SAGE	6" POT	1'–2' H X 3'–4' W	18"	24"	LOW	40
SP	SALVIA X 'POZO BLUE' POZO BLUE SAGE	5 GAL	3–5' H X 3–4' W	48"	54"	VERY LOW	20
SM	SYMPHORICARPOS MOLLIS CREEPING SNOWBERRY	5 GAL	1' H X 3' W	36"	42"	LOW	32
VB	VERBENA BONARIENSIS TALL VERBENA	1 GAL	4'–5' H X 2'–3' W	AS SHOWN	24"	LOW	18
WF	WESTRINGIA FRUTICOSA 'BLUE GEM' BLUE GEM COAST ROSEMARY	5 GAL	3'–6' H X 6'–8' W	60"	60"	VERY LOW	6
WM	WESTRINGIA FRUTICOSA 'MUNDI' COASTAL ROSEMARY	1 GAL	1' H X 4'–6' W	36"	42"	VERY LOW	7
WO	WOODWARDIA FIMBRIATA GIANT CHAIN FERN	6" POT	4' H X SPREADING	36"	42"	MODERATE	48
MM	X MANGAVE X 'MISSION TO MARS' MISSION TO MARS MANGAVE	15 GAL	1' H X 1'–2' W	48"	48"	VERY LOW	5
ZF	ZAMIA FURFURACEA CARDBOARD PALM	25 GAL	3'–4' H X 2'–3' W (SPREADING)	60"	60"	MODERATE	5
BULBS							
	LEUCOJUM AESTIVUM SUMMER SNOWFLAKE (GROUPS OF 5)	–	0.75' H X 0.5' W			MODERATE	90
VINES							
	CLEMATIS LIGUSTICIFOLIA WESTERN WHITE CLEMATIS	1 GAL	4'–25' H X 4'–5' W			LOW	1
	WISTERIA FLORIBUNDA JAPANESE WISTERIA	15 GAL	15'–30' H X 6'–12' W			MODERATE	2

SHRUB AREAS						
AGAPANTHUS AFRICANUS 'PETER PAN' PETER PAN AFRICAN LILY	6" POT	1' H X 1' W	12"	18"	LOW	142 SF
CAREX DIVULSA EUROPEAN GREY SEDGE	6" POT	1' H X 1'–2' W	24"	32"	MODERATE	431
CARISSA MACROCARPA 'GREEN CARPET' GREEN CARPET NATAL PLUM	1 GAL	1'–2' H X 3'–4' W	48"	54"	LOW	375 SF
CEANOTHUS X 'DIAMOND HEIGHTS' VARIEGATED CARMEL CREEPER	6" POT	1' H X 1'–4' W	48"	54"	VERY LOW	81 SF
ERIGERON KARVINSKIANUS SANTA BARBARA DAISY	1 GAL	6"–12" H X 2'–3' W	24"	30"	LOW	76 SF
GERANIUM X 'ANN FOLKARD' ANN FOLKARD GERANIUM	4" POT	1' H X 1'–2' W	18"	24"	MODERATE	49
SANSEVIERIA TRIFASCIATA 'MOONSHINE' MOONSHINE SNAKE PLANT	6" POT	1'–2' H X 1'–2' W	18"	24"	VERY LOW	388 SF
TRACHELOSPERMUM JASMINOIDES CHINESE STAR JASMINE	4" POT	1'–10' H X 2'–6' W	12"	18"	LOW	152
GROUND COVERS						
CRASSULA MULTICAVA 'FAIRY' FAIRY CRASSULA	1 GAL	1' H X 2'–3' W	18"	24"	LOW	305 SF
EUPHORBIA RESINIFERA MOROCCAN MOUND	6" POT	2' H X 4'–6' W	18"	24"	VERY LOW	197 SF
SENECIO SERPENS BLUE CHALKSTICKS	4" POT	1' H X 1'–2' W	24"	32"	LOW	372 SF
SOD						
BANDERA BERMUDA TURF OVERSEEDED WITH RYE GRASS	SOD			NONE	LOW	9,566 SF

PLANTING NOTES

1. GENERAL:

1.1. DESIGN IRRIGATION IN ALL BEDS TO AVOID SPRAYING ON THE TRUNKS OF EXISTING TREES.

1.2. EXCAVATE PLANTING HOLES WITH HAND TOOLS WITHIN DRIPLINE OF ANY TREES.

1.3. WHERE ROOTS UNDER 3" IN DIAMETER ARE ENCOUNTERED WHILE PERFORMING IRRIGATION WORK OR EXCAVATING/AMENDING SOILS AND EXCAVATING PLANTING PITS, CARE SHOULD BE TAKEN TO AVOID ROOT DAMAGE (E.G. ADJUST PLANTING/IRRIGATION LOCATIONS), BUT, WHERE DAMAGE OCCURS OR TAKING OUT ROOTS IS UNAVOIDABLE, THE ROOTS SHALL BE CLEANLY CUT BACK.

1.4. WHERE ROOTS OVER 3" IN DIAMETER ARE ENCOUNTERED WHILE PERFORMING IRRIGATION WORK OR EXCAVATING/AMENDING SOILS, THE ROOTS SHALL BE PROTECTED IN PLACE AND WORKED AROUND.

1.5. ONLY HAND TOOL OR AN AIR SPADE SHOULD BE USED INSIDE THE DRIPLINE OF EXISTING TREES TO REMAIN AND TO BE PROTECTED IN PLACE.

2. SOD AREAS:

2.1. CLASS C TOPSOIL TO A DEPTH OF 12".

2.2. PROVIDE 4" DEPTH MULCH RING AT THE DRIPLINE OF EXISTING TREES TO BE PROTECTED IN PLACE (THERE IS ONLY ONE – FICUS MACLELLANDII). DO NOT AMEND SOILS WITHIN THE DRIPLINE OF THE MULCH RING.

3. ALL OTHER PLANTING AREAS: AMEND THE BACKFILL PER WHITEBOOK AND THE RECOMMENDATIONS OF SOILS REPORT.

4. REMOVE EXISTING LANDSCAPE FABRIC IN ANY PLANTING AREAS AND DISPOSE, TYPICAL.

5. PLANTS TO BE LAID OUT BE CITY REPRESENTATIVE AND LANDSCAPE ARCHITECT REVIEW PRIOR TO PLANTING.

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San Diego, California 92110
619.681.0090
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PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2
PLANTING LEGEND

CONSULTANT

COMPANY ADDRESS: SPURLOCK LANDSCAPE ARCHITECTS, 2122 HANCOCK ST, SAN DIEGO, CA 92110
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COMPANY EMAIL DATE OF: AARMOUR@SPURLOCK-LAND.COM

SIGNING:

LICENSED LANDSCAPE ARCHITECT
KEITH KYLE – 6111
STATE OF CALIFORNIA
Signature
06/30/25
Renewal Date
11/01/24
Date

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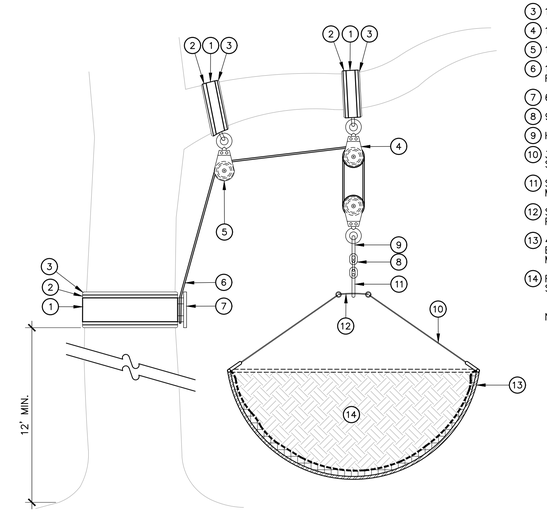

1. STAINLESS STEEL ADJUSTABLE WRAP WITH GROMMETS
2. 6" OR 3" WIDTH ADJUSTABLE HEAVY DUTY SYTHENTIC DECAY-RESISTANT TREE WRAP
3. 1/4" THICK FELT PADDING
4. 1-1/2" DOUBLE SWIVEL EYE PULLEY
5. 1-1/2" SINGLE SWIVEL EYE PULLEY
6. 1/2" DOUBLE BRAIDED POLYESTER ROPE; ROPE DIA. TO MATCH GROOVE DIA. OF PULLEY
7. 6" STAINLESS STEEL CLEAT HITCH
8. 9/32" GRADE 80 HEAVY-LIFTING ALLOY CHAIN
9. HEAVY DUTY CARABINER
10. 3/16" GALVANIZED STEEL OR STAINLESS STEEL WIRE ROPE WITH HOOKS
11. SWIVEL HANGING HOOK PER BASKET MANUFACTURER
12. SWINGING HANGING HOOK MOUNTING PLATE PER BASKET MANUFACTURER
13. 42" DIA. HEAVY-GUAGE STAINLESS STEEL BASKET WITH COCO LINER PER MANUFACTURER
14. FERN PLANTING MIX PER PLANTING SPECIFICATIONS

NOTES:

1. REFER TO PLANT SPECIFICATIONS FOR ADDITIONAL INFORMATION.
2. CONTRACTOR TO FIELD VERIFY PLACEMENT AND POSITIONING OF TREE WRAPS WITH LANDSCAPE ARCHITECT AND CITY REPRESENTATIVE.
3. FIELD VERIFY HARDWARE LOCATIONS WITH CITY REPRESENTATIVE PRIOR TO INSTALLATION.
4. (4) 5 GALLON PLATYCERIUM BIFURCATUM (STAGHORN FERN) PER BASKET, TYP.
5. ROPE TO BE MARINE-GRADE, UV STABLE.
6. ALL HARDSCAPE FITTINGS TO BE STAINLESS STEEL.
7. PROVIDE SHOP DRAWINGS INCLUDING ALL MECHANICAL ELEMENTS NOT LIMITED TO STRAPS, ROPES, PULLEYS, CHAINS, ETC.

1 STAGHORN FERN HANGING BASKET SCALE: 1" = 1'-0"

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PLANS FOR THE CONSTRUCTION OF
BOTANICAL BUILDING AND GARDENS PHASE 2
PLANTING DETAILS

CONSULTANT

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LICENSED LANDSCAPE ARCHITECT
LEIGH KYLE - 6137
Signature
06/30/25
Renewal Date
11/01/24
Date
STATE OF CALIFORNIA

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GEOCON
INCORPORATED

GEOTECHNICAL
ENVIRONMENTAL
MATERIALS

LIMITED GEOTECHNICAL INVESTIGATION

BALBOA PARK BOTANICAL BUILDING AND GARDENS PHASE 2 DESIGN PROJECT SAN DIEGO, CALIFORNIA

PREPARED FOR

SPURLOCK LANDSCAPE ARCHITECTURE
SAN DIEGO, CALIFORNIA

FEBRUARY 26, 2024
PROJECT NO. G3245-42-01

GEOCON
INCORPORATED
GEOTECHNICAL ■ ENVIRONMENTAL ■ MATERIALS

Project No. G3245-42-01
February 26, 2024

Spurlock Landscape Architecture
2122 Hancock Street
San Diego, California 92110

Attention: Ms. Emily Dowgiallo

Subject: LIMITED GEOTECHNICAL INVESTIGATION
BALBOA PARK BOTANICAL BUILDING AND GARDENS
PHASE 2 DESIGN PROJECT
SAN DIEGO, CALIFORNIA

Dear Ms. Dowgiallo:

In accordance with your request and authorization of our proposal (LG-23538 dated November 15, 2023), we herein submit the results of our limited geotechnical investigation for the subject project. We performed our investigation to evaluate the underlying soil and geologic conditions and potential geologic hazards, and to assist in the design of the proposed improvements.

The accompanying report contains the results of our study with conclusions and recommendations pertaining to geotechnical aspects of the proposed project. The site is suitable for the proposed improvements provided the recommendations in this report are incorporated into the design and construction of the planned project.

Should you have questions regarding this report, or if we may be of further service, please contact the undersigned at your convenience.

Very truly yours,

GEOCON INCORPORATED

Lilian E. Rodriguez
RCE 83227

Rodney C. Mikesell
GE 2533

Garry W. Cannon
CEG 2201
RCE 56468

LER:RCM:GWC:arm

(e-mail) Addressee

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APPENDIX C
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APPENDIX D
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LIST OF REFERENCES

LIMITED GEOTECHNICAL INVESTIGATION

1. PURPOSE AND SCOPE

This report presents the results of our limited geotechnical investigation for the proposed phase 2 design of the Balboa Park Botanical Building and Gardens in San Diego, California (see Vicinity Map).

Vicinity Map

The purpose of this study is to evaluate the surface and subsurface soil conditions and general site geology, and to identify geotechnical constraints that could affect development of the property including faulting, liquefaction, and seismic shaking (based on the 2022 CBC seismic design criteria). In addition, we are providing recommendations for remedial grading, shallow foundations, deep foundations, concrete flatwork, and retaining walls.

We reviewed the following plans and report in preparation of this report:

1. *Improvement Plans for: Balboa Park Botanical Building and Gardens Phase II, San Diego, California,* prepared by Spurlock Landscape Architects, dated January 26, 2024.

2. *Geotechnical Investigation, Timken Museum of Art Expansion, 1500 El Prado, San Diego, California*, prepared by Geocon Incorporated, dated December 5, 2022 (Project No. G3045-52-01).

The scope of our investigation included reviewing readily available geologic literature, performing engineering analyses, and preparing this report. Field work consisted of drilling 4 exploratory borings to a depths of about 2 to 3 feet; sampling soil; and performing laboratory tests on selected soil samples.

We previously drilled four, small-diameter borings in 2022 for the adjacent Timken Museum of Art Expansion (Geocon, 2022). The approximate locations of the exploratory borings for the subject project and Timken Museum are shown on the Geologic Map, Figure 1. Appendix A presents the exploratory boring logs and details of the field investigation. The details of the laboratory tests and a summary of the test results are shown in Appendix B. Appendix C presents the previous exploratory boring logs and results of laboratory testing for the adjacent Timken Museum of Art Expansion (Geocon, 2022).

2. SITE AND PROJECT DESCRIPTION

The existing Botanical Building and Gardens area is located near the center of Balboa Park and is bound to the north by Old Globe Way, existing Balboa Park buildings to the south, east and west, and El Prado to the south. The site currently consists of a botanical building, a large lily pond extending from the botanical building to El Prado, two water fountain features, landscaping, trees, and hardscape walkways. The botanical building and interior garden are currently undergoing restoration as part of Phase 1 construction. The site generally slopes to the west and south at elevations ranging from about 273 to 284 feet above mean sea level (MSL).

We understand the planned improvements will consist of a reconstructed historic pergola, new walkway hardscape, enhancements to exterior landscape planting, landscape irrigation, landscape lighting, repair to existing water features, six urns, bridge balustrades and railing (Spurlock, 2024).

The locations, site descriptions, and proposed development are based on our site reconnaissance, review of published geologic literature, field investigations, and discussions with project personnel. If development plans differ from those described herein, Geocon Incorporated should be contacted for review of the plans and possible revisions to this report.

3. SOIL AND GEOLOGIC CONDITIONS

Undocumented fill, Very Old Paralic Deposits, and San Diego Formation were encountered in the current and adjacent property exploratory borings. Approximate geologic contacts based on boring data and published geologic maps are shown on the Geologic Map, Figure 1. Boring logs are provided in Appendix A. The geologic units are described below.

3.1 Undocumented Fill (Qudf)

We encountered undocumented fill in our hand auger borings to a maximum depth of about 2.5 feet. Undocumented fill associated with previous development may be present to greater depths in unexplored areas within the project boundaries. In general, the undocumented fill encountered consists of loose to medium dense, brown, silty to clayey sand with some gravel. The undocumented fill is not suitable to support settlement sensitive improvements and should be removed and replaced as compacted fill within structural improvement areas or places to receive fill. The undocumented fill can be reused for new compacted fill during grading operations provided it is free of roots and debris.

3.2 Very Old Paralic Deposits (Qvop)

Quaternary-age Very Old Paralic Deposits underlies the site, extending through the maximum depth explored of approximately 3 feet in hand augers HA-1 through HA-4, and extending to 12.5 to 14 feet in previous borings B-1 and B-2 (Geocon, 2022). The Very Old Paralic Deposits encountered consists of dense to very dense, cemented, sandstone and cobble conglomerate, and possesses a "very low" expansion index (expansion index of 20 or less). Excavations within this unit will likely require heavy effort due to the dense nature of the soil, cemented zones, and abundant cobble. The Very Old Paralic Deposits are suitable to support settlement-sensitive structures.

3.3 San Diego Formation (Tsd)

Tertiary-age San Diego Formation was encountered in previous borings B-1 and B-2 adjacent to the site (Geocon, 2022) below the Very Old Paralic Deposits at elevations ranging from about 261 to 265 feet MSL. We expect the San Diego Formation is at a similar elevation below the proposed improvements. The San Diego Formation encountered generally consists of very stiff to hard, moist, pale yellowish brown and reddish brown, sandy to clayey siltstone and silty claystone. The San Diego Formation is suitable for support of fill and structural loads.

4. GROUNDWATER

We did not encounter groundwater or seepage during our site investigations; however, it is not uncommon for shallow seepage conditions to develop where none previously existed when sites are irrigated or infiltration is implemented. Seepage is dependent on seasonal precipitation, irrigation, land use, among other factors, and varies as a result. Proper surface drainage will be important to future performance of the project. We do not expect groundwater to be encountered during construction of the proposed development.

5. GEOLOGIC HAZARDS

5.1 Geologic Hazard Category

The City of San Diego (2008) defines the site with *Hazard Category 51: Level mesas underlain by terrace deposits and bedrock, nominal risk.*

5.2 Ground Rupture

The USGS (2016), City of San Diego (2008), Kennedy (1975), and Kennedy & Tan (2008) show that there are no mapped Quaternary faults crossing or trending toward the property. The site is not located within a currently established Alquist-Priolo Earthquake Fault Zone (CEG, 2021a).

There are no active faults, potentially active faults, inactive faults, presumed inactive faults, or activity unknown faults at the site or trending toward the site. The potentially active Florida Canyon Fault zone is located approximately 0.25 mile to the east. The risk associated with ground rupture hazard is low.

5.3 Seismicity

Considerations important in seismic design include frequency and duration of motion and soil conditions underlying the site. Seismic design of structures should be evaluated in accordance with the California Building Code currently adopted by the City of San Diego. The risk associated with strong seismic ground motion hazard is high; however, the risk is no greater than that for the site vicinity.

5.4 Liquefaction

Due to the lack of a permanent, near-surface groundwater table and the dense nature and age of the underlying Very Old Paralic Deposits and San Diego Formation, the risk associated with liquefaction is low.

5.5 Tsunamis, and Seiches

The site is not mapped within a State of California tsunami hazard zone (CGS, 2021b). The site is not located near a large body of water. The risk associated with flooding due to tsunami or seiche hazard is low.

5.6 Landslides

No evidence of landsliding was observed during our investigation. City of San Diego (2008), Kennedy (1975), and Kennedy & Tan (2008) do not map landslides at the site or in areas that would impact the property. The risk associated with landslide hazard is low.

5.7 Flooding

The site is not mapped in a Special Flood Hazard Area as defined by FEMA (2020). The risk of inundation hazard due to flooding is low.

6. CONCLUSIONS AND RECOMMENDATIONS

6.1 General

6.1.1 No soil or geologic conditions were observed during this study that would preclude the proposed development, provided the recommendations presented herein are followed and implemented during design and construction. We will provide supplemental recommendations if we observe variable or undesirable conditions during construction, or if the proposed construction will differ from that anticipated herein.

6.1.2 With the exception of possible moderate to strong seismic shaking, we did not observe or know of significant geologic hazards to exist on the site that would adversely affect the proposed project.

6.1.3 The undocumented fill is potentially compressible and unsuitable in its present condition to support compacted fill or settlement-sensitive improvements and will require removal and replacement with properly compacted fill. Very Old Paralic Deposits and San Diego Formation are suitable to support proposed fill and structural loads.

6.1.4 We did not encounter groundwater during our subsurface exploration, and we do not expect it to be a constraint to project development; however, seepage within the existing soils may be encountered during grading, especially during the rainy seasons.

6.1.5 Proper drainage should be maintained to preserve the engineering properties of the soil. Recommendations for site drainage are provided herein.

6.1.6 We do not expect the planned development will destabilize or result in the settlement of adjacent properties.

6.2 Excavation and Soil Characteristics

6.2.1 Excavation of the in-situ soil should be possible with moderate to heavy effort using conventional heavy-duty equipment. The sandstone and cobble conglomerate soils within the Very Old Paralic Deposits will likely require very heavy effort to excavate.

6.2.2 The soil encountered in the field investigation is “non-expansive” (Expansion Index [EI] of 20 or less) as defined by 2022 California Building Code (CBC) Section 1803.5.3. We expect most of the soil that will be encountered possess a “very low” to “low” expansion potential (EI of 50 or less) in accordance with ASTM D 4829. Table 6.2 presents soil classifications based on the expansion index.

TABLE 6.2
EXPANSION CLASSIFICATION BASED ON EXPANSION INDEX

Expansion Index (EI)	ASTM D 4829 Expansion Classification	2022 CBC Expansion Classification
0 – 20	Very Low	Non-Expansive
21 – 50	Low	Expansive
51 – 90	Medium	
91 – 130	High	
Greater Than 130	Very High	

6.2.3 We performed laboratory tests on samples of the site soil to evaluate the percentage of water-soluble sulfate content. Appendix B presents test results, which indicate the on-site soils at the locations tested possess "S0" sulfate exposure to concrete structures as defined by 2022 CBC Section 1904 and ACI 318. The presence of water-soluble sulfates is not a visually discernible characteristic; therefore, other soil samples from the site could yield different concentrations. Over time, landscaping activities (i.e., addition of fertilizers and other additives) may affect the water-soluble sulfate concentration.

6.2.4 Geocon Incorporated does not practice in the field of corrosion engineering; therefore, further evaluation by a corrosion engineer could be needed if improvements susceptible to corrosion are planned.

6.3 Grading

6.3.1 Grading should be performed in accordance with the recommendations provided in this report, the Recommended Grading Specifications contained in Appendix D, and the local grading ordinance. Geocon Incorporated should observe the grading operations on a full-time basis and provide testing during the fill placement.

6.3.2 A preconstruction conference should be held at the site with the City representative, grading and underground contractors, civil engineer, and geotechnical engineer in attendance. Special soil handling and the grading plan can be discussed at that time.

6.3.3 Site preparation should begin with the removal of deleterious material, debris, and vegetation. The depth of vegetation removal should be such that material exposed in cut areas or soil to be used as fill is relatively free of organic matter. Material generated during stripping and/or site demolition should be exported from the site. Asphalt and concrete should not be mixed with the fill soil.

6.3.4 Abandoned foundations and buried utilities should be removed and the resultant depressions and/or trenches backfilled with properly compacted soil as part of the remedial grading.

6.3.5 In areas to receive fill or structural improvement areas, undocumented fill should be removed to competent Very Old Paralic Deposits and replaced as compacted fill. The excavations should extend at least 3 feet laterally outside of the improvement area, where practical.

6.3.6 The base of removals should be scarified to a depth of at least 12 inches, moisture conditioned as needed, and compacted to at least 90 percent of the maximum dry density as determined by ASTM D1557 prior to fill being placed. Deeper excavations may be required if saturated or loose soil is encountered. A representative of Geocon should be on-site during grading to evaluate the limits of the remedial grading.

6.3.7 Fill soil should be placed in loose layers approximately 6 to 8 inches thick to allow for adequate bonding and compaction.

6.3.8 Fill should be compacted to a dry density of at least 90 percent of the maximum dry density at or slightly above optimum moisture content as determined by ASTM Test Procedure D 1557. Fill soil placed below optimum moisture content will require additional moisture conditioning prior to compaction and placing additional fill.

6.3.9 Imported fill should consist of the characteristics presented in Table 6.3.1. Geocon Incorporated should be provided with a sample of the soil proposed for import to perform testing to ascertain its suitability as fill soil.

TABLE 6.3.1
SUMMARY OF IMPORT FILL RECOMMENDATIONS

Soil Characteristic	Values
Expansion Potential	"Very Low" to "Low" (Expansion Index of 50 or less)
Particle Size	Maximum Dimension Less Than 3 Inches
	Generally Free of Debris

6.4 Subdrains

6.4.1 Subdrains are not required.

6.5 Seismic Design Criteria – 2022 California Building Code

6.5.1 Table 6.5.1 summarizes site-specific design criteria obtained from the 2022 California Building Code (CBC; Based on the 2021 International Building Code [IBC] and ASCE 7-16), Chapter 16 Structural Design, Section 1613 Earthquake Loads. We used SEAOC (2019) to calculate the seismic design parameters. The short spectral response uses a period of 0.2 second. We evaluated the Site Class based on the discussion in Section 1613.2.2 of the 2022 CBC and Table 20.3-1 of ASCE 7-16 using exploratory borings from nearby projects. The values presented herein are for the risk-targeted maximum considered earthquake (MCE_R).

TABLE 6.5.1
2022 CBC SEISMIC DESIGN PARAMETERS

Parameter	Value	2022 CBC Reference
Site Class	C	Section 1613.2.2
MCE_R Ground Motion Spectral Response Acceleration – Class B (short), S_S	1.424g	Figure 1613.2.1(1)
MCE_R Ground Motion Spectral Response Acceleration – Class B (1 sec), S_1	0.483g	Figure 1613.2.1(3)
Site Coefficient, F_A	1.2	Table 1613.2.3(1)
Site Coefficient, F_V	1.5	Table 1613.2.3(2)
Site Class Modified MCE_R Spectral Response Acceleration (short), S_{MS}	1.708g	Section 1613.2.3 (Eqn 16-20)
Site Class Modified MCE_R Spectral Response Acceleration – (1 sec), S_{M1}	0.724g	Section 1613.2.3 (Eqn 16-21)
5% Damped Design Spectral Response Acceleration (short), S_{DS}	1.139g	Section 1613.2.4 (Eqn 16-22)
5% Damped Design Spectral Response Acceleration (1 sec), S_{D1}	0.483g	Section 1613.2.4 (Eqn 16-23)

6.5.2 Table 6.5.2 presents the mapped maximum considered geometric mean (MCE_G) seismic design parameters for projects located in Seismic Design Categories of D through F in accordance with ASCE 7-16.

TABLE 6.5.2
ASCE 7-16 PEAK GROUND ACCELERATION

Parameter	Value	ASCE 7-16 Reference
Mapped MCE_G Peak Ground Acceleration, PGA	0.647g	Figure 22-9
Site Coefficient, F_{PGA}	1.2	Table 11.8-1
Site Class Modified MCE_G Peak Ground Acceleration, PGA_M	0.777g	Section 11.8.3 (Eqn 11.8-1)

6.5.3 Conformance to the criteria in Tables 6.5.1 and 6.5.2 for seismic design does not constitute any kind of guarantee or assurance that significant structural damage or ground failure will not occur in the event of a large earthquake. The primary goal of seismic design is to protect life, not to avoid all damage, since such design may be economically prohibitive.

6.5.4 The project structural engineer and architect should evaluate the appropriate Risk Category and Seismic Design Category for the planned structures. The values presented herein assume a Risk Category of II resulting in a Seismic Design Category D. Table 6.5.3 presents a summary of the risk categories in accordance with ASCE 7-16.

TABLE 6.5.3
ASCE 7-16 RISK CATEGORIES

Risk Category	Building Use	Examples
I	Low risk to Human Life at Failure	Barn, Storage Shelter
II	Nominal Risk to Human Life at Failure (Buildings Not Designated as I, III or IV)	Residential, Commercial and Industrial Buildings
III	Substantial Risk to Human Life at Failure	Theaters, Lecture Halls, Dining Halls, Schools, Prisons, Small Healthcare Facilities, Infrastructure Plants, Storage for Explosives/Toxins
IV	Essential Facilities	Hazardous Material Facilities, Hospitals, Fire and Rescue, Emergency Shelters, Police Stations, Power Stations, Aviation Control Facilities, National Defense, Water Storage

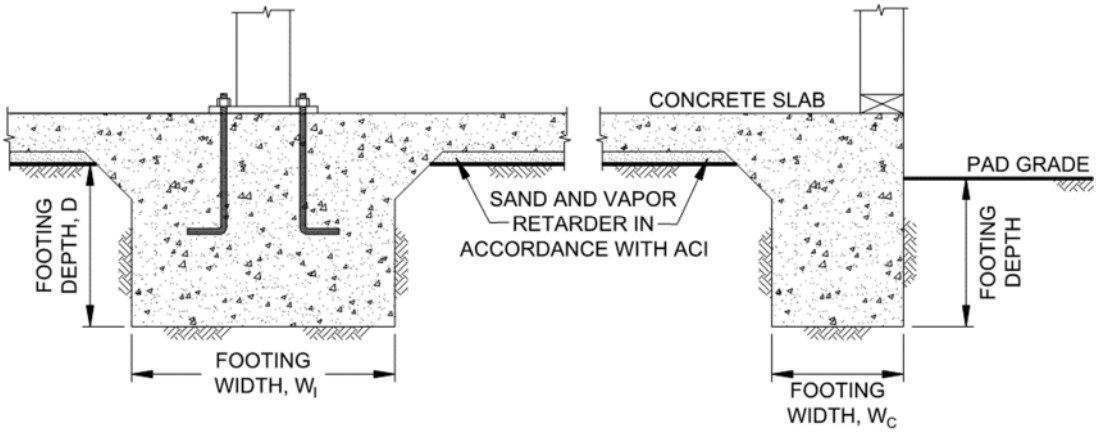
6.6 Shallow Foundations

6.6.1 Foundations for the pergola structure can be supported on a shallow foundation system founded entirely in the Very Old Paralic Deposits. This could require footings to be deepened in areas of fill. Foundations for the structure should consist of continuous strip footings and/or isolated spread footings. Table 6.6 provides a summary of the foundation design recommendations.

TABLE 6.6
SUMMARY OF FOUNDATION RECOMMENDATIONS

Parameter	Value
Minimum Continuous Foundation Width, W_C	12 inches
Minimum Isolated Foundation Width, W_I	24 inches
Minimum Foundation Depth, D	24 Inches Below Lowest Adjacent Grade
Minimum Steel Reinforcement	4 No. 5 Bars, 2 at the Top and 2 at the Bottom
Maximum Allowable Bearing Capacity	5,000 psf
Estimated Total Settlement	½ Inch
Estimated Differential Settlement	½ Inch in 40 Feet
Footing Size Used for Settlement	10-Foot Square
Design Expansion Index	50 or less

6.6.2 The foundations should be embedded in accordance with the recommendations herein and the Wall/Column Footing Dimension Detail. The embedment depths should be measured from the lowest adjacent pad grade for both interior and exterior footings. Footings should be deepened such that the bottom outside edge of the footing is at least 7 feet horizontally from the face of the slope (unless designed with a post-tensioned foundation system as discussed herein).



Wall/Column Footing Dimension Detail

6.6.3 The bearing capacity values presented herein are for dead plus live loads and may be increased by one-third when considering transient loads due to wind or seismic forces.

6.6.4 We should observe the foundation excavations prior to the placement of reinforcing steel and concrete to check that the exposed soil conditions are similar to those expected and that they have been extended to the appropriate bearing strata. Foundation modifications may be required if unexpected soil conditions are encountered.

6.6.5 Geocon Incorporated should be consulted to provide additional design parameters as required by the structural engineer.

6.7 Drilled Pier Recommendations

6.7.1 Drilled piers may be used for foundation support for the pergola structure. The foundation recommendations herein assume that the piers will extend into the underlying Very Old Paralic Deposits.

6.7.2 Piers can be designed to develop support by end bearing and skin friction within the Very Old Paralic Deposits using the design parameters presented in Table 6.7. These allowable values possess a factor of safety of at least 2 and 3 for skin friction and end bearing, respectively.

TABLE 6.7
SUMMARY OF DRILLED PIER RECOMMENDATIONS

Parameter	Value
Minimum Pile Diameter	12 Inches
Minimum Pile Spacing	3 Times Pile Diameter
Minimum Foundation Embedment Depth	5 Feet
	5 Feet in Very Old Paralic Deposits
Allowable End Bearing Capacity	5,000 psf (Very Old Paralic Deposits)
Allowable Skin Friction Capacity	200 psf (Very Old Paralic Deposits)
Estimated Total Static Settlement	½ Inch
Estimated Differential Static Settlement	½ Inch in 40 Feet

6.7.3 If pier spacing is at least three times the maximum dimension of the pier, no reduction in axial capacity for group effects is considered necessary. If piles are spaced between 2 and 3 pile diameters (center to center), the single pile axial capacity should be reduced by 25 percent. Geocon Incorporated should be contacted to provide single-pile capacity if piers are spaced closer than 2 diameters.

6.7.4 The allowable downward capacity may be increased by one-third when considering transient wind or seismic loads.

6.7.5 Because a portion of the pier capacity will be developed by end bearing, the bottom of the borehole should be cleaned of loose cuttings prior to the placement of steel and concrete. Experience indicates that back spinning the auger does not remove loose material and a flat cleanout plate is necessary. Concrete should be placed within the excavation as soon as

possible after the auger/cleanout plate is withdrawn to reduce the potential for discontinuities or caving.

6.7.6 Pile settlement is expected to be on the order of ½ inch if the piers are loaded to their allowable capacities.

6.7.7 If needed, we can provide a lateral pile capacity analysis using the *LPILE* computer program once the pile type, size, and length have been determined.

6.8 Exterior Concrete Flatwork

6.8.1 Exterior concrete flatwork that is not subjected to vehicular traffic should be constructed in accordance with the recommendations presented in Table 6.8. The recommended concrete reinforcement would help reduce potential cracking.

TABLE 6.8
MINIMUM CONCRETE FLATWORK RECOMMENDATIONS

Expansion Index, EI	Minimum Steel Reinforcement* Options	Minimum Thickness
EI $\leq$ 90	6x6-W2.9/W2.9 (6x6-6/6) welded wire mesh	4 Inches
	No. 3 Bars 18 inches on center, Both Directions	

*In excess of 8 feet square.

6.8.2 The subgrade soil should be properly moisturized and compacted prior to the placement of steel and concrete. The subgrade soil should be compacted to a dry density of at least 90 percent of the laboratory maximum dry density near to slightly above optimum moisture content in accordance with ASTM D 1557.

6.8.3 Concrete flatwork should be provided with crack-control joints. American Concrete Institute (ACI) guidelines should be used to determine the appropriate spacing.

6.8.4 Subgrade soil should be compacted in accordance with criteria presented in the grading section prior to concrete placement. Subgrade soil should be properly compacted and the moisture content of subgrade soil should be verified prior to placing concrete. Base materials will not be required below concrete improvements.

6.8.5 The occurrence of concrete shrinkage cracks is independent of the soil supporting characteristics. The recommendations presented herein are intended to reduce potential cracking of exterior slabs; however, even with the incorporation of the recommendations

presented herein, slabs could still crack. The occurrence of cracking can reduced by limiting the slump of the concrete; the use of appropriately spaced crack-control joints; and proper concrete placement and curing. Crack-control joints should be spaced at intervals no greater than 12 feet. Portland Concrete Association (PCA) and American Concrete Institute guidelines for proper concrete mix, construction, and curing practices should be incorporated into project design and construction.

6.9 Retaining Walls

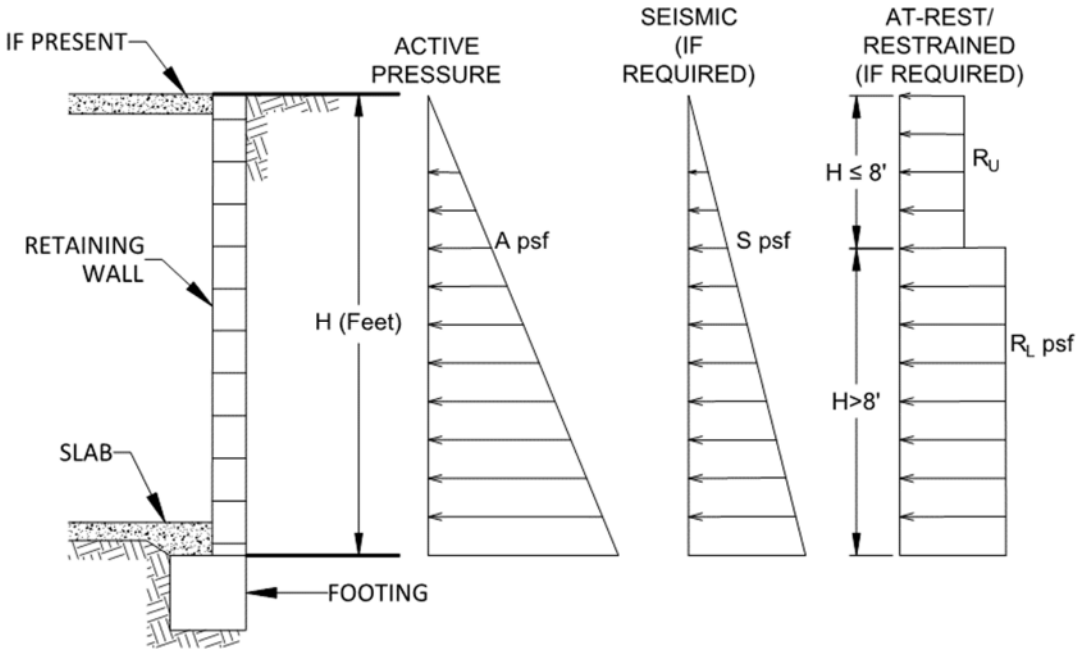
6.9.1 Retaining walls should be designed using the values presented in Table 6.9.1. Soil with an expansion index (EI) of greater than 50 should not be used as backfill behind retaining walls.

TABLE 6.9.1
RETAINING WALL DESIGN RECOMMENDATIONS

Parameter	Value
Active Soil Pressure (Level Backfill), A	35H psf
Active Soil Pressure (2:1 Sloping Backfill), A	50H psf
Seismic Pressure, S	15H psf
At-Rest/Restrained Walls Additional Uniform Pressure, R_U (0 to 8 Feet High)	7H psf
At-Rest/Restrained Walls Additional Uniform Pressure, R_L (8+ Feet High)	13H psf
Expected Expansion Index for the Subject Property	EI$\leq$50

H equals the height of the retaining portion of the wall

6.9.2 The project retaining walls should be designed as shown in the Retaining Wall Loading Diagram.



Retaining Wall Loading Diagram

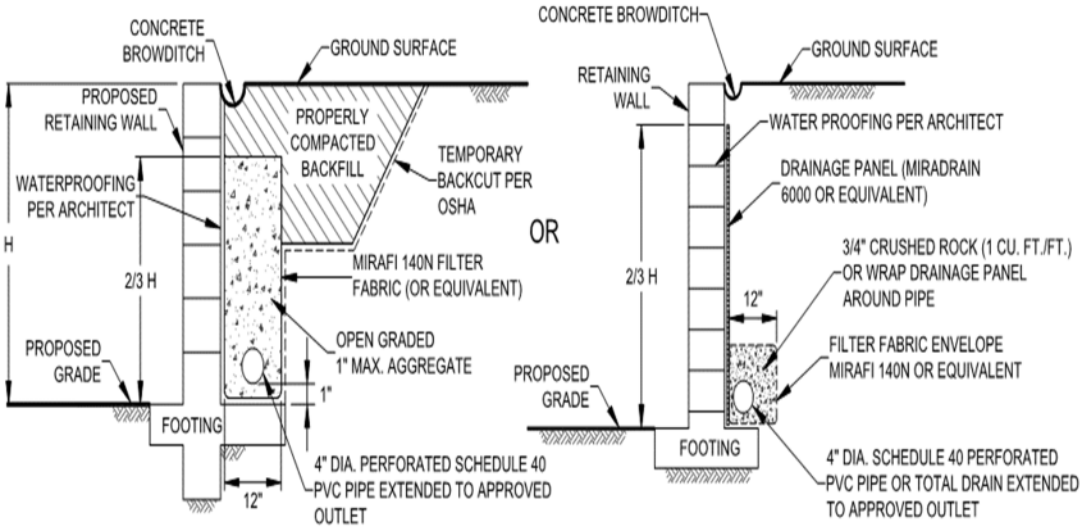
6.9.3 Unrestrained walls are those that are allowed to rotate more than 0.001H (where H equals the height of the retaining portion of the wall) at the top of the wall. Where walls are restrained from movement at the top (at-rest condition), an additional uniform pressure should be applied to the wall. For retaining walls subject to vehicular loads within a horizontal distance equal to two-thirds the wall height, a surcharge equivalent to 2 feet of fill soil should be added to the upper 10 feet of the retaining wall.

6.9.4 The structural engineer should determine the Seismic Design Category for the project in accordance with Section 1613 of the 2022 CBC or Section 11.6 of ASCE 7-16. For structures assigned to Seismic Design Category of D, E, or F, retaining walls that support more than 6 feet of backfill should be designed with seismic lateral pressure in accordance with Section 1803.5.12 of the 2022 CBC. The seismic load is dependent on the retained height where H is the height of the wall, in feet, and the calculated loads result in pounds per square foot (psf) exerted at the base of the wall and zero at the top of the wall.

6.9.5 It is not necessary to consider active pressure on the keyway.

6.9.6 Drainage openings through the base of the wall should not be used where the seepage could be a nuisance or otherwise adversely affect the property adjacent to the base of the wall. The recommendations herein assume a properly compacted granular (EI of 90 or less) free-draining backfill material with no hydrostatic forces or imposed surcharge load. The retaining wall should be properly drained as shown in the Typical Retaining Wall Drainage Detail. If

conditions different than those described are expected, or if specific drainage details are desired, Geocon Incorporated should be contacted for additional recommendations.



Typical Retaining Wall Drainage Detail

6.9.7 In general, wall foundations should be designed in accordance with Table 6.9.2. The proximity of the foundation to the top of a slope steeper than 3:1 could impact the allowable soil bearing pressure. Therefore, retaining wall foundations should be deepened such that the bottom outside edge of the footing is at least 7 feet horizontally from the face of the slope.

TABLE 6.9.2
SUMMARY OF RETAINING WALL FOUNDATION RECOMMENDATIONS

Parameter	Value
Minimum Retaining Wall Foundation Width	12 inches
Minimum Retaining Wall Foundation Depth	18 Inches
Minimum Concrete Reinforcement	Per Structural Engineer
Allowable Bearing Capacity (Compacted Fill)	2,000 psf
Bearing Capacity Increase	500 psf per Foot of Depth
	300 psf per Foot of Width
Maximum Allowable Bearing Capacity (Compacted fill)	4,000 psf
Estimated Total Settlement	1 Inch
Estimated Differential Settlement	½ Inch in 40 Feet

6.9.8 The recommendations presented herein are generally applicable to the design of rigid concrete or masonry retaining walls. In the event that other types of walls (such as mechanically

stabilized earth [MSE] walls, soil nail walls, or soldier pile walls) are planned, Geocon Incorporated should be consulted for additional recommendations.

6.9.9 Unrestrained walls will move laterally when backfilled and loading is applied. The amount of lateral deflection is dependent on the wall height, the type of soil used for backfill, and loads acting on the wall. The retaining walls and improvements above the retaining walls should be designed to incorporate an appropriate amount of lateral deflection as determined by the structural engineer.

6.9.10 Soil contemplated for use as retaining wall backfill, including imported soil, should be identified prior to backfilling. We should be provided with samples of the proposed backfill soil for laboratory testing to evaluate its suitability. Modified lateral earth pressures may be necessary if the backfill soil does not meet the required expansion index or shear strength. City or regional standard wall designs, if used, are based on a specific active lateral earth pressure and/or soil friction angle. In this regard, on-site soil to be used as backfill may or may not meet the values for standard wall designs. We should be consulted to assess the suitability of the on-site soil for use as wall backfill if standard wall designs will be used.

6.10 Lateral Loading

6.10.1 Table 6.10 should be used to help design the proposed structures and improvements to resist lateral loads for the design of footings or shear keys. The allowable passive pressure assumes a horizontal surface extending at least 5 feet, or three times the surface generating the passive pressure, whichever is greater. The upper 12 inches of material in areas not protected by floor slabs or pavement should not be included in the design for passive resistance.

TABLE 6.10
SUMMARY OF LATERAL LOAD DESIGN RECOMMENDATIONS

Parameter	Value
Passive Pressure	300H psf
Coefficient of Friction (Concrete and Soil)	0.35
Coefficient of Friction (Along Vapor Barrier)	0.2 to 0.25*

*Per manufacturer's recommendations.

6.10.2 The passive and frictional resistant loads can be combined for design purposes. The lateral passive pressures may be increased by one-third for transient loads due to wind or seismic forces.

6.11 Site Drainage and Moisture Protection

6.11.1 Adequate site drainage is critical to reduce the potential for differential soil movement, erosion and subsurface seepage. Under no circumstances should water be allowed to pond adjacent to footings. The site should be graded and maintained such that surface drainage is directed away from structures in accordance with 2022 CBC 1804.4 or other applicable standards. In addition, surface drainage should be directed away from the top of slopes into swales or other controlled drainage devices. Roof and pavement drainage should be directed into conduits that carry runoff away from the proposed structure.

6.11.2 Underground utilities should be leak free. Utility and irrigation lines should be checked periodically for leaks, and detected leaks should be repaired promptly. Detrimental soil movement could occur if water is allowed to infiltrate the soil for prolonged periods of time.

6.11.3 Landscaping planters adjacent to paved areas are not recommended due to the potential for surface or irrigation water to infiltrate the pavement's subgrade and base course. Area drains to collect excess irrigation water and transmit it to drainage structures or impervious above-grade planter boxes can be used. In addition, where landscaping is planned adjacent to the pavement, construction of a cutoff wall along the edge of the pavement that extends at least 6 inches below the bottom of the base material should be considered.

6.11.4 We should prepare a storm water infiltration feasibility report if storm water management devices are planned.

6.12 Grading and Foundation Plan Review

6.12.1 Geocon Incorporated should review the grading and building foundation plans for the project prior to final design submittal to evaluate if additional analyses and/or recommendations are required.

LIMITATIONS AND UNIFORMITY OF CONDITIONS

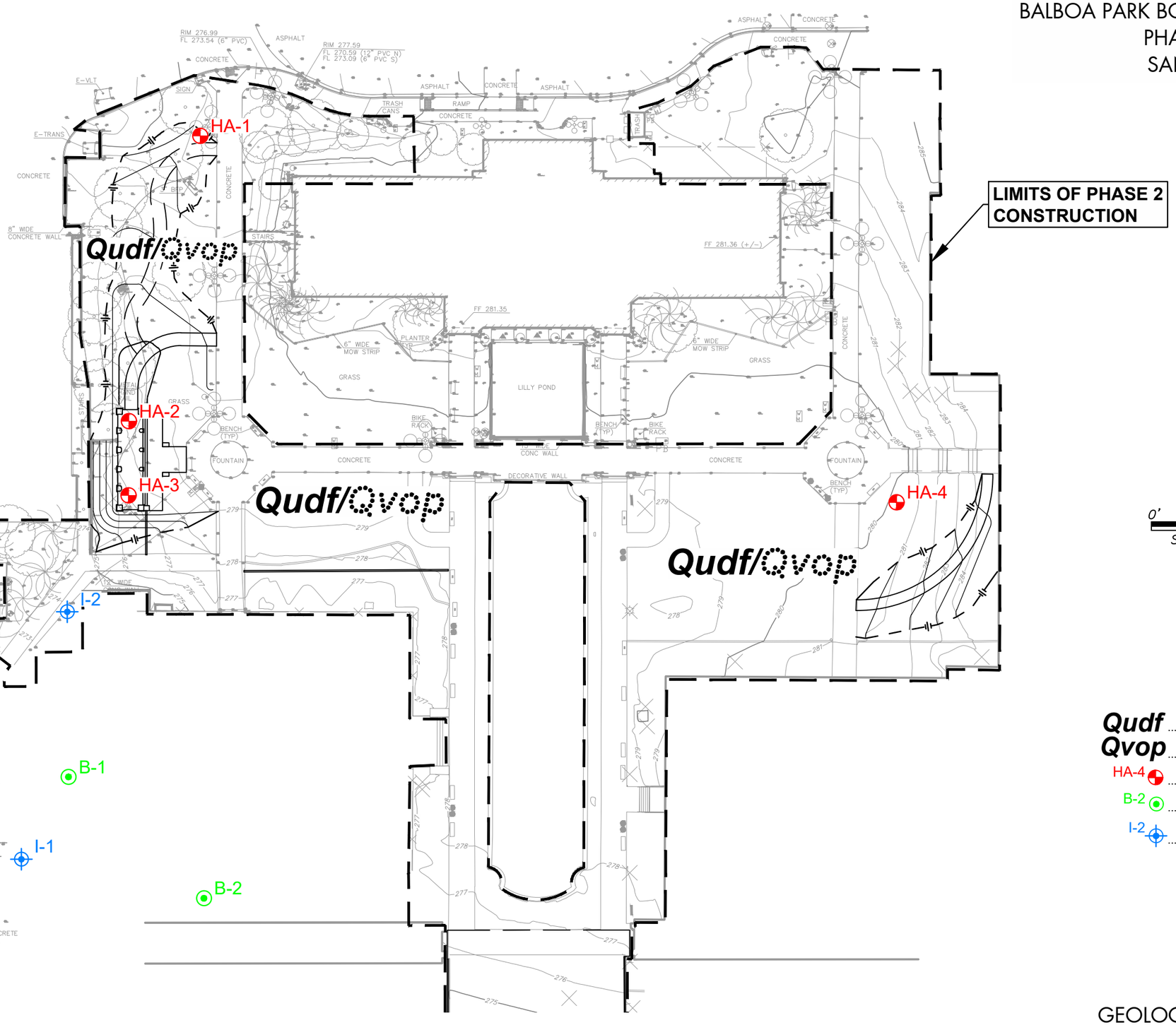
1. We prepared the geotechnical investigation for the project we should be retained to provide testing and observation services during construction to provide continuity of geotechnical interpretation and to check that the recommendations presented for geotechnical aspects of site development are incorporated during site grading, construction of improvements, and excavation of foundations. If another geotechnical firm is selected to perform the testing and observation services during construction operations, we should be notified and the selected firm should prepare a letter indicating their intent to assume the responsibilities of project geotechnical engineer of record. A copy of the letter should be provided to us and the regulatory agency for their records. In addition, that firm should provide revised recommendations concerning the geotechnical aspects of the proposed development, or a written acknowledgement of their concurrence with the recommendations presented in our report. They should also perform additional analyses deemed necessary to assume the role of Geotechnical Engineer of Record.

2. The recommendations of this report pertain only to the site investigated and are based on the assumption that the soil conditions do not deviate from those disclosed in the investigation. If any variations or undesirable conditions are encountered during construction, or if the proposed construction will differ from that anticipated herein, Geocon Incorporated should be notified to provide additional recommendations. The evaluation or identification of the potential presence of hazardous or corrosive materials was not part of the scope of services provided by Geocon Incorporated.

3. This report is issued with the understanding that it is the responsibility of the owner or his representative to ensure that the information and recommendations contained herein are brought to the attention of the architect and engineer for the project and incorporated into the plans, and the necessary steps are taken to see that the contractor and subcontractors carry out such recommendations in the field.

4. The findings of this report are valid as of the present date. However, changes in the conditions of a property can occur with the passage of time, whether they be due to natural processes or the works of man on this or adjacent properties. In addition, changes in applicable or appropriate guidelines/standards may occur, whether they result from legislation or the broadening of knowledge. Accordingly, the findings of this report may be invalidated wholly or partially by changes outside our control. Therefore, this report is subject to review and should not be relied upon after a period of three years.

BALBOA PARK BOTANICAL BUILDING AND GARDENS
PHASE 2 DESIGN PROJECT
SAN DIEGO, CALIFORNIA



0' 50' 100'
SCALE 1"= 50' (On 11x17)

GEOCON LEGEND

Qudf .....UNDOCUMENTED FILL

Qvop .....VERY OLD PARALIC DEPOSITS (Dotted Where Buried)

HA-4 .....APPROX. LOCATION OF HAND AUGER BORING

B-2 .....APPROX. LOCATION OF PREVIOUS BORING (Geocon, 2022)

I-2 .....APPROX. LOCATION OF PREVIOUS INFILTRATION TEST (Geocon, 2022)

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PROJECT NO. G3245 - 42 - 01
FIGURE 1
DATE 02 - 26 - 2024

GEOLOGIC MAP

Plotted:02/26/2024 1:29PM | By:JONATHAN WILKINS | File Location:Y:\PROJECTS\G3245-42-01 Botanical Gardens\SHEETS\G3245-42-01 GeoMap.dwg

APPENDIX A

APPENDIX A

FIELD INVESTIGATION

We performed the hand auger borings on January 15, 2024. The approximate locations of the exploratory borings are shown on the Geologic Map, Figure 1 and the boring logs are presented in this appendix.

The borings were excavated to a maximum depth of approximately 3 feet below existing grade using hand digging equipment. We collected bulk soil samples from the auger spoils.

We visually examined, classified, and logged the soil encountered in the borings in general accordance with American Society for Testing and Materials (ASTM) practice for Description and Identification of Soils (Visual-Manual Procedure D 2488). The logs depict the soil and geologic conditions observed and the depth at which samples were obtained.

PROJECT NO. G3245-42-01

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	**HAND AUGER HA 1** ELEV. (MSL.) **274'** DATE COMPLETED **01/15/2024** EQUIPMENT **HAND AUGER** BY: **J. SHELTON**	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0.0				SM	**UNDOCUMENTED FILL (Qudf)** Loose to medium dense, damp to moist, light brown, Silty, fine to medium SAND; trace gravel			
0.5								
1.0								
1.5								
2.0				SM	**VERY OLD PARALIC DEPOSITS (Qvop)** Very dense, dry to damp, orangish brown, Silty, fine- to coarse-grained SANDSTONE; very difficult to excavate with hand auger; spoils fall out of hand auger			

REFUSAL AT 2.25 FEET
Groundwater not encountered
Seepage not encountered

Figure A-1,
Log of HAND AUGER HA 1, Page 1 of 1

G3245-42-01.GPJ

SAMPLE SYMBOLS
... SAMPLING UNSUCCESSFUL ... STANDARD PENETRATION TEST ... DRIVE SAMPLE (UNDISTURBED)
... DISTURBED OR BAG SAMPLE ... CHUNK SAMPLE ... WATER TABLE OR ... SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

PROJECT NO. G3245-42-01

HAND AUGER HA 2

ELEV. (MSL.) **281'** DATE COMPLETED **01/15/2024**

EQUIPMENT **HAND AUGER** BY: **J. SHELTON**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0.0	HA2-1			SM	**UNDOCUMENTED FILL (Qudf)** Loose to medium dense, damp, brown, Silty, fine to coarse SAND; trace gravel			
0.5								
1.0								
1.5				SM	**VERY OLD PARALIC DEPOSITS (Qvop)** Very dense, dry to damp, reddish brown to orangish brown, Silty, fine- to coarse-grained SANDSTONE; very difficult to excavate with hand auger; spoils fall out of hand auger			

REFUSAL AT 1.75 FEET
Groundwater not encountered
Seepage not encountered

Figure A-2,
Log of HAND AUGER HA 2, Page 1 of 1

G3245-42-01.GPJ

SAMPLE SYMBOLS

... SAMPLING UNSUCCESSFUL ... STANDARD PENETRATION TEST ... DRIVE SAMPLE (UNDISTURBED)

... DISTURBED OR BAG SAMPLE ... CHUNK SAMPLE ... WATER TABLE OR ... SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

PROJECT NO. G3245-42-01

HAND AUGER HA 3

ELEV. (MSL.) **279'** DATE COMPLETED **01/15/2024**

EQUIPMENT **HAND AUGER** BY: **J. SHELTON**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0.0					**3" GRASS AND TOPSOIL**			
	HA3-1			SM	**UNDOCUMENTED FILL (Qudf)** Loose to medium dense, moist, brown to reddish brown, Silty, fine to coarse SAND; some lithic fragments			
0.5								
1.0								
1.5				SM	**VERY OLD PARALIC DEPOSITS (Qvop)** Very dense, dry, orangish brown to reddish brown, Silty, fine- to coarse-grained SANDSTONE; very difficult to excavate with hand auger; samples fall out of hand auger			

REFUSAL AT 1.75 FEET
Groundwater not encountered
Seepage not encountered

Figure A-3,
Log of HAND AUGER HA 3, Page 1 of 1

G3245-42-01.GPJ

SAMPLE SYMBOLS

... SAMPLING UNSUCCESSFUL ... STANDARD PENETRATION TEST ... DRIVE SAMPLE (UNDISTURBED)

... DISTURBED OR BAG SAMPLE ... CHUNK SAMPLE ... WATER TABLE OR ... SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

PROJECT NO. G3245-42-01

HAND AUGER HA 4

ELEV. (MSL.) **283'** DATE COMPLETED **01/15/2024**

EQUIPMENT **HAND AUGER** BY: **J. SHELTON**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0.0					**4" GRASS AND TOPSOIL**			
0.5				SM	**UNDOCUMENTED FILL (Qudf)** Loose to medium dense, damp, brown, Silty, fine to coarse SAND; trace gravel			
1.0								
1.5					-Becomes damp to moist, reddish brown to brown			
2.0								
2.5				SM	**VERY OLD PARALIC DEPOSITS (Qvop)** Very dense, damp, orangish brown, Silty, fine- to coarse-grained SANDSTONE; very difficult to excavate with hand auger; samples fall out of hand auger			

REFUSAL AT 2.75 FEET
Groundwater not encountered
Seepage not encountered

Figure A-4,
Log of HAND AUGER HA 4, Page 1 of 1

G3245-42-01.GPJ

SAMPLE SYMBOLS
... SAMPLING UNSUCCESSFUL
... STANDARD PENETRATION TEST
... DRIVE SAMPLE (UNDISTURBED)
... DISTURBED OR BAG SAMPLE
... CHUNK SAMPLE
... WATER TABLE OR ... SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

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APPENDIX B

APPENDIX B

LABORATORY TESTING

We performed laboratory tests in accordance with generally accepted test methods of the American Society for Testing and Materials (ASTM) or other suggested procedures. We tested selected soil samples for maximum density/optimum moisture content, expansion index, water-soluble sulfate, and chloride content. The results of our laboratory tests are presented herein.

SUMMARY OF LABORATORY MAXIMUM DRY DENSITY AND OPTIMUM MOISTURE CONTENT TEST RESULTS ASTM D 1557

Sample No.	Description (Geologic Unit)	Maximum Dry Density (pcf)	Optimum Moisture Content (% dry wt.)
HA3-1	Reddish brown, Silty, fine to coarse SAND (Qudf/Qvop)	126.6	9.6

SUMMARY OF LABORATORY EXPANSION INDEX TEST RESULTS ASTM D 4829

Sample No.	Moisture Content (%)		Dry Density (pcf)	Expansion Index	2022 CBC Expansion Classification	ASTM Soil Expansion Classification
	Before Test	After Test				
HA3-1	9.7	16.7	111.5	5	Non-Expansive	Very Low

SUMMARY OF LABORATORY WATER-SOLUBLE SULFATE TEST RESULTS CALIFORNIA TEST NO. 417

Sample No.	Depth (feet)	Geologic Unit	Water-Soluble Sulfate (%)	ACI 318 Sulfate Exposure
HA3-1	0.25-1.75	Qudf/Qvop	0.008	S0

SUMMARY OF LABORATORY CHLORIDE TEST RESULTS AASHTO T 291

Sample No.	Depth (Feet)	Geologic Unit	Chloride Ion Content (ppm)	Chloride Ion Content (%)
HA3-1	0.25-1.75	Qudf/Qvop	128	0.013

APPENDIX C

APPENDIX C

PREVIOUS FIELD INVESTIGATION AND LABORATORY TESTING (GEOCON, 2022)

FOR

BALBOA PARK BOTANICAL BUILDING AND GARDENS PHASE 2 DESIGN PROJECT SAN DIEGO, CALIFORNIA

PROJECT NO. G3245-42-01

PROJECT NO. G3045-52-01

BORING B 1

ELEV. (MSL.) 275' DATE COMPLETED 11/04/2022

EQUIPMENT MULTIPOWER LAR BY: B. KUNA

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0					**4" PORTLAND CEMENT CONCRETE**			
	B1-1			SM	**VERY OLD PARALIC DEPOSITS (Qvop)** Very dense, moist, reddish brown with layers of grayish brown, Silty, fine to medium SAND; intermittent gravel/cobble layers			
2								
4								
	B1-2					50/3"	101.0 99.3	13.9 13.4
6								
				SC	Very dense, moist, reddish brown, Clayey, fine to medium SAND; intermittent gravel/cobble layers			
8								
10	B1-3					50/6"	117.7	8.6
12								
14				ML	**SAN DIEGO FORMATION (Tsd)** Hard, moist, reddish brown and pale yellowish brown, Sandy SILTSTONE; poorly cemented; laminated			
	B1-4					68	94.0	22.8
16								
18								

Figure A-1,
Log of Boring B 1, Page 1 of 2

G3045-52-01.GPJ

SAMPLE SYMBOLS

... SAMPLING UNSUCCESSFUL ... STANDARD PENETRATION TEST ... DRIVE SAMPLE (UNDISTURBED)

... DISTURBED OR BAG SAMPLE ... CHUNK SAMPLE ... WATER TABLE OR ... SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

PROJECT NO. G3045-52-01

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	**BORING B 1** ELEV. (MSL.) **275'** DATE COMPLETED **11/04/2022** EQUIPMENT **MULTIPOWER LAR** BY: **B. KUNA**	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
20	B1-5					63	97.9	17.3
22								
24								
	B1-6					79/11"	95.4	12.7
					BORING TERMINATED AT 25.9 FEET Groundwater not encountered Backfilled on 11/04/2022			

Figure A-1,
Log of Boring B 1, Page 2 of 2

G3045-52-01.GPJ

SAMPLE SYMBOLS

... SAMPLING UNSUCCESSFUL ... STANDARD PENETRATION TEST ... DRIVE SAMPLE (UNDISTURBED)

... DISTURBED OR BAG SAMPLE ... CHUNK SAMPLE ... WATER TABLE OR ... SEEPAGE

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GEOCON

PROJECT NO. G3045-52-01

BORING B 2

ELEV. (MSL.) 277' DATE COMPLETED 11/04/2022

EQUIPMENT MULTIPOWER LAR BY: B. KUNA

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0	B2-1			SC	**UNDOCUMENTED FILL/TOPSOIL (Undifferentiated)** Medium dense, moist, brown, Clayey, fine to medium SAND; some gravel			
2				SM	**VERY OLD PARALIC DEPOSITS (Qvop)** Very dense, damp, reddish brown, Silty, fine SAND with gravel and cobble			
4								
	B2-2					50/5.5"		5.0
6								
8				SC	Very dense, moist, reddish brown, Clayey, fine to medium SAND with gravel and cobble			
10	B2-3					50/6"	117.2	9.8
12								
14				CL	**SAN DIEGO FORMATION (Tsd)** Very stiff, moist, pale yellowish brown, Silty CLAYSTONE			
	B2-4					64	102.9	12.4
16	B2-5							
18								

Figure A-2,
Log of Boring B 2, Page 1 of 2

G3045-52-01.GPJ

SAMPLE SYMBOLS

... SAMPLING UNSUCCESSFUL ... STANDARD PENETRATION TEST ... DRIVE SAMPLE (UNDISTURBED)

... DISTURBED OR BAG SAMPLE ... CHUNK SAMPLE ... WATER TABLE OR ... SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

PROJECT NO. G3045-52-01

BORING B 2

ELEV. (MSL.) 277' DATE COMPLETED 11/04/2022

EQUIPMENT MULTIPOWER LAR BY: B. KUNA

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
20	B2-6			ML	Very stiff, moist, pale yellowish brown, Clayey SILTSTONE; poorly cemented, laminated	60	97.2	15.5
22								
24								
	B2-7				-Becomes hard; brownish gray	79	104.4	16.4
26								
28								
30	B2-8					84/10.5"	100.5	14.0
					BORING TERMINATED AT 30.8 FEET Groundwater not encountered Backfilled on 11/04/2022			

Figure A-2,
Log of Boring B 2, Page 2 of 2

G3045-52-01.GPJ

SAMPLE SYMBOLS

... SAMPLING UNSUCCESSFUL ... STANDARD PENETRATION TEST ... DRIVE SAMPLE (UNDISTURBED)

... DISTURBED OR BAG SAMPLE ... CHUNK SAMPLE ... WATER TABLE OR ... SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

PROJECT NO. G3045-52-01

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	**BORING I 1** ELEV. (MSL.) **275** DATE COMPLETED **11/04/2022** EQUIPMENT **MULTIPOWER LAR** BY: **B. KUNA**	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0				SC	**UNDOCUMENTED FILL/TOPSOIL (Undifferentiated)**			
				SM/SC	Medium dense, moist, very dark brown, Clayey, fine SAND with organics			
					VERY OLD PARALIC DEPOSITS (Qvop) Very dense, moist, reddish brown and brownish gray, Silty to Clayey, fine to medium SAND with gravel and cobble			
2								
4								
					BORING TERMINATED AT 4.5 FEET Groundwater not encountered Backfilled on 11/04/2022			

Figure A-3,
Log of Boring I 1, Page 1 of 1

G3045-52-01.GPJ

SAMPLE SYMBOLS			
	... SAMPLING UNSUCCESSFUL	... STANDARD PENETRATION TEST	... DRIVE SAMPLE (UNDISTURBED)
	... DISTURBED OR BAG SAMPLE	... CHUNK SAMPLE	... WATER TABLE OR ... SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

PROJECT NO. G3045-52-01

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	**BORING I 2** ELEV. (MSL.) **276'** DATE COMPLETED **11/04/2022** EQUIPMENT **MULTIPOWER LAR** BY: **B. KUNA**	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0				SM/SC	**UNDOCUMENTED FILL/TOPSOIL (Undifferentiated)** Medium dense, moist, brown, Silty to Clayey, fine to medium SAND with gravel			
				SM	**VERY OLD PARALIC DEPOSITS (Qvop)** Very dense, damp, reddish brown, Silty, fine to medium SAND with gravel and cobble			
2								
4								
					BORING TERMINATED AT 4.5 FEET Groundwater not encountered Backfilled on 11/04/2022			

Figure A-4,
Log of Boring I 2, Page 1 of 1

G3045-52-01.GPJ

SAMPLE SYMBOLS

... SAMPLING UNSUCCESSFUL ... STANDARD PENETRATION TEST ... DRIVE SAMPLE (UNDISTURBED)

... DISTURBED OR BAG SAMPLE ... CHUNK SAMPLE ... WATER TABLE OR ... SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

APPENDIX B

LABORATORY TESTING

We performed laboratory tests in accordance with generally accepted test methods of the American Society for Testing and Materials (ASTM) or other suggested procedures. We tested selected soil samples for in-place dry density/moisture content, maximum density/optimum moisture content, expansion index, water-soluble sulfate, unconfined compressive strength, consolidation, gradation and direct shear strength. The results of our current laboratory tests are presented herein. The in-place dry density and moisture content of the samples tested are presented on the boring logs in Appendix A.

SUMMARY OF LABORATORY MAXIMUM DRY DENSITY AND OPTIMUM MOISTURE CONTENT TEST RESULTS ASTM D 1557

Sample No.	Description (Geologic Unit)	Maximum Dry Density (pcf)	Optimum Moisture Content (% dry wt.)
B1-1	Reddish brown, Silty, fine to medium SAND; little gravel (Qvop)	128.6	9.3

SUMMARY OF LABORATORY EXPANSION INDEX TEST RESULTS ASTM D 4829

Sample No.	Moisture Content (%)		Dry Density (pcf)	Expansion Index	2022 CBC Expansion Classification	ASTM Soil Expansion Classification
	Before Test	After Test				
B1-1	9.8	16.5	111.8	3	Non-Expansive	Very Low
B2-5	10.2	23.8	108.6	61	Expansive	Medium

SUMMARY OF LABORATORY WATER-SOLUBLE SULFATE TEST RESULTS CALIFORNIA TEST NO. 417

Sample No.	Depth (feet)	Geologic Unit	Water-Soluble Sulfate (%)	ACI 318 Sulfate Exposure
B1-1	1-7	Qvop	0.014	S0
B2-5	15-25	Tsd	0.011	S0

SUMMARY OF LABORATORY UNCONFINED COMPRESSIVE STRENGTH TEST RESULTS
ASTM D 1558

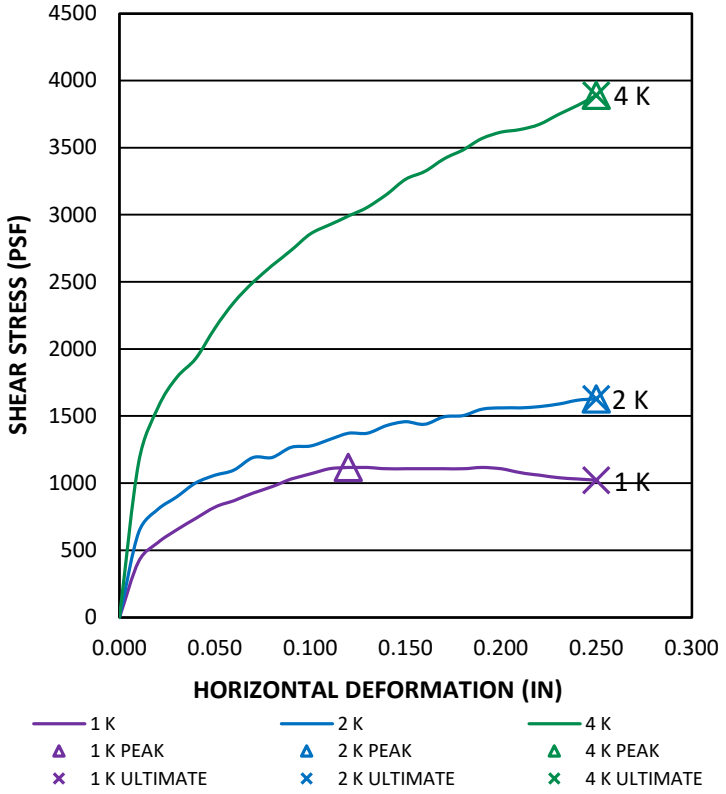
Sample No.	Depth (feet)	Geologic Unit	Hand Penetrometer Reading/Unconfined Compression Strength (tsf) and Undrained Shear Strength (ksf)
B1-2	5	Qvop	4.5+
B1-3	10	Qvop	4.25
B1-4	15	Tsd	4.5+
B1-5	20	Tsd	4.5+
B2-2	5	Qvop	4.5+
B2-3	10	Qvop	4.5+
B2-4	15	Tsd	4.5+
B2-6	20	Tsd	4.5+
B2-7	25	Tsd	4.5+
B2-8	30	Tsd	4.5+

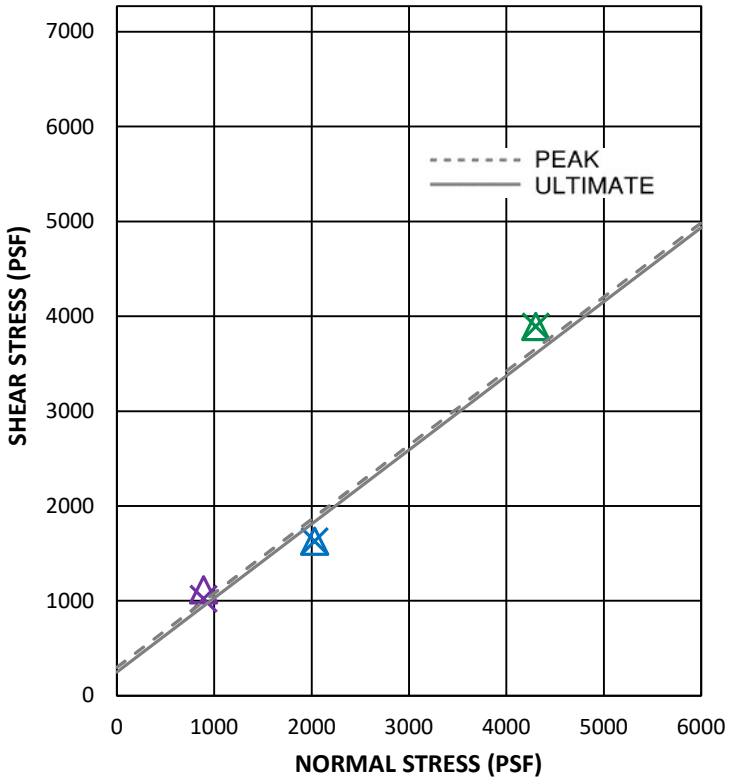
SAMPLE NO.:	**B1-2**	GEOLOGIC UNIT:	**Qvop**
SAMPLE DEPTH (FT):	**5'**	NATURAL/REMOLDED:	**N**

INITIAL CONDITIONS				
NORMAL STRESS TEST LOAD	**1 K**	**2 K**	**4 K**	**AVERAGE**
ACTUAL NORMAL STRESS (PSF):	890	2030	4300	--
WATER CONTENT (%):	13.8	14.5	13.4	13.9
DRY DENSITY (PCF):	110.7	89.3	103.1	101.0

AFTER TEST CONDITIONS				
NORMAL STRESS TEST LOAD	**1 K**	**2 K**	**4 K**	**AVERAGE**
WATER CONTENT (%):	16.8	26.7	18.5	20.7
PEAK SHEAR STRESS (PSF):	1117	1628	3891	--
ULT.-E.O.T. SHEAR STRESS (PSF):	1023	1628	3891	--

RESULTS		
PEAK	COHESION, C (PSF)	300
	FRICTION ANGLE (DEGREES)	38
ULTIMATE	COHESION, C (PSF)	250
	FRICTION ANGLE (DEGREES)	38





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DIRECT SHEAR - AASHTO T-236

TIMKEN MUSEUM OF ART EXPANSION

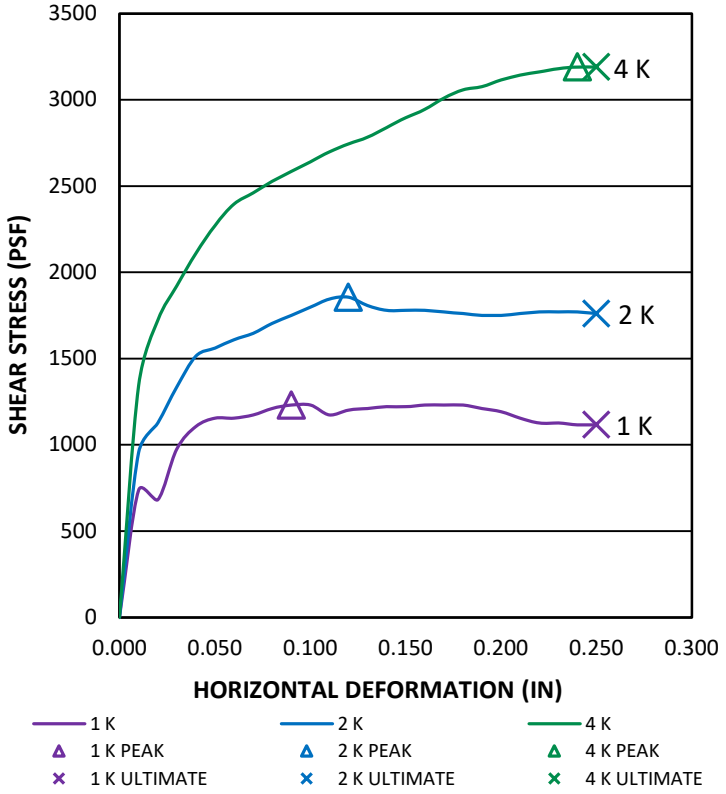
PROJECT NO.: G3045-52-01

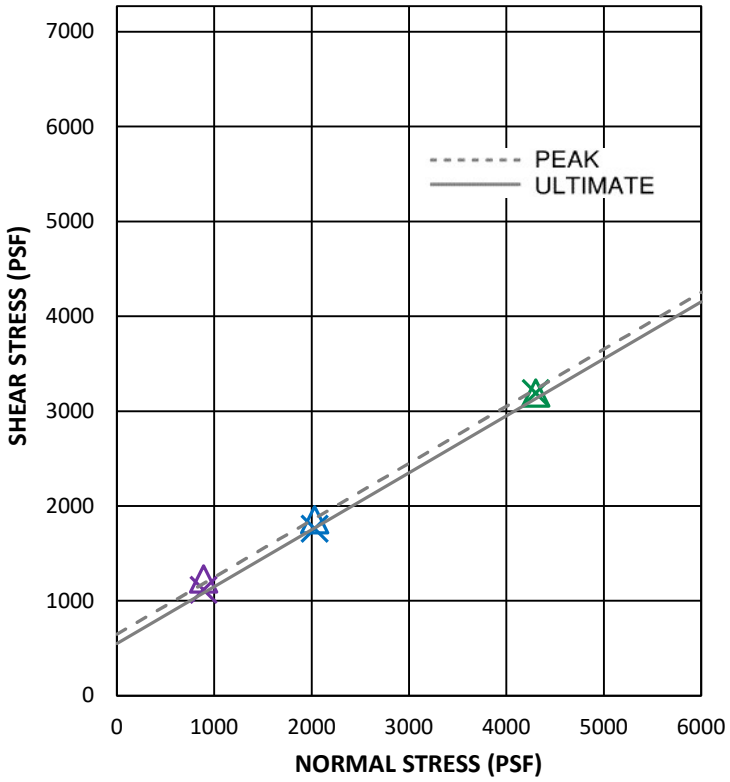
SAMPLE NO.:	**B1-5**	GEOLOGIC UNIT:	**Tsd**
SAMPLE DEPTH (FT):	**20'**	NATURAL/REMOLDED:	**N**

INITIAL CONDITIONS				
NORMAL STRESS TEST LOAD	**1 K**	**2 K**	**4 K**	**AVERAGE**
ACTUAL NORMAL STRESS (PSF):	890	2030	4300	--
WATER CONTENT (%):	17.0	16.9	18.1	17.3
DRY DENSITY (PCF):	98.6	95.3	99.9	97.9

AFTER TEST CONDITIONS				
NORMAL STRESS TEST LOAD	**1 K**	**2 K**	**4 K**	**AVERAGE**
WATER CONTENT (%):	24.3	25.6	25.0	25.0
PEAK SHEAR STRESS (PSF):	1231	1856	3191	--
ULT.-E.O.T. SHEAR STRESS (PSF):	1117	1761	3191	--

RESULTS		
PEAK	COHESION, C (PSF)	650
	FRICTION ANGLE (DEGREES)	31
ULTIMATE	COHESION, C (PSF)	550
	FRICTION ANGLE (DEGREES)	31





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PHONE 858 558-6900 - FAX 858 558-6159

DIRECT SHEAR - AASHTO T-236

TIMKEN MUSEUM OF ART EXPANSION

PROJECT NO.: G3045-52-01

SAMPLE NO.: **B1-6**

SAMPLE DEPTH (FT): **25**

GEOLOGIC UNIT: **Tsd**

TEST INFORMATION	
INITIAL DRY DENSITY (PCF):	95.4
INITIAL WATER CONTENT (%):	12.7%
SAMPLE SATURATED AT (KSF):	4.0
INITIAL SATURATION (%):	45.8%

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INCORPORATED
GEOTECHNICAL CONSULTANTS
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PHONE 858 558-6900 - FAX 858 558-6159

CONSOLIDATION CURVE - ASTM D 2435

TIMKEN MUSEUM OF ART EXPANSION

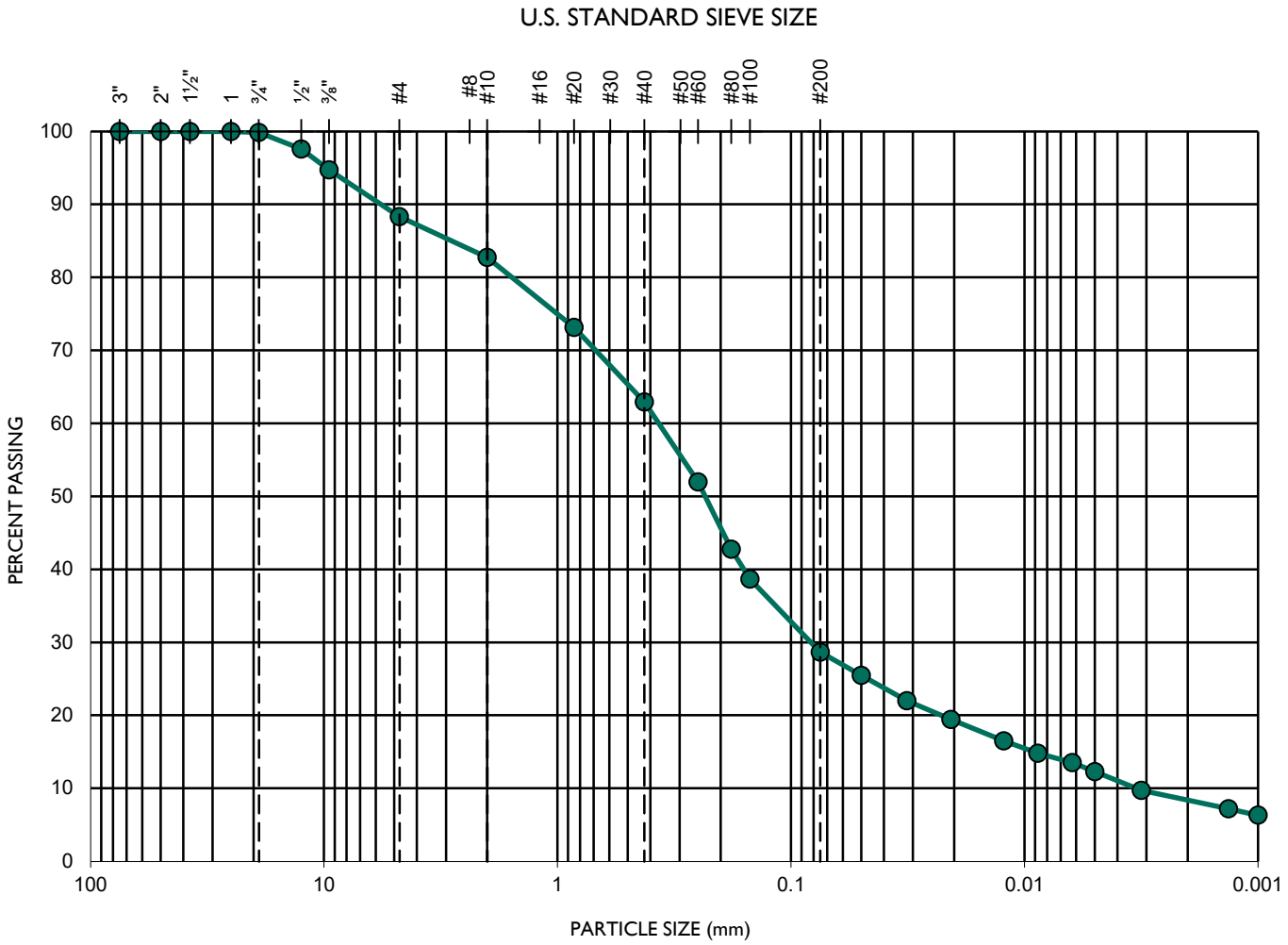
PROJECT NO.: G3045-52-01

SAMPLE NO.: **B1-1**

SAMPLE DEPTH (FT.): **1'-7'**

GEOLOGIC UNIT: **Qvop**

GRAVEL		SAND			SILT OR CLAY
COARSE	FINE	COARSE	MEDIUM	FINE	



TEST DATA					
D_{10} (mm)	D_{30} (mm)	D_{60} (mm)	C_c	C_u	SOIL DESCRIPTION
0.00013	0.00335	0.01489	5.7	112.9	Silty SAND

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SIEVE ANALYSES - ASTM D 6913

TIMKEN MUSEUM OF ART EXPANSION

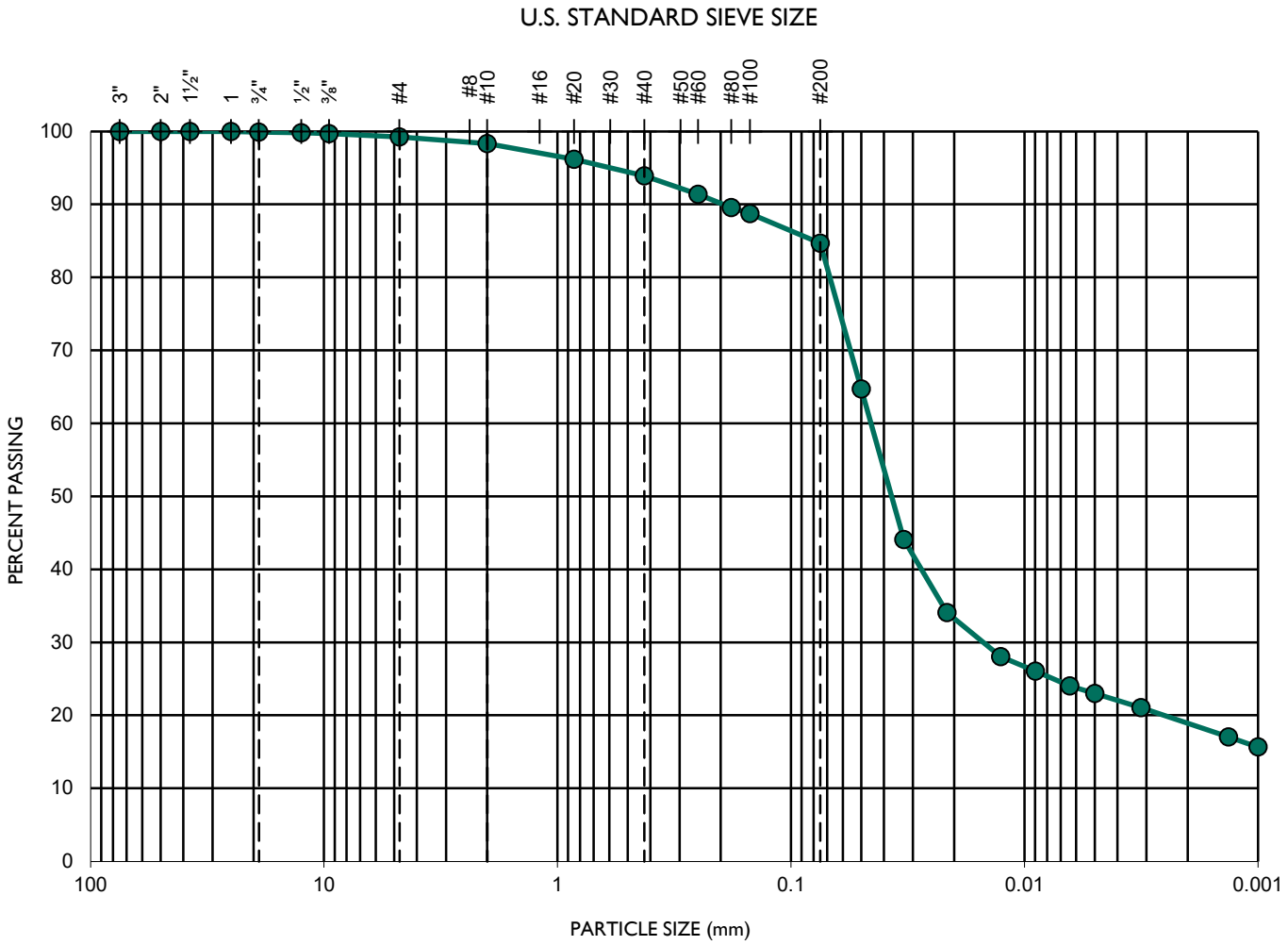
PROJECT NO.: G3045-52-01

SAMPLE NO.: **B2-5**

SAMPLE DEPTH (FT.): **15-25**

GEOLOGIC UNIT: **Tsd**

GRAVEL		SAND			SILT OR CLAY
COARSE	FINE	COARSE	MEDIUM	FINE	



TEST DATA					
D_{10} (mm)	D_{30} (mm)	D_{60} (mm)	C_c	C_u	SOIL DESCRIPTION
--	0.00061	0.00181	--	--	Silty CLAY

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SIEVE ANALYSES - ASTM D 6913

TIMKEN MUSEUM OF ART EXPANSION

PROJECT NO.: G3045-52-01

APPENDIX D

APPENDIX D

RECOMMENDED GRADING SPECIFICATIONS

FOR

BALBOA PARK BOTANICAL BUILDING AND GARDENS
PHASE 2 DESIGN PROJECT
SAN DIEGO, CALIFORNIA

PROJECT NO. G3245-42-01

RECOMMENDED GRADING SPECIFICATIONS

1. GENERAL

1.1 These Recommended Grading Specifications shall be used in conjunction with the Geotechnical Report for the project prepared by Geocon. The recommendations contained in the text of the Geotechnical Report are a part of the earthwork and grading specifications and shall supersede the provisions contained hereinafter in the case of conflict.

1.2 Prior to the commencement of grading, a geotechnical consultant (Consultant) shall be employed for the purpose of observing earthwork procedures and testing the fills for substantial conformance with the recommendations of the Geotechnical Report and these specifications. The Consultant should provide adequate testing and observation services so that they may assess whether, in their opinion, the work was performed in substantial conformance with these specifications. It shall be the responsibility of the Contractor to assist the Consultant and keep them apprised of work schedules and changes so that personnel may be scheduled accordingly.

1.3 It shall be the sole responsibility of the Contractor to provide adequate equipment and methods to accomplish the work in accordance with applicable grading codes or agency ordinances, these specifications and the approved grading plans. If, in the opinion of the Consultant, unsatisfactory conditions such as questionable soil materials, poor moisture condition, inadequate compaction, and/or adverse weather result in a quality of work not in conformance with these specifications, the Consultant will be empowered to reject the work and recommend to the Owner that grading be stopped until the unacceptable conditions are corrected.

2. DEFINITIONS

2.1 **Owner** shall refer to the owner of the property or the entity on whose behalf the grading work is being performed and who has contracted with the Contractor to have grading performed.

2.2 **Contractor** shall refer to the Contractor performing the site grading work.

2.3 **Civil Engineer** or **Engineer of Work** shall refer to the California licensed Civil Engineer or consulting firm responsible for preparation of the grading plans, surveying and verifying as-graded topography.

2.4 **Consultant** shall refer to the soil engineering and engineering geology consulting firm retained to provide geotechnical services for the project.

2.5 **Soil Engineer** shall refer to a California licensed Civil Engineer retained by the Owner, who is experienced in the practice of geotechnical engineering. The Soil Engineer shall be responsible for having qualified representatives on-site to observe and test the Contractor's work for conformance with these specifications.

2.6 **Engineering Geologist** shall refer to a California licensed Engineering Geologist retained by the Owner to provide geologic observations and recommendations during the site grading.

2.7 **Geotechnical Report** shall refer to a soil report (including all addenda) which may include a geologic reconnaissance or geologic investigation that was prepared specifically for the development of the project for which these Recommended Grading Specifications are intended to apply.

3. MATERIALS

3.1 Materials for compacted fill shall consist of any soil excavated from the cut areas or imported to the site that, in the opinion of the Consultant, is suitable for use in construction of fills. In general, fill materials can be classified as *soil* fills, *soil-rock* fills or *rock* fills, as defined below.

3.1.1 **Soil fills** are defined as fills containing no rocks or hard lumps greater than 12 inches in maximum dimension and containing at least 40 percent by weight of material smaller than ¾ inch in size.

3.1.2 **Soil-rock fills** are defined as fills containing no rocks or hard lumps larger than 4 feet in maximum dimension and containing a sufficient matrix of soil fill to allow for proper compaction of soil fill around the rock fragments or hard lumps as specified in Paragraph 6.2. **Oversize rock** is defined as material greater than 12 inches.

3.1.3 **Rock fills** are defined as fills containing no rocks or hard lumps larger than 3 feet in maximum dimension and containing little or no fines. Fines are defined as material smaller than ¾ inch in maximum dimension. The quantity of fines shall be less than approximately 20 percent of the rock fill quantity.

3.2 Material of a perishable, spongy, or otherwise unsuitable nature as determined by the Consultant shall not be used in fills.

3.3 Materials used for fill, either imported or on-site, shall not contain hazardous materials as defined by the California Code of Regulations, Title 22, Division 4, Chapter 30, Articles 9

and 10; 40CFR; and any other applicable local, state or federal laws. The Consultant shall not be responsible for the identification or analysis of the potential presence of hazardous materials. However, if observations, odors or soil discoloration cause Consultant to suspect the presence of hazardous materials, the Consultant may request from the Owner the termination of grading operations within the affected area. Prior to resuming grading operations, the Owner shall provide a written report to the Consultant indicating that the suspected materials are not hazardous as defined by applicable laws and regulations.

3.4 The outer 15 feet of *soil-rock* fill slopes, measured horizontally, should be composed of properly compacted *soil* fill materials approved by the Consultant. *Rock* fill may extend to the slope face, provided that the slope is not steeper than 2:1 (horizontal:vertical) and a soil layer no thicker than 12 inches is track-walked onto the face for landscaping purposes. This procedure may be utilized provided it is acceptable to the governing agency, Owner and Consultant.

3.5 Samples of soil materials to be used for fill should be tested in the laboratory by the Consultant to determine the maximum density, optimum moisture content, and, where appropriate, shear strength, expansion, and gradation characteristics of the soil.

3.6 During grading, soil or groundwater conditions other than those identified in the Geotechnical Report may be encountered by the Contractor. The Consultant shall be notified immediately to evaluate the significance of the unanticipated condition.

4. CLEARING AND PREPARING AREAS TO BE FILLED

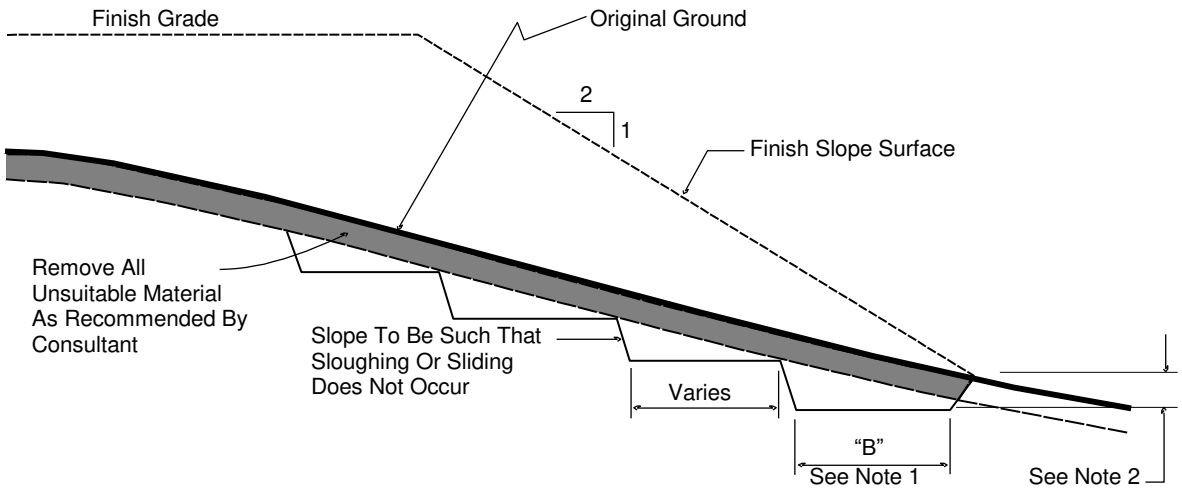
4.1 Areas to be excavated and filled shall be cleared and grubbed. Clearing shall consist of complete removal above the ground surface of trees, stumps, brush, vegetation, man-made structures, and similar debris. Grubbing shall consist of removal of stumps, roots, buried logs and other unsuitable material and shall be performed in areas to be graded. Roots and other projections exceeding 1½ inches in diameter shall be removed to a depth of 3 feet below the surface of the ground. Borrow areas shall be grubbed to the extent necessary to provide suitable fill materials.

4.2 Asphalt pavement material removed during clearing operations should be properly disposed at an approved off-site facility or in an acceptable area of the project evaluated by Geocon and the property owner. Concrete fragments that are free of reinforcing steel may be placed in fills, provided they are placed in accordance with Section 6.2 or 6.3 of this document.

4.3 After clearing and grubbing of organic matter and other unsuitable material, loose or porous soils shall be removed to the depth recommended in the Geotechnical Report. The depth of removal and compaction should be observed and approved by a representative of the Consultant. The exposed surface shall then be plowed or scarified to a minimum depth of 6 inches and until the surface is free from uneven features that would tend to prevent uniform compaction by the equipment to be used.

4.4 Where the slope ratio of the original ground is steeper than 5:1 (horizontal:vertical), or where recommended by the Consultant, the original ground should be benched in accordance with the following illustration.

TYPICAL BENCHING DETAIL



No Scale

DETAIL NOTES:

(1) Key width "B" should be a minimum of 10 feet, or sufficiently wide to permit complete coverage with the compaction equipment used. The base of the key should be graded horizontal, or inclined slightly into the natural slope.

(2) The outside of the key should be below the topsoil or unsuitable surficial material and at least 2 feet into dense formational material. Where hard rock is exposed in the bottom of the key, the depth and configuration of the key may be modified as approved by the Consultant.

4.5 After areas to receive fill have been cleared and scarified, the surface should be moisture conditioned to achieve the proper moisture content, and compacted as recommended in Section 6 of these specifications.

5. COMPACTION EQUIPMENT

5.1 Compaction of *soil* or *soil-rock* fill shall be accomplished by sheepsfoot or segmented-steel wheeled rollers, vibratory rollers, multiple-wheel pneumatic-tired rollers, or other types of acceptable compaction equipment. Equipment shall be of such a design that it will be capable of compacting the *soil* or *soil-rock* fill to the specified relative compaction at the specified moisture content.

5.2 Compaction of *rock* fills shall be performed in accordance with Section 6.3.

6. PLACING, SPREADING AND COMPACTION OF FILL MATERIAL

6.1 *Soil* fill, as defined in Paragraph 3.1.1, shall be placed by the Contractor in accordance with the following recommendations:

6.1.1 *Soil* fill shall be placed by the Contractor in layers that, when compacted, should generally not exceed 8 inches. Each layer shall be spread evenly and shall be thoroughly mixed during spreading to obtain uniformity of material and moisture in each layer. The entire fill shall be constructed as a unit in nearly level lifts. Rock materials greater than 12 inches in maximum dimension shall be placed in accordance with Section 6.2 or 6.3 of these specifications.

6.1.2 In general, the *soil* fill shall be compacted at a moisture content at or above the optimum moisture content as determined by ASTM D 1557.

6.1.3 When the moisture content of *soil* fill is below that specified by the Consultant, water shall be added by the Contractor until the moisture content is in the range specified.

6.1.4 When the moisture content of the *soil* fill is above the range specified by the Consultant or too wet to achieve proper compaction, the *soil* fill shall be aerated by the Contractor by blading/mixing, or other satisfactory methods until the moisture content is within the range specified.

6.1.5 After each layer has been placed, mixed, and spread evenly, it shall be thoroughly compacted by the Contractor to a relative compaction of at least 90 percent. Relative compaction is defined as the ratio (expressed in percent) of the in-place dry density of the compacted fill to the maximum laboratory dry density as determined in accordance with ASTM D 1557. Compaction shall be continuous over the entire area, and compaction equipment shall make sufficient passes so that the specified minimum relative compaction has been achieved throughout the entire fill.

6.1.6 Where practical, soils having an Expansion Index greater than 50 should be placed at least 3 feet below finish pad grade and should be compacted at a moisture content generally 2 to 4 percent greater than the optimum moisture content for the material.

6.1.7 Properly compacted *soil* fill shall extend to the design surface of fill slopes. To achieve proper compaction, it is recommended that fill slopes be over-built by at least 3 feet and then cut to the design grade. This procedure is considered preferable to track-walking of slopes, as described in the following paragraph.

6.1.8 As an alternative to over-building of slopes, slope faces may be back-rolled with a heavy-duty loaded sheepsfoot or vibratory roller at maximum 4-foot fill height intervals. Upon completion, slopes should then be track-walked with a D-8 dozer or similar equipment, such that a dozer track covers all slope surfaces at least twice.

6.2 *Soil-rock* fill, as defined in Paragraph 3.1.2, shall be placed by the Contractor in accordance with the following recommendations:

6.2.1 Rocks larger than 12 inches but less than 4 feet in maximum dimension may be incorporated into the compacted *soil* fill, but shall be limited to the area measured 15 feet minimum horizontally from the slope face and 5 feet below finish grade or 3 feet below the deepest utility, whichever is deeper.

6.2.2 Rocks or rock fragments up to 4 feet in maximum dimension may either be individually placed or placed in windrows. Under certain conditions, rocks or rock fragments up to 10 feet in maximum dimension may be placed using similar methods. The acceptability of placing rock materials greater than 4 feet in maximum dimension shall be evaluated during grading as specific cases arise and shall be approved by the Consultant prior to placement.

6.2.3 For individual placement, sufficient space shall be provided between rocks to allow for passage of compaction equipment.

6.2.4 For windrow placement, the rocks should be placed in trenches excavated in properly compacted *soil* fill. Trenches should be approximately 5 feet wide and 4 feet deep in maximum dimension. The voids around and beneath rocks should be filled with approved granular soil having a Sand Equivalent of 30 or greater and should be compacted by flooding. Windrows may also be placed utilizing an "open-face" method in lieu of the trench procedure, however, this method should first be approved by the Consultant.

6.2.5 Windrows should generally be parallel to each other and may be placed either parallel to or perpendicular to the face of the slope depending on the site geometry. The minimum horizontal spacing for windrows shall be 12 feet center-to-center with a 5-foot stagger or offset from lower courses to next overlying course. The minimum vertical spacing between windrow courses shall be 2 feet from the top of a lower windrow to the bottom of the next higher windrow.

6.2.6 Rock placement, fill placement and flooding of approved granular soil in the windrows should be continuously observed by the Consultant.

6.3 *Rock* fills, as defined in Section 3.1.3, shall be placed by the Contractor in accordance with the following recommendations:

6.3.1 The base of the *rock* fill shall be placed on a sloping surface (minimum slope of 2 percent). The surface shall slope toward suitable subdrainage outlet facilities. The *rock* fills shall be provided with subdrains during construction so that a hydrostatic pressure buildup does not develop. The subdrains shall be permanently connected to controlled drainage facilities to control post-construction infiltration of water.

6.3.2 *Rock* fills shall be placed in lifts not exceeding 3 feet. Placement shall be by rock trucks traversing previously placed lifts and dumping at the edge of the currently placed lift. Spreading of the *rock* fill shall be by dozer to facilitate *seating* of the rock. The *rock* fill shall be watered heavily during placement. Watering shall consist of water trucks traversing in front of the current rock lift face and spraying water continuously during rock placement. Compaction equipment with compactive energy comparable to or greater than that of a 20-ton steel vibratory roller or other compaction equipment providing suitable energy to achieve the required compaction or deflection as recommended in Paragraph 6.3.3 shall be utilized. The number of passes to be made should be determined as described in Paragraph 6.3.3. Once a *rock* fill lift has been covered with *soil* fill, no additional *rock* fill lifts will be permitted over the *soil* fill.

6.3.3 Plate bearing tests, in accordance with ASTM D 1196, may be performed in both the compacted *soil* fill and in the *rock* fill to aid in determining the required minimum number of passes of the compaction equipment. If performed, a minimum of three plate bearing tests should be performed in the properly compacted *soil* fill (minimum relative compaction of 90 percent). Plate bearing tests shall then be performed on areas of *rock* fill having two passes, four passes and six passes of the compaction equipment, respectively. The number of passes required for the *rock* fill shall be determined by comparing the results of the plate bearing tests for the *soil* fill and the *rock* fill and by evaluating the deflection

variation with number of passes. The required number of passes of the compaction equipment will be performed as necessary until the plate bearing deflections are equal to or less than that determined for the properly compacted *soil* fill. In no case will the required number of passes be less than two.

6.3.4 A representative of the Consultant should be present during *rock* fill operations to observe that the minimum number of "passes" have been obtained, that water is being properly applied and that specified procedures are being followed. The actual number of plate bearing tests will be determined by the Consultant during grading.

6.3.5 Test pits shall be excavated by the Contractor so that the Consultant can state that, in their opinion, sufficient water is present and that voids between large rocks are properly filled with smaller rock material. In-place density testing will not be required in the *rock* fills.

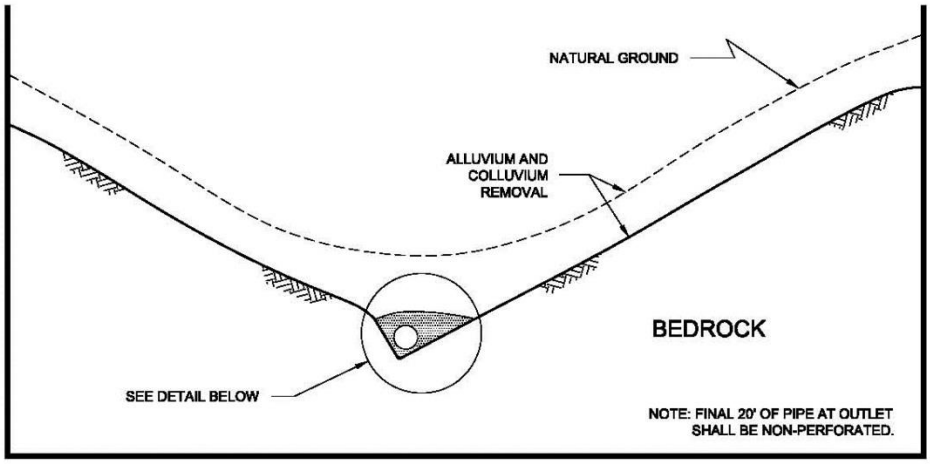
6.3.6 To reduce the potential for "piping" of fines into the *rock* fill from overlying *soil* fill material, a 2-foot layer of graded filter material shall be placed above the uppermost lift of *rock* fill. The need to place graded filter material below the *rock* should be determined by the Consultant prior to commencing grading. The gradation of the graded filter material will be determined at the time the *rock* fill is being excavated. Materials typical of the *rock* fill should be submitted to the Consultant in a timely manner, to allow design of the graded filter prior to the commencement of *rock* fill placement.

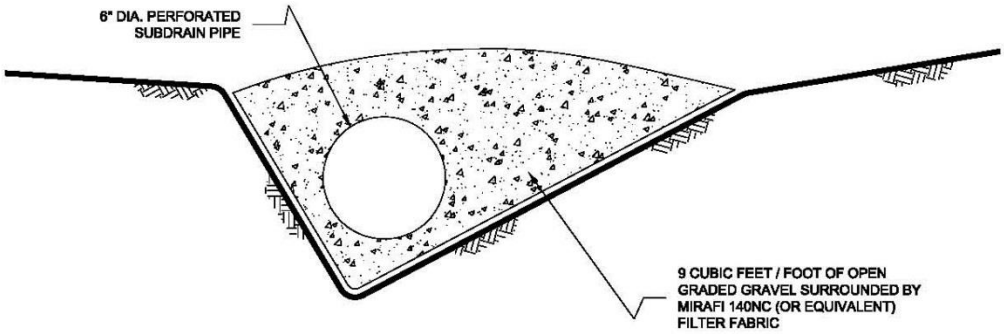
6.3.7 *Rock* fill placement should be continuously observed during placement by the Consultant.

7. SUBDRAINS

7.1 The geologic units on the site may have permeability characteristics and/or fracture systems that could be susceptible under certain conditions to seepage. The use of canyon subdrains may be necessary to mitigate the potential for adverse impacts associated with seepage conditions. Canyon subdrains with lengths in excess of 500 feet or extensions of existing offsite subdrains should use 8-inch-diameter pipes. Canyon subdrains less than 500 feet in length should use 6-inch-diameter pipes.

TYPICAL CANYON DRAIN DETAIL





NOTES:

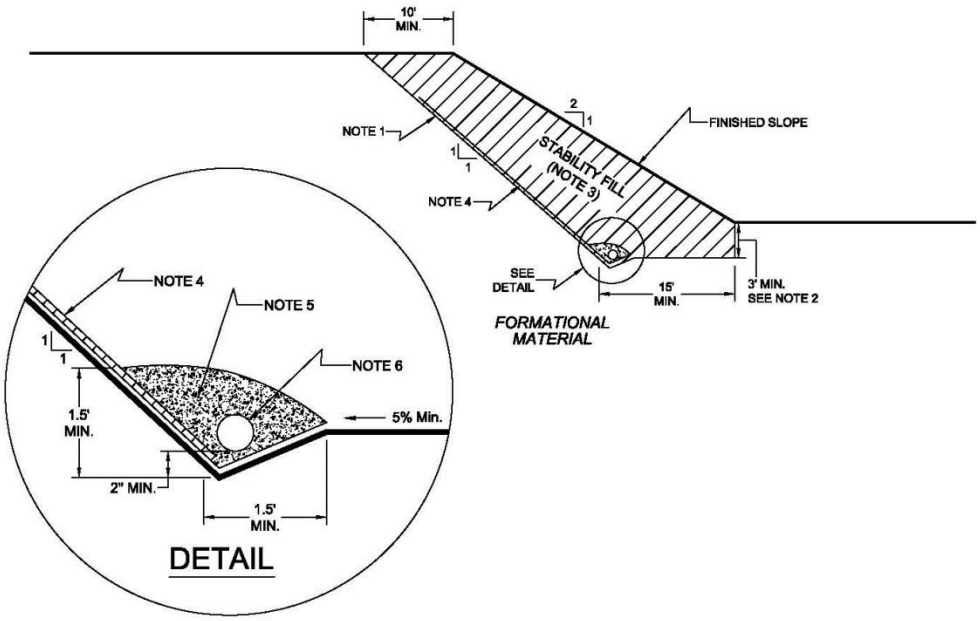
1.....8-INCH DIAMETER, SCHEDULE 80 PVC PERFORATED PIPE FOR FILLS
IN EXCESS OF 100-FEET IN DEPTH OR A PIPE LENGTH OF LONGER THAN 500 FEET.

2.....6-INCH DIAMETER, SCHEDULE 40 PVC PERFORATED PIPE FOR FILLS
LESS THAN 100-FEET IN DEPTH OR A PIPE LENGTH SHORTER THAN 500 FEET.

NO SCALE

7.2 Slope drains within stability fill keyways should use 4-inch-diameter (or lager) pipes.

TYPICAL STABILITY FILL DETAIL



NOTES:

1.....EXCAVATE BACKCUT AT 1:1 INCLINATION (UNLESS OTHERWISE NOTED).

2.....BASE OF STABILITY FILL TO BE 3 FEET INTO FORMATIONAL MATERIAL, SLOPING A MINIMUM 5% INTO SLOPE.

3.....STABILITY FILL TO BE COMPOSED OF PROPERLY COMPACTED GRANULAR SOIL.

4.....CHIMNEY DRAINS TO BE APPROVED PREFABRICATED CHIMNEY DRAIN PANELS (MIRADRAIN G200N OR EQUIVALENT) SPACED APPROXIMATELY 20 FEET CENTER TO CENTER AND 4 FEET WIDE. CLOSER SPACING MAY BE REQUIRED IF SEEPAGE IS ENCOUNTERED.

5.....FILTER MATERIAL TO BE 3/4-INCH, OPEN-GRADED CRUSHED ROCK ENCLOSED IN APPROVED FILTER FABRIC (MIRAFI 140NC).

6.....COLLECTOR PIPE TO BE 4-INCH MINIMUM DIAMETER, PERFORATED, THICK-WALLED PVC SCHEDULE 40 OR EQUIVALENT, AND SLOPED TO DRAIN AT 1 PERCENT MINIMUM TO APPROVED OUTLET.

NO SCALE

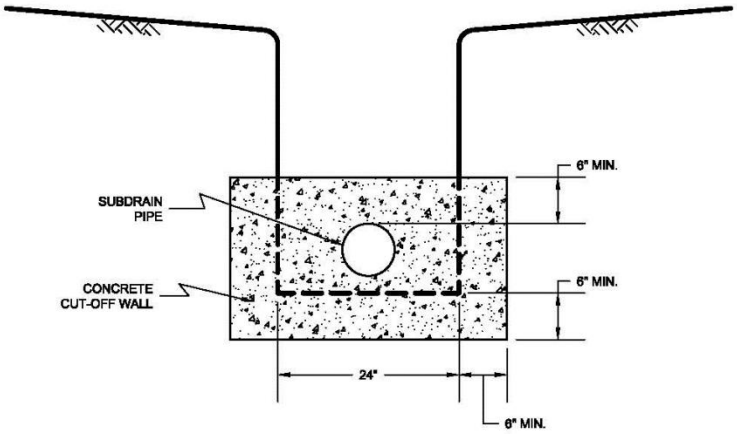
7.3 The actual subdrain locations will be evaluated in the field during the remedial grading operations. Additional drains may be necessary depending on the conditions observed and the requirements of the local regulatory agencies. Appropriate subdrain outlets should be evaluated prior to finalizing 40-scale grading plans.

7.4 *Rock* fill or *soil-rock* fill areas may require subdrains along their down-slope perimeters to mitigate the potential for buildup of water from construction or landscape irrigation. The subdrains should be at least 6-inch-diameter pipes encapsulated in gravel and filter fabric. *Rock* fill drains should be constructed using the same requirements as canyon subdrains.

7.5 Prior to outletting, the final 20-foot segment of a subdrain that will not be extended during future development should consist of non-perforated drainpipe. At the non-perforated/ perforated interface, a seepage cutoff wall should be constructed on the downslope side of the pipe.

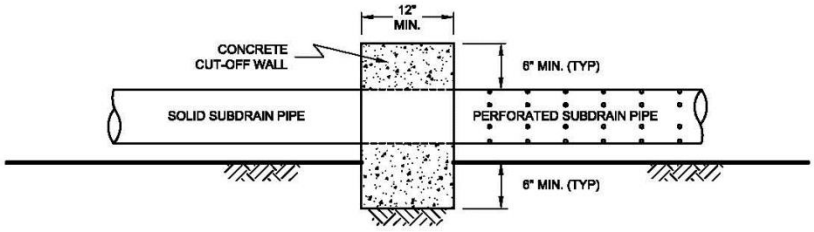
TYPICAL CUT OFF WALL DETAIL

FRONT VIEW



NO SCALE

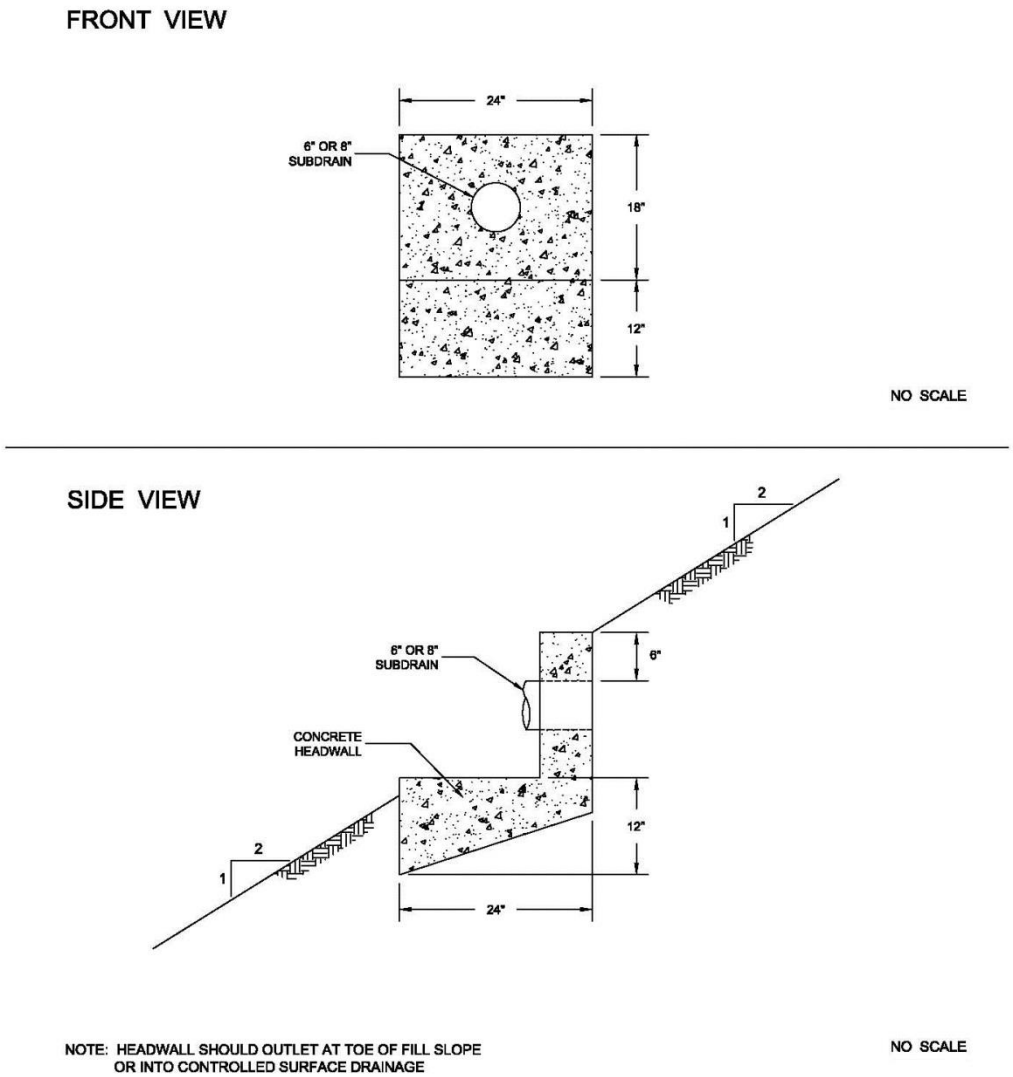
SIDE VIEW



NO SCALE

7.6 Subdrains that discharge into a natural drainage course or open space area should be provided with a permanent headwall structure.

TYPICAL HEADWALL DETAIL



7.7 The final grading plans should show the location of the proposed subdrains. After completion of remedial excavations and subdrain installation, the project civil engineer should survey the drain locations and prepare an "as-built" map showing the drain locations. The final outlet and connection locations should be determined during grading operations. Subdrains that will be extended on adjacent projects after grading can be placed on formational material and a vertical riser should be placed at the end of the subdrain. The grading contractor should consider videoing the subdrains shortly after burial to check proper installation and functionality. The contractor is responsible for the performance of the drains.

8. OBSERVATION AND TESTING

8.1 The Consultant shall be the Owner's representative to observe and perform tests during clearing, grubbing, filling, and compaction operations. In general, no more than 2 feet in vertical elevation of *soil* or *soil-rock* fill should be placed without at least one field density test being performed within that interval. In addition, a minimum of one field density test should be performed for every 2,000 cubic yards of *soil* or *soil-rock* fill placed and compacted.

8.2 The Consultant should perform a sufficient distribution of field density tests of the compacted *soil* or *soil-rock* fill to provide a basis for expressing an opinion whether the fill material is compacted as specified. Density tests shall be performed in the compacted materials below any disturbed surface. When these tests indicate that the density of any layer of fill or portion thereof is below that specified, the particular layer or areas represented by the test shall be reworked until the specified density has been achieved.

8.3 During placement of *rock* fill, the Consultant should observe that the minimum number of passes have been obtained per the criteria discussed in Section 6.3.3. The Consultant should request the excavation of observation pits and may perform plate bearing tests on the placed *rock* fills. The observation pits will be excavated to provide a basis for expressing an opinion as to whether the *rock* fill is properly seated and sufficient moisture has been applied to the material. When observations indicate that a layer of *rock* fill or any portion thereof is below that specified, the affected layer or area shall be reworked until the *rock* fill has been adequately seated and sufficient moisture applied.

8.4 A settlement monitoring program designed by the Consultant may be conducted in areas of *rock* fill placement. The specific design of the monitoring program shall be as recommended in the Conclusions and Recommendations section of the project Geotechnical Report or in the final report of testing and observation services performed during grading.

8.5 We should observe the placement of subdrains, to check that the drainage devices have been placed and constructed in substantial conformance with project specifications.

8.6 Testing procedures shall conform to the following Standards as appropriate:

8.6.1 Soil and Soil-Rock Fills:

8.6.1.1 Field Density Test, ASTM D 1556, *Density of Soil In-Place By the Sand-Cone Method.*

8.6.1.2 Field Density Test, Nuclear Method, ASTM D 6938, *Density of Soil and Soil-Aggregate In-Place by Nuclear Methods (Shallow Depth).*

8.6.1.3 Laboratory Compaction Test, ASTM D 1557, *Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 10-Pound Hammer and 18-Inch Drop*.

8.6.1.4. Expansion Index Test, ASTM D 4829, *Expansion Index Test*.

9. PROTECTION OF WORK

9.1 During construction, the Contractor shall properly grade all excavated surfaces to provide positive drainage and prevent ponding of water. Drainage of surface water shall be controlled to avoid damage to adjoining properties or to finished work on the site. The Contractor shall take remedial measures to prevent erosion of freshly graded areas until such time as permanent drainage and erosion control features have been installed. Areas subjected to erosion or sedimentation shall be properly prepared in accordance with the Specifications prior to placing additional fill or structures.

9.2 After completion of grading as observed and tested by the Consultant, no further excavation or filling shall be conducted except in conjunction with the services of the Consultant.

10. CERTIFICATIONS AND FINAL REPORTS

10.1 Upon completion of the work, Contractor shall furnish Owner a certification by the Civil Engineer stating that the lots and/or building pads are graded to within 0.1 foot vertically of elevations shown on the grading plan and that all tops and toes of slopes are within 0.5 foot horizontally of the positions shown on the grading plans. After installation of a section of subdrain, the project Civil Engineer should survey its location and prepare an *as-built* plan of the subdrain location. The project Civil Engineer should verify the proper outlet for the subdrains and the Contractor should ensure that the drain system is free of obstructions.

10.2 The Owner is responsible for furnishing a final as-graded soil and geologic report satisfactory to the appropriate governing or accepting agencies. The as-graded report should be prepared and signed by a California licensed Civil Engineer experienced in geotechnical engineering and by a California Certified Engineering Geologist, indicating that the geotechnical aspects of the grading were performed in substantial conformance with the Specifications or approved changes to the Specifications.

LIST OF REFERENCES

City of San Diego (2008), *City of San Diego Seismic Safety Study, Geologic Hazards and Faults*, Grid Tile 17, Development Services Department, April 3, 2008.

CGS (2021a), EQ Zapp: California Earthquake Hazards Zone Application, web application that queries California Geological Survey mapped earthquake hazard zones, https://www.conservation.ca.gov/cgs/geohazards/eq-zapp, accessed February 2024.

CGS (2021b), *California Tsunami Maps and Data*, web application for accessing tsunami inundation hazard, https://www.conservation.ca.gov/cgs/tsunami/maps, accessed February 2024.

FEMA (2020), Flood Insurance Rate Map (FIRM), Map Number 06073C1882G, Effective May 16, 2012, http://www.fema.gov/portal/home, accessed February 2024.

Geocon Incorporated (2022), *Geotechnical Investigation, Timken Museum of Art Expansion, 1500 El Prado, San Diego, California*, dated December 5, 2022 (Project No. G3045-52-01).

SEAOC (2019), OSHPD Seismic Design Maps: Structural Engineers Association of California website, http://seismicmaps.org/, accessed February 2024.

USGS (2016), *Quaternary Fault and Fold Database of the United States*: U.S. Geological Survey website, https://www.usgs.gov/programs/earthquake-hazards/faults, accessed February 2024.

Kennedy, M. P. (1975), *Geology of the La Mesa Quadrangle, San Diego County, California,* Scale 1:24,000, in *Geology of the San Diego Metropolitan Area, California,* CDMG Bull. 200.

Kennedy, M. P., and Tan, S. S. (2008), *Geologic Map of the San Diego 30' x 60' Quadrangle, California*, USGS Regional Geologic Map Series, 1:100,000 Scale, Map No. 3.

Spurlock Landscape Architects (2024), *Improvement Plans for: Balboa Park Botanical Building and Gardens Phase II, San Diego, California*, dated January 26, 2024.