SCOPE OF WORK:

PROPERTY INFORMATION:
- SLOPES: 2:1 Slopes
- POOL BARRIER: ALL GATES OPEN AWAY FROM POOL, SELF CLOSE, SELF LATCH, WITH LATCH MIN. 60" FROM GROUND.
- ALARMS: ALL DOORS WITH ACCESS TO POOL WILL HAVE DOOR ALARMS

NEW GUNITE POOL INFORMATION:
SURFACE AREA: 424 SQFT
PERIMETER: 103 FT
DEPTH: 3' - 5'

NEW GUNITE SPA INFORMATION:
ELEVATION FROM POOL: +24"
SURFACE AREA: 76 SQFT
PERIMETER: 35 FT
DEPTH: 3'
JETS: (6)

LINE INFORMATION:
- 1.5" POLYTENE GAS LINE
- .75" PVC ELECTRICAL CONDUIT
- 3" PVC SUCTION LINE
- 2.5" PVC RETURN LINE
- #10 COPPER WIRE

(ALL TRENCHES & LINES MIN. 18" DEEP)

ACCESS:
OPENING WIDTH: 6'-6"
TRACTOR SIZE: FULL SIZE

COPING:
- STANDARD POURED IN PLACE COPING

DECKING:
- PROPOSED DECKING AROUND POOL

DEMO:
- GRASS: NO
- CONCRETE: NO
- GRADING: NO
- ACCESS WALL: HOMEOWNER RESPONSIBLE FOR ACCESS WALL

EQUIPMENT LIST:
- JANDY 2.7 HP VARIABLE SPEED PUMP
- JANDY 460 CARTRIDGE FILTER
- JANDY 400k BTU HEATER
- (2) 24" SHEER DESCENTS
- (2) BUBBLERS
- (3) POOL LIGHTS
- (1) SPA LIGHT

PLASTER:
- STANDARD PLASTER

3500 PSI SHOTCRETE

SPECIAL INSPECTION REQUIRED FOR GUNITE INSTALLATION

ANTI-ENTRAPMENT COVER IS TO BE INSTALLED ON THE SUCTION OUTLET OF THE POOL/SPA AS PART OF THIS WORK

POOL SHALL HAVE #8 COPPER BONDING WIRE & COPPER BONDING CLAMPS

SETBACK CERTIFICATION REQUIRED
– A California licensed surveyor is required to certify the location and setbacks of the new swimming pool prior to beginning excavation. A copy of the certification shall be available to the Building Inspector prior to the first inspection.

AGREEMENTS TO BUILD; NOTICE OF PROVISIONS. [HSC 115924]
a) Any person entering into an agreement to build a swimming pool or spa, or to engage in permitted work on a pool or spa covered by this article, shall give the consumer notice of the requirements of this article.
b) Pursuant to existing law, the Department of Health Services shall have available on the department's Web site, commencing January 1, 2007, approved pool safety information available for consumers to download. Pool contractors are encouraged to share this information with consumers regarding the potential dangers a pool or spa poses to toddlers. Additionally, pool contractors may provide the consumer with swimming pool safety materials produced from organizations such as the United States Consumer Product Safety Commission, Drowning Prevention Foundation, California Coalition for Children's Safety & Health, Safe Kids Worldwide, Association of Pool and Spa Professionals, or the American Academy of Pediatrics.

FINAL INSPECTION
Prior to the issuance of any final approval for the completion of permitted construction or remodeling work, the Building Division shall inspect the drowning safety prevention devices required by this act, and if no violations are found, shall give final approval. The contractor and/or the owner shall submit the signed Certificate of Compliance to the Building Inspector prior to final inspection.

SWIMMING POOL STAGE III DROUGHT RESTRICTIONS
(City of Burbank Sustainable Water Use Ordinance, Burbank Municipal Code Title 8, Chapter 2, Article 3):
All swimming pools, wading pools and spas must be covered with acceptable protection to decrease water evaporation per the Stage III Drought Restrictions. For additional information visit the Burbank Water and Power web site at https://www.burbankwaterandpower.com/water/water-drought.

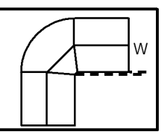
NEW CONSTRUCTION REQUIREMENTS. [HSC 115928]
Whenever a building permit is issued for the construction of a new swimming pool or spa, the pool or spa shall meet all of the following requirements:

a) (1) The suction outlets of the pool or spa for which the permit is issued shall be equipped to provide circulation throughout the pool or spa as prescribed in paragraphs (2) and (3).
(2) The swimming pool or spa shall either have at least two circulation suction outlets per pump that shall be hydraulically balanced and symmetrically plumbed through one or more "T" fittings, and that are separated by a distance of at least three feet in any dimension between the suction outlets, or be designed to use alternatives to suction outlets, including, but not limited to, skimmers or perimeter overflow systems to conduct water to the recirculation pump.
(3) The circulation system shall have the capacity to provide a complete turnover of pool water, as specified in Section 3124B of Chapter 31B of the California Building Standards Code (Title 24 of the California Code of Regulations).
b) Suction outlets shall be covered with anti entrapment grates, as specified in the ANSI/APSP-16 performance standard or successor standard designated by the federal Consumer Product Safety Commission, that cannot be removed except with the use of tools. Slots or openings in the grates or similar protective devices shall be of a shape, area, and arrangement that would prevent physical entrapment and would not pose any suction hazard to bathers.
c) Any backup safety system that an owner of a new swimming pool or spa may choose to install in addition to the requirements set forth in subdivisions (a) and (b) shall meet the standards as published in the document, "Guidelines for Entrapment Hazards: Making Pools and Spas Safer," Publication Number 363, March 2005, United States Consumer Product Safety Commission.

- 2022 CALIFORNIA BUILDING CODE
- 2022 CALIFORNIA RESIDENTIAL CODE
- 2022 CALIFORNIA ELECTRICAL CODE
- 2022 CALIFORNIA MECHANICAL CODE
- 2022 CALIFORNIA PLUMBING CODE
- 2022 CALIFORNIA FIRE CODE
- 2022 CALIFORNIA ENERGY CODE
- 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE

EQUIPMENT	INFORMATION
PUMP:	
MANUFACTURER	JANDY
MODEL	VSPHP270AUT
HORSEPOWER	.5 HP - 2.7 HP
MIN. PUMP FLOW IN GALLONS PER MINUTE (GPM) (TO MEET REQUIRMENTS	35
MULTI-SPEED PUMP (YES OR NO)	YES
POOL/SPA VOLUME IN GALLONS	18000
RETURN PIPE DIAMETER	2"
SUCTION PIPE DIAMETER	2"
FILTER TYPE	CARTRIDGE
FILTER SURFACE AREA IN SF	460

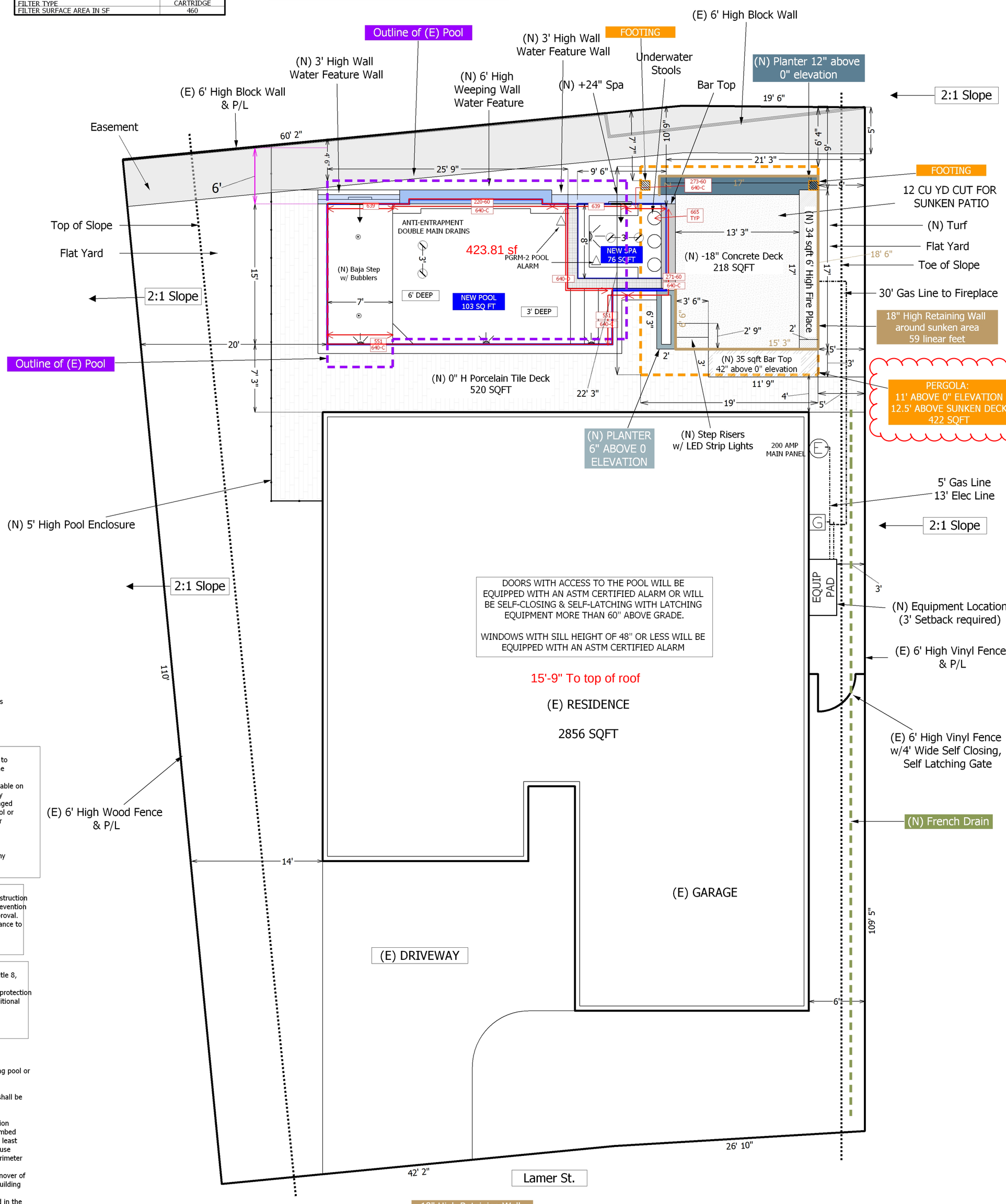
PIPE DIAMETER	MIN. W (INCH)
1.5	3/8
2	1/2
2.5	5/8
3	3/4
4	1

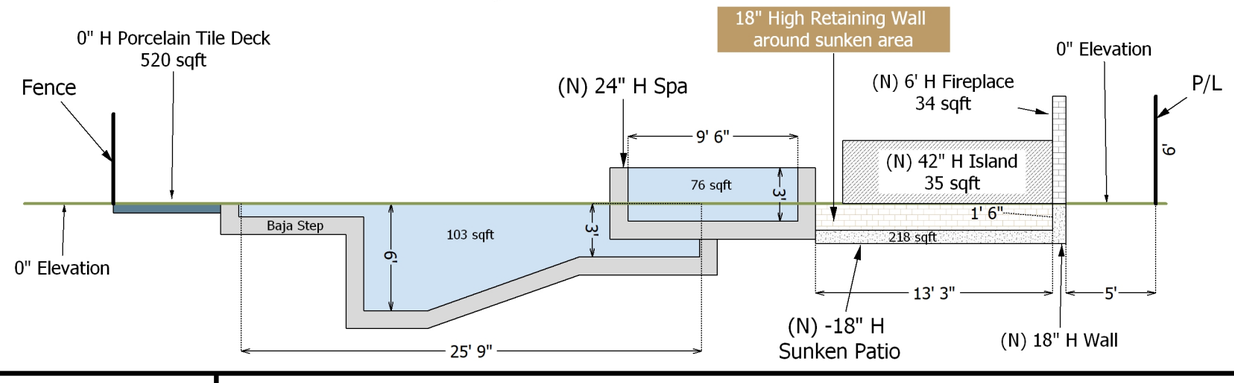


MAX POOL VOL. (GAL)	MIN PIPE D OR GREATER (INCHES)		MIN FILTER AREA OR MORE (SQFT)			MAX PUMP FLOW (GPM)
	RETURN	SUCTION	CARTRIDGE	SAND	DE	
13,000	1.5	1.5	100	2.4	20	36
17,000	1.5	2	130	3.1	25	47
21,000	2	2	160	3.9	30	58
28,000	2	2.5	210	5.2	40	78
42,000	2.5	3	320	7.8	60	117
48,000	3	3	360	8.9	70	133

COASTLINE POOLS

SITE PLAN REVIEWED
for conformance to structural details
Authentication Code = dg#23-02702@3%17p041923
Matthew G. Thompson
Pool Engineering, Inc.
Structural details shall take precedence over conflicts with site plan.





"Plan approval is conditional that a separate Main Electrical Service Panel relocation/upgrade permit is obtained and completed by the applicant prior to the issuance of a building permit final. See Confirmation of Electric Service # 24-411 in Title Sheet or contact BWP Electric at eres@burbankca.gov for the latest revision."

KEN GMEREK, OWNER
2925 N. LAMER ST.
BURBANK, CA 91504
(818) 321-7656

APN 2471-022-028
TRACT #18923
LOT #87

GMEREK RESIDENCE

COASTLINE POOLS & CONSTRUCTION INC

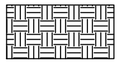
DATE: 03/20/2023

SCALE: 1/8" = 1'0"

2308 HALF MOON LN.
COSTA MESA, CA. 92627
949-338-3041

C53 LIC #: 1082075
DRAWN BY: RYAN BIRD

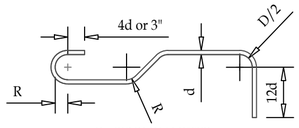
SYMBOLS:



SOIL

CONCRETE

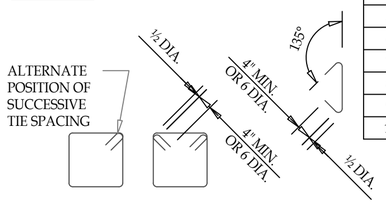
TYPICAL REINFORCEMENT DETAILS



D= BEND DIAMETER
6d FOR #3 THROUGH #8 BARS
8d FOR #9 THROUGH #11 BARS

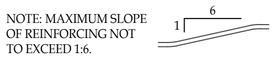
HOOK DETAIL

STANDARD HOOK EMBEDMENT		
BAR SIZE	MIN. HOOK EMBEDMENT	
	f_y = 40 ksi	f_y = 60 ksi
3	6"	6"
4	6"	8"
5	7"	10"
6	8"	12"
7	9"	14"
8	11"	16"
9	12"	18"
10	13"	20"



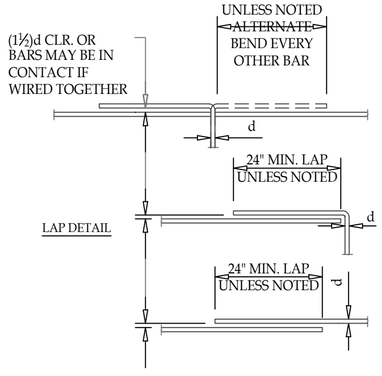
TIE DETAIL

NOTE: FOR SIZE & SPACING OF ALL TIES AND/OR STIRRUPS REFER TO SECTIONS, DETAILS, AND/OR PLANS.



NOTE: MAXIMUM SLOPE OF REINFORCING NOT TO EXCEED 1:6.

SLOPE



LAP DETAIL

LENGTH OF LAP SPLICE		
BAR SIZE	LAP SPLICE	
	f_y = 40 ksi	f_y = 60 ksi
3	24"	24"
4	24"	29"
5	24"	36"
6	29"	43"
7	42"	63"
8	48"	72"
9	54"	81"
10	60"	90"

ABBREVIATIONS:

(E)	EXISTING
#	NUMBER
&	AND
@	AT
A.B.	ANCHOR BOLT
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
BLDG	BUILDING
BLKG	BLOCKING
A.N.	BOUNDARY NAILING
CIP	CAST IN PLACE
CL	CENTERLINE
CLG	CEILING
CLR	CLEAR
C.M.U.	CONCRETE MASONRY UNIT
COL	COLUMN
CONC.	CONCRETE
CONT	CONTINUOUS
d	PENNY (NAIL SIZE)
DIA or Ø	DIAMETER
DIST	DISTANCE
EA	EACH
EL	ELEVATION
E.N.	EDGE NAILING
E.W.	EACH WAY
E.S.	EACH SIDE
EXTG	EXISTING
EXT	EXTERIOR
F.N.	FIELD NAILING
FTG.	FOOTING
F.V.	FIELD VERIFY
GLB	GLU-LAM BEAM
HDR	HEADER
HORIZ	HORIZONTAL
HSS	HOLLOW STRUCTURAL SECTION
IRP	INSULATED ROOF PANEL
JST	JOIST
LONG	LONGITUDINAL
LSL	TIMBERSTRAND, LAMINATED STRAND LUMBER
LVL	MICROLLAM
M.B.	MACHINE BOLT
MIN	MINIMUM
NO. or #	NUMBER
N.T.S.	NOT TO SCALE
O.C.	ON CENTER
O.H.	OTHER HAND
PSL	PARALLAM
REBAR	REINFORCING BAR
REQ'D	REQUIRED
SHTG	SHEATHING
SIM	SIMILAR
SQ	SQUARE
STAG	STAGGER OR STAGGERED
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
THK	THICK
THRU	THROUGH
TRANS	TRANSVERSE
U.O.N.	UNLESS OTHERWISE NOTED
VERT	VERTICAL
W/	WITH
W/O	WITHOUT

HARDWARE NOTES:

1. BOLTS SHALL CONFORM TO ASTM A307.
2. ALL BOLTS SHALL BE INSTALLED WITH A METAL PLATE OR WASHER NOT LESS THAN A STANDARD CUT WASHER BETWEEN WOOD AND BOLT HEAD AND WOOD AND NUT.
3. HOLES FOR BOLTS SHALL BE BORED 1/32" TO 1/16" LARGER THAN NOMINAL BOLT DIAMETER.
4. LAG SCREWS MUST PENETRATE 3" MIN. INTO COMPETENT FRAMING MEMBERS, AND NOT DERIVE ANY SUPPORT FROM RIM JOISTS OR BLOCKING UNLESS SPECIFICALLY DETAILED.
5. NAILS SHALL BE COMMON WIRE. NAILING SHALL BE AS NOTED ON THE PLANS AND DETAILS.
6. ALL METAL CONNECTORS SHALL BE SIMPSON STRONG-TIE CONNECTORS OR APPROVED EQUAL WITH APPROVED GALVANIZED NAILS AND/OR BOLTS, AND SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER SPECIFICATIONS.

ALUMINUM NOTES:

1. ALUMINUM MEMBERS SHALL CONFORM TO AA ADM1-10 (CURRENT EDITION).
2. ALL BOLTS SHALL BE INSTALLED AS BEARING TYPE CONNECTION WITH THREADS INCLUDED. ALL HIGH STRENGTH BOLTS SHALL BE FULLY PRE TENSIONED USING LOAD INDICATOR WASHERS OR LOAD INDICATOR BOLTS.
3. WELDING SHALL BE PERFORMED BY A CERTIFIED WELDER W/ EXPERIENCE IN ALUMINUM WELDING. ALL WELDING SHALL CONFORM TO AWS D1.2 LATEST STRUCTURAL WELDING CODE-ALUMINUM.
4. OTHER MATERIALS (BOLTS, NUTS, WASHERS, ETC.) MAY BE USED IN CONSTRUCTION WHERE CONTACT OF DISSIMILAR MATERIALS MAY CAUSE ELECTROLYSIS OR WHERE ALUMINUM WILL COME IN CONTACT W/ CONCRETE, MORTAR OR PLASTER, THE CONTACT SURFACE OF THE ALUMINUM SHALL BE COATED W/ (1) COAT OF ZINC CHROMATE PRIMER AND OR HEAVY COAT OF ALUMINUM PIGMENTED ASPHALT PAINT.

FOUNDATION NOTES:

1. CONCRETE SHALL BE PLACED AGAINST UNDISTURBED SOIL OR BUILDING DEPARTMENT APPROVED COMPACTED FILL.
2. ALL FOOTING STEEL SHALL HAVE 3" MINIMUM CLEARANCE TO EARTH.
3. SOIL SHALL HAVE MINIMUM VALUES OF 1,500 P.S.F. BEARING PRESSURE AND 200 P.C.F. PASSIVE PRESSURE OR PER APPROVED GEOTECHNICAL RECOMMENDATIONS.
4. SHOULD UNUSUAL OR UNEXPECTED SOIL CONDITIONS BE ENCOUNTERED, A GEOTECHNICAL ENGINEER SHOULD BE NOTIFIED TO PROVIDE ADDITIONAL RECOMMENDATIONS.

CONCRETE NOTES:

1. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2,500 P.S.I. @ 28 DAYS UNLESS NOTED.
2. KEEP CONCRETE DAMP CONTINUOUSLY FOR 14 DAYS.
3. CONCRETE AGGREGATES SHALL CONFORM TO ASTM C 33.
4. WATER USED IN CONCRETE SHALL BE CLEAN AND FREE FROM DELETERIOUS SUBSTANCES.
5. HYDRATED LIME SHALL CONFORM TO ASTM C 51.
6. CEMENT SHALL BE PORTLAND CEMENT CONFORMING TO CBC/IBC CHAP. 19 DIV. II AND BE TYPE I OR II.
7. NO ADMIXTURES OF ANY KIND ARE ALLOWED WITHOUT APPROVAL FROM THIS OFFICE PRIOR TO CONSTRUCTION.
8. SHOULD PROVISIONS FOR SEVERE SULFATE EXPOSURE BE REQUIRED BY THE BUILDING AUTHORITY, CONCRETE IN CONTACT WITH SOIL SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,500 P.S.I. TYPE V CEMENT, AND A WATER/CEMENT RATIO OF 0.45.

REBAR NOTES:

1. REINFORCING STEEL SHALL BE DEFORMED BARS & CONFORM TO ASTM A615 GRADE 40 FOR #4 BARS AND SMALLER, AND GRADE 60 FOR #5 BARS AND LARGER.
2. THE MINIMUM COVER FOR REINFORCEMENT SHALL BE IN ACCORDANCE WITH CBC/IBC, ACI 318, AND TMS 402.
3. BARS SHALL BE CLEAN OF GREASE AND/OR OTHER MATERIAL LIKELY TO IMPAIR BONDING.
4. ALL REBAR SHALL BE BENT COLD IN ACCORDANCE WITH ACI 318.
5. ALL REINFORCING STEEL LAPS OR SPLICES SHALL BE AS INDICATED ON PLANS. WHERE LAP OR SPLICE LOCATIONS ARE NOT SPECIFIED, LAPS OR SPLICES SHALL BE WELL STAGGERED.
6. ENDS OF REINFORCEMENT SHALL BE COVERED WITH PLASTIC CAPS TO PROTECT CRAFT PERSONNEL FROM INJURY PER OSHA STANDARD 1926.701(b).
7. PLASTIC CAPS SHALL BE REMOVED PRIOR TO ENCASING REINFORCEMENT IN CONCRETE. PROTECT FROM CORROSION ALL REINFORCEMENT LEFT EXPOSED FOR FUTURE CONCRETE OR GROUT PLACEMENT.
8. DOWELS SHALL BE PROVIDED AT POUR JOINTS AND AT CONSTRUCTION JOINTS, AND SHALL BE THE SAME SIZE AND SPACING AS THE REINFORCING SHOWN FOR THE SUBSEQUENT CONSTRUCTION, UNLESS NOTED OTHERWISE.

GENERAL NOTES:

1. THIS PLAN WAS DESIGNED IN ACCORDANCE WITH THE CODES SPECIFIED IN THE DESIGN CRITERIA, AND ALL METHODS OF CONSTRUCTION AND MATERIALS SHALL COMPLY WITH THOSE CODES.
2. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER DRAWING SCALE.
3. THIS PLAN IS NOT INTENDED TO BE APPLICABLE FOR NON STRUCTURAL ITEMS INCLUDING BUT NOT LIMITED TO ELECTRICAL, WATERPROOFING, DRAINAGE, OR CONCRETE DECKING ON GRADE.
4. CONTRACTOR OR OWNER SHALL VERIFY AND IS ULTIMATELY RESPONSIBLE FOR ALL FIELD CONDITIONS AND DIMENSIONS AT THE JOB SITE. IF THE SITE CONDITIONS CHANGE OR ARE NOT AS SHOWN, CONTRACTOR OR OWNER SHALL CONTACT THE ENGINEER BEFORE CONSTRUCTION.
5. NO DEVIATIONS FROM STRUCTURAL DETAILS SHALL BE MADE WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER. APPROVAL BY THE CITY INSPECTOR/PLAN REVIEWER DOES NOT CONSTITUTE AUTHORITY TO DEVIATE FROM PLANS OR SPECIFICATIONS.
6. OWNER, ARCHITECT OR CONTRACTOR IS RESPONSIBLE FOR REVIEWING AND CHECKING STRUCTURAL PLANS AND DETAILS HEREIN FOR CORRECTNESS OF DESIGN INTENT PRIOR TO SUBMITTING FOR PERMIT, INITIATION OF WORK OR ORDERING OF MATERIALS. VARIANCES OR ERRORS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING.
7. THE PLANS AND SPECIFICATIONS REPRESENT THE COMPLETED STRUCTURE AND DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES AND PROCEDURES, INCLUDING, BUT NOT LIMITED TO BRACING, SHORING, AND DEMOLITION.
8. CONTRACTOR TO VERIFY WITH THE ENGINEER ANY CHANGES MADE TO THE PROJECT THAT DEVIATE FROM THIS PLAN PRIOR TO CONSTRUCTION.

DESIGN CRITERIA:

- C.B.C. 2022
- LUMBER: DF-L #1 (6x & LARGER)
  DF-L #2 (2x-4x)
- CONCRETE: 2,500 P.S.I.
- MASONRY: 1,500 P.S.I.
- BOLTS: ASTM 307
- REINFORCING STEEL: GRADE 40
- ALUMINUM: 6061-T6 (F_y=35 ksi)
- LIVE LOAD: 10 P.S.F. (ROOF)
- DEAD LOAD: 2.0 P.S.F. (ROOF)
- S_S: 2.002
- S_1: 0.731
- SITE CLASS: D
- S.D.C.: D
- M.L.F.R.S.: CANTILEVER COLUMN SYSTEM: 1.25
- RISK CATEGORY: II
- WIND SPEED: 100 M.P.H.
- EXPOSURE CATEGORY: C
- ACTIVE PRESSURE: 35 PCF
- PASSIVE PRESSURE: 200 PCF
- FRICTION: 0.25

SPECIAL INSPECTIONS:

REQ'D	#	DESCRIPTION
☐	1	CONCRETE
☐	2	ANCHORS INSTALLED IN CONCRETE
☐	3	STRUCTURAL WELDING
☐	4	DEEP FOUNDATIONS
☐	5	VERIFY SOIL CONDITIONS
☐	6	AS REQUIRED BY BUILDING OFFICIAL

SHEET INDEX:

McPHERSON ENGINEERING
RYAN McPHERSON, P.E.
9240 LIMONITE AVENUE
JURUPA VALLEY, CA 92509
(909) 566-0066
SE@McPE.GROUP

REVISIONS:

#	REASON	DATE
1		
2		
3		

PROJECT LOCATION:

THE GMEREK RESIDENCE
2925 N LAMER STREET,
BURBANK, CA 91504

CONTRACTOR:

CRAFTED PATIOS

PROJECT DESCRIPTION:

FREESTANDING PATIO COVER

SHEET CONTENTS:

GENERAL NOTES

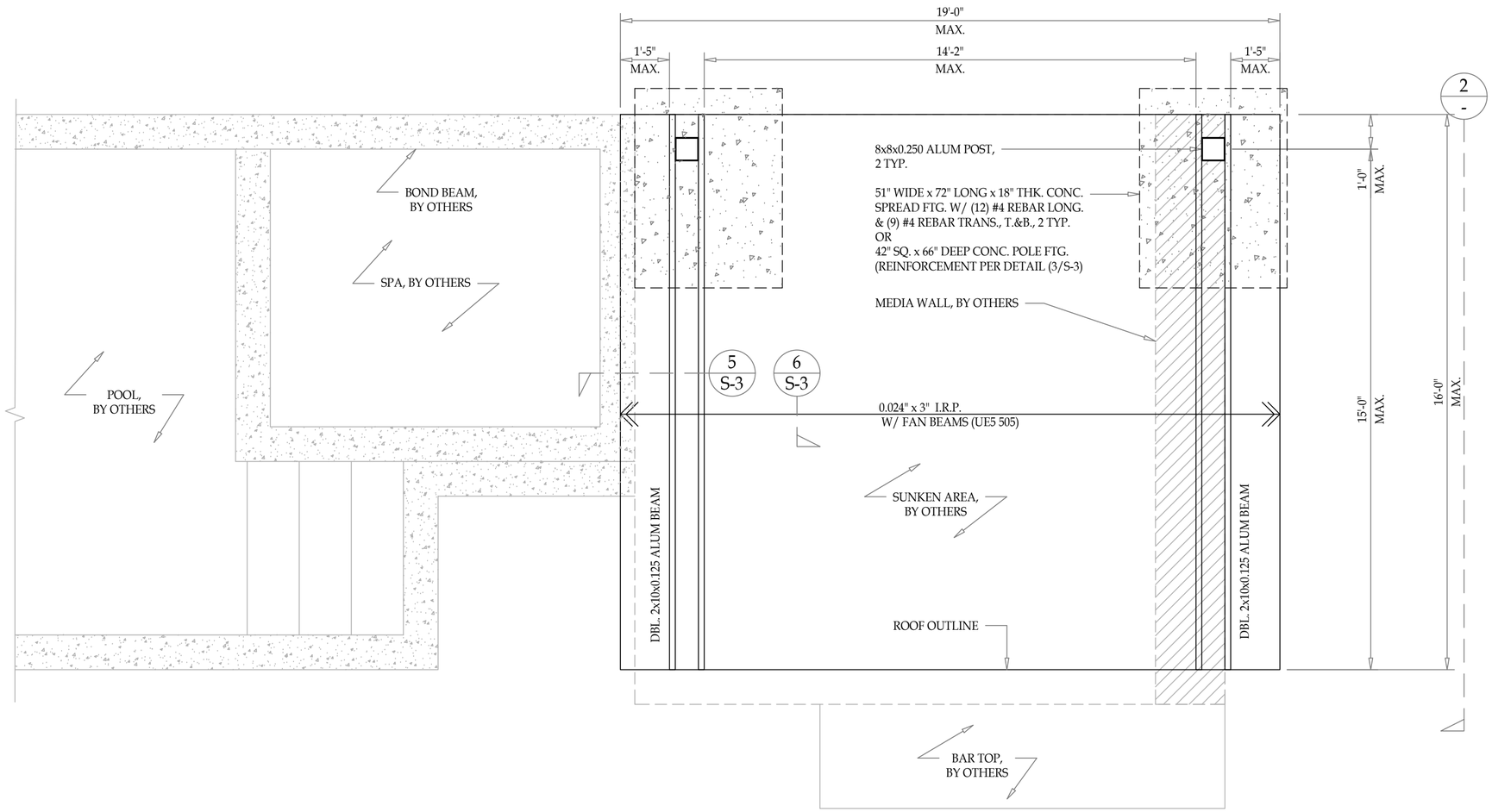
E.O.R.

This item has been digitally signed and sealed on Nov 06, 2024

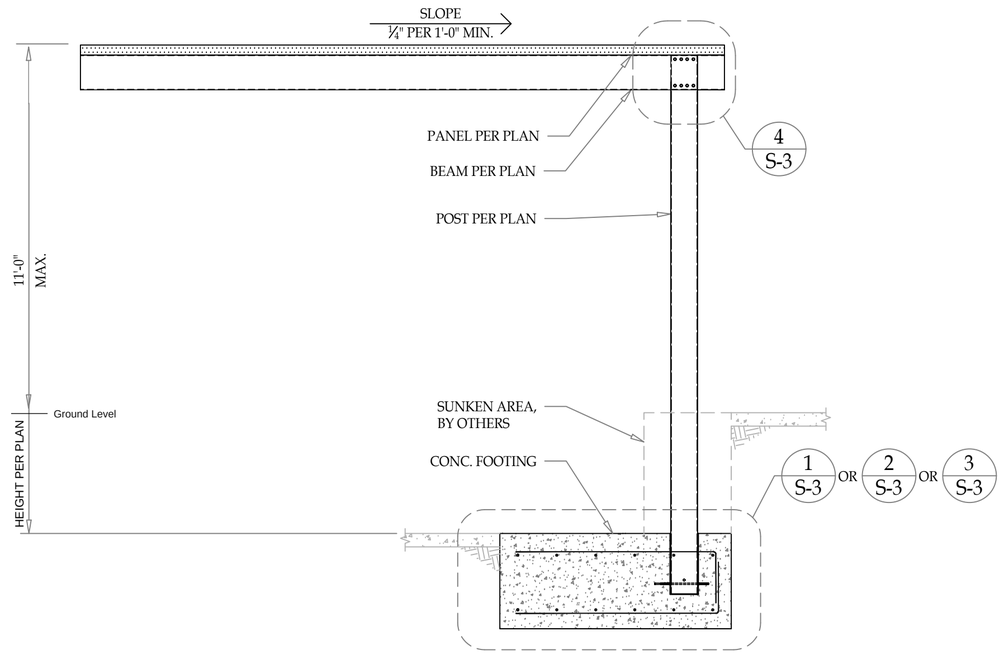
DATE:	11/06/24
DRAFTED BY:	J.N.
DESIGNED BY:	J.N.
PROJECT #:	24-06801

SHEET #:

S-1



PLAN | SCALE: $\frac{3}{8}$"=1'-0" | 1



NOTE:
FOOTINGS TO EXTEND MIN. 12" INTO UNDISTURBED SOIL OR 90% COMPACTED FILL

SECTION | SCALE: N.T.S. | 2

McPHERSON ENGINEERING
RYAN McPHERSON, P.E.
9240 LIMONITE AVENUE
JURUPA VALLEY, CA 92509
(909) 566-0066
SE@McPE.GROUP

REVISIONS:

#	REASON	DATE

PROJECT LOCATION:

THE GMEREK RESIDENCE
2925 N LAMER STREET,
BURBANK, CA 91504

CONTRACTOR:

CRAFTED PATIOS

PROJECT DESCRIPTION:

FREESTANDING PATIO COVER

SHEET CONTENTS:

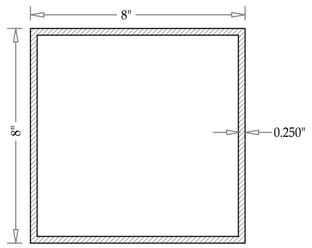
FOUNDATION/FRAMING PLAN & SECTION

E.O.R.

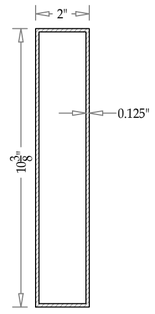
REGISTERED PROFESSIONAL ENGINEER
RYAN J. McPHERSON
No. 82088
Exp. 3/31/26
CIVIL
STATE OF CALIFORNIA

This item has been digitally signed and sealed on Nov 06, 2024

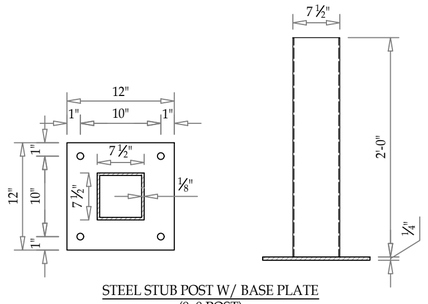
DATE:	11/06/24
DRAFTED BY:	J.N.
DESIGNED BY:	J.N.
PROJECT #:	24-06801
SHEET #:	S-2



8x8x0.250 POST
(6061-T6)

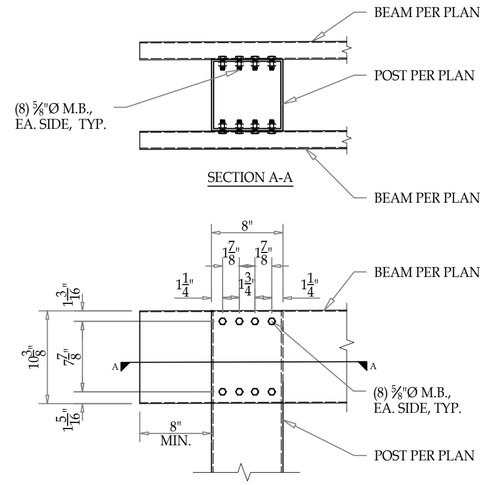


2x10x0.125 BEAM
(6061-T6)

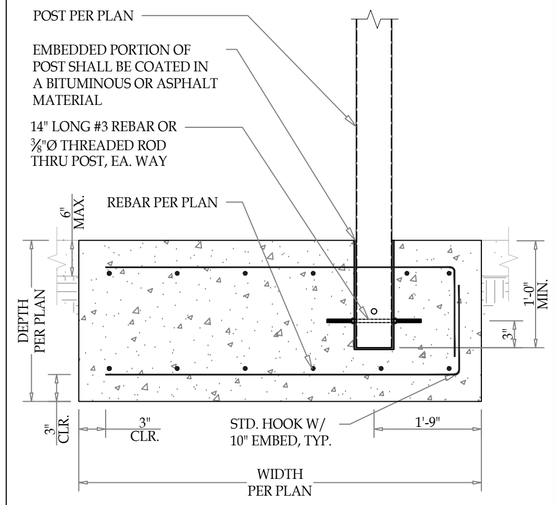


STEEL STUB POST W/ BASE PLATE
(8x8 POST)

NOT USED | SCALE: N.T.S. | 7



BEAM TO POST | SCALE: N.T.S. | 4



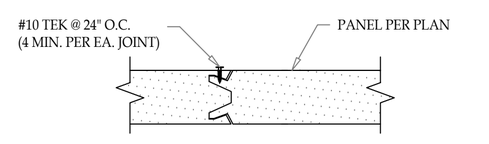
POST EMBEDDED INTO FTG. | SCALE: N.T.S. | 1

NOT USED | SCALE: N.T.S. | 8

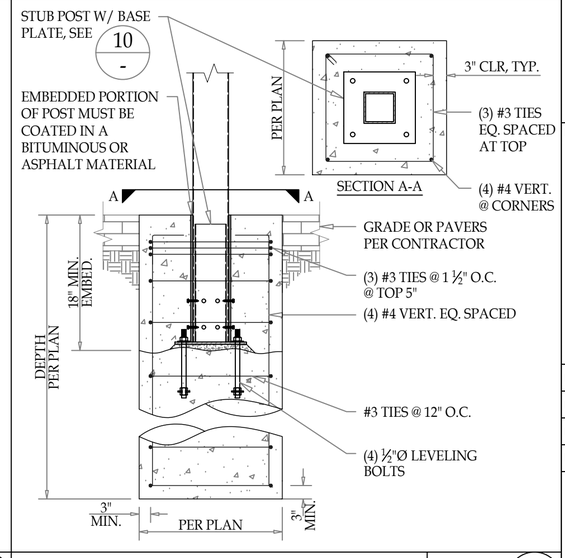
PANEL TO BEAM | SCALE: N.T.S. | 5

POST ANCHORED TO SPREAD FTG. | SCALE: N.T.S. | 2

NOT USED | SCALE: N.T.S. | 9



PANEL TO PANEL | SCALE: N.T.S. | 6



ALT. POLE FTG. DETAIL | SCALE: N.T.S. | 3

COMPONENTS | SCALE: N.T.S. | 10

McPHERSON ENGINEERING
RYAN McPHERSON, P.E.
9240 LIMONITE AVENUE
JURUPA VALLEY, CA 92509
(909) 566-0066
SE@McPE.GROUP

REVISIONS:

#	REASON	DATE

PROJECT LOCATION:

THE GMEREK RESIDENCE
2925 N LAMER STREET,
BURBANK, CA 91504

CONTRACTOR:

CRAFTED PATIOS

PROJECT DESCRIPTION:

FREESTANDING PATIO COVER

SHEET CONTENTS:

DETAILS

E.O.R.

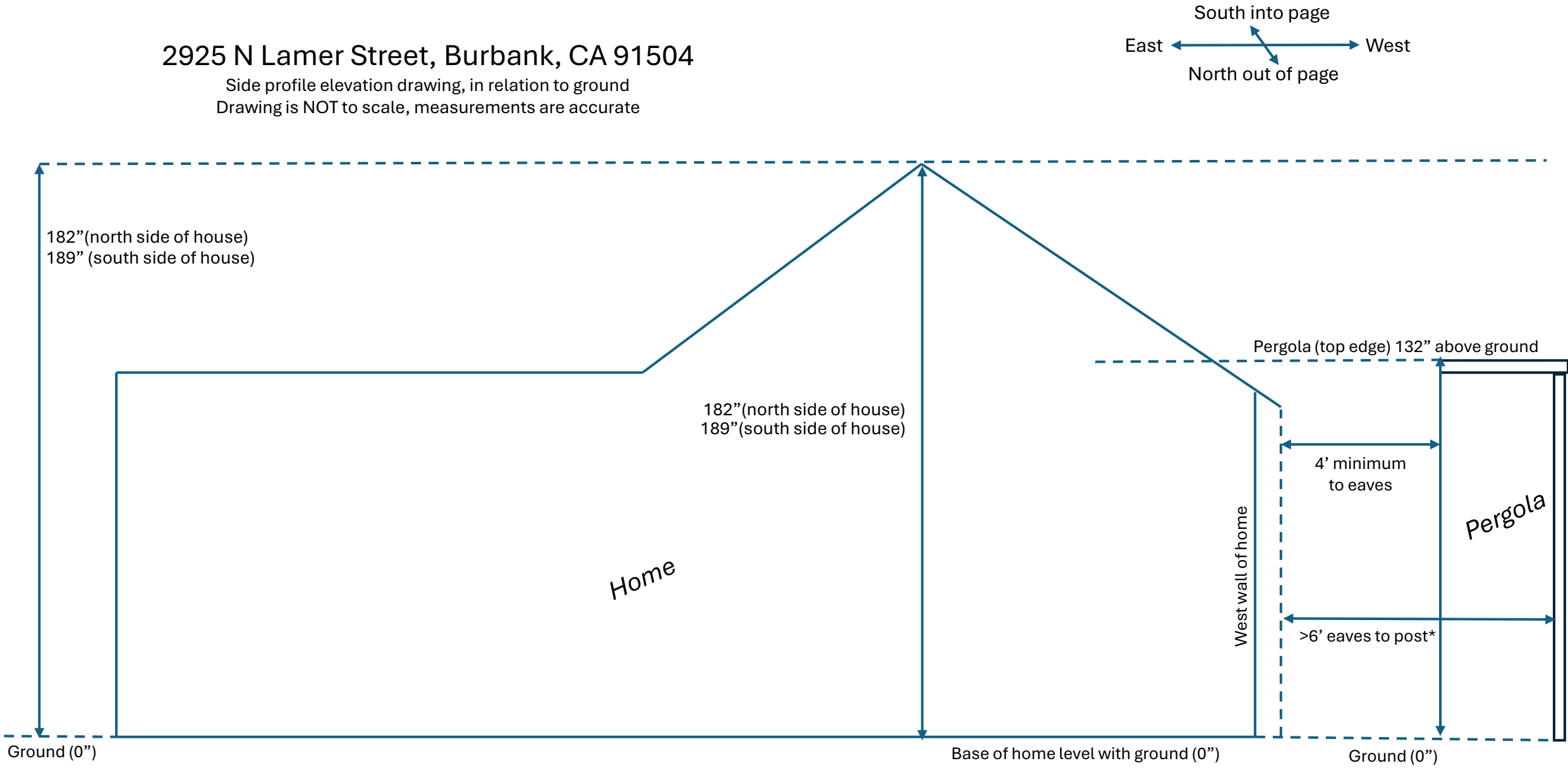
REGISTERED PROFESSIONAL ENGINEER
RYAN J. McPHERSON
No. 82088
Exp. 3/31/26
CIVIL
STATE OF CALIFORNIA

This item has been digitally signed and sealed on Nov 06, 2024

DATE:	11/06/24
DRAFTED BY:	J.N.
DESIGNED BY:	J.N.
PROJECT #:	24-06801
SHEET #:	S-3

2925 N Lamer Street, Burbank, CA 91504

Side profile elevation drawing, in relation to ground
Drawing is NOT to scale, measurements are accurate



*Note: Pergola is cantilevered, vertical post is >20’ away from building

GENERAL NOTES

1. ALL GRADING AND CONSTRUCTION SHALL CONFORM TO THE 2023 COUNTY OF LOS ANGELES BUILDING CODES AND THE STATE MODEL WATER EFFICIENCY LANDSCAPE ORDINANCE UNLESS SPECIFICALLY NOTED ON THESE PLANS.

2. ANY MODIFICATIONS OF OR CHANGES TO APPROVED GRADING PLANS MUST BE APPROVED BY THE BUILDING OFFICIAL.

3. NO GRADING SHALL BE STARTED WITHOUT FIRST NOTIFYING THE BUILDING OFFICIAL. A PRE-GRADING MEETING AT THE SITE IS REQUIRED BEFORETHE START OF THE GRADING WITH THE FOLLOWING PEOPLE PRESENT: OWNER, GRADING CONTRACTOR, DESIGN CIVIL ENGINEER, SOILS ENGINEER, GEOLOGIST, COUNTY GRADING INSPECTOR(S) OR THEIR REPRESENTATIVES, AND WHEN REQUIRED THE ARCHEOLOGIST OR OTHER JURISDICTIONAL AGENCIES. PERMITTEE OR HIS AGENT ARE RESPONSIBLE FOR ARRANGING PRE-GRADE MEETING AND MUST NOTIFY THE BUILDING OFFICIAL AT LEAST TWO BUSINESS DAYS PRIOR TO PROPOSED PRE-GRADE MEETING.

4. APPROVAL OF THESE PLANS REFLECT SOLELY THE REVIEW OF PLANS IN ACCORDANCE WITH THE COUNTY OF LOS ANGELES BUILDING CODES AND DOES NOT REFLECT ANY POSITION BY THE COUNTY OF LOS ANGELES OR THE DEPARTMENT OF PUBLIC WORKS REGARDING THE STATUS OF ANY TITLE ISSUES RELATING TO THE LAND ON WHICH THE IMPROVEMENTS MAY BE CONSTRUCTED. ANY DISPUTES RELATING TO TITLE ARE SOLELY A PRIVATE MATTER NOT INVOLVING THE COUNTY OF LOS ANGELES OR THE DEPARTMENT OF PUBLIC WORKS.

5. ALL GRADING AND CONSTRUCTION ACTIVITIES SHALL COMPLY WITH COUNTY OF LOS ANGELES CODE, TITLE 12, SECTION 12.12.030 THAT CONTROLS AND RESTRICTS NOISE FROM THE USE OF CONSTRUCTION AND GRADING EQUIPMENT FROM THE HOURS OF 8:00 PM TO 6:30 AM, AND ON SUNDAYS AND HOLIDAYS. (MORE RESTRICTIVE CONSTRUCTION ACTIVITY TIMES MAY GOVERN, AS REQUIRED BY THE DEPARTMENT OF REGIONAL PLANNING AND SHOULD BE SHOWN ON THE GRADING PLANS WHEN APPLICABLE.)

6. CALIFORNIA PUBLIC RESOURCES CODE (SECTION 5097.98) AND HEALTH AND SAFETY CODE (SECTION 7050.5) ADDRESS THE DISCOVERY AND DISPOSITION OF HUMAN REMAINS. IN THE EVENT OF DISCOVERY OR RECOGNITION OF ANY HUMAN REMAINS IN ANY LOCATION OTHER THAN A DEDICATED CEMETERY, THE LAW REQUIRES THAT GRADING IMMEDIATELY STOPS AND NO FURTHER EXCAVATION OR DISTURBANCE OF THE SITE, OR ANY NEARBY AREA WHERE HUMAN REMAINS MAY BE LOCATED, OCCUR UNTIL THE FOLLOWING HAS BEEN MEASURES HAVE BEEN TAKEN:

   A. THE COUNTY CORONER HAS BEEN INFORMED AND HAS DETERMINED THAT NO INVESTIGATION OF THE CAUSE OF DEATH IS REQUIRED, AND

   B. IF THE REMAINS ARE OF NATIVE AMERICAN ORIGIN, THE DESCENDANTS FROM THE DECEASED NATIVE AMERICANS HAVE MADE A RECOMMENDATION FOR THE MEANS OF TREATING OR DISPOSING, WITH APPROPRIATE DIGNITY, OF THE HUMAN REMAINS AND ANY ASSOCIATED GRAVE GOODS.

7. THE LOCATION AND PROTECTION OF ALL UTILITIES IS THE RESPONSIBILITY OF THE PERMITTEE.
8. ALL EXPORT OF MATERIAL FROM THE SITE MUST GO TO A PERMITTED SITE APPROVED BY THE BUILDING OFFICIAL OR A LEGAL DUMPSITE. RECEIPTS FOR ACCEPTANCE OF EXCESS MATERIAL BY A DUMPSITE ARE REQUIRED AND MUST BE PROVIDED TO THE BUILDING OFFICIAL UPON REQUEST.

9. A COPY OF THE GRADING PERMIT AND APPROVED GRADING PLANS MUST BE IN THE POSSESSION OF A RESPONSIBLE PERSON AND AVAILABLE AT THE SITE AT ALL TIMES.

10. SITE BOUNDARIES, EASEMENTS, DRAINAGE DEVICES, RESTRICTED USE AREAS SHALL BE LOCATED PER CONSTRUCTION STAKING BY FIELD ENGINEER OR LICENSED SURVEYOR. PRIOR TO GRADING, AS REQUESTED BY THE BUILDING OFFICIAL, ALL PROPERTY LINES, EASEMENTS, AND RESTRICTED USE AREAS SHALL BE STAKED.

11. NO GRADING OR CONSTRUCTION SHALL OCCUR WITHIN THE PROTECTED ZONE OF ANY OAK TREE AS REQUIRED PER TITLE CHAPTER 22.56 OF THE COUNTY OF LOS ANGELES ZONING CODE. THE PROTECTED ZONE SHALL MEAN THAT AREA WITHIN THE DRIP LINE OF AN OAK TREE EXTENDING THERE FROM A POINT AT LEAST FIVE FEET OUTSIDE THE DRIP LINE, OR 15 FEET FROM THE TRUNK(S) OF A TREE, WHICHEVER IS GREATER.
    IF AN OAK TREE PERMIT IS OBTAINED: (ADD THE FOLLOWING NOTE:)
    ALL GRADING AND CONSTRUCTION WITHIN THE PROTECTED ZONE OF ALL OAK TREES SHALL BE PER OAK TREE PERMIT NO._____. ALL RECOMMENDATIONS IN THE PERMIT AND ASSOCIATED OAK TREE REPORT MUST BE COMPLIED WITH AND ARE A PART OF THE GRADING PLAN. A COPY OF THE OAK TREE PERMIT AND ASSOCIATED REPORTS SHALL BE MAINTAINED IN THE POSSESSION OF A RESPONSIBLE PERSON AND AVAILABLE AT THE SITE AT ALL TIMES.

12. THE STANDARD RETAINING WALL DETAILS SHOWN ON THE GRADING PLANS ARE FOR REFERENCE ONLY. STANDARD RETAINING WALLS ARE NOT CHECKED, PERMITTED, OR INSPECTED PER THE GRADING PERMIT. A SEPARATE RETAINING WALL PERMIT IS REQUIRED FOR ALL STANDARD RETAINING WALLS. NOTE: THIS NOTE ONLY APPLIES TO STANDARD RETAINING WALLS. GEOGRID FABRIC AND SEGMENTAL RETAINING WALLS DO NOT REQUIRE A SEPARATE RETAINING WALL PERMIT. DETAILS AND CONSTRUCTION NOTES FOR ALL GEOGRID WALLS MUST BE ON THE GRADING PLAN.

13. A PREVENTIVE PROGRAM TO PROTECT THE SLOPES FROM POTENTIAL DAMAGE FROM BURROWING RODENTS IS REQUIRED PER SECTION J101.8 OF THE COUNTY OF LOS ANGELES BUILDING CODE. OWNER IS TO INSPECT SLOPES PERIODICALLY FOR EVIDENCE OF BURROWING RODENTS AND A FIRST EVIDENCE OF THEIR EXISTENCE SHALL EMPLOY AN EXTERMINATOR FOR THEIR REMOVAL.

14. WHERE A GRADING PERMIT IS ISSUED AND THE BUILDING OFFICIAL DETERMINES THAT THE GRADING WILL NOT BE COMPLETED PRIOR TO NOVEMBER 1, THE OWNER OF THE SITE ON WHICH THE GRADING IS BEING PERFORMED SHALL, ON OR BEFORE OCTOBER 1, FILE OR CAUSE TO BE FILED WITH THE BUILDING OFFICIAL AN ESCP PER SECTION J110.8.3 OF THE COUNTY OF LOS ANGELES BUILDING CODE.

15. TRANSFER OF RESPONSIBILITY: IF THE FIELD ENGINEER, THE SOILS ENGINEER, OR THE ENGINEERING GEOLOGIST OF RECORD IS CHANGED DURING GRADING, THE WORK SHALL BE STOPPED UNTIL THE REPLACEMENT HAS AGREED IN WRITING TO ACCEPT THEIR RESPONSIBILITY WITHIN THE AREA OF TECHNICAL COMPETENCE FOR APPROVAL UPON COMPLETION OF THE WORK. IT SHALL BE THE DUTY OF THE PERMITTEE TO NOTIFY THE BUILDING OFFICIAL IN WRITING OF SUCH CHANGE PRIOR TO THE RECOMMENCEMENT OF SUCH GRADING.

INSPECTIONS NOTES:

16. THE PERMITTEE OR HIS AGENT SHALL NOTIFY THE BUILDING OFFICIAL AT LEAST ONE WORKING DAY IN ADVANCE OF REQUIRED INSPECTIONS AT FOLLOWING STAGES OF THE WORK. (SECTION J105.7 OF THE BUILDING CODE.)

    (A) PRE-GRADE - BEFORE THE START OF ANY EARTH DISTURBING ACTIVITY OR CONSTRUCTION.

    (B) INITIAL - WHEN THE SITE HAS BEEN CLEARED OF VEGETATION AND UNAPPROVED FILL HAS BEEN SCARIFIED, BENCHED OR OTHERWISE PREPARED FOR FILL. FILL SHALL NOT BE PLACED PRIOR TO THIS INSPECTION. NOTE: PRIOR TO ANY CONSTRUCTION ACTIVITIES, INCLUDING GRADING, ALL STORM WATER POLLUTION PREVENTION MEASURES INCLUDING EROSION CONTROL DEVICES WHICH CONTAIN SEDIMENTS MUST BE INSTALLED.

    (C) ROUGH - WHEN APPROXIMATE FINAL ELEVATIONS HAVE BEEN ESTABLISHED; DRAINAGE TERRACES, SWALES AND BERMS INSTALLED AT THE TOP OF THE SLOPE; AND THE STATEMENTS REQUIRED IN THIS SECTION HAVE BEEN RECEIVED.

    (D) FINAL - WHEN GRADING HAS BEEN COMPLETED; ALL DRAINAGE DEVICES INSTALLED; SLOPE PLANTING ESTABLISHED, IRRIGATION SYSTEMS INSTALLED AND THE AS-BUILT PLANS, REQUIRED STATEMENTS, AND REPORTS HAVE BEEN SUBMITTED AND APPROVED.

17. IN ADDITION TO THE INSPECTION REQUIRED BY THE BUILDING OFFICIAL FOR GRADING, REPORTS AND STATEMENTS SHALL BE SUBMITTED TO THE BUILDING OFFICIAL IN ACCORDANCE WITH SECTION J105 OF THE COUNTY OF LOS ANGELES BUILDING CODE.

18. UNLESS OTHERWISE DIRECTED BY THE BUILDING OFFICIAL, THE FIELD ENGINEER FOR ALL ENGINEERED GRADING PROJECTS SHALL PREPARE ROUTINE INSPECTION REPORTS AS REQUIRED UNDER SECTION J105.11 OF THE COUNTY OF LOS ANGELES BUILDING CODE. THESE REPORTS, KNOWN AS "REPORT OF GRADING ACTIVITIES", SHALL BE SUBMITTED TO THE BUILDING OFFICIAL AS FOLLOWS:

1. BI-WEEKLY DURING ALL TIMES WHEN GRADING OF 400 CUBIC YARDS OR MORE PER WEEK IS OCCURRING ON THE SITE;
2. MONTHLY, AT ALL OTHER TIMES; AND
3. AT ANY TIME WHEN REQUESTED IN WRITING BY THE BUILDING OFFICIAL.

    SUCH "REPORT OF GRADING ACTIVITIES" SHALL CERTIFY TO THE BUILDING OFFICIAL THAT THE FIELD ENGINEER HAS INSPECTED THE GRADING SITE AND RELATED ACTIVITIES AND HAS FOUND THEM IN COMPLIANCE WITH THE APPROVED GRADING PLANS AND SPECIFICATIONS, THE BUILDING CODE, ALL GRADING PERMIT CONDITIONS, AND ALL OTHER APPLICABLE ORDINANCES AND REQUIREMENTS. THIS FORM IS AVAILABLE AT THE FOLLOWING WEBSITE htpp:/?dpw.lacounty.gov/bsd/dg/default.aspx. "REPORT OF GRADING ACTIVITIES"" MAY BE SCANNED AND UPLOADED AT THE WEBSITE OR FAXED TO (310) 530-5482. FAILURE TO PROVIDE REQUIRED INSPECTION REPORTS WILL RESULT IN A "STOP WORK ORDER."

19. ALL GRADED SITES MUST HAVE DRAINAGE SWALES, BERMS, AND OTHER DRAINAGE DEVICES INSTALLED PRIOR TO ROUGH GRADING APPROVAL PER SECTION J105.7 OF THE COUNTY OF LOS ANGELES BUILDING CODE.

20. THE GRADING CONTRACTOR SHALL SUBMIT THE STATEMENT TO THE GRADING INSPECTOR AS REQUIRED BY SECTION J105.12 OF THE COUNTY OF LOS ANGELES BUILDING CODE AT THE COMPLETION OF ROUGH GRADING.

21. FINAL GRADING MUST BE APPROVED BEFORE OCCUPANCY OF BUILDINGS WILL BE ALLOWED PER SECTION J105 OF THE COUNTY OF LOS ANGELES BUILDING CODE.

DRAINAGE NOTES:

22. ROOF DRAINAGE MUST BE DIVERTED FROM GRADED SLOPES.

23. PROVISIONS SHALL BE MADE FOR CONTRIBUTORY DRAINAGE AT ALL TIMES.

24. ALL CONSTRUCTION AND GRADING WITHIN A STORM DRAIN EASEMENT ARE TO BE DONE PER PRIVATE DRAIN PD NO._____OR MISCELLANEOUS TRANSFER DRAIN MTD NO._____.

25. ALL STORM DRAIN WORK IS TO BE DONE UNDER CONTINUOUS INSPECTION BY THE FIELD ENGINEER. STATUS REQUIRED UNDER NOTE 18 AND SECTION J105.11 OF THE COUNTY OF LOS ANGELES BUILDING CODE SHALL INCLUDE INSPECTION INFORMATION AND REPORTS ON THE STORM DRAIN INSTALLATION.

AGENCY NOTES:

26. AN ENCROACHMENT PERMIT FROM (COUNTY DEPARTMENT OF PUBLIC WORKS) (CALTRANS) (CITY OF _____) IS REQUIRED FOR ALL WORK WITHIN OR AFFECTING ROAD RIGHT OF WAY. ALL WORK WITHIN ROAD RIGHT OF WAY SHALL CONFORM TO (COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS)(CALTRANS) (CITY OF _____) ENCROACHMENT PERMIT.

27. AN ENCROACHMENT PERMIT /CONNECTION PERMIT IS REQUIRED FROM THE COUNTY OF LOS ANGELES FLOOD CONTROL DISTRICT FOR ALL WORK WITHIN THE COUNTY OF LOS ANGELES FLOOD CONTROL DISTRICT RIGHT OF WAY. ALL WORK SHALL CONFORM TO CONDITIONS SET BY THE PERMIT.

28. PERMISSION TO OPERATE IN VERY HIGH FIRE HAZARD SEVERITY ZONE MUST BE OBTAINED FROM THE FIRE PREVENTION BUREAU OR THE LOCAL FIRE STATION PRIOR TO COMMENCING WORK.

29. ALL WORK WITHIN THE STREAMBED AND AREAS OUTLINED ON GRADING PLANS SHALL CONFORM TO:
    ARMY CORP 404 PERMIT NUMBER: _____.
    CALIFORNIA FISH & WILDLIFE PERMIT NO.: _____.

30. ALL CONSTRUCTION/DEMOLITION, GRADING, AND STORAGE OF BULK MATERIALS MUST COMPLY WITH THE LOCAL AQMD RULE 403 FOR FUGITIVE DUST. INFORMATION ON RULE 403 IS AVAILABLE AT AQMD'S WEBSITE http://www.avaqmd.com.

GENERAL GEOTECHNICAL NOTES:

31. ALL WORK MUST BE IN COMPLIANCE WITH THE RECOMMENDATIONS INCLUDED IN THE GEOTECHNICAL CONSULTANT'S REPORT(S) AND THE APPROVED GRADING PLANS AND SPECIFICATIONS.

32. GRADING OPERATIONS MUST BE CONDUCTED UNDER PERIODIC INSPECTIONS BY THE GEOTECHNICAL CONSULTANTS WITH MONTHLY INSPECTION REPORTS TO BE SUBMITTED TO THE GEOLOGY AND SOILS SECTION. (900 S. FREMONT, ALHAMBRA CA 91803 - 3RD FLOOR)

33. THE SOIL ENGINEER SHALL PROVIDE SUFFICIENT INSPECTIONS DURING THE PREPARATION OF THE NATURAL GROUND AND THE PLACEMENT AND COMPACTION OF THE FILL TO BE SATISFIED THAT THE WORK IS BEING PERFORMED IN ACCORDANCE WITH THE PLAN AND APPLICABLE CODE REQUIREMENTS.

34. ROUGH GRADING MUST BE APPROVED BY A FINAL ENGINEERING GEOLOGY AND SOILS ENGINEERING REPORT. AN AS-BUILT GEOLOGIC MAP MUST BE INCLUDED IN THE FINAL GEOLOGY REPORT. PROVIDE A FINAL REPORT STATEMENT THAT VERIFIES WORK WAS DONE IN ACCORDANCE WITH REPORT RECOMMENDATIONS AND CODE PROVISIONS (SECTION J105.12 OF THE COUNTY OF LOS ANGELES BUILDING CODE). THE FINAL REPORT(S) MUST BE SUBMITTED TO THE GEOTECHNICAL AND MATERIALS ENGINEERING DIVISION FOR REVIEW AND APPROVAL.

35. FOUNDATION, WALL AND POOL EXCAVATIONS MUST BE INSPECTED AND APPROVED BY THE CONSULTING GEOLOGIST AND SOILS ENGINEER, PRIOR TO THE PLACING OF STEEL OR CONCRETE.

36. BUILDING PADS LOCATED IN CUT/FILL TRANSITION AREAS SHALL BE OVER-EXCAVATED A MINIMUM OF THREE (3) FEET BELOW THE PROPOSED BOTTOM OF FOOTING.

FILL NOTES:

37. ALL FILL SHALL BE COMPACTED TO THE FOLLOWING MINIMUM RELATIVE COMPACTION CRITERIA:

    A. 90 PERCENT OF MAXIMUM DRY DENSITY WITHIN 40 FEET BELOW FINISH GRADE.

    B. 93 PERCENT OF MAXIMUM DRY DENSITY DEEPER THAN 40 FEET BELOW FINISH GRADE, UNLESS A LOWER RELATIVE COMPACTION (NOT LESS THAN 90 PERCENT OF MAXIMUM DRY DENSITY) IS JUSTIFIED BY THE GEOTECHNICAL ENGINEER. THE RELATIVE COMPACTION SHALL BE DETERMINED BY A.S.T.M. SOIL COMPACTION TEST D1557-91 WHERE APPLICABLE: WHERE NOT APPLICABLE, A TEST ACCEPTABLE TO THE BUILDING OFFICIAL SHALL BE USED. (SECTION J107.5 OF THE COUNTY OF LOS ANGELES BUILDING CODE.)

    C. 95 PERCENT OF MAXIMUM DRY DENSITY IS REQUIRED FOR ALL FIRE LANES UNLESS OTHERWISE APPROVED BY THE FIRE DEPARTMENT.

38. FIELD DENSITY SHALL BE DETERMINED BY A METHOD ACCEPTABLE TO THE BUILDING OFFICIAL. (SECTION J107.5 OF THE COUNTY OF LOS ANGELES BUILDING CODE.) HOWEVER, NOT LESS THAN 10% OF THE REQUIRED DENSITY TEST, UNIFORMLY DISTRIBUTED, AND SHALL BE OBTAINED BY THE SAND CONE METHOD.

39. SUFFICIENT TESTS OF THE FILL SOILS SHALL BE MADE TO DETERMINE THE RELATIVE COMPACTION OF THE FILL IN ACCORDANCE WITH THE FOLLOWING MINIMUM GUIDELINES:

    A. ONE TEST FOR EACH TWO-FOOT VERTICAL LIFT.
    B. ONE TEST FOR EACH 1,000 CUBIC YARDS OF MATERIAL PLACED.
    C. ONE TEST AT THE LOCATION OF THE FINAL FILL SLOPE FOR EACH BUILDING SITE (LOT) IN EACH FOUR-FOOT VERTICAL LIFT OR PORTION THEREOF.
    D. ONE TEST IN THE VICINITY OF EACH BUILDING PAD FOR EACH FOUR-FOOT VERTICAL LIFT OR PORTION THEREOF.

40. SUFFICIENT TESTS OF FILL SOILS SHALL BE MADE TO VERIFY THAT THE SOIL PROPERTIES COMPLY WITH THE DESIGN REQUIREMENTS, AS DETERMINED BY THE SOIL ENGINEER INCLUDING SOIL TYPES, SHEAR STRENGTHS PARAMETERS AND CORRESPONDING UNIT WEIGHTS IN ACCORDANCE WITH THE FOLLOWING GUIDELINES:

    A. PRIOR AND SUBSEQUENT TO PLACEMENT OF THE FILL, SHEAR TESTS SHALL BE TAKEN ON EACH TYPE OF SOIL OR SOIL MIXTURE TO BE USED FOR ALL FILL SLOPES STEEPER THAN THREE (3) HORIZONTAL TO ONE VERTICAL.

    B. SHEAR TEST RESULTS FOR THE PROPOSED FILL MATERIAL MUST MEET OR EXCEED THE DESIGN VALUES USED IN THE GEOTECHNICAL REPORT TO DETERMINE SLOPE STABILITY REQUIREMENTS. OTHERWISE, THE SLOPE MUST BE REEVALUATED USING THE ACTUAL SHEAR TEST VALUE OF THE FILL MATERIAL THAT IS IN PLACE.

    C. FILL SOILS SHALL BE FREE OF DELETERIOUS MATERIALS.

41. FILL SHALL NOT BE PLACED UNTIL STRIPPING OF VEGETATION, REMOVAL OF UNSUITABLE SOILS, AND INSTALLATION OF SUBDRAIN (IF ANY) HAVE BEEN INSPECTED AND APPROVED BY THE SOIL ENGINEER. THE BUILDING OFFICIAL MAY REQUIRE A "STANDARD TEST METHOD FOR MOISTURE, ASH, ORGANIC MATTER, PEAT OR OTHER ORGANIC SOILS" ASTM D-2974-87 ON ANY SUSPECT MATERIAL. DETRIMENTAL AMOUNTS OF ORGANIC MATERIAL SHALL NOT BE PERMITTED IN FILLS. SOIL CONTAINING SMALL AMOUNTS OF ROOTS MAY BE ALLOWED PROVIDED THAT THE ROOTS ARE IN A QUANTITY AND DISTRIBUTED IN A MANNERTHAT WILL NOT BE DETRIMENTAL TO THE FUTURE USE OF THE SITE AND SOILS ENGINEER APPROVES THE USE OF SUCH MATERIAL.

42. ROCK OR SIMILAR MATERIAL GREATER THAN 12 INCHES IN DIAMETER SHALL NOT BE PLACED IN THE FILL UNLESS RECOMMENDATIONS FOR SUCH PLACEMENT HAVE BEEN SUBMITTED BY THE SOIL ENGINEER AND APPROVED IN ADVANCE BY THE BUILDING OFFICIAL. LOCATION, EXTENT, AND ELEVATION OF ROCK DISPOSAL AREAS MUST BE SHOWN ON AN "AS BUILT" GRADING PLAN.

43. CONTINUOUS INSPECTION BY THE SOIL ENGINEER, OR A RESPONSIBLE REPRESENTATIVE, SHALL BE PROVIDED DURING ALL FILL PLACEMENT AND COMPACTION OPERATIONS WHERE FILLS HAVE A DEPTH GREATER THAN 30 FEET OR SLOPE SURFACE STEEPER THAN 2:1. (SECTION J107.8 OF THE COUNTY OF LOS ANGELES BUILDING CODE)

44. CONTINUOUS INSPECTION BY THE SOIL ENGINEER, OR A RESPONSIBLE REPRESENTATIVE, SHALL BE PROVIDED DURING ALL SUBDRAIN INSTALLATION. (SECTION J107.2 OF THE COUNTY OF LOS ANGELES BUILDING CODE)

45. ALL SUBDRAIN OUTLETS ARE TO BE SURVEYED FOR LINE AND ELEVATION. SUBDRAIN INFORMATION MUST BE SHOWN ON AN "AS BUILT" GRADING PLAN.

46. FILL SLOPES IN EXCESS OF 2:1 STEEPNESS RATIO ARE TO BE CONSTRUCTED BY THE PLACEMENT OF SOIL AT SUFFICIENT DISTANCE BEYOND THE PROPOSED FINISH SLOPE TO ALLOW COMPACTION EQUIPMENT TO BE OPERATED AT THE OUTER LIMITS OF THE FINAL SLOPE SURFACE. THE EXCESS FILL IS TO BE REMOVED PRIOR TO COMPLETION OF ROUGH GRADING. OTHER CONSTRUCTION PROCEDURES MAY BE USED WHEN IT IS DEMONSTRATED TO THE SATISFACTION OF THE BUILDING OFFICIAL THAT THE ANGLE OF SLOPE, CONSTRUCTION METHOD AND OTHER FACTORS WILL HAVE EQUIVALENT EFFECT. (SECTION J107.5 OF THE COUNTY OF LOS ANGELES BUILDING CODE.)

PLANTING AND IRRIGATION NOTES:

47. PLANTING AND IRRIGATION ON GRADED SLOPES MUST COMPLY WITH THE FOLLOWING MINIMUM GUIDELINES:
    A. THE SURFACE OF ALL CUT SLOPES MORE THAN 5 FEET IN HEIGHT AND FILL SLOPES MORE THAN 3 FEET IN HEIGHT SHALL BE PROTECTED AGAINST DAMAGE BY EROSION BY PLANTING WITH GRASS OR GROUNDCOVER PLANTS. SLOPES EXCEEDING 15 FEET IN VERTICAL HEIGHT SHALL ALSO BE PLANTED WITH SHRUBS, SPACED AT NOT TO EXCEED 10 FEET ON CENTERS; OR TREES, SPACED AT NOT TO EXCEED 20 FEET ON CENTERS, OR A COMBINATION OF SHRUBS AND TREES AT EQUIVALENT SPACING, IN ADDITION TO THE GRASS OR GROUNDCOVER PLANTS. THE PLANTS SELECTED AND PLANTING METHODS USED SHALL BE SUITABLE FOR THE SOIL AND CLIMATIC CONDITIONS OF THE SITE. PLANT MATERIAL SHALL BE SELECTED WHICH WILL PRODUCE A COVERAGE OF PERMANENT PLANTING EFFECTIVELY CONTROLLING EROSION. CONSIDERATION SHALL BE GIVEN TO DEEP-ROOTED PLANTING MATERIAL NEEDING LIMITED WATERING, MAINTENANCE, HIGH ROOT TO SHOOT RATIO, WIND SUSCEPTIBILITY AND FIRE-RETARDANT CHARACTERISTICS. ALL PLANT MATERIALS MUST BE APPROVED BY THE BUILDING OFFICIAL. (SECTION J110.3 OF THE COUNTY OF LOS ANGELES BUILDING CODE)
    NOTE: PLANTING MAY BE MODIFIED FOR THE SITE IF SPECIFIC RECOMMENDATIONS ARE PROVIDED BY BOTH THE SOILS ENGINEER AND A LANDSCAPE ARCHITECT. SPECIFIC RECOMMENDATIONS MUST CONSIDER SOILS AND CLIMATIC CONDITIONS, IRRIGATION REQUIREMENTS, PLANTING METHODS, FIRE RETARDANT CHARACTERISTICS, WATER EFFICIENCY, MAINTENANCE NEEDS, AND OTHER REGULATORY REQUIREMENTS. RECOMMENDATIONS MUST INCLUDE A FINDING THAT THE ALTERNATIVE PLANTING WILL PROVIDE A PERMANENT AND EFFECTIVE METHOD OF EROSION CONTROL. MODIFICATIONS TO PLANTING MUST BE APPROVED BY THE BUILDING OFFICIAL PRIOR TO INSTALLATION.

    B. SLOPES REQUIRED TO BE PLANTED BY SECTION J110.3 SHALL BE PROVIDED WITH AN APPROVED SYSTEM OF IRRIGATION THAT IS DESIGNED TO COVER ALL PORTIONS OF THE SLOPE. IRRIGATION SYSTEM PLANS SHALL BE SUBMITTED AND APPROVED PRIOR TO INSTALLATION. A FUNCTIONAL TEST OF THE SYSTEM MAY BE REQUIRED. FOR SLOPES LESS THAN 20 FEET IN VERTICAL HEIGHT, HOSE BIBS TO PERMIT HAND WATERING WILL BE ACCEPTABLE IF SUCH HOSE BIBS ARE INSTALLED AT CONVENIENTLY ACCESSIBLE LOCATIONS WHERE A HOSE NO LONGER THAN 50 FEET IS NECESSARY FOR IRRIGATION. THE REQUIREMENTS FOR PERMANENT IRRIGATION SYSTEMS MAY BE MODIFIED UPON SPECIFIC RECOMMENDATION OF A LANDSCAPE ARCHITECT OR EQUIVALENT AUTHORITY THAT, BECAUSE OF THE TYPE OF PLANTS SELECTED, THE PLANTING METHODS USED AND THE SOIL AND CLIMATIC CONDITIONS AT THE SITE, IRRIGATION WILL NOT BE NECESSARY FOR THE MAINTENANCE OF THE SLOPE PLANTING. (SECTION J110.4 OF THE COUNTY OF LOS ANGELES BUILDING CODE)
    C. OTHER GOVERNMENTAL AGENCIES MAY HAVE ADDITIONAL REQUIREMENTS FOR LANDSCAPING AND IRRIGATION. IT IS THE RESPONSIBILITY OF THE APPLICANT TO COORDINATE WITH OTHER AGENCIES TO MEET THEIR REQUIREMENTS WHILE MAINTAINING COMPLIANCE WITH THE COUNTY OF LOS ANGELES BUILDING CODE.

48. THE PLANTING AND IRRIGATION SYSTEMS SHALL BE INSTALLED AS SOON AS PRACTICAL AFTER ROUGH GRADING. PRIOR TO FINAL GRADING APPROVAL ALL REQUIRED SLOPE PLANTING MUST BE WELL ESTABLISHED. (SECTION J110.7OF THE COUNTY OF LOS ANGELES BUILDING CODE)

49. LANDSCAPE IRRIGATION SYSTEM SHALL BE DESIGNED AND MAINTAINED TO PREVENT SPRAY ON STRUCTURES. (TITLE 31, SECTION 5.407.2.1)

50. PRIOR TO ROUGH GRADE APPROVAL THIS PROJECT REQUIRES A LANDSCAPE PERMIT. LANDSCAPE PLANS IN COMPLIANCE WITH THE "MODEL WATER EFFICIENT LANDSCAPE ORDINANCE" TITLE 23, CHAPTER 2.7 OF CALIFORNIA CODE OF REGULATIONS (AB 1881) MUST BE SUBMITTED TO THE DEPARTMENT OF PUBLIC WORKS, LAND DEVELOPMENT DIVISION. (900 S. FREMONT AVE, ALHAMBRA - 3RD FLOOR, CA 91803 (626) 458-4921). TO OBTAIN LANDSCAPE PERMIT APPROVED PLANS AND WATER PURVEYOR ACKNOWLEDGMENT FORM MUST BE SUBMITTED TO THE LOCAL BUILDING AND SAFETY OFFICE.

MATERIAL SPECIFICATIONS:

CONCRETE:
1. CONCRETE SHALL BE 3,250 PSI @ 28 DAYS (EXCEPT AS NOTED)
2. AGGREGATES TO BE : MAXIMUM SIZE ½" FOR FOOTINGS AND 1" FOR ALL OTHER WORK, ASTM-C33
3. REINFORCING STEEL TO BE : ASTM-615-60 FOR BILLET STEEL INTERMEDIATE GRADE, CLEAN AND UNRUSTED. LAPS AT SPLICES AND POUR LINES TO BE 36" DIAMETERS OR 24"MINIMUM UNLESS NOTED
4. WELDED WIRE FABRIC:ASTM-A185,LAP 16"@EDGES.
5. REMOVAL OF FORMS: SUPPORTING VERTICAL SURFACES, MIN.2 DAYS; SUPPORTING HORIZONTAL SURFACES, MIN.15 DAYS.
6. ONLY ONE GRADE OF CONCRETE SHALL BE PERMITTED ON THE JOB SITE AT ONE TIME.

STRUCTURAL STEEL
7. STRUCTURAL STEEL SHALL BE A-36 IDENTIFIED WITH MARK AND MILL CERTIFICATION TO BE SENT TO STRUCTURAL ENGINEER.
8. PIPE COLUMNS TO BE: ASTM-A53 GRADE B SEAMLESS, NOTE THAT DIMENSIONS ON PLANS SHOW INSIDE DIAMETER.
9. SQUARE AND RECTANGULAR TUBING SHALL BE EQUAL TO ASTM-A-36 UNLESS SPECIFICALLY IDENTIFIED OTHERWISE ON PLAN OR MEMBER SCHEDULE.

MASONRY
10. HOLLOW CONCRETE MASONRY UNITS:1- LIGHT WEIGHT CONCRETE UNITS SHALL CONFORM TO ASTM STD. C-90
11. REINFORCING STEEL SHALL CONFORM TO A.S.T.M. A-615 GRADE 60.
12. MORTAR PROPORTIONS : 1 PART PORTLAND CEMENT1 PART LIME PUTTY4 PARTS SAND
13. GROUT PROPORTIONS : 1 PART PORTLAND CEMENT 3 PARTS SAND $\frac{1}{10}$ PART LIME PUTTY
14. ALL GROUT SHALL BE 2,500 PSI AT 28 DAYS.

ADDITIONAL NOTES
A. ALL GRADING SLOPES SHALL BE PLANTED AND SPRINKLERED. (7012.1.)
B. STANDARD 12 INCH HIGH BERM IS REQUIRED AT TOP ALL GRADED SLOPES. (7013.3)
C. NO FILL TO BE PLACED, UNTIL THE CITY GRADING INSPECTOR HAS INSPECTED AND APPROVED THE BOTTOM EXCAVATION.
D. MAN-MADE FILL SHALL BE COMPACTED TO A MINIMUM RELATIVE COMPACTION OF 90% MAX. DRY DENSITY WITHIN 40 FEET BELOW FINISH GRADE AND 93% MAX. DRY DENSITY DEEPER THAN 40 FEET BELOW FINISH GRADE, UNLESS A LOWER RELATIVE COMPACTION (NOT LESS THAN 90% OF MAX. DRY DENSITY) IS JUSTIFIED BY THE SOILS ENGINEER.
E. TEMPORARY EROSION CONTROL TO BE INSTALLED BETWEEN OCTOBER 1 AND APRIL 15. OBTAIN GRADING INSPECTOR'S AND DEPARTMENT OF PUBLIC WORKS APPROVAL OF PROPOSED PROCEDURES. [>200CY].

CONTINUOUS INCPECTION REQUIRED FOR:
1. CONCRETE OVER 2500 PSI
2. INSTALLATION OF TIE-BACK ANCHORS
3. FIELD WELDING
4. EXCAVATION (BY SOILS ENGINEER)
5. PLACEMENT OF ENGINEERING FILLS (BY SOILS ENGINEER)
6. EPOXY ANCHORS TO THE EXISTING HARDENED CONCRETE
7. INSTALLATION OF HIGH STRENGTH BOLTS. GROUTING OF HOLLOW MASONRY UNITS.

THIS PLAN HAS BEEN REVIEWED AND CONFORMS TO RECOMMENDATIONS OF SOILS ENGINEERING/GEOLOGIC REPORTS DATED _____.
SIGNATURE AND DATE _____.

PROJECT DIRECTORY
CIVIL ENGINEER:
SOUREN GRIGORYAN M.S.P.E.

PROJECT ADDRESS:
2925 N LAMER ST.
BURBANK, CA 91504

SCOPE OF WORK
-NEW GRADING FOR SWIMMING POOL

SHEET INDEX

PROJECT INFORMATION

LOT SIZE: 8,182 SQ. FT.
APN: 2471-022-028

No.	DESCRIPTION	DATE
1	INITIAL DESIGN	02/04/2024

PROJECT No.24-20

DESIGNED BY: SG

CHECKED BY: SG

JOB ADDRESS:
2925 N LAMER ST.
BURBANK, CA 91504

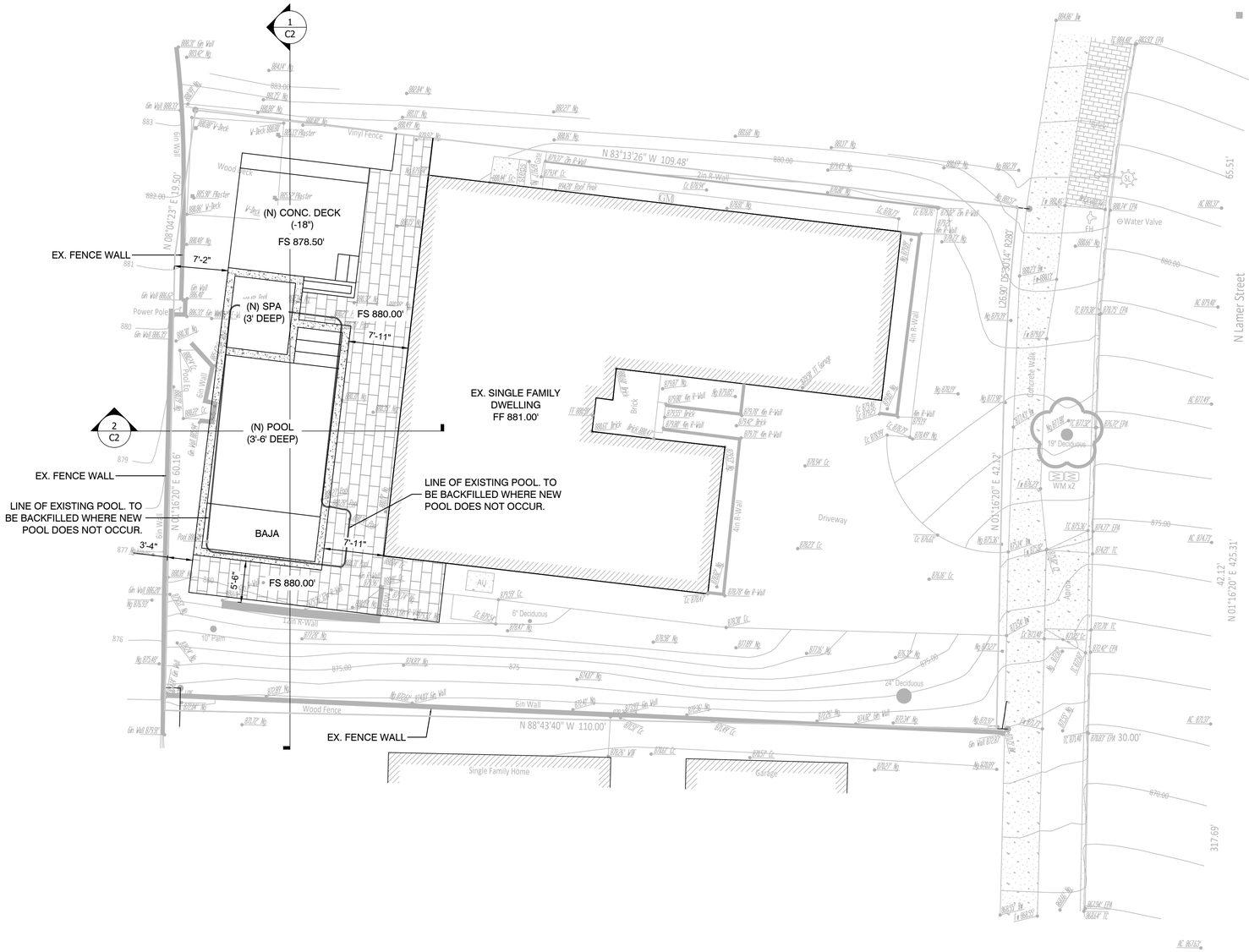
GRADING PLAN COVER SHEET AND NOTES

STUDIO

REGISTERED PROFESSIONAL ENGINEER
SOUREN GRIGORYAN
No. C 93320
CIVIL
STATE OF CALIFORNIA

C-0

SHEET NUMBER



GRADING PLAN

Scale: 1/8" = 1'

LEGEND:

(0.1)	EX ELEVATION
· 100.0	EX ELEVATION (FROM TOPO)
000.00	PROPOSED ELEVATION
0000	PROPOSED CONTOUR
	NEW RETAINING WALL
	4" PERFORATED DRAIN PIPE BEHIND RET WALL. PVC SCH 40. ENCASED INSIDE 12"X12" GRAVEL

ABBREVIATIONS:

A.B.	AGGREGATE BASE
BC	BEGINNING OF CURVE
BOW	BOTTOM OF WALL
DI	DRAINAGE INLET
DS	DOWNSPOUT
FF	FINISHED FLOOR
FG	FINISHED GRADE
FL	FLOW LINE
FS	FINISHED SURFACE
H	WALL FACE HEIGHT
INV	PIPE INVERT
ME	MATCH EXISTING
N.A.P.	NOT A PART OF THIS PERMIT
PB	PLANTER BOX
PC	PILE CAP
PCC	PORTLAND CEMENT CONCRETE
PL	PROPERTY LINE
R&R	REMOVE AND RECOMPACT
TOCP	TOP OF COPING
TOG	TOP OF GRATE
TOP	TOP OF PLANTER BOX
TOW	TOP OF WALL

No.	DESCRIPTION	DATE
1	INITIAL DESIGN	02/04/2024

PROJECT No.24-20

DESIGNED BY: SG

CHECKED BY: SG

JOB ADDRESS:
2925 N LAMER ST.
BURBANK, CA 91504

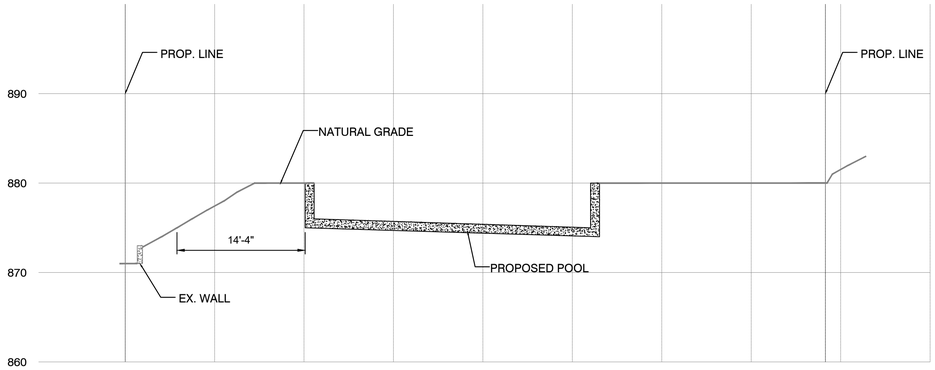
GRADING PLAN

STUDIO

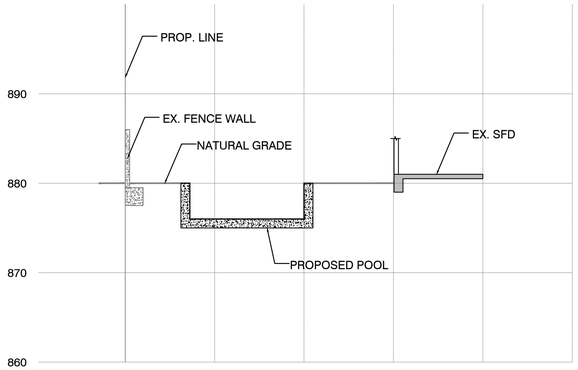
REGISTERED PROFESSIONAL ENGINEER
SOREN GRIGORYAN
No. C 93320
CIVIL
STATE OF CALIFORNIA

C-1

SHEET NUMBER



2 SECTION 2



2 SECTION 2

No.	DESCRIPTION	DATE
1	INITIAL DESIGN	02/04/2024

PROJECT No.24-20

DESIGNED BY: SG

CHECKED BY: SG

JOB ADDRESS:
2925 N LAMER ST.
BURBANK, CA 91504

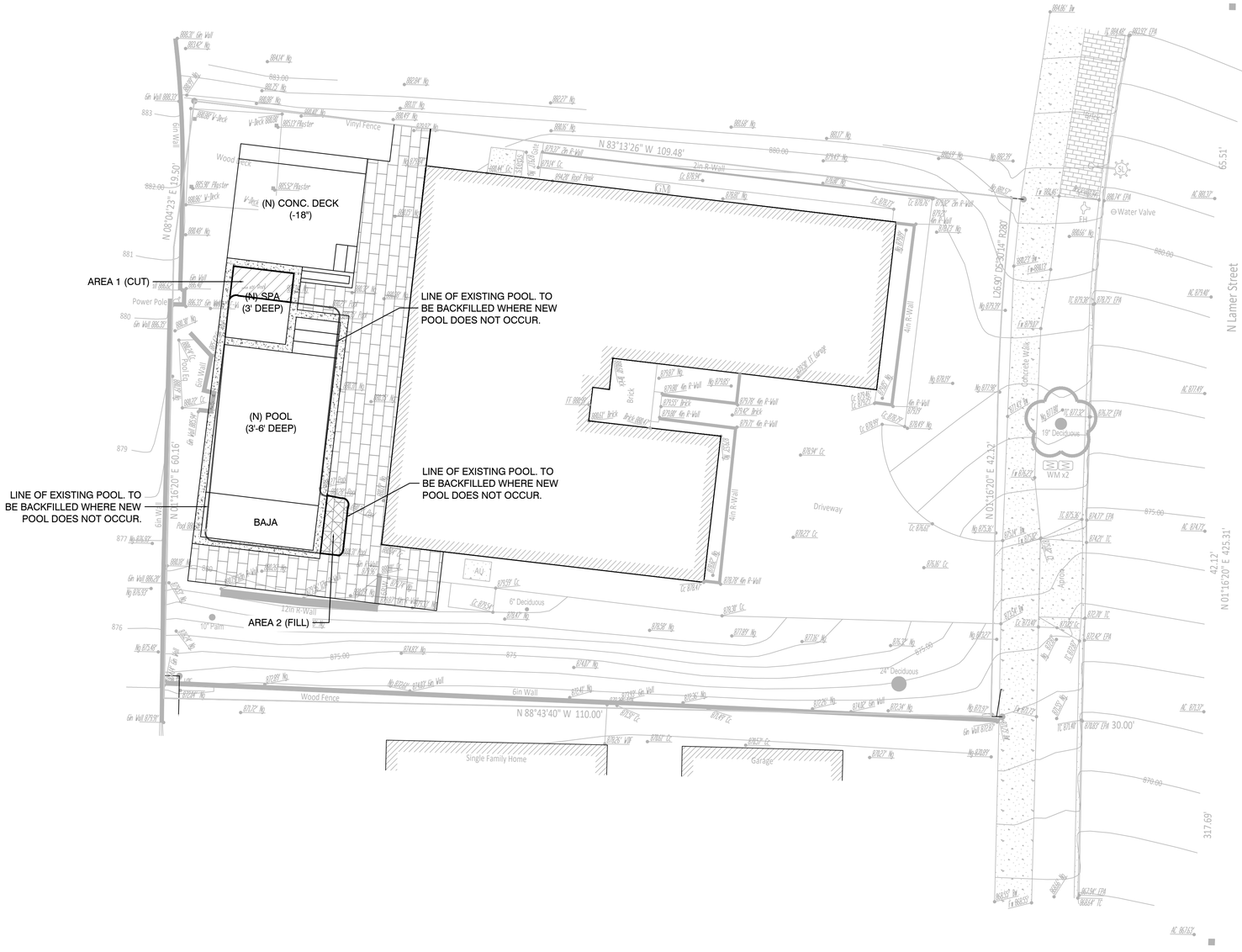
GRADING SECTIONS

STUDIO

REGISTERED PROFESSIONAL ENGINEER
SOUREN GRIGORYAN
No. C 93320
CIVIL
STATE OF CALIFORNIA

C-2

SHEET NUMBER



GRADING VOLUMES

Scale: 1/8" = 1'

LEGEND:

CUT AREA

FILL AREA

GRADING VOLUME CALCULATIONS:

AREA 1: (32 SF)(-3 FT)/27=	-4 CY
AREA 2: (23 SF)(+5 FT)/27=	+4 CY
TOTAL CUT=	4 CY
TOTAL FILL=	4 CY
NET TOTAL=	0 CY

NOTE:
GRADING VOLUMES ARE THE MINOR CUT OR FILL AREAS IN BETWEEN THE EXISTING POOL AND THE PROPOSED POOL LOCATIONS.

ABBREVIATIONS:

A.B.	AGGREGATE BASE
BC	BEGINNING OF CURVE
BOW	BOTTOM OF WALL
DI	DRAINAGE INLET
DS	DOWNSPOUT
FF	FINISHED FLOOR
FG	FINISHED GRADE
FL	FLOW LINE
FS	FINISHED SURFACE
H	WALL FACE HEIGHT
INV	PIPE INVERT
ME	MATCH EXISTING
N.A.P.	NOT A PART OF THIS PERMIT
PB	PLANTER BOX
PC	PILE CAP
PCC	PORTLAND CEMENT CONCRETE
PL	PROPERTY LINE
R&R	REMOVE AND RECOMPACT
TOCP	TOP OF COPING
TOG	TOP OF GRATE
TOP	TOP OF PLANTER BOX
TOW	TOP OF WALL

No.	DESCRIPTION	DATE
1	INITIAL DESIGN	02/04/2024

PROJECT No.24-20

DESIGNED BY: SG

CHECKED BY: SG

JOB ADDRESS:
2925 N LAMER ST.
BURBANK, CA 91504

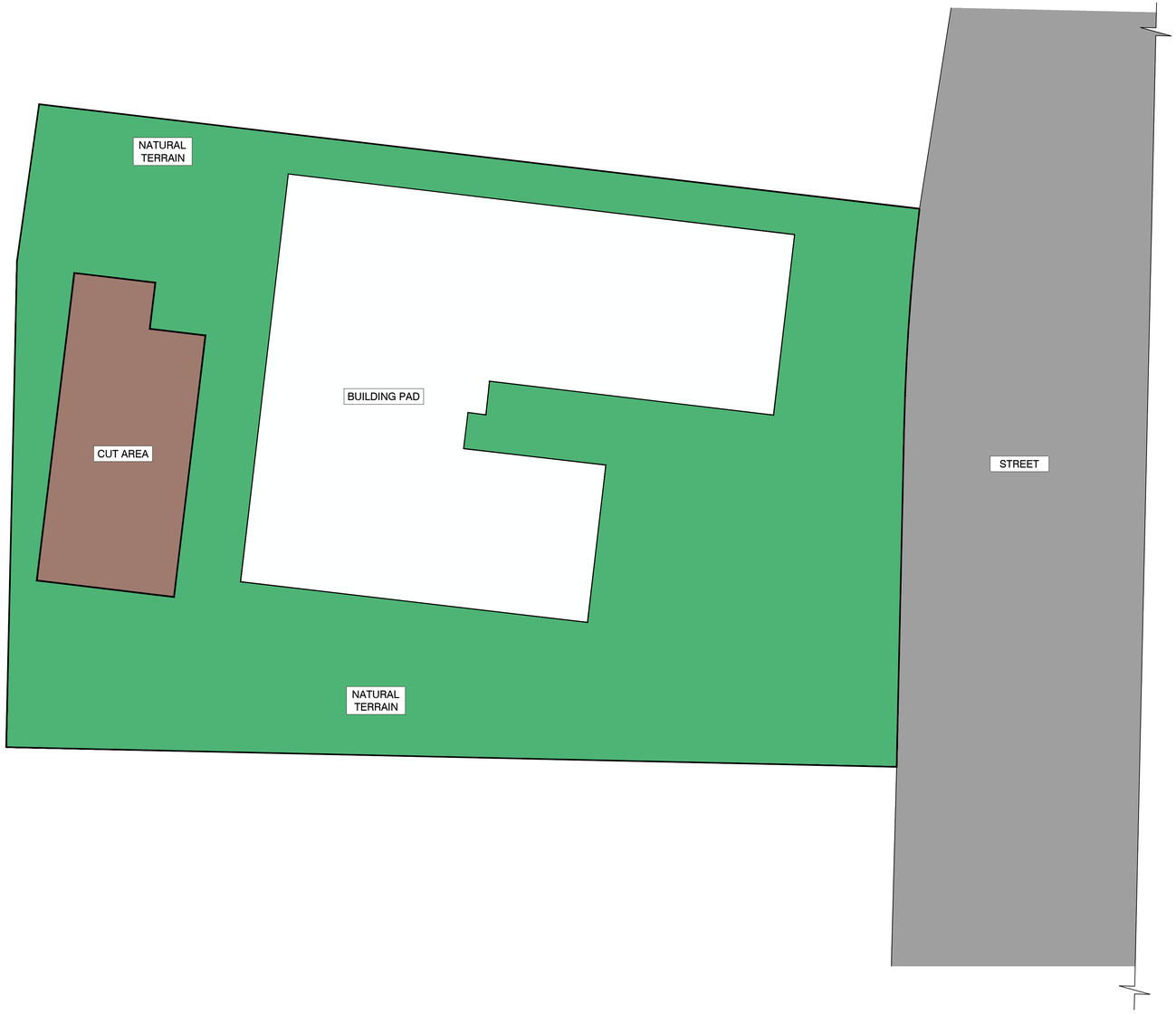
GRADING VOLUMES

STUDIO

REGISTERED PROFESSIONAL ENGINEER
SOUREN GRIGORYAN
No. C 93320
CIVIL
STATE OF CALIFORNIA

C-3

SHEET NUMBER

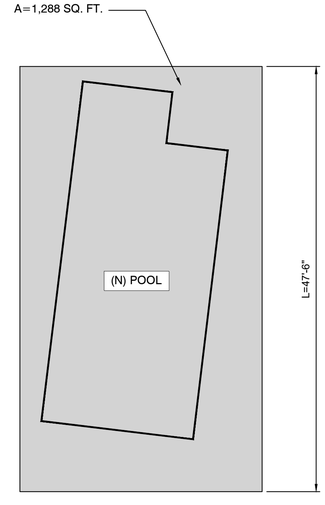


SITE PLAN

Scale: 1/8" = 1'

LEGEND:

- CUT AREA
- FILL AREA
- NATURAL TERRAIN
- STREETS
- BUILDING PAD



AREA OF SCOPE

Scale: 1/8" = 1'

SLOPE CALCULATIONS

SLOPE CALCULATION: S= (IxLx100)/A

S =AVERAGE GROUND SLOPE IN PERCENT

I =CONTOUR INTERVAL IN FEET = 0.5 FT.

(THE AREA OF THE PROPOSED POOL IS FLAT AND DOES NOT RANGE ACROSS MULTIPLE CONTOURS. THERE IS A MAX. 6" DIFFERENTIAL ACROSS THE AREA OF PROPOSED WORK.

L =COMBINED LENGTH IN FEET = 47.5 FT.
A = GROSS AREA = 1,288 SF

S = ((0.5 FT)X(47.5 FT)X100)/1,288 SF =1.85%

No.	DESCRIPTION	DATE
1	INITIAL DESIGN	02/04/2024

PROJECT No.24-20

DESIGNED BY: SG

CHECKED BY: SG

JOB ADDRESS:
2925 N LAMER ST.
BURBANK, CA 91504

CUT FILL EXHIBIT

STUDIO

REGISTERED PROFESSIONAL ENGINEER
SOUREN GRIGORYAN
No. C 93320
CIVIL
STATE OF CALIFORNIA

C-4

SHEET NUMBER

CALCULATIONS

METHODOLOGY:

γ = EQUIVALENT FLUID PRESSURE

OTM = $1/6\ \gamma\ H^3$

WHERE γ = 60 pcf

NET MOM = OTM − RESIST. MOMENT

$$fs = \frac{M(12\ in/ft)}{As\ j\ d} = \frac{Mt\ (12)}{As\ (0.887)\ d}$$

$$fc = \frac{M(2)\ 12\ in/ft}{j\ k\ b\ d^2}$$

$$= \frac{Mt\ (2)(12)}{(0.887)(0.339)(12)\ d^2} < 1125\ psi$$

$$vc = \frac{(1/2)\ \gamma\ H^2}{(12\ in/ft)\ j\ d}$$

$$= \frac{\gamma\ H^2}{(2)(12)(0.887)\ d} < 55\ psi$$

f'c = 2,500 p.s.i.

Fs = 20,000 p.s.i.

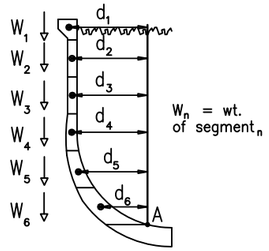
fc = 0.45 f'c = 1125 p.s.i.

Vc = 1.1 $\sqrt{f'c}$ = 55 p.s.i.

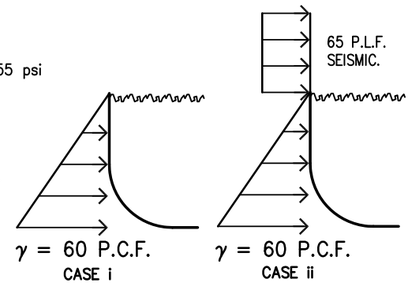
RESISTING MOMENT:

RESISTING MOMENT ABOUT POINT A

RM = $W_1 d_1 + W_2 d_2 + \ldots W_n d_n$



LOADING DIAGRAM:



CALCULATION RESULTS: 6'−0" BLOCK WALL ON BOND BEAM EXPANSIVE SOIL

EQUIVALENT FLUID PRESSURE = 60 P.C.F.

RESULTS FOR NO RAISED BOND BEAM WITH SEISMIC

DEPTH 'D'	SOIL OTM ft−#	LOAD OTM ft−#	SOIL RM ft−#	NET Mom	t	VERTICAL STEEL	fs p.s.i.	fc p.s.i.	vc p.s.i.
2'−0"	80	1950	109	1921	9"	#3 @ 6"	19405	549	7.3
3'−0"	270	2340	161	2449	11"	"	18223	437	7.0
3'−6"	429	2535	192	2771	11"	#3 @ 3"	10571	375	8.1
4'−6"	911	2925	309	3527	11"	"	13453	478	10.6
5'−6"	1664	3315	588	4391	11"	"	16747	595	13.8
6'−6"	2746	3705	1142	5310	12"	"	17868	592	15.7
7'−6"	4219	4095	2249	6065	13"	"	18253	569	17.6
8'−6"	6141	4485	6809	3817	13"	"	11489	358	21.7

RESULTS FOR 2'−6" MAX. RAISED BOND BEAM WITH SEISMIC

HEIGHT 'H'	SOIL OTM ft−#	LOAD OTM ft−#	SOIL RM ft−#	NET Mom	t	VERTICAL STEEL	fs p.s.i.	fc p.s.i.	vc p.s.i.
2'−0"	80	1950	109	1921	9"	#3 @ 6"	19405	549	7.3
3'−0"	270	2340	161	2449	11"	"	18223	437	7.0
3'−6"	429	2535	192	2771	11"	#3 @ 3"	10571	375	8.1
4'−6"	911	2925	255	3581	11"	"	13658	485	10.6
5'−6"	1664	3315	321	4657	12"	"	15673	519	12.3
6'−6"	2746	3705	420	6031	13"	"	18151	566	14.1
7'−0"	3430	3900	534	6796	13½"	add 3 #4	12578	498	15.1
8'−0"	5120	4290	972	8438	13½"	"	15618	618	18.8
9'−0"	7290	4680	1813	10157	13½"	"	18799	744	22.9
10'−0"	10000	5070	3419	11651	14½"	"	19569	734	25.1
11'−0"	13310	5460	9708	9062	15"	"	14546	532	28.5

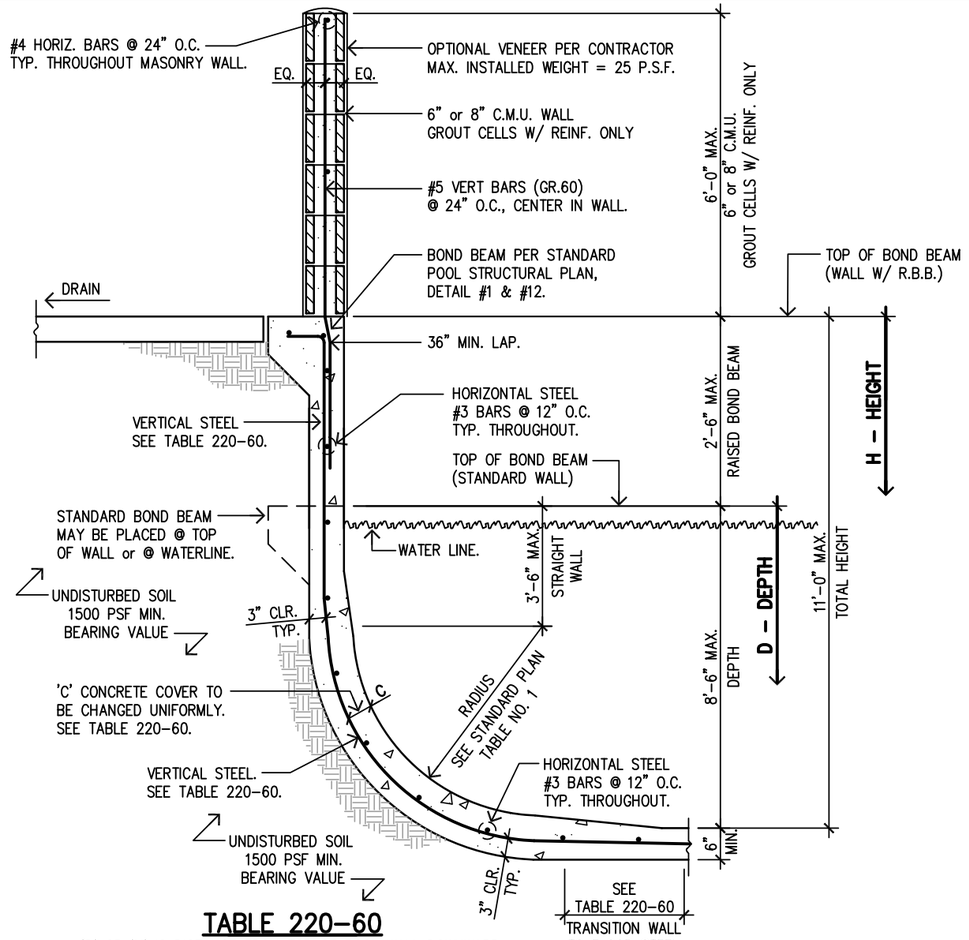


TABLE 220−60

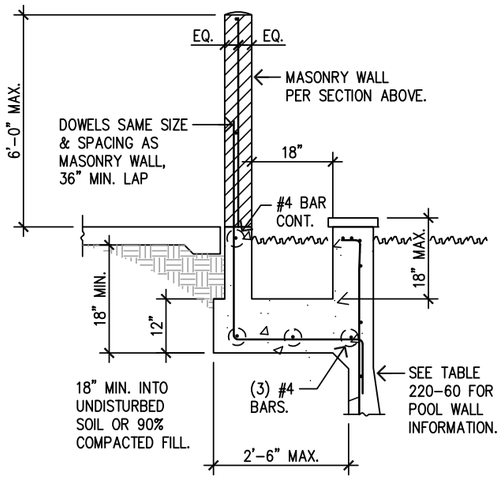
'D' OR 'H' IS DISTANCE FROM TOP OF POOL WALL DOWNWARD. BEGIN SPECIFIED STEEL & GUNITE THICKNESS AT INDICATED 'D' OR 'H' DEPTH. (SEE STANDARD STRUCTURAL PLAN, DETAIL #2)

POOL DEPTH	NO R.B.B.		REQ'D TRANS.
D	C	VERTICAL STEEL	
0 to 2'0"	6"	#3 @ 6"	2'−4"
3'−0"	8"	"	2'−4"
3'−6"	8"	#3 @ 3"	2'−5"
4'−6"	8"	"	2'−9"
5'−6"	8"	"	2'−5"
6'−0"	8"	"	2'−4"
6'−6"	9"	"	2'−2"
7'−0"	9"	"	2'−0"
7'−6"	10"	"	2'−0"
8'−6"	10"	"	2'−0"

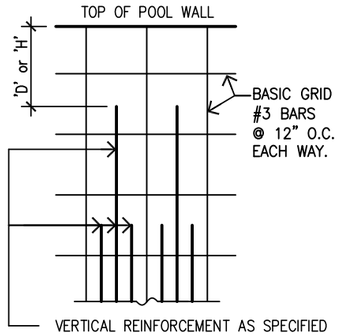
TOTAL HEIGHT	2'−6" MAX. R.B.B.		REQ'D TRANS.
H	C	VERTICAL STEEL	
0 to 2'0"	6"	#3 @ 6"	2'−4"
3'−0"	8"	"	2'−4"
3'−6"	8"	#3 @ 3"	2'−5"
4'−6"	8"	"	2'−9"
5'−0"	8"	"	2'−11"
5'−6"	9"	"	3'−2"
6'−0"	9"	"	3'−4"
6'−6"	10"	"	3'−6"
7'−0"	10"	add 3 #4	3'−9"
8'−0"	10"	"	3'−6"
9'−0"	10"	"	3'−5"
9'−6"	11"	"	3'−5"
10'−0"	11"	"	3'−5"
10'−6"	11½"	"	3'−4"
11'−0"	11½"	"	3'−5"

SEE ADD BARS DIAGRAM

FOUNTAIN DETAIL



TYPICAL ADD BAR REINFORCING DIAGRAM



VERTICAL REINFORCEMENT AS SPECIFIED IN TABLE STARTS A DISTANCE 'D' OR 'H' DOWN FROM TOP OF POOL WALL. REINFORCEMENT OTHER THAN BASIC GRID NEED NOT EXTEND TO TOP OF POOL WALL. ADD BARS TO BE EQUALLY SPACED BETWEEN BASIC GRID.

MASONRY NOTES:

1. CONCRETE BLOCK SHALL BE NORMAL WEIGHT UNITS (135 PCF), CONFORMING TO CBC/IBC SEC. 2103, AND ASTM C 90. ALL CONCRETE BLOCK SHALL HAVE A DESIGN STRENGTH OF f'm = 2,000 psi.
2. GROUT SHALL CONFORM TO CBC/IBC SEC. 2103 & ASTM C 476 WITH f'c=2,000 PSI.
3. MORTAR SHALL BE TYPE M WITH f'c = 2,500 psi AND SHALL CONFORM TO CBC/IBC SEC. 2103 & ASTM C 270.
4. MORTAR BED JOINTS USED IN CONSTRUCTION SHALL NOT EXCEED 5/8" THICKNESS.

Ron Lacher, R.C.E.
1201 N. Tustin Ave.
Anaheim, CA 92807
Phone: (714) 630-6100
Email; info@pooleng.com

pool engineering inc.

FOR USE ONLY AT
2925 N Lamer St
Burbank CA 91504

REGISTERED PROFESSIONAL ENGINEER MATTHEW G. THOMPSON No. 86051 Exp. 9/30/24 CIVIL STATE OF CALIFORNIA

Date: 4/19/2023

23-02702

PLAN VALID ONLY WITH ENGINEER'S SIGNATURE IN RED INK ON PLAN.

THIS DETAIL TO BE USED IN CONJUNCTION WITH STANDARD POOL STRUCTURAL PLAN

STANDARD WALL
WITH 6'−0" BLOCK WALL ON BOND BEAM
EXPANSIVE SOIL
EQUIVALENT FLUID PRESSURE = 60 P.C.F.

DETAIL #220-60

19v2 MARCH 8, 2022

CALCULATIONS

METHODOLOGY:

(SURCHARGE LOADING BASED ON BOUSSINESQ METHOD, MODIFIED BY TERZAGI FOR TYPICAL BUILDING/FOOTING 1,000 P.S.F. BEARING PRESSURE).

γ = EQUIVALENT FLUID PRESSURE

$OTM = 1/6\ \gamma H^3 + \sum[(P_i)(r_i)]$

WHERE γ = 60 p.c.f. AND

$P_i = 1/2(\sigma_i + \sigma_{i-1})(6\text{ in})$

r_i = vertical dist. from P_i to z depth.

NET MOM = OTM − RESISTING MOMENT

$$fs = \frac{M(12\text{ in/ft})}{As\ j\ d} = \frac{Mt\ (12)}{As\ (0.887)\ d}$$

$$fc = \frac{M(2)\ 12\text{ in/ft}}{j\ k\ b\ d^2} = \frac{Mt\ (2)(12)}{(0.887)(0.339)(12)\ d^2} < 1125\text{ psi}$$

$$vc = \frac{(1/2)\ \gamma H^2}{(12\text{ in/ft})\ j\ d} = \frac{\gamma H^2}{(2)(12)(0.887)\ d} < 55\text{ psi}$$

f'c = 2,500 p.s.i.

Fs = 20,000 p.s.i.

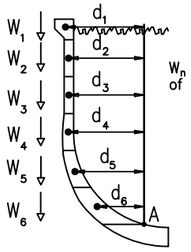
fc = 0.45 f'c = 1125 p.s.i.

$Vc = 1.1\sqrt{f'c}$ = 55 p.s.i.

RESISTING MOMENT:

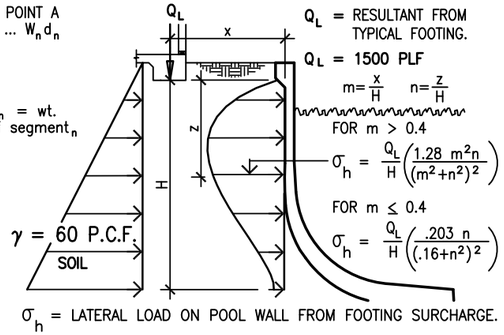
RESISTING MOMENT ABOUT POINT A

$RM = W_1 d_1 + W_2 d_2 + \ldots W_n d_n$



W_n = wt. of segment$_n$

LOADING DIAGRAM:



Q_L = RESULTANT FROM TYPICAL FOOTING.

Q_L = 1500 PLF

$m = \frac{x}{H}$ $n = \frac{z}{H}$

FOR m > 0.4

$$\sigma_h = \frac{Q_L}{H}\left(\frac{1.28\ m^2 n}{(m^2+n^2)^2}\right)$$

FOR m ≤ 0.4

$$\sigma_h = \frac{Q_L}{H}\left(\frac{.203\ n}{(.16+n^2)^2}\right)$$

σ_h = LATERAL LOAD ON POOL WALL FROM FOOTING SURCHARGE.

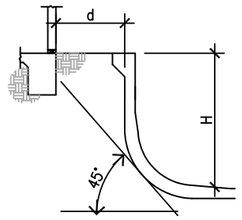
CALCULATION RESULTS:

BUILDING/FOOTING SURCHARGE
EXPANSIVE SOIL
EQUIVALENT FLUID PRESSURE = 60 P.C.F.
RESULTS FOR 'X' = 1'−0" W/ 2'−6" MAX. RAISED BOND BEAM

HEIGHT 'H'	SOIL OTM ft−#	LOAD OTM ft−#	SOIL RM ft−#	NET Mom	t	VERTICAL STEEL	fs p.s.i.	fc p.s.i.	vc p.s.i.
2'−0"	80	19	78	20	6"	#3 @ 12"	853	25	5.2
3'−0"	270	135	100	304	7"	#3 @ 6"	4763	172	10.0
4'−0"	640	395	134	901	9"	"	9103	258	11.7
5'−0"	1250	797	183	1864	10"	#3 @ 3"	8201	315	14.9
6'−0"	2160	1317	235	3242	10"	"	14261	548	20.2
7'−0"	3430	1926	367	4989	11"	add 3 #4	12372	578	22.8
8'−0"	5120	2603	704	7018	11"	"	17404	813	28.2
9'−0"	7290	3329	1371	9249	12½"	"	19057	801	28.6
10'−0"	10000	4094	2687	11407	14½"	"	19158	719	28.0
11'−0"	13310	4887	8115	10082	15"	"	16183	592	31.5

v19.1 JANUARY 7, 2020

THIS DETAIL IS NOT NEEDED WHEN 'd' IS GREATER THAN 'H'.



NOTE:
THIS DETAIL APPLIES TO STRUCTURES WITH ROOF RAFTER & FLOOR JOIST SPANS OF UP TO 32'−0" TRIBUTARY TO FOOTING.

FOOTING LOAD FROM BUILDING OR PATIO STRUCTURE = 1,500 P.L.F.

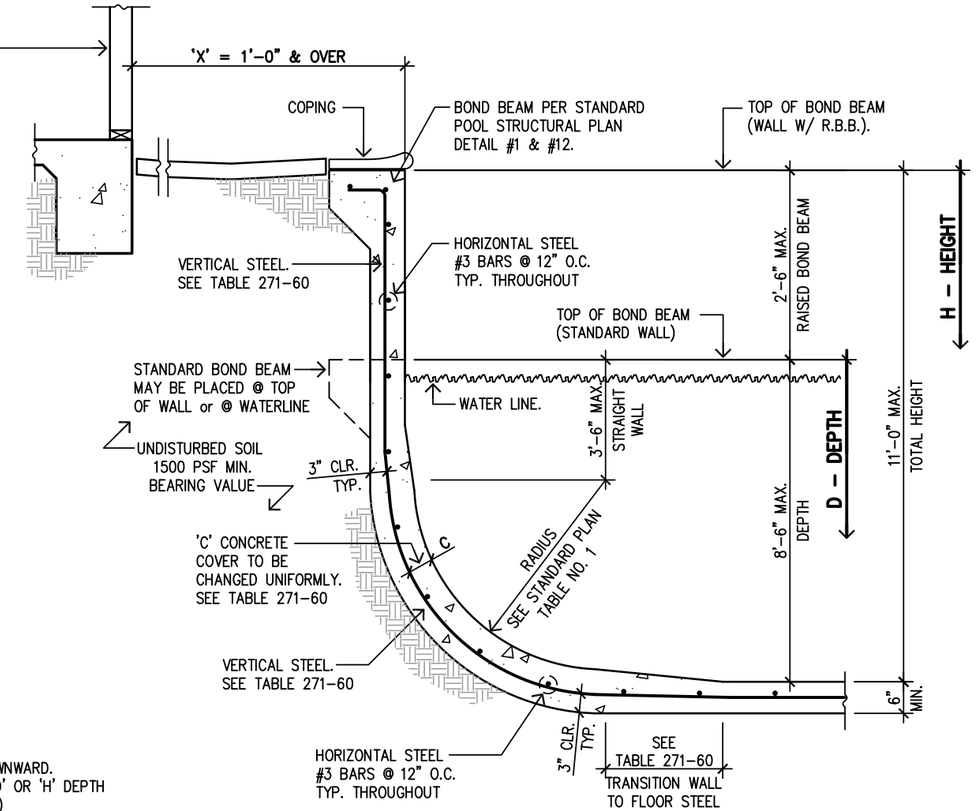


TABLE 271−60

'D' OR 'H' IS DISTANCE FROM TOP OF POOL WALL DOWNWARD.
BEGIN SPECIFIED STEEL & GUNITE THICKNESS AT INDICATED 'D' OR 'H' DEPTH
(SEE STANDARD STRUCTURAL PLAN, DETAIL #2)

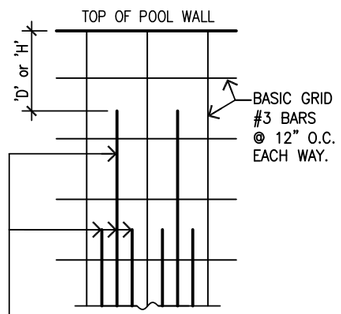
POOL DEPTH	NO R.B.B.		REQ'D TRANS.
D	C	VERTICAL STEEL	
0 to 2'0"	3"	#3 @ 12"	2'−0"
2'−6"	3½"	"	2'−0"
3'−0"	3½"	#3 @ 6"	2'−0"
3'−6"	4½"	"	2'−0"
4'−0"	5½"	"	2'−0"
4'−6"	6½"	"	2'−3"
5'−0"	6½"	#3 @ 3"	2'−3"
5'−6"	6½"	"	2'−4"
6'−0"	6½"	"	2'−4"
6'−6"	6½"	"	2'−5"
7'−0"	6"	add 3 #4	2'−6"
7'−6"	6"	"	2'−8"
8'−0"	6"	"	2'−10"
8'−6"	6"	"	2'−11"

SEE ADD BARS DIAGRAM

TOTAL HEIGHT	2'−6" MAX. R.B.B.		REQ'D TRANS.
H	C	VERTICAL STEEL	
0 to 2'0"	3"	#3 @ 12"	2'−0"
2'−6"	3½"	"	2'−0"
3'−0"	4"	#3 @ 6"	2'−0"
3'−6"	5"	"	2'−0"
4'−0"	6"	"	2'−0"
4'−6"	7"	"	2'−2"
5'−0"	7"	#3 @ 3"	2'−6"
5'−6"	7"	"	2'−11"
6'−0"	7"	"	3'−4"
6'−6"	8"	"	3'−9"
7'−0"	7½"	add 3 #4	4'−2"
7'−6"	7½"	"	4'−2"
8'−0"	7½"	"	4'−2"
8'−6"	8½"	"	4'−2"
9'−0"	9"	"	4'−2"
9'−6"	10"	"	4'−2"
10'−0"	11"	"	4'−2"
10'−6"	11½"	"	4'−2"
11'−0"	11½"	"	4'−2"

SEE ADD BARS DIAGRAM

TYPICAL ADD BAR REINFORCING DIAGRAM



VERTICAL REINFORCEMENT AS SPECIFIED IN TABLE STARTS A DISTANCE 'D' OR 'H' DOWN FROM TOP OF POOL WALL. REINFORCEMENT OTHER THAN BASIC GRID NEED NOT EXTEND TO TOP OF POOL WALL. ADD BARS TO BE EQUALLY SPACED BETWEEN BASIC GRID.

Ron Lacher, R.C.E.
1201 N. Tustin Ave.
Anaheim, CA 92807
(714) 630-6100
info@pooleng.com

pool engineering inc.

FOR USE ONLY AT
2925 N Lamer St
Burbank CA 91504

REGISTERED PROFESSIONAL ENGINEER
MATTHEW G. THOMPSON
No. 86051
Exp. 9/30/24
CIVIL
STATE OF CALIFORNIA

Date: 4/19/2023

23-02702

PLAN VALID ONLY WITH ENGINEER'S SIGNATURE IN RED INK ON PLAN.

THIS DETAIL TO BE USED IN CONJUNCTION WITH STANDARD POOL STRUCTURAL PLAN

BUILDING/FOOTING SURCHARGE
1'−0" MIN. FROM POOL
EQUIVALENT FLUID PRESSURE = 60 P.C.F.
(PLUS SURCHARGE)

DETAIL #271-60

CALCULATIONS

METHODOLOGY:

(SURCHARGE LOADING BASED ON BOUSSINESQ METHOD)

γ = EQUIVALENT FLUID PRESSURE

$OTM = 1/6\ \gamma H^3 + \sum\left[(P_i)(r_i)\right]$

WHERE γ = 60 p.c.f. AND

$P_i = 1/2\ (\sigma_i + \sigma_{i-1})(6\ in)$

r_i = VERTICAL DIST. FROM P_i TO z DEPTH.

NET MOM = OTM − RESISTING MOMENT

$fs = \dfrac{M(12\ in/ft)}{As\ j\ d} = \dfrac{Mt\ (12)}{As\ (0.887)\ d}$

$fc = \dfrac{M(2)\ 12\ in/ft}{j\ k\ b\ d^2} = \dfrac{Mt\ (2)(12)}{(0.887)(0.339)(12)\ d^2} < 1125\ psi$

$vc = \dfrac{(1/2)\ \gamma\ H^2}{(12\ in/ft)\ j\ d} = \dfrac{\gamma\ H^2}{(2)(12)(0.887)\ d} < 55\ psi$

f'c = 2,500 p.s.i.

Fs = 20,000 p.s.i.

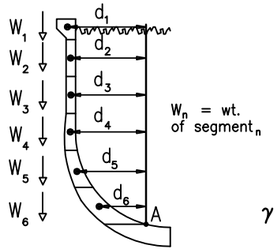
fc = 0.45 f'c = 1125 p.s.i.

$Vc = 1.1\sqrt{f'c}$ = 55 p.s.i.

RESISTING MOMENT:

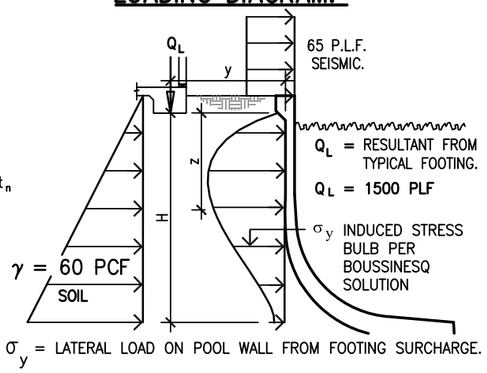
RESISTING MOMENT ABOUT POINT A

$RM = W_1 d_1 + W_2 d_2 + \ldots W_n d_n$



W_n = wt. of segment$_n$

LOADING DIAGRAM:

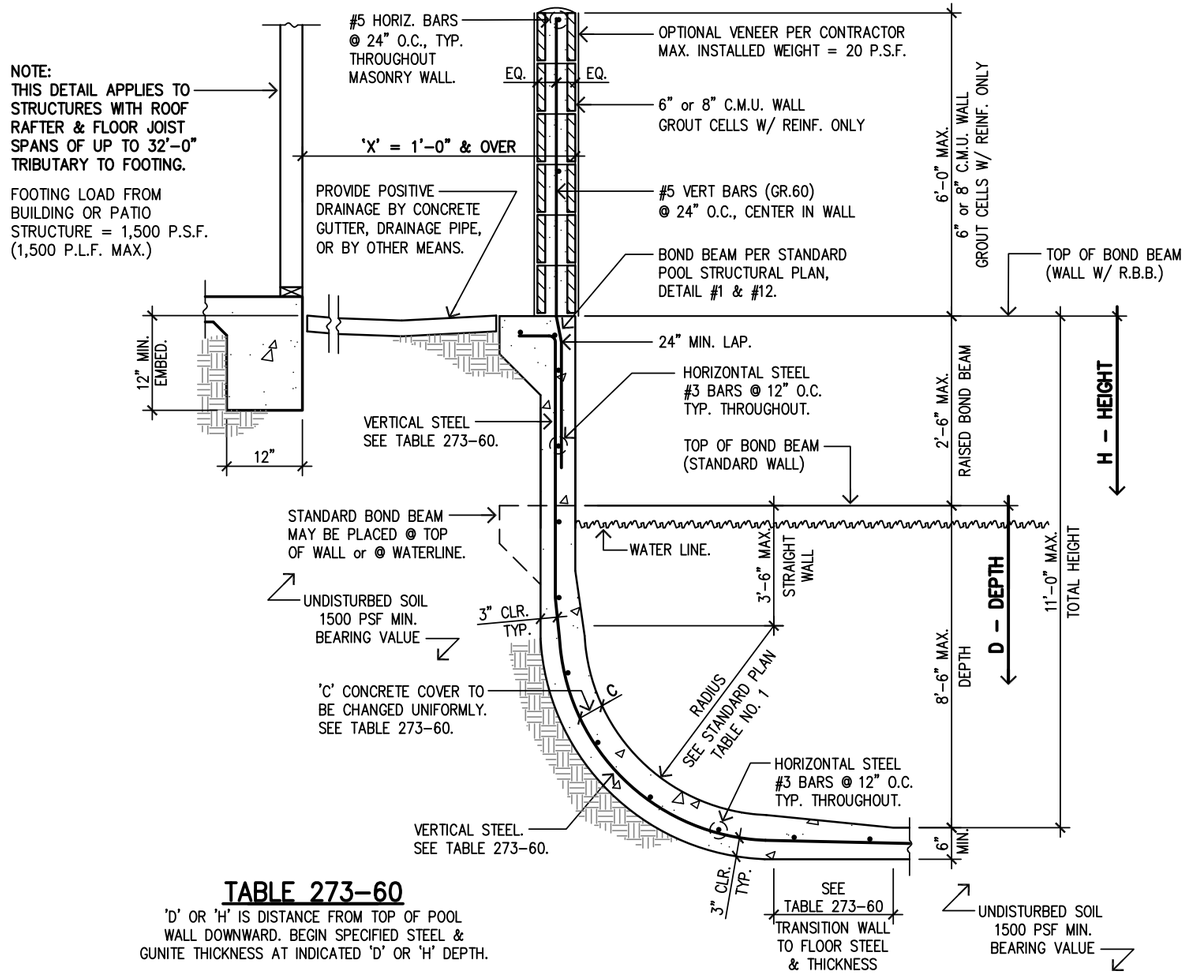


σ_y = LATERAL LOAD ON POOL WALL FROM FOOTING SURCHARGE.

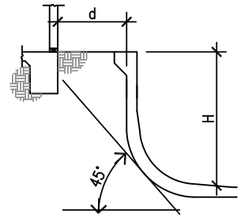
CALCULATION RESULTS:

6'−0" BLOCK WALL ON BOND BEAM
w/ BUILDING/FOOTING SURCHARGE
RESULTS FOR 'X' = 1'−0" & GREATER W/ 2'−6" MAX. RAISED BOND BEAM

HEIGHT 'H'	SOIL OTM ft−#	LOAD OTM ft−#	SOIL RM ft−#	NET Mom	t	VERTICAL STEEL	fs p.s.i.	fc p.s.i.	vc p.s.i.
1'−0"	10	1458	64	1468	8"	#3 @ 6"	18030	568	7.3
2'−0"	80	1867	106	1995	10"	"	17101	443	6.9
2'−6"	156	2103	132	2495	10"	#3 @ 3"	10978	422	8.5
3'−6"	429	2679	184	3581	10"	"	15755	606	12.5
4'−6"	911	3403	238	4888	10½"	add 3 #4	12999	632	16.1
5'−6"	1664	4257	295	6463	10½"	"	17189	835	20.9
6'−6"	2746	5205	375	8342	11½"	"	19375	872	22.9
7'−6"	4219	6156	642	9977	13½"	"	18467	731	22.4
8'−6"	6141	7070	1233	11979	14½"	add 3 #5	13978	661	24.5
9'−6"	8574	7897	2364	14107	14½"	"	16461	778	28.8
10'−6"	11576	8500	4723	15353	14½"	"	17915	847	33.5
11'−0"	13310	8205	9438	12078	14½"	"	14093	666	35.9



THIS DETAIL IS NOT NEEDED WHEN 'd' IS GREATER THAN 'H'.



TYPICAL ADD BAR REINFORCING DIAGRAM

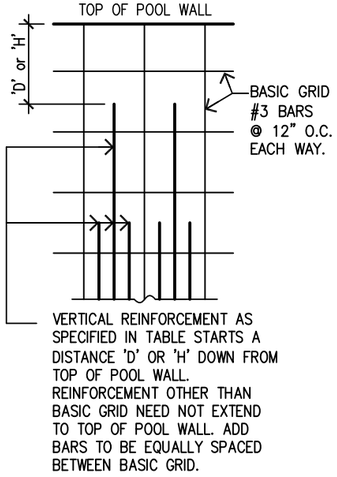


TABLE 273−60

'D' OR 'H' IS DISTANCE FROM TOP OF POOL WALL DOWNWARD. BEGIN SPECIFIED STEEL & GUNITE THICKNESS AT INDICATED 'D' OR 'H' DEPTH.

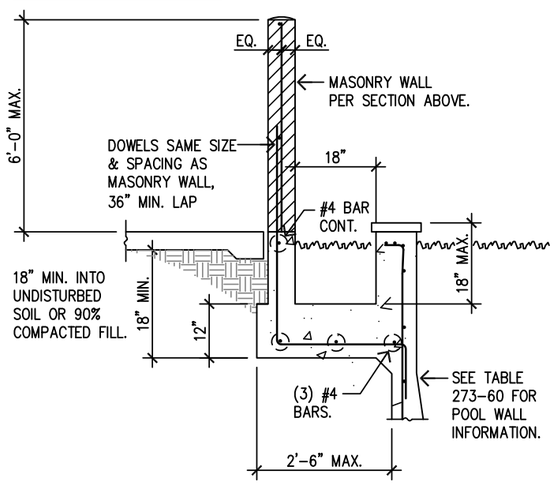
TOTAL HEIGHT	2'−6" MAX. R.B.B.		REQ'D TRANS.
H	C	VERTICAL STEEL	
0 to 1'0"	5"	#3 @ 6"	2'−0"
2'−0"	7"	"	2'−0"
2'−6"	7"	#3 @ 3"	2'−0"
3'−6"	7"	"	2'−3"
4'−0"	7"	"	2'−6"
4'−6"	7"	add 3 #4	2'−11"
5'−6"	7"	"	3'−6"
6'−0"	7"	"	3'−11"
7'−0"	9"	"	4'−5"
8'−0"	11"	"	4'−2"
8'−6"	11"	add 3 #5	4'−0"
9'−6"	11"	"	3'−11"
10'−6"	11"	"	3'−11"
11'−0"	11"	"	3'−11"

SEE ADD BARS DIAGRAM

POOL DEPTH	NO R.B.B.		REQ'D TRANS.
D	C	VERTICAL STEEL	
0 to 1'0"	5"	#3 @ 6"	2'−0"
2'−0"	7"	"	2'−0"
2'−6"	7"	#3 @ 3"	2'−0"
3'−6"	7"	"	2'−3"
4'−0"	7"	"	2'−6"
4'−6"	7"	add 3 #4	2'−11"
5'−6"	7"	"	2'−9"
6'−0"	7"	"	2'−8"
7'−0"	9"	"	2'−5"
8'−0"	11"	"	2'−3"
8'−6"	11"	"	2'−3"

SEE ADD BARS DIAGRAM

FOUNTAIN DETAIL



Ron Lacher, R.C.E.
1201 N. Tustin Ave.
Anaheim, CA 92807
(714) 630-6100
info@pooleng.com

pool engineering inc.

FOR USE ONLY AT
2925 N Lamer St
Burbank CA 91504

REGISTERED PROFESSIONAL ENGINEER
MATTHEW G. THOMPSON
No. 86051
Exp. 9/30/24
CIVIL
STATE OF CALIFORNIA

Date: 4/19/2023

23-02702

PLAN VALID ONLY WITH ENGINEER'S SIGNATURE IN RED INK ON PLAN.

THIS DETAIL TO BE USED IN CONJUNCTION WITH STANDARD POOL STRUCTURAL PLAN

STANDARD WALL
WITH 6'−0" BLOCK WALL ON BOND BEAM
& FOOTING SURCHARGE (1'−0" MIN. FROM POOL)
EQUIVALENT FLUID PRESSURE = 60 P.C.F.

DETAIL #273-60

19r2 AUG 3, 2022

CALCULATIONS

METHODOLOGY:

γ = EQUIVALENT FLUID PRESSURE

CASE I

OTM = 1/6 γ H^3 WHERE γ = 60 pcf

NET MOM = OTM − RESISTING MOMENT

CASE II

OTM = 1/6 γ H^3 WHERE γ = 62.4 pcf

NET MOM = OTM + RESISTING MOMENT

$$fs = \frac{M(12\ in/ft)}{As\ j\ d} = \frac{Mt\ (12)}{As\ (0.887)\ d}$$

$$fc = \frac{M(2)\ 12\ in/ft}{j\ k\ b\ d^2}$$

$$= \frac{Mt\ (2)(12)}{(0.887)(0.339)(12)\ d^2} < 1125\ psi$$

$$vc = \frac{(1/2)\ \gamma\ H^2}{(12\ in/ft)\ j\ d}$$

$$= \frac{\gamma\ H^2}{(2)(12)(0.887)\ d} < 55\ psi$$

f'c = 2,500 psi

Fs = 20,000 psi

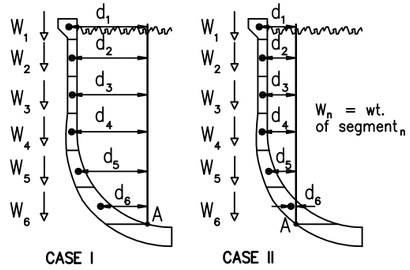
fc = 0.45 f'c = 1125 psi

Vc = 1.1 $\sqrt{f'c}$ = 55 psi

RESISTING MOMENT:

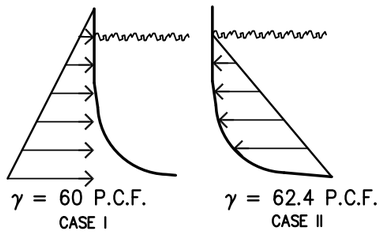
RESISTING MOMENT ABOUT POINT A

RM = $W_1 d_1 + W_2 d_2 + \ldots W_n d_n$



LOADING DIAGRAM:

THIS DETAIL IS DESIGNED FOR EACH OF THE LOAD CASES DEFINED BELOW.



CALCULATION RESULTS:

FREESTANDING WALL
EQUIVALENT FLUID PRESSURE = 60 P.C.F.
RESULTS FOR NO RAISED BOND BEAM

DEPTH 'D'	SOIL OTM ft-#	WATER OTM ft-#	SOIL RM ft-#	WATER RM ft-#	NET Mom	CASE I d1 SOIL	CASE II d2 WATER	VERTICAL STEEL	fs p.s.i.	fc p.s.i.	vc p.s.i.
3'–6"	429	446	106	−53	393	3"	3"	#3 @ 12"	15354	427	10.6
4'–0"	640	666	124	−55	611	3"	3"	#3 @ 6"	12275	508	13.9
5'–0"	1250	1300	230	−57	1020	3½"	4½"	"	17454	660	17.9
6'–0"	2160	2246	497	−2	1663	4"	5½"	add 3 #4	8283	580	22.5
7'–0"	3430	3567	1046	315	3882	4"	5½"	"	13807	832	30.6
8'–0"	5120	5325	2259	971	6296	4"	6½"	"	18781	998	40.0
8'–6"	6141	6387	4820	888	7275	4"	7½"	"	18671	889	45.2

RESULTS FOR 2'–6" MAX. RAISED BOND BEAM

HEIGHT 'H'	SOIL OTM ft-#	WATER OTM ft-#	SOIL RM ft-#	WATER RM ft-#	NET Mom	CASE I d1 SOIL	CASE II d2 WATER	VERTICAL STEEL	fs p.s.i.	fc p.s.i.	vc p.s.i.
3'–6"	429	10	106	−53	323	3"	3"	#3 @ 12"	12607	351	10.2
4'–0"	640	35	116	−63	524	3"	3"	#3 @ 6"	10537	436	13.3
5'–0"	1250	163	135	−99	1115	3½"	3"	"	19071	722	17.9
6'–0"	2160	446	163	−165	1997	4½"	3"	#3 @ 3"	13563	666	20.0
7'–0"	3430	948	251	−163	3179	5"	3"	"	19325	891	24.5
8'–0"	5120	1730	508	−82	4612	6"	3"	add 3 #4	14965	938	26.7
9'–0"	7290	2856	1031	195	6259	6½"	4"	"	18669	1064	31.2
10'–0"	10000	4388	2082	611	7918	8"	5½"	"	18993	1021	31.3
11'–0"	13310	6387	6678	291	6678	8½"	6½"	"	19921	1034	35.6

19v1 OCTOBER 31, 2019

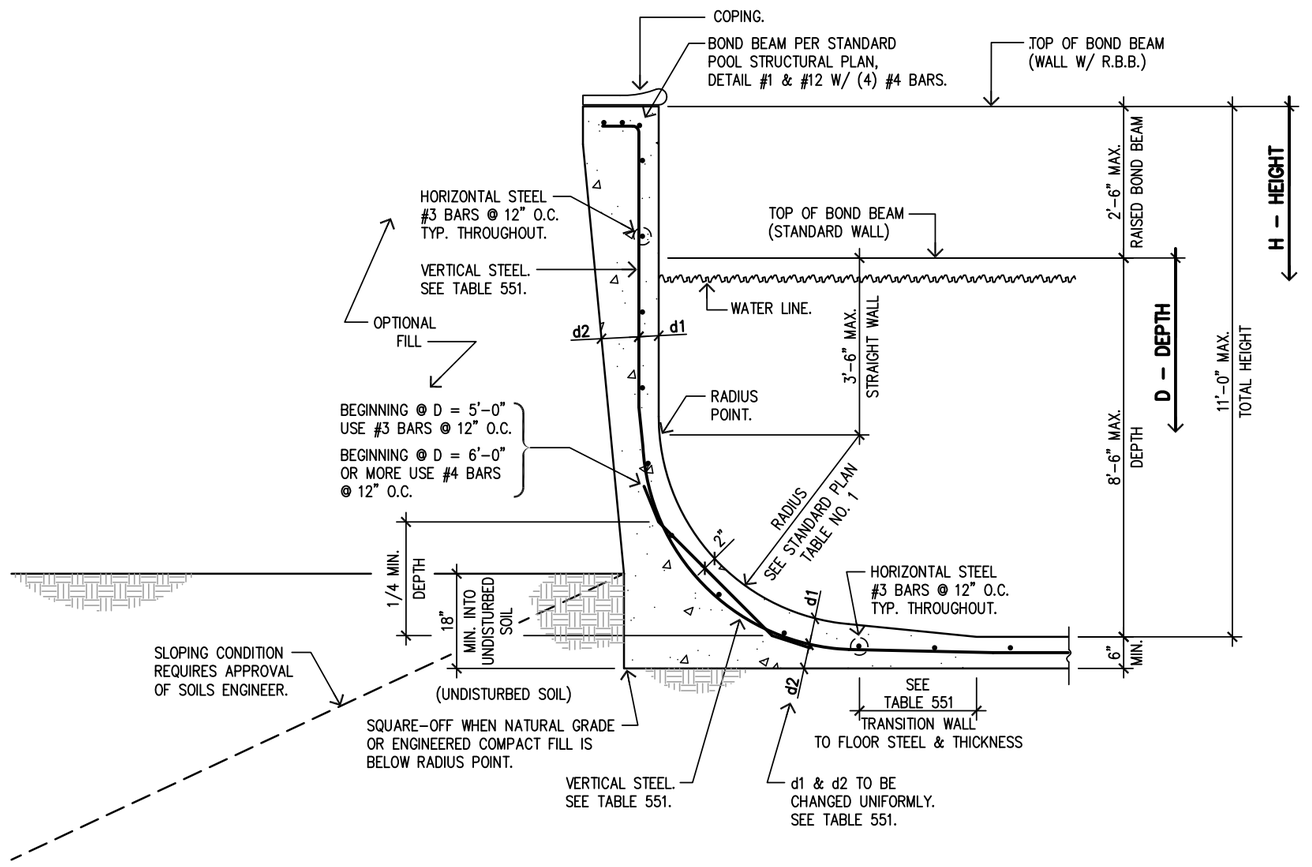


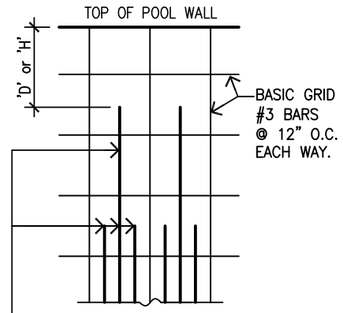
TABLE 551

'D' OR 'H' IS DISTANCE FROM TOP OF POOL WALL DOWNWARD.
BEGIN SPECIFIED STEEL & GUNITE THICKNESS AT INDICATED 'D' OR 'H' DEPTH.
(SEE STANDARD STRUCTURAL PLAN, DETAIL #2)

POOL DEPTH	NO RAISED BOND BEAM			REQ'D TRANS.
D	d1	d2	VERTICAL STEEL	
0 to 3'6"	3"	3"	#3 @ 12"	2'–0"
4'–0"	3"	3"	#3 @ 6"	2'–0"
4'–6"	3"	3½"	"	2'–0"
5'–0"	3½"	4½"	"	2'–0"
5'–6"	4"	5½"	"	2'–0"
6'–0"	4"	5½"	add 3 #4	2'–0"
6'–6"	4"	5½"	"	2'–0"
7'–0"	4"	5½"	"	2'–0"
7'–6"	4"	5½"	"	2'–0"
8'–0"	4"	6½"	"	2'–0"
8'–6"	4"	7½"	"	2'–0"

TOTAL HEIGHT	2'–6" MAX. RAISED BOND BEAM			REQ'D TRANS.
H	d1	d2	VERTICAL STEEL	
0 to 3'6"	3"	3"	#3 @ 12"	2'–0"
4'–0"	3"	3"	#3 @ 6"	2'–0"
4'–6"	3"	3"	"	2'–0"
5'–0"	3½"	3"	"	2'–0"
5'–6"	4½"	3"	"	2'–0"
6'–0"	4½"	3"	#3 @ 3"	2'–0"
6'–6"	4½"	3"	"	2'–0"
7'–0"	5"	3"	"	2'–8"
7'–6"	6"	3"	"	2'–8"
8'–0"	6"	3"	add 3 #4	2'–10"
8'–6"	6"	3½"	"	2'–11"
9'–0"	6½"	4"	"	3'–0"
9'–6"	7"	5"	"	3'–2"
10'–0"	8"	5½"	"	3'–2"
10'–6"	8½"	6½"	"	3'–2"
11'–0"	8½"	6½"	"	3'–2"

TYPICAL ADD BAR REINFORCING DIAGRAM

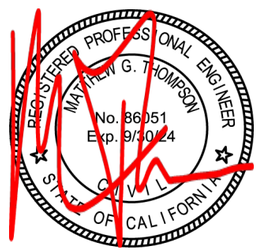


VERTICAL REINFORCEMENT AS SPECIFIED IN TABLE STARTS A DISTANCE 'D' OR 'H' DOWN FROM TOP OF POOL WALL. REINFORCEMENT OTHER THAN BASIC GRID NEED NOT EXTEND TO TOP OF POOL WALL. ADD BARS TO BE EQUALLY SPACED BETWEEN BASIC GRID.

Ron Lacher, R.C.E.
1201 N. Tustin Ave.
Anaheim, CA 92807
Fax: (714) 630-6114
Phone: (714) 630-6100

pool engineering inc.

FOR USE ONLY AT
2925 N Lamer St
Burbank CA 91504



Date: 4/19/2023

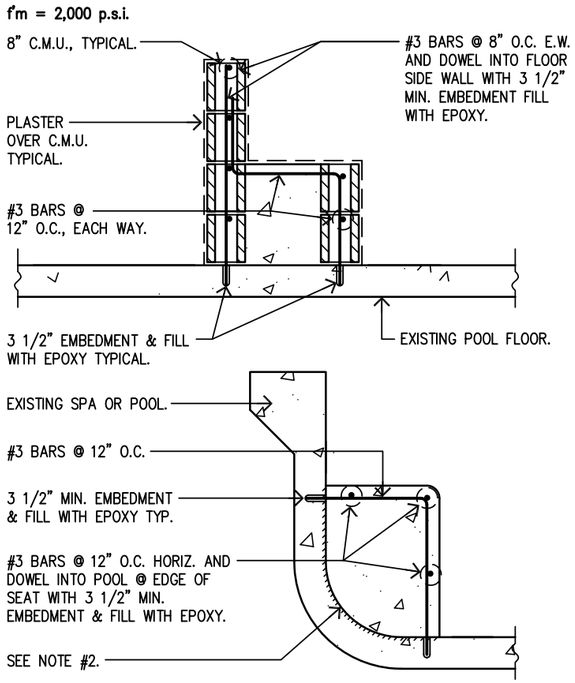
23-02702

PLAN VALID ONLY WITH ENGINEER'S SIGNATURE IN RED INK ON PLAN.

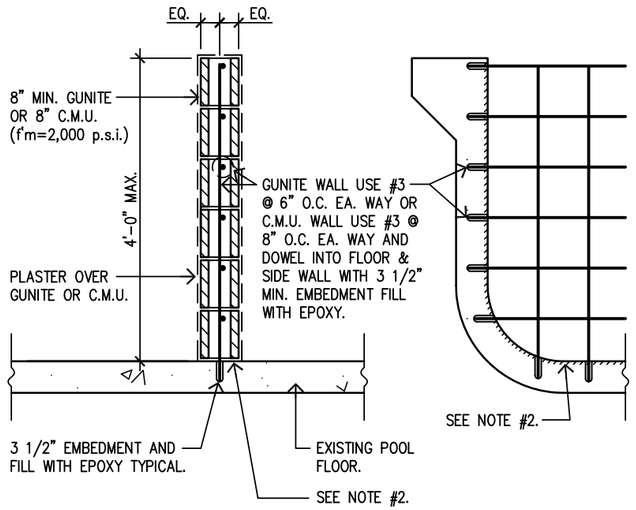
THIS DETAIL TO BE USED IN CONJUNCTION WITH STANDARD POOL STRUCTURAL PLAN

FREESTANDING WALL
EQUIVALENT FLUID PRESSURE = 60 P.C.F.

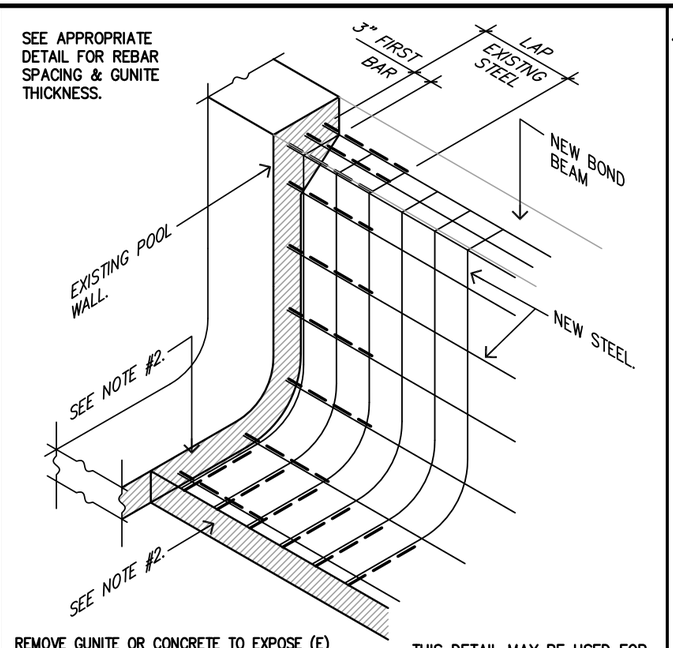
DETAIL #551



ADD STEPS, BENCH OR SHELF (A)



ADD A DAM WALL (GUNITE OR C.M.U.) (B)



REMOVE GUNITE OR CONCRETE TO EXPOSE (E) REINF. STEEL EACH SIDE OF REMOVED AREA FOR LAP SPLICE WITH NEW REINF.
LAP LENGTH: #3 BAR – 15 INCHES
#4 BAR – 20 INCHES
#5 BAR – 25 INCHES

THIS DETAIL MAY BE USED FOR THE FOLLOWING:
1. REMOVE AND REPLACE FLOOR.
2. REMOVE AND REPLACE WALL.
3. ANY COMBINATION OF 1 & 2

LAP SPLICE & REMOVE AND REPLACE GUNITE DETAIL (C)

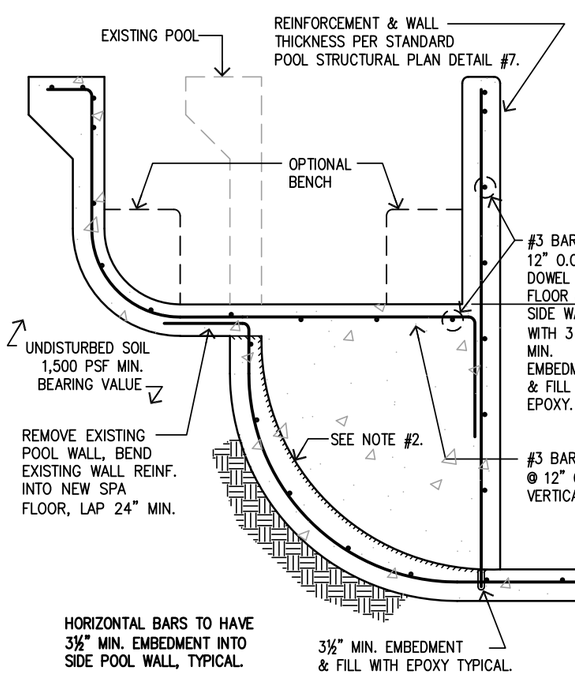
REMODEL NOTES:

1. EPOXY TO BE SIMPSON STRONGTIE SET-XP EPOXY ADHESIVE OR EQUAL. INSTALL PER MANUFACTURERS SPECIFICATIONS (ICC REPORT ESR-2508, L.A. RR# 25744).
2. BONDING TO EXISTING SURFACE:
   - A. EXISTING SURFACES MUST BE SOUND, FREE OF DEFECTS, CLEAN, AND FREE OF BOND INHIBITING MATERIALS.
   - B. EXISTING SURFACES SHALL BE ROUGHENED BY CHIPPING OR OTHER SUITABLE MEANS TO PROVIDE OPEN PORE STRUCTURE. ALL LOOSE, CRACKED, OR DETERIORATED MATERIALS SHALL BE REMOVED.
   - C. CLEAN EXISTING SURFACES BY WATER BLASTING.
   - D. SATURATED SURFACE DRY CONDITION OF THE SUBSTRATE SHALL BE MAINTAINED PRIOR TO APPLYING MATERIALS.
   - E. WHEN APPLYING MATERIALS OTHER THAN WET-MIX SHOTCRETE OR DRY-MIX SHOTCRETE (GUNITE), CEMENT PASTE OR OTHER BONDING AGENTS SHALL BE BRUSHED ONTO THE SUBSTRATE FOR ABSORPTION INTO PORE STRUCTURE.
   - F. BONDING MATERIALS ARE NOT RECOMMENDED FOR WET OR DRY MIX SHOTCRETE.
3. USE GRADE 40 REINFORCING STEEL.
4. IF REINFORCING SHOWS SIGNS OF EXCESSIVE DETERIORATION (RUST), CUT EXISTING REINFORCING 6" PAST DETERIORATION SECTION & LAP WITH NEW STEEL 24" MIN.

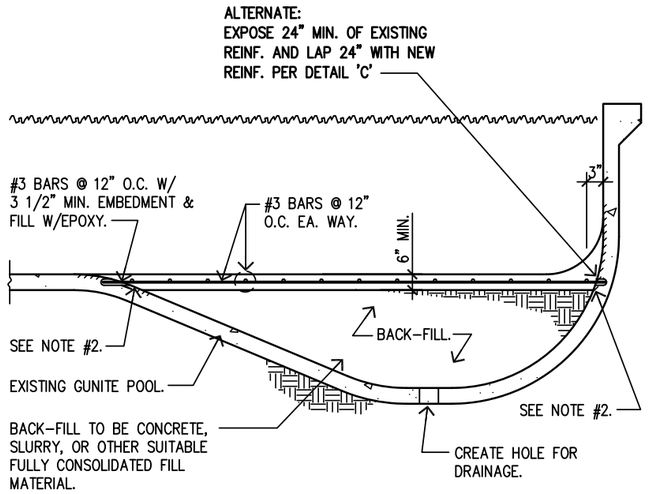
THIS DETAIL IS NOT APPLICABLE TO, AND SHALL NOT BE USED TO REMODEL NON-GROUND SUPPORTED POOLS SUCH AS CAISSON, PILE OR PIER SUPPORTED POOLS.

Ron Lacher, R.C.E.
1201 N. Tustin Ave.
Anaheim, CA 92807
Fax: (714) 630-6114
Phone: (714) 630-6100

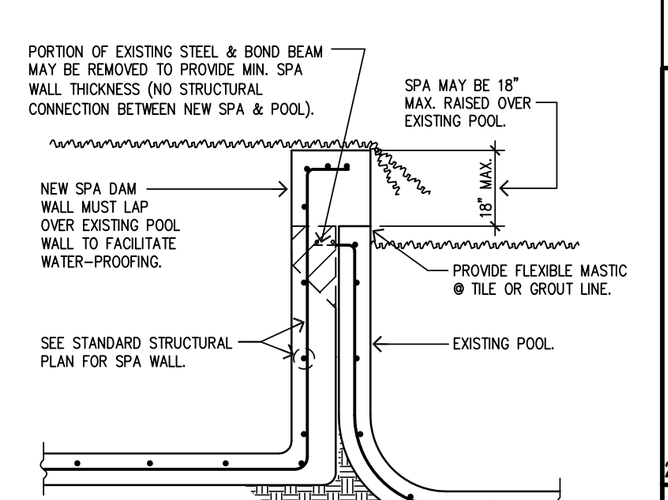
pool engineering inc.



SPA OR SHELF PARTIALLY INSIDE POOL (D)

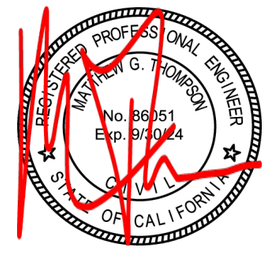


RAISE FLOOR OF EXISTING POOL (E)



ADD A SPA (OUTSIDE EXISTING POOL) (F)

FOR USE ONLY AT
2925 N Lamer St
Burbank CA 91504



Date: 4/19/2023

23-02702

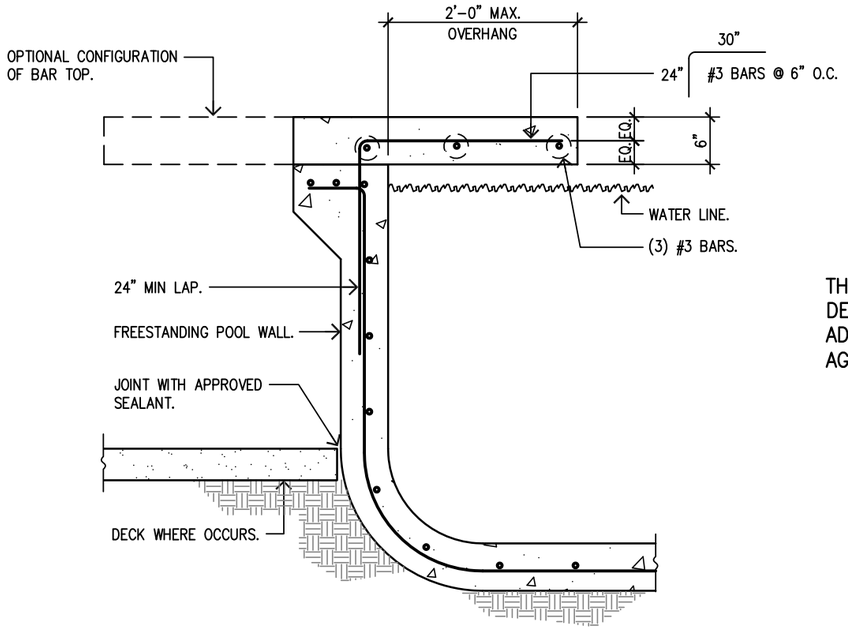
PLAN VALID ONLY WITH ENGINEER'S SIGNATURE IN RED INK ON PLAN.

THIS DETAIL TO BE USED IN CONJUNCTION WITH STANDARD POOL STRUCTURAL PLAN

POOL & SPA REMODEL DETAIL

DETAIL #640

19V2 JANUARY 13, 2020

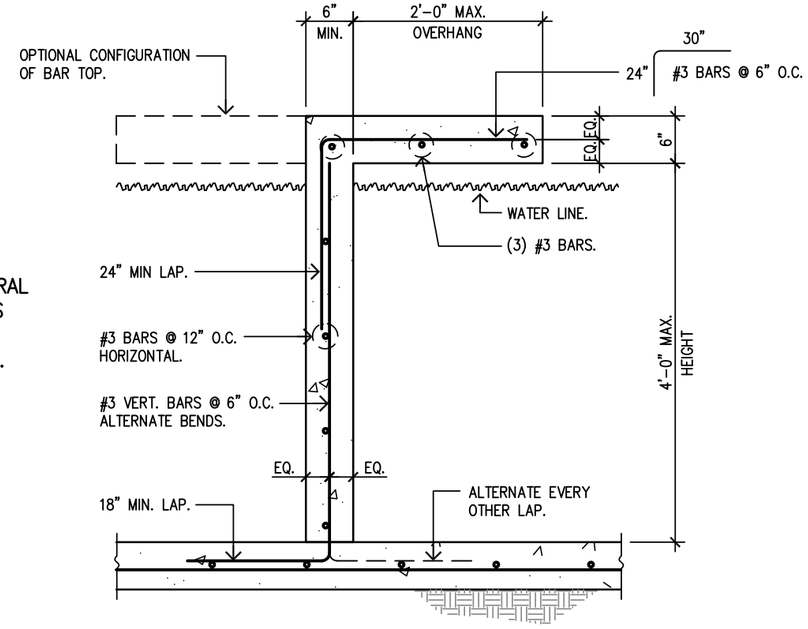


THIS CONDITION
REQUIRES FREESTANDING
POOL WALL DETAIL.

BAR ON BOND BEAM (B)

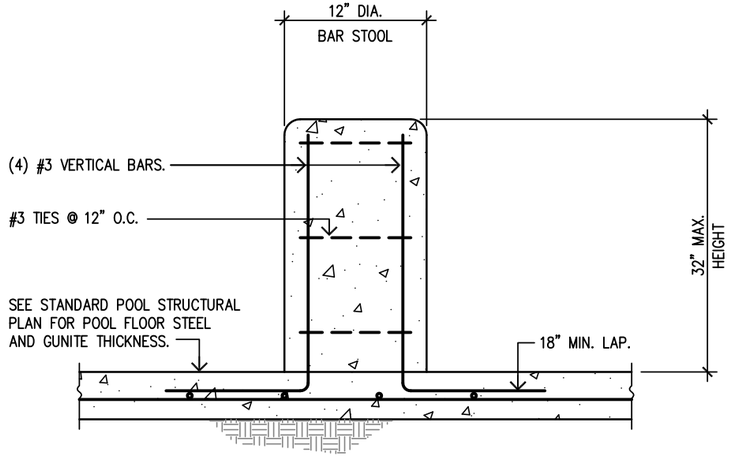
NO SCALE

THIS DETAIL IS FOR STRUCTURAL DESIGN ONLY. CONTRACTOR IS ADVISED TO ENSURE SAFETY AGAINST ENTRAPMENT HAZARD.



BAR ON PEDESTAL (A)

NO SCALE



BAR STOOL (C)

NO SCALE

Ron Lacher, R.C.E.
1201 N. Tustin Ave.
Anaheim, CA 92807
Fax: (714) 630-6114
Phone: (714) 630-6100

pool engineering inc.

FOR USE ONLY AT
2925 N Lamer St
Burbank CA 91504

REGISTERED PROFESSIONAL ENGINEER
MATTHEW G. THOMPSON
No. 86051
Exp. 9/30/24
CIVIL
STATE OF CALIFORNIA

Date: 4/19/2023

23-02702

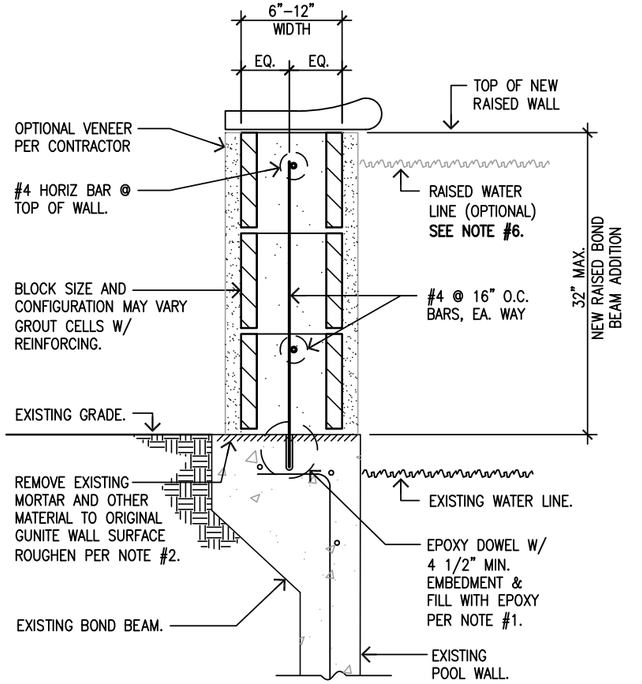
PLAN VALID ONLY WITH ENGINEER'S SIGNATURE IN RED INK ON PLAN.

THIS DETAIL TO BE USED IN CONJUNCTION WITH STANDARD POOL STRUCTURAL PLAN

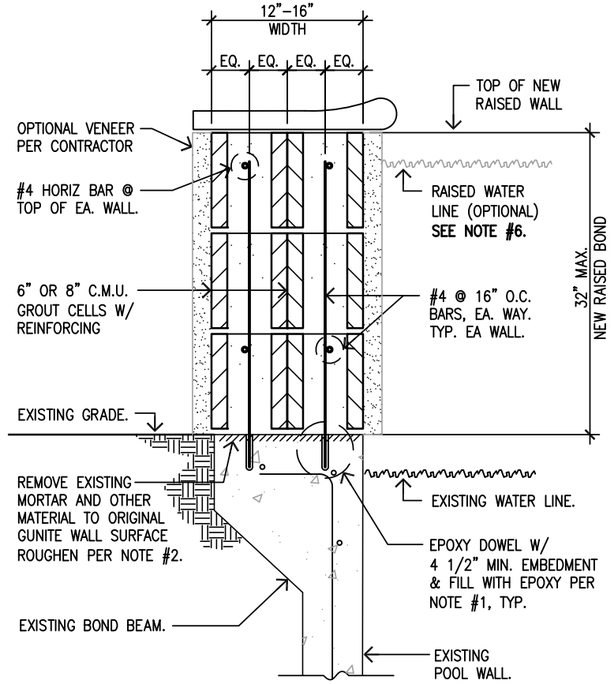
BARSTOOLS & BAR
WITHIN NEW POOL

DETAIL #665

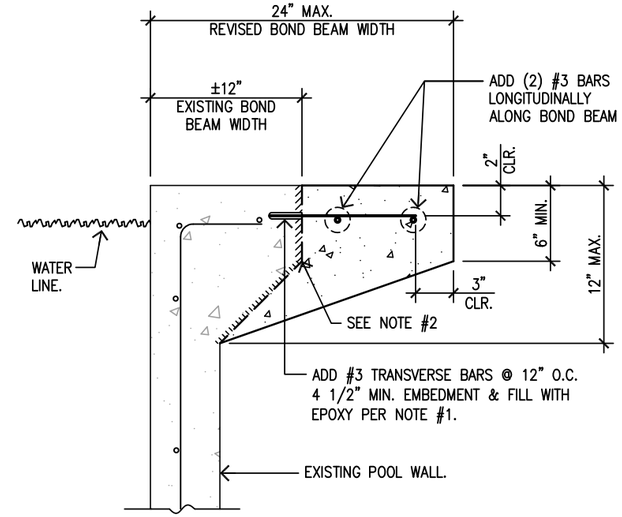
19v1 NOVEMBER 21, 2019



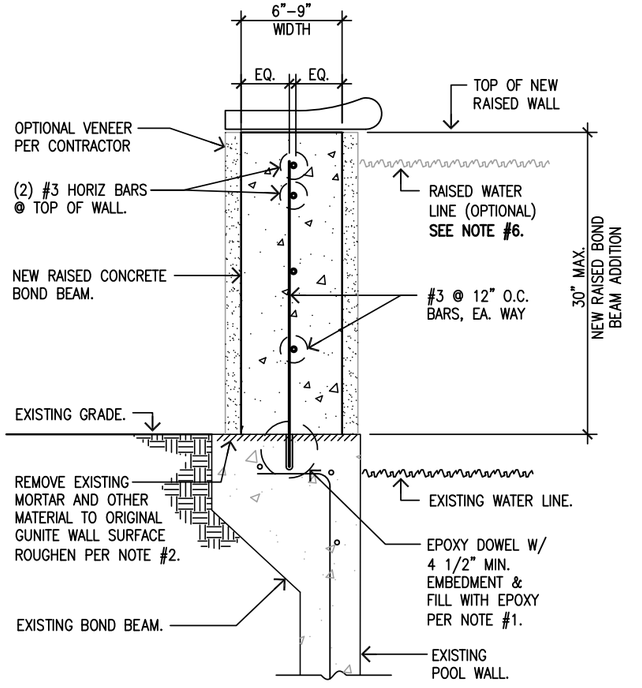
ADD MASONRY RAISED BOND BEAM (6"–12" MAX. WIDTH) A



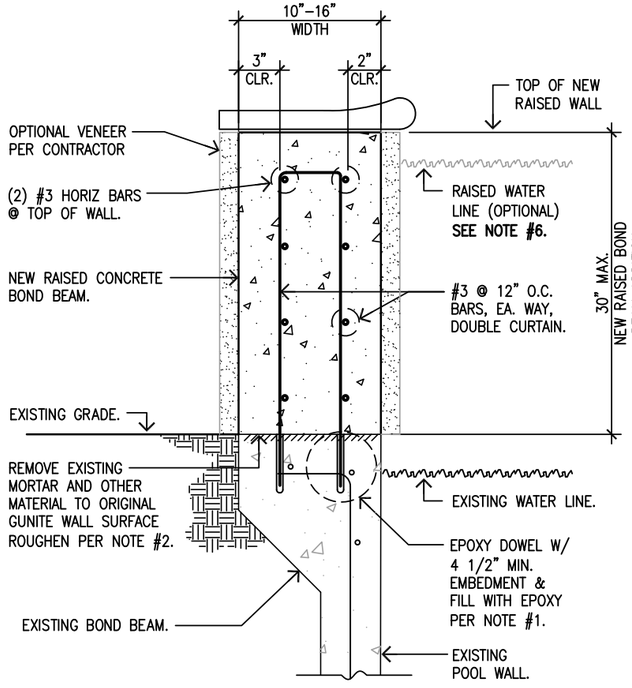
ADD MASONRY RAISED BOND BEAM (DBL WALL, 12"–16" MAX. WIDTH) B



WIDEN EXISTING BOND BEAM C



RAISED CONC BOND BEAM (6"–9" MAX. WIDTH) D



ADD RAISED CONC BOND BEAM (10"–16" MAX. WIDTH) E

REMODEL NOTES:

1. EPOXY TO BE SIMPSON STRONGTIE SET–XP EPOXY ADHESIVE OR EQUAL. INSTALL PER MANUFACTURERS SPECIFICATIONS (ICC REPORT ESR–2508, L.A. RR# 25744).
2. BONDING TO EXISTING SURFACE:
   - A. EXISTING SURFACES MUST BE SOUND, FREE OF DEFECTS, CLEAN, AND FREE OF BOND INHIBITING MATERIALS.
   - B. EXISTING SURFACES SHALL BE ROUGHENED BY CHIPPING OR OTHER SUITABLE MEANS TO PROVIDE OPEN PORE STRUCTURE. ALL LOOSE, CRACKED, OR DETERIORATED MATERIALS SHALL BE REMOVED.
   - C. CLEAN EXISTING SURFACES BY WATER BLASTING.
   - D. SATURATED SURFACE DRY CONDITION OF THE SUBSTRATE SHALL BE MAINTAINED PRIOR TO APPLYING MATERIALS.
   - E. WHEN APPLYING MATERIALS OTHER THAN WET–MIX SHOTCRETE OR DRY–MIX SHOTCRETE (GUNITE), CEMENT PASTE OR OTHER BONDING AGENTS SHALL BE BRUSHED ONTO THE SUBSTRATE FOR ABSORPTION INTO PORE STRUCTURE.
   - F. BONDING MATERIALS ARE NOT RECOMMENDED FOR WET OR DRY MIX SHOTCRETE.
3. USE GRADE 40 REINFORCING STEEL (REINF).
4. IF REINF SHOWS SIGNS OF EXCESSIVE DETERIORATION (RUST), CUT EXISTING REINF 6" PAST DETERIORATION SECTION & LAP WITH NEW STEEL 24" MIN.
5. ADDITIONAL REINF MAY BE REQUIRED BY SHOTCRETE CONTRACTOR TO FACILITATE SHOTCRETE APPLICATION. ADDITIONAL REINF SHALL BE ATTACHED TO EXISTING POOL WALL PER NOTES #1 & #2.
6. WATER LINE MAY NOT BE RAISED WHERE POOL WALL IS REQUIRED TO BE DESIGNED TO SUPPORT WATER WITHOUT LATERAL SOIL SUPPORT (I.E. FREESTANDING CONDITION) SUCH AS ON OR ADJACENT TO A DESCENDING SLOPE.
7. **THIS DETAIL IS NOT APPLICABLE TO, AND SHALL NOT BE USED TO REMODEL NON–GROUND SUPPORTED POOLS SUCH AS CAISSON, PILE OR PIER SUPPORTED POOLS.**

NOTES & SPECIFICATIONS F

EPOXY DOWELS MUST BE EMBEDDED INTO STRUCTURALLY SOUND SHOTCRETE OR GUNITE BOND BEAM.

FOR USE ONLY AT
2925 N Lamer St
Burbank CA 91504

REGISTERED PROFESSIONAL ENGINEER
MATTHEW G. THOMPSON
No. 86051
Exp. 9/30/24
CIVIL
STATE OF CALIFORNIA

Date: 4/19/2023

23-02702

BOND BEAM
REMODEL DETAIL

DETAIL #639

PLAN VALID ONLY WITH ENGINEER'S SIGNATURE IN RED INK ON PLAN.

THIS DETAIL TO BE USED IN CONJUNCTION WITH STANDARD POOL STRUCTURAL PLAN

Ron Lacher, R.C.E.
1201 N. Tustin Ave.
Anaheim, CA 92807
(714) 630-6100
info@pooleng.com

pool engineering inc.

GENERAL NOTES

1. ALL GRADING AND CONSTRUCTION SHALL CONFORM TO THE 2017 COUNTY OF LOS ANGELES BUILDING CODES AND THE STATE MODEL WATER EFFICIENCY LANDSCAPE ORDINANCE UNLESS SPECIFICALLY NOTED ON THESE PLANS.

2. ANY MODIFICATIONS OF OR CHANGES TO APPROVED GRADING PLANS MUST BE APPROVED BY THE BUILDING OFFICIAL.

3. NO GRADING SHALL BE STARTED WITHOUT FIRST NOTIFYING THE BUILDING OFFICIAL. A PRE-GRADING MEETING AT THE SITE IS REQUIRED BEFORETHE START OF THE GRADING WITH THE FOLLOWING PEOPLE PRESENT: OWNER, GRADING CONTRACTOR, DESIGN CIVIL ENGINEER, SOILS ENGINEER, GEOLOGIST, COUNTY GRADING INSPECTOR(S) OR THEIR REPRESENTATIVES, AND WHEN REQUIRED THE ARCHEOLOGIST OR OTHER JURISDICTIONAL AGENCIES. PERMITTEE OR HIS AGENT ARE RESPONSIBLE FOR ARRANGING PRE-GRADE MEETING AND MUST NOTIFY THE BUILDING OFFICIAL AT LEAST TWO BUSINESS DAYS PRIOR TO PROPOSED PRE-GRADE MEETING.

4. APPROVAL OF THESE PLANS REFLECT SOLELY THE REVIEW OF PLANS IN ACCORDANCE WITH THE COUNTY OF LOS ANGELES BUILDING CODES AND DOES NOT REFLECT ANY POSITION BY THE COUNTY OF LOS ANGELES OR THE DEPARTMENT OF PUBLIC WORKS REGARDING THE STATUS OF ANY TITLE ISSUES RELATING TO THE LAND ON WHICH THE IMPROVEMENTS MAY BE CONSTRUCTED. ANY DISPUTES RELATING TO TITLE ARE SOLELY A PRIVATE MATTER NOT INVOLVING THE COUNTY OF LOS ANGELES OR THE DEPARTMENT OF PUBLIC WORKS.

5. ALL GRADING AND CONSTRUCTION ACTIVITIES SHALL COMPLY WITH COUNTY OF LOS ANGELES CODE, TITLE 12, SECTION 12.12.030 THAT CONTROLS AND RESTRICTS NOISE FROM THE USE OF CONSTRUCTION AND GRADING EQUIPMENT FROM THE HOURS OF 8:00 PM TO 6:30 AM, AND ON SUNDAYS AND HOLIDAYS. (MORE RESTRICTIVE CONSTRUCTION ACTIVITY TIMES MAY GOVERN, AS REQUIRED BY THE DEPARTMENT OF REGIONAL PLANNING AND SHOULD BE SHOWN ON THE GRADING PLANS WHEN APPLICABLE.)

6. CALIFORNIA PUBLIC RESOURCES CODE (SECTION 5097.98) AND HEALTH AND SAFETY CODE (SECTION 7050.5) ADDRESS THE DISCOVERY AND DISPOSITION OF HUMAN REMAINS. IN THE EVENT OF DISCOVERY OR RECOGNITION OF ANY HUMAN REMAINS IN ANY LOCATION OTHER THAN A DEDICATED CEMETERY, THE LAW REQUIRES THAT GRADING IMMEDIATELY STOPS AND NO FURTHER EXCAVATION OR DISTURBANCE OF THE SITE, OR ANY NEARBY AREA WHERE HUMAN REMAINS MAY BE LOCATED, OCCUR UNTIL THE FOLLOWING HAS BEEN MEASURES HAVE BEEN TAKEN:

   A. THE COUNTY CORONER HAS BEEN INFORMED AND HAS DETERMINED THAT NO INVESTIGATION OF THE CAUSE OF DEATH IS REQUIRED, AND

   B. IF THE REMAINS ARE OF NATIVE AMERICAN ORIGIN, THE DESCENDANTS FROM THE DECEASED NATIVE AMERICANS HAVE MADE A RECOMMENDATION FOR THE MEANS OF TREATING OR DISPOSING, WITH APPROPRIATE DIGNITY, OF THE HUMAN REMAINS AND ANY ASSOCIATED GRAVE GOODS.

7. THE LOCATION AND PROTECTION OF ALL UTILITIES IS THE RESPONSIBILITY OF THE PERMITTEE.
8. ALL EXPORT OF MATERIAL FROM THE SITE MUST GO TO A PERMITTED SITE APPROVED BY THE BUILDING OFFICIAL OR A LEGAL DUMPSITE. RECEIPTS FOR ACCEPTANCE OF EXCESS MATERIAL BY A DUMPSITE ARE REQUIRED AND MUST BE PROVIDED TO THE BUILDING OFFICIAL UPON REQUEST.

9. A COPY OF THE GRADING PERMIT AND APPROVED GRADING PLANS MUST BE IN THE POSSESSION OF A RESPONSIBLE PERSON AND AVAILABLE AT THE SITE AT ALL TIMES.

10. SITE BOUNDARIES, EASEMENTS, DRAINAGE DEVICES, RESTRICTED USE AREAS SHALL BE LOCATED PER CONSTRUCTION STAKING BY FIELD ENGINEER OR LICENSED SURVEYOR. PRIOR TO GRADING, AS REQUESTED BY THE BUILDING OFFICIAL, ALL PROPERTY LINES, EASEMENTS, AND RESTRICTED USE AREAS SHALL BE STAKED.

11. NO GRADING OR CONSTRUCTION SHALL OCCUR WITHIN THE PROTECTED ZONE OF ANY OAK TREE AS REQUIRED PER TITLE CHAPTER 22.56 OF THE COUNTY OF LOS ANGELES ZONING CODE. THE PROTECTED ZONE SHALL MEAN THAT AREA WITHIN THE DRIP LINE OF AN OAK TREE EXTENDING THERE FROM A POINT AT LEAST FIVE FEET OUTSIDE THE DRIP LINE, OR 15 FEET FROM THE TRUNK(S) OF A TREE, WHICHEVER IS GREATER.

    IF AN OAK TREE PERMIT IS OBTAINED: (ADD THE FOLLOWING NOTE:)

    ALL GRADING AND CONSTRUCTION WITHIN THE PROTECTED ZONE OF ALL OAK TREES SHALL BE PER OAK TREE PERMIT NO._____. ALL RECOMMENDATIONS IN THE PERMIT AND ASSOCIATED OAK TREE REPORT MUST BE COMPLIED WITH AND ARE A PART OF THE GRADING PLAN. A COPY OF THE OAK TREE PERMIT AND ASSOCIATED REPORTS SHALL BE MAINTAINED IN THE POSSESSION OF A RESPONSIBLE PERSON AND AVAILABLE AT THE SITE AT ALL TIMES.

12. THE STANDARD RETAINING WALL DETAILS SHOWN ON THE GRADING PLANS ARE FOR REFERENCE ONLY. STANDARD RETAINING WALLS ARE NOT CHECKED, PERMITTED, OR INSPECTED PER THE GRADING PERMIT. A SEPARATE RETAINING WALL PERMIT IS REQUIRED FOR ALL STANDARD RETAINING WALLS. NOTE: THIS NOTE ONLY APPLIES TO STANDARD RETAINING WALLS. GEOGRID FABRIC AND SEGMENTAL RETAINING WALLS DO NOT REQUIRE A SEPARATE RETAINING WALL PERMIT. DETAILS AND CONSTRUCTION NOTES FOR ALL GEOGRID WALLS MUST BE ON THE GRADING PLAN.

13. A PREVENTIVE PROGRAM TO PROTECT THE SLOPES FROM POTENTIAL DAMAGE FROM BURROWING RODENTS IS REQUIRED PER SECTION J101.8 OF THE COUNTY OF LOS ANGELES BUILDING CODE. OWNER IS TO INSPECT SLOPES PERIODICALLY FOR EVIDENCE OF BURROWING RODENTS AND A FIRST EVIDENCE OF THEIR EXISTENCE SHALL EMPLOY AN EXTERMINATOR FOR THEIR REMOVAL.

14. WHERE A GRADING PERMIT IS ISSUED AND THE BUILDING OFFICIAL DETERMINES THAT THE GRADING WILL NOT BE COMPLETED PRIOR TO NOVEMBER 1, THE OWNER OF THE SITE ON WHICH THE GRADING IS BEING PERFORMED SHALL, ON OR BEFORE OCTOBER 1, FILE OR CAUSE TO BE FILED WITH THE BUILDING OFFICIAL AN ESCP PER SECTION J110.8.3 OF THE COUNTY OF LOS ANGELES BUILDING CODE.

15. TRANSFER OF RESPONSIBILITY: IF THE FIELD ENGINEER, THE SOILS ENGINEER, OR THE ENGINEERING GEOLOGIST OF RECORD IS CHANGED DURING GRADING, THE WORK SHALL BE STOPPED UNTIL THE REPLACEMENT HAS AGREED IN WRITING TO ACCEPT THEIR RESPONSIBILITY WITHIN THE AREA OF TECHNICAL COMPETENCE FOR APPROVAL UPON COMPLETION OF THE WORK. IT SHALL BE THE DUTY OF THE PERMITTEE TO NOTIFY THE BUILDING OFFICIAL IN WRITING OF SUCH CHANGE PRIOR TO THE RECOMMENCEMENT OF SUCH GRADING.

INSPECTIONS NOTES:

16. THE PERMITTEE OR HIS AGENT SHALL NOTIFY THE BUILDING OFFICIAL AT LEAST ONE WORKING DAY IN ADVANCE OF REQUIRED INSPECTIONS AT FOLLOWING STAGES OF THE WORK. (SECTION J105.7 OF THE BUILDING CODE.)

    (A) PRE-GRADE - BEFORE THE START OF ANY EARTH DISTURBING ACTIVITY OR CONSTRUCTION.

    (B) INITIAL - WHEN THE SITE HAS BEEN CLEARED OF VEGETATION AND UNAPPROVED FILL HAS BEEN SCARIFIED, BENCHED OR OTHERWISE PREPARED FOR FILL. FILL SHALL NOT BE PLACED PRIOR TO THIS INSPECTION. NOTE: PRIOR TO ANY CONSTRUCTION ACTIVITIES, INCLUDING GRADING, ALL STORM WATER POLLUTION PREVENTION MEASURES INCLUDING EROSION CONTROL DEVICES WHICH CONTAIN SEDIMENTS MUST BE INSTALLED.

    (C) ROUGH - WHEN APPROXIMATE FINAL ELEVATIONS HAVE BEEN ESTABLISHED; DRAINAGE TERRACES, SWALES AND BERMS INSTALLED AT THE TOP OF THE SLOPE; AND THE STATEMENTS REQUIRED IN THIS SECTION HAVE BEEN RECEIVED.

    (D) FINAL - WHEN GRADING HAS BEEN COMPLETED; ALL DRAINAGE DEVICES INSTALLED; SLOPE PLANTING ESTABLISHED, IRRIGATION SYSTEMS INSTALLED AND THE AS-BUILT PLANS, REQUIRED STATEMENTS, AND REPORTS HAVE BEEN SUBMITTED AND APPROVED.

17. IN ADDITION TO THE INSPECTION REQUIRED BY THE BUILDING OFFICIAL FOR GRADING, REPORTS AND STATEMENTS SHALL BE SUBMITTED TO THE BUILDING OFFICIAL IN ACCORDANCE WITH SECTION J105 OF THE COUNTY OF LOS ANGELES BUILDING CODE.

18. UNLESS OTHERWISE DIRECTED BY THE BUILDING OFFICIAL, THE FIELD ENGINEER FOR ALL ENGINEERED GRADING PROJECTS SHALL PREPARE ROUTINE INSPECTION REPORTS AS REQUIRED UNDER SECTION J105.11 OF THE COUNTY OF LOS ANGELES BUILDING CODE. THESE REPORTS, KNOWN AS "REPORT OF GRADING ACTIVITIES", SHALL BE SUBMITTED TO THE BUILDING OFFICIAL AS FOLLOWS:

1. BI-WEEKLY DURING ALL TIMES WHEN GRADING OF 400 CUBIC YARDS OR MORE PER WEEK IS OCCURRING ON THE SITE;
2. MONTHLY, AT ALL OTHER TIMES; AND
3. AT ANY TIME WHEN REQUESTED IN WRITING BY THE BUILDING OFFICIAL.

    SUCH "REPORT OF GRADING ACTIVITIES" SHALL CERTIFY TO THE BUILDING OFFICIAL THAT THE FIELD ENGINEER HAS INSPECTED THE GRADING SITE AND RELATED ACTIVITIES AND HAS FOUND THEM IN COMPLIANCE WITH THE APPROVED GRADING PLANS AND SPECIFICATIONS, THE BUILDING CODE, ALL GRADING PERMIT CONDITIONS, AND ALL OTHER APPLICABLE ORDINANCES AND REQUIREMENTS. THIS FORM IS AVAILABLE AT THE FOLLOWING WEBSITE htpp:/?dpw.lacounty.gov/bsd/dg/default.aspx. "REPORT OF GRADING ACTIVITIES"" MAY BE SCANNED AND UPLOADED AT THE WEBSITE OR FAXED TO (310) 530-5482. FAILURE TO PROVIDE REQUIRED INSPECTION REPORTS WILL RESULT IN A "STOP WORK ORDER."

19. ALL GRADED SITES MUST HAVE DRAINAGE SWALES, BERMS, AND OTHER DRAINAGE DEVICES INSTALLED PRIOR TO ROUGH GRADING APPROVAL PER SECTION J105.7 OF THE COUNTY OF LOS ANGELES BUILDING CODE.

20. THE GRADING CONTRACTOR SHALL SUBMIT THE STATEMENT TO THE GRADING INSPECTOR AS REQUIRED BY SECTION J105.12 OF THE COUNTY OF LOS ANGELES BUILDING CODE AT THE COMPLETION OF ROUGH GRADING.

21. FINAL GRADING MUST BE APPROVED BEFORE OCCUPANCY OF BUILDINGS WILL BE ALLOWED PER SECTION J105 OF THE COUNTY OF LOS ANGELES BUILDING CODE.

DRAINAGE NOTES:

22. ROOF DRAINAGE MUST BE DIVERTED FROM GRADED SLOPES.

23. PROVISIONS SHALL BE MADE FOR CONTRIBUTORY DRAINAGE AT ALL TIMES.

24. ALL CONSTRUCTION AND GRADING WITHIN A STORM DRAIN EASEMENT ARE TO BE DONE PER PRIVATE DRAIN PD NO._____OR MISCELLANEOUS TRANSFER DRAIN MTD NO._____.

25. ALL STORM DRAIN WORK IS TO BE DONE UNDER CONTINUOUS INSPECTION BY THE FIELD ENGINEER. STATUS REQUIRED UNDER NOTE 18 AND SECTION J105.11 OF THE COUNTY OF LOS ANGELES BUILDING CODE SHALL INCLUDE INSPECTION INFORMATION AND REPORTS ON THE STORM DRAIN INSTALLATION.

AGENCY NOTES:

26. AN ENCROACHMENT PERMIT FROM (COUNTY DEPARTMENT OF PUBLIC WORKS) (CALTRANS) (CITY OF _____) IS REQUIRED FOR ALL WORK WITHIN OR AFFECTING ROAD RIGHT OF WAY. ALL WORK WITHIN ROAD RIGHT OF WAY SHALL CONFORM TO (COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS)(CALTRANS) (CITY OF _____) ENCROACHMENT PERMIT.

27. AN ENCROACHMENT PERMIT /CONNECTION PERMIT IS REQUIRED FROM THE COUNTY OF LOS ANGELES FLOOD CONTROL DISTRICT FOR ALL WORK WITHIN THE COUNTY OF LOS ANGELES FLOOD CONTROL DISTRICT RIGHT OF WAY. ALL WORK SHALL CONFORM TO CONDITIONS SET BY THE PERMIT.

28. PERMISSION TO OPERATE IN VERY HIGH FIRE HAZARD SEVERITY ZONE MUST BE OBTAINED FROM THE FIRE PREVENTION BUREAU OR THE LOCAL FIRE STATION PRIOR TO COMMENCING WORK.

29. ALL WORK WITHIN THE STREAMBED AND AREAS OUTLINED ON GRADING PLANS SHALL CONFORM TO:
    ARMY CORP 404 PERMIT NUMBER: _____.
    CALIFORNIA FISH & WILDLIFE PERMIT NO.: _____.

30. ALL CONSTRUCTION/DEMOLITION, GRADING, AND STORAGE OF BULK MATERIALS MUST COMPLY WITH THE LOCAL AQMD RULE 403 FOR FUGITIVE DUST. INFORMATION ON RULE 403 IS AVAILABLE AT AQMD'S WEBSITE http://www.avaqmd.com.

GENERAL GEOTECHNICAL NOTES:

31. ALL WORK MUST BE IN COMPLIANCE WITH THE RECOMMENDATIONS INCLUDED IN THE GEOTECHNICAL CONSULTANT'S REPORT(S) AND THE APPROVED GRADING PLANS AND SPECIFICATIONS.

32. GRADING OPERATIONS MUST BE CONDUCTED UNDER PERIODIC INSPECTIONS BY THE GEOTECHNICAL CONSULTANTS WITH MONTHLY INSPECTION REPORTS TO BE SUBMITTED TO THE GEOLOGY AND SOILS SECTION. (900 S. FREMONT, ALHAMBRA CA 91803 - 3RD FLOOR)

33. THE SOIL ENGINEER SHALL PROVIDE SUFFICIENT INSPECTIONS DURING THE PREPARATION OF THE NATURAL GROUND AND THE PLACEMENT AND COMPACTION OF THE FILL TO BE SATISFIED THAT THE WORK IS BEING PERFORMED IN ACCORDANCE WITH THE PLAN AND APPLICABLE CODE REQUIREMENTS.

34. ROUGH GRADING MUST BE APPROVED BY A FINAL ENGINEERING GEOLOGY AND SOILS ENGINEERING REPORT. AN AS-BUILT GEOLOGIC MAP MUST BE INCLUDED IN THE FINAL GEOLOGY REPORT. PROVIDE A FINAL REPORT STATEMENT THAT VERIFIES WORK WAS DONE IN ACCORDANCE WITH REPORT RECOMMENDATIONS AND CODE PROVISIONS (SECTION J105.12 OF THE COUNTY OF LOS ANGELES BUILDING CODE). THE FINAL REPORT(S) MUST BE SUBMITTED TO THE GEOTECHNICAL AND MATERIALS ENGINEERING DIVISION FOR REVIEW AND APPROVAL.

35. FOUNDATION, WALL AND POOL EXCAVATIONS MUST BE INSPECTED AND APPROVED BY THE CONSULTING GEOLOGIST AND SOILS ENGINEER, PRIOR TO THE PLACING OF STEEL OR CONCRETE.

36. BUILDING PADS LOCATED IN CUT/FILL TRANSITION AREAS SHALL BE OVER-EXCAVATED A MINIMUM OF THREE (3) FEET BELOW THE PROPOSED BOTTOM OF FOOTING.

FILL NOTES:

37. ALL FILL SHALL BE COMPACTED TO THE FOLLOWING MINIMUM RELATIVE COMPACTION CRITERIA:

    A. 90 PERCENT OF MAXIMUM DRY DENSITY WITHIN 40 FEET BELOW FINISH GRADE.

    B. 93 PERCENT OF MAXIMUM DRY DENSITY DEEPER THAN 40 FEET BELOW FINISH GRADE, UNLESS A LOWER RELATIVE COMPACTION (NOT LESS THAN 90 PERCENT OF MAXIMUM DRY DENSITY) IS JUSTIFIED BY THE GEOTECHNICAL ENGINEER. THE RELATIVE COMPACTION SHALL BE DETERMINED BY A.S.T.M. SOIL COMPACTION TEST D1557-91 WHERE APPLICABLE: WHERE NOT APPLICABLE, A TEST ACCEPTABLE TO THE BUILDING OFFICIAL SHALL BE USED. (SECTION J107.5 OF THE COUNTY OF LOS ANGELES BUILDING CODE.)

    C. 95 PERCENT OF MAXIMUM DRY DENSITY IS REQUIRED FOR ALL FIRE LANES UNLESS OTHERWISE APPROVED BY THE FIRE DEPARTMENT.

38. FIELD DENSITY SHALL BE DETERMINED BY A METHOD ACCEPTABLE TO THE BUILDING OFFICIAL. (SECTION J107.5 OF THE COUNTY OF LOS ANGELES BUILDING CODE.) HOWEVER, NOT LESS THAN 10% OF THE REQUIRED DENSITY TEST, UNIFORMLY DISTRIBUTED, AND SHALL BE OBTAINED BY THE SAND CONE METHOD.

39. SUFFICIENT TESTS OF THE FILL SOILS SHALL BE MADE TO DETERMINE THE RELATIVE COMPACTION OF THE FILL IN ACCORDANCE WITH THE FOLLOWING MINIMUM GUIDELINES:

    A. ONE TEST FOR EACH TWO-FOOT VERTICAL LIFT.
    B. ONE TEST FOR EACH 1,000 CUBIC YARDS OF MATERIAL PLACED.
    C. ONE TEST AT THE LOCATION OF THE FINAL FILL SLOPE FOR EACH BUILDING SITE (LOT) IN EACH FOUR-FOOT VERTICAL LIFT OR PORTION THEREOF.
    D. ONE TEST IN THE VICINITY OF EACH BUILDING PAD FOR EACH FOUR-FOOT VERTICAL LIFT OR PORTION THEREOF.

40. SUFFICIENT TESTS OF FILL SOILS SHALL BE MADE TO VERIFY THAT THE SOIL PROPERTIES COMPLY WITH THE DESIGN REQUIREMENTS, AS DETERMINED BY THE SOIL ENGINEER INCLUDING SOIL TYPES, SHEAR STRENGTHS PARAMETERS AND CORRESPONDING UNIT WEIGHTS IN ACCORDANCE WITH THE FOLLOWING GUIDELINES:

    A. PRIOR AND SUBSEQUENT TO PLACEMENT OF THE FILL, SHEAR TESTS SHALL BE TAKEN ON EACH TYPE OF SOIL OR SOIL MIXTURE TO BE USED FOR ALL FILL SLOPES STEEPER THAN THREE (3) HORIZONTAL TO ONE VERTICAL.

    B. SHEAR TEST RESULTS FOR THE PROPOSED FILL MATERIAL MUST MEET OR EXCEED THE DESIGN VALUES USED IN THE GEOTECHNICAL REPORT TO DETERMINE SLOPE STABILITY REQUIREMENTS. OTHERWISE, THE SLOPE MUST BE REEVALUATED USING THE ACTUAL SHEAR TEST VALUE OF THE FILL MATERIAL THAT IS IN PLACE.

    C. FILL SOILS SHALL BE FREE OF DELETERIOUS MATERIALS.

41. FILL SHALL NOT BE PLACED UNTIL STRIPPING OF VEGETATION, REMOVAL OF UNSUITABLE SOILS, AND INSTALLATION OF SUBDRAIN (IF ANY) HAVE BEEN INSPECTED AND APPROVED BY THE SOIL ENGINEER. THE BUILDING OFFICIAL MAY REQUIRE A "STANDARD TEST METHOD FOR MOISTURE, ASH, ORGANIC MATTER, PEAT OR OTHER ORGANIC SOILS" ASTM D-2974-87 ON ANY SUSPECT MATERIAL. DETRIMENTAL AMOUNTS OF ORGANIC MATERIAL SHALL NOT BE PERMITTED IN FILLS. SOIL CONTAINING SMALL AMOUNTS OF ROOTS MAY BE ALLOWED PROVIDED THAT THE ROOTS ARE IN A QUANTITY AND DISTRIBUTED IN A MANNERTHAT WILL NOT BE DETRIMENTAL TO THE FUTURE USE OF THE SITE AND SOILS ENGINEER APPROVES THE USE OF SUCH MATERIAL.

42. ROCK OR SIMILAR MATERIAL GREATER THAN 12 INCHES IN DIAMETER SHALL NOT BE PLACED IN THE FILL UNLESS RECOMMENDATIONS FOR SUCH PLACEMENT HAVE BEEN SUBMITTED BY THE SOIL ENGINEER AND APPROVED IN ADVANCE BY THE BUILDING OFFICIAL. LOCATION, EXTENT, AND ELEVATION OF ROCK DISPOSAL AREAS MUST BE SHOWN ON AN "AS BUILT" GRADING PLAN.

43. CONTINUOUS INSPECTION BY THE SOIL ENGINEER, OR A RESPONSIBLE REPRESENTATIVE, SHALL BE PROVIDED DURING ALL FILL PLACEMENT AND COMPACTION OPERATIONS WHERE FILLS HAVE A DEPTH GREATER THAN 30 FEET OR SLOPE SURFACE STEEPER THAN 2:1. (SECTION J107.8 OF THE COUNTY OF LOS ANGELES BUILDING CODE)

44. CONTINUOUS INSPECTION BY THE SOIL ENGINEER, OR A RESPONSIBLE REPRESENTATIVE, SHALL BE PROVIDED DURING ALL SUBDRAIN INSTALLATION. (SECTION J107.2 OF THE COUNTY OF LOS ANGELES BUILDING CODE)

45. ALL SUBDRAIN OUTLETS ARE TO BE SURVEYED FOR LINE AND ELEVATION. SUBDRAIN INFORMATION MUST BE SHOWN ON AN "AS BUILT" GRADING PLAN.

46. FILL SLOPES IN EXCESS OF 2:1 STEEPNESS RATIO ARE TO BE CONSTRUCTED BY THE PLACEMENT OF SOIL AT SUFFICIENT DISTANCE BEYOND THE PROPOSED FINISH SLOPE TO ALLOW COMPACTION EQUIPMENT TO BE OPERATED AT THE OUTER LIMITS OF THE FINAL SLOPE SURFACE. THE EXCESS FILL IS TO BE REMOVED PRIOR TO COMPLETION OF ROUGH GRADING. OTHER CONSTRUCTION PROCEDURES MAY BE USED WHEN IT IS DEMONSTRATED TO THE SATISFACTION OF THE BUILDING OFFICIAL THAT THE ANGLE OF SLOPE, CONSTRUCTION METHOD AND OTHER FACTORS WILL HAVE EQUIVALENT EFFECT. (SECTION J107.5 OF THE COUNTY OF LOS ANGELES BUILDING CODE.)

PLANTING AND IRRIGATION NOTES:

47. PLANTING AND IRRIGATION ON GRADED SLOPES MUST COMPLY WITH THE FOLLOWING MINIMUM GUIDELINES:
    A. THE SURFACE OF ALL CUT SLOPES MORE THAN 5 FEET IN HEIGHT AND FILL SLOPES MORE THAN 3 FEET IN HEIGHT SHALL BE PROTECTED AGAINST DAMAGE BY PLANTING WITH GRASS OR GROUNDCOVER PLANTS. SLOPES EXCEEDING 15 FEET IN VERTICAL HEIGHT SHALL ALSO BE PLANTED WITH SHRUBS, SPACED AT NOT TO EXCEED 10 FEET ON CENTERS; OR TREES, SPACED AT NOT TO EXCEED 20 FEET ON CENTERS, OR A COMBINATION OF SHRUBS AND TREES AT EQUIVALENT SPACING, IN ADDITION TO THE GRASS OR GROUNDCOVER PLANTS. THE PLANTS SELECTED AND PLANTING METHODS USED SHALL BE SUITABLE FOR THE SOIL AND CLIMATIC CONDITIONS OF THE SITE. PLANT MATERIAL SHALL BE SELECTED WHICH WILL PRODUCE A COVERAGE OF PERMANENT PLANTING EFFECTIVELY CONTROLLING EROSION. CONSIDERATION SHALL BE GIVEN TO DEEP-ROOTED PLANTING MATERIAL NEEDING LIMITED WATERING, MAINTENANCE, HIGH ROOT TO SHOOT RATIO, WIND SUSCEPTIBILITY AND FIRE-RETARDANT CHARACTERISTICS. ALL PLANT MATERIALS MUST BE APPROVED BY THE BUILDING OFFICIAL. (SECTION J110.3 OF THE COUNTY OF LOS ANGELES BUILDING CODE)
    NOTE: PLANTING MAY BE MODIFIED FOR THE SITE IF SPECIFIC RECOMMENDATIONS ARE PROVIDED BY BOTH THE SOILS ENGINEER AND A LANDSCAPE ARCHITECT. SPECIFIC RECOMMENDATIONS MUST CONSIDER SOILS AND CLIMATIC CONDITIONS, IRRIGATION REQUIREMENTS, PLANTING METHODS, FIRE RETARDANT CHARACTERISTICS, WATER EFFICIENCY, MAINTENANCE NEEDS, AND OTHER REGULATORY REQUIREMENTS. RECOMMENDATIONS MUST INCLUDE A FINDING THAT THE ALTERNATIVE PLANTING WILL PROVIDE A PERMANENT AND EFFECTIVE METHOD OF EROSION CONTROL. MODIFICATIONS TO PLANTING MUST BE APPROVED BY THE BUILDING OFFICIAL PRIOR TO INSTALLATION.

    B. SLOPES REQUIRED TO BE PLANTED BY SECTION J110.3 SHALL BE PROVIDED WITH AN APPROVED SYSTEM OF IRRIGATION THAT IS DESIGNED TO COVER ALL PORTIONS OF THE SLOPE. IRRIGATION SYSTEM PLANS SHALL BE SUBMITTED AND APPROVED PRIOR TO INSTALLATION. A FUNCTIONAL TEST OF THE SYSTEM MAY BE REQUIRED. FOR SLOPES LESS THAN 20 FEET IN VERTICAL HEIGHT, HOSE BIBS TO PERMIT HAND WATERING WILL BE ACCEPTABLE IF SUCH HOSE BIBS ARE INSTALLED AT CONVENIENTLY ACCESSIBLE LOCATIONS WHERE A HOSE NO LONGER THAN 50 FEET IS NECESSARY FOR IRRIGATION. THE REQUIREMENTS FOR PERMANENT IRRIGATION SYSTEMS MAY BE MODIFIED UPON SPECIFIC RECOMMENDATION OF A LANDSCAPE ARCHITECT OR EQUIVALENT AUTHORITY THAT, BECAUSE OF THE TYPE OF PLANTS SELECTED, THE PLANTING METHODS USED AND THE SOIL AND CLIMATIC CONDITIONS AT THE SITE, IRRIGATION WILL NOT BE NECESSARY FOR THE MAINTENANCE OF THE SLOPE PLANTING. (SECTION J110.4 OF THE COUNTY OF LOS ANGELES BUILDING CODE)
    C. OTHER GOVERNMENTAL AGENCIES MAY HAVE ADDITIONAL REQUIREMENTS FOR LANDSCAPING AND IRRIGATION. IT IS THE RESPONSIBILITY OF THE APPLICANT TO COORDINATE WITH OTHER AGENCIES TO MEET THEIR REQUIREMENTS WHILE MAINTAINING COMPLIANCE WITH THE COUNTY OF LOS ANGELES BUILDING CODE.

48. THE PLANTING AND IRRIGATION SYSTEMS SHALL BE INSTALLED AS SOON AS PRACTICAL AFTER ROUGH GRADING. PRIOR TO FINAL GRADING APPROVAL ALL REQUIRED SLOPE PLANTING MUST BE WELL ESTABLISHED. (SECTION J110.7OF THE COUNTY OF LOS ANGELES BUILDING CODE)

49. LANDSCAPE IRRIGATION SYSTEM SHALL BE DESIGNED AND MAINTAINED TO PREVENT SPRAY ON STRUCTURES. (TITLE 31, SECTION 5.407.2.1)

50. PRIOR TO ROUGH GRADE APPROVAL THIS PROJECT REQUIRES A LANDSCAPE PERMIT. LANDSCAPE PLANS IN COMPLIANCE WITH THE "MODEL WATER EFFICIENT LANDSCAPE ORDINANCE" TITLE 23, CHAPTER 2.7 OF CALIFORNIA CODE OF REGULATIONS (AB 1881) MUST BE SUBMITTED TO THE DEPARTMENT OF PUBLIC WORKS, LAND DEVELOPMENT DIVISION. (900 S. FREMONT AVE, ALHAMBRA - 3RD FLOOR, CA 91803 (626) 458-4921). TO OBTAIN LANDSCAPE PERMIT APPROVED PLANS AND WATER PURVEYOR ACKNOWLEDGMENT FORM MUST BE SUBMITTED TO THE LOCAL BUILDING AND SAFETY OFFICE.

MATERIAL SPECIFICATIONS:

CONCRETE:
1. CONCRETE SHALL BE 3,250 PSI @ 28 DAYS (EXCEPT AS NOTED)
2. AGGREGATES TO BE : MAXIMUM SIZE ½" FOR FOOTINGS AND 1" FOR ALL OTHER WORK, ASTM-C33
3. REINFORCING STEEL TO BE : ASTM-615-60 FOR BILLET STEEL INTERMEDIATE GRADE, CLEAN AND UNRUSTED. LAPS AT SPLICES AND POUR LINES TO BE 36" DIAMETERS OR 24"MINIMUM UNLESS NOTED
4. WELDED WIRE FABRIC:ASTM-A185,LAP 16"@EDGES.
5. REMOVAL OF FORMS: SUPPORTING VERTICAL SURFACES, MIN.2 DAYS; SUPPORTING HORIZONTAL SURFACES, MIN.15 DAYS.
6. ONLY ONE GRADE OF CONCRETE SHALL BE PERMITTED ON THE JOB SITE AT ONE TIME.

STRUCTURAL STEEL
7. STRUCTURAL STEEL SHALL BE A-36 IDENTIFIED WITH MARK AND MILL CERTIFICATION TO BE SENT TO STRUCTURAL ENGINEER.
8. PIPE COLUMNS TO BE: ASTM-A53 GRADE B SEAMLESS, NOTE THAT DIMENSIONS ON PLANS SHOW INSIDE DIAMETER.
9. SQUARE AND RECTANGULAR TUBING SHALL BE EQUAL TO ASTM-A-36 UNLESS SPECIFICALLY IDENTIFIED OTHERWISE ON PLAN OR MEMBER SCHEDULE.

MASONRY
10. HOLLOW CONCRETE MASONRY UNITS:1- LIGHT WEIGHT CONCRETE UNITS SHALL CONFORM TO ASTM STD. C-90
11. REINFORCING STEEL SHALL CONFORM TO A.S.T.M. A-615 GRADE 60.
12. MORTAR PROPORTIONS : 1 PART PORTLAND CEMENT1 PART LIME PUTTY4 PARTS SAND
13. GROUT PROPORTIONS : 1 PART PORTLAND CEMENT 3 PARTS SAND $\frac{1}{10}$ PART LIME PUTTY
14. ALL GROUT SHALL BE 2,500 PSI AT 28 DAYS.

ADDITIONAL NOTES
A. ALL GRADING SLOPES SHALL BE PLANTED AND SPRINKLERED. (7012.1.)
B. STANDARD 12 INCH HIGH BERM IS REQUIRED AT TOP ALL GRADED SLOPES. (7013.3)
C. NO FILL TO BE PLACED, UNTIL THE CITY GRADING INSPECTOR HAS INSPECTED AND APPROVED THE BOTTOM EXCAVATION.
D. MAN-MADE FILL SHALL BE COMPACTED TO A MINIMUM RELATIVE COMPACTION OF 90% MAX. DRY DENSITY WITHIN 40 FEET BELOW FINISH GRADE AND 93% MAX. DRY DENSITY DEEPER THAN 40 FEET BELOW FINISH GRADE, UNLESS A LOWER RELATIVE COMPACTION (NOT LESS THAN 90% OF MAX. DRY DENSITY) IS JUSTIFIED BY THE SOILS ENGINEER.
E. TEMPORARY EROSION CONTROL TO BE INSTALLED BETWEEN OCTOBER 1 AND APRIL 15. OBTAIN GRADING INSPECTOR'S AND DEPARTMENT OF PUBLIC WORKS APPROVAL OF PROPOSED PROCEDURES. [>200CY].

CONTINUOUS INCPECTION REQUIRED FOR:
1. CONCRETE OVER 2500 PSI
2. INSTALLATION OF TIE-BACK ANCHORS
3. FIELD WELDING
4. EXCAVATION (BY SOILS ENGINEER)
5. PLACEMENT OF ENGINEERING FILLS (BY SOILS ENGINEER)
6. EPOXY ANCHORS TO THE EXISTING HARDENED CONCRETE
7. INSTALLATION OF HIGH STRENGTH BOLTS. GROUTING OF HOLLOW MASONRY UNITS.

THIS PLAN HAS BEEN REVIEWED AND CONFORMS TO RECOMMENDATIONS OF SOILS ENGINEERING/GEOLOGIC REPORTS DATED _____.
SIGNATURE AND DATE _____.

PROJECT DIRECTORY
CIVIL ENGINEER:
SOUREN GRIGORYAN M.S.P.E.

PROJECT ADDRESS:
2925 N LAMER ST.
BURBANK, CA 91504

SCOPE OF WORK
-NEW GRADING FOR SWIMMING POOL

SHEET INDEX

PROJECT INFORMATION

LOT SIZE: 8,182 SQ. FT.
APN: 2471-022-028

No.	DESCRIPTION	DATE
1	INITIAL DESIGN	02/04/2024

PROJECT No.24-20

DESIGNED BY: SG

CHECKED BY: SG

JOB ADDRESS:
2925 N LAMER ST.
BURBANK, CA 91504

GRADING PLAN COVER
SHEET AND NOTES

STUDIO

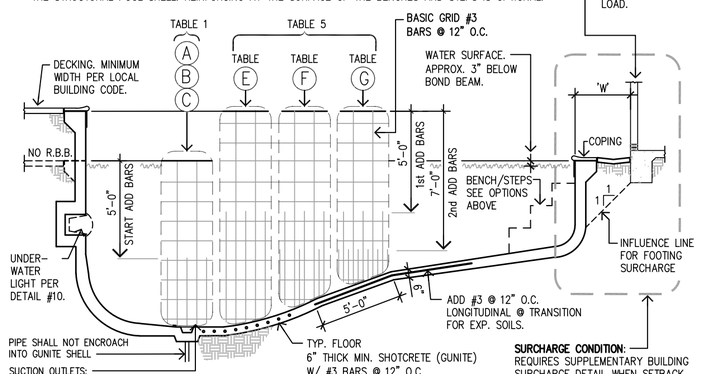
REGISTERED PROFESSIONAL ENGINEER
SOUREN GRIGORYAN
No. C 93320
CIVIL
STATE OF CALIFORNIA

C-0

SHEET NUMBER

BENCH AND STEP OPTIONS:

1. UNDISTURBED EARTH MAY BE LEFT IN PLACE TO FORM THE STEPS OR BENCHES. REINFORCING STEEL SHOULD BE PLACED AROUND THE STEP OR BENCH SHAPED EARTH (3" CLEAR FROM EARTH).
2. THE EARTH MAY BE REMOVED AND BENCHES AND STEPS MAY BE FORMED OF SHOTCRETE (GUNITE) WITHIN THE STRUCTURAL POOL SHELL. REINFORCING AT THE SURFACE OF THE BENCHES AND STEPS IS OPTIONAL.



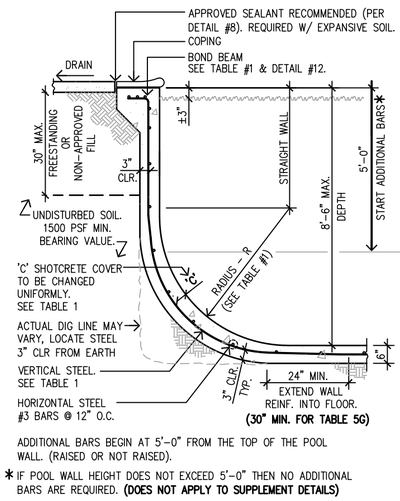
SUCTION OUTLETS:
WHERE CIRCULATION SUCTION OUTLETS ARE USED PROVIDE (2) SUCTION OUTLETS PER PUMP COVERED WITH ANTI-ENTRAPMENT GRATES THAT ARE HYDRAULICALLY BALANCED AND SYMMETRICALLY PLUMBED THROUGH "T" FITTINGS. DRAINS SHALL BE SEPARATED BY THREE FEET IN ANY DIMENSION. SEE ELECTRICAL AND PLUMBING NOTE 8.

ALTERNATIVES TO SUCTION OUTLETS, INCLUDING SKIMMERS OR PERIMETER OVERFLOW SYSTEMS, MAY BE USED TO CONDUCT WATER TO THE RECIRCULATION PUMP.

IN HIGH WATER TABLE, INSTALL HYDROSTATIC VALVE AND ROCK PACK AT LOW POINT.

RADIUS NOTE: FLOOR TO WALL TRANSITION RADIUS MAY VARY SLIGHTLY DEPENDING ON CONTRACTOR OR OWNER DESIGN INTENT. RADIUS SHALL NOT BE LESS THAN 1-FOOT AND SHALL NOT EXCEED 5-FEET.

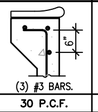
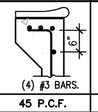
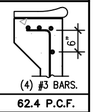
NOTE:
BOND BEAM HORIZONTAL BARS MAY BE OVER OR UNDER VERTICAL BARS.
TYPICAL INCLUDING ALL SPECIAL DETAILS.



ADDITIONAL BARS BEGIN AT 5'-0" FROM THE TOP OF THE POOL WALL. (RAISED OR NOT RAISED).

* IF POOL WALL HEIGHT DOES NOT EXCEED 5'-0" THEN NO ADDITIONAL BARS ARE REQUIRED. **(DOES NOT APPLY TO SUPPLEMENT DETAILS)**

TABLE NO. 1

NON-EXPANSIVE	EXPANSIVE	NO DECK/HIGH EXP.
A	B	C
		
(3) #3 BARS.	(4) #3 BARS.	(4) #3 BARS.

E.F.P.		30 P.C.F.		45 P.C.F.		62.4 P.C.F.	
D	R	C	VERTICAL ST	C	VERTICAL ST	C	VERTICAL ST
3'0"	1'-0"	3"	#3 @ 12"	3"	#3 @ 12"	3"	#3 @ 12"
3'6"	1'-0"	3"		3"		3"	
4'0"	1'-0"	3"		3"		4"	
4'6"	1'-0"	3"		3½"		5"	
5'0"	1'-6"	3"		4"		5"	
5'6"	2'-0"	3"		4"		5"	
6'0"	2'-6"	3"		4"		6"	
6'6"	3'-0"	3"		4½"			
7'0"	3'-6"	3"		5½"			
7'6"	4'-0"	3"		6"			
8'0"	4'-6"	3"		6"			
8'6"	5'-0"	3"		6"			

ITEM NOT APPLICABLE — POOL ENGINEERING, INC.

INDICATES TYPICAL RADIUS (ACTUAL RADIUS MAY VARY, SEE RADIUS NOTE AT TOP)

'D' IS DISTANCE DOWN FROM TOP OF POOL WALL.

NO DECK OR HIGH EXPANSIVE SOIL

GENERAL NOTES

1. THIS STANDARD POOL STRUCTURAL PLAN MUST BE ACCOMPANIED BY A CLEAR PLOT PLAN SHOWING POOL AND/OR SPA SHAPE, DEPTH, DISTANCE TO PROPERTY LINE, GRADE CHANGES & SLOPES AND ADJACENT STRUCTURES.
2. REPRESENTATIVES OF POOL ENGINEERING INC. HAVE NOT INSPECTED THE SITE & ARE RELYING ON INFORMATION PROVIDED BY THE CONTRACTOR OR OWNER TO DETERMINE THE ADEQUACY OF THIS STANDARD POOL STRUCTURAL PLAN FOR THE ACTUAL SITE CONDITIONS. SHOULD SITE CONDITIONS VARY FROM THAT COVERED BY THIS STANDARD POOL STRUCTURAL PLAN, IT IS THE RESPONSIBILITY OF THE CONTRACTOR OR THE OWNER TO NOTIFY POOL ENGINEERING INC. AND OBTAIN APPLICABLE SPECIAL ENGINEERING DETAILS PRIOR TO CONSTRUCTION. EXPANSIVE SOIL DETAILS ARE VALID ONLY FOR STATED EQUIVALENT FLUID PRESSURES AND POOL ENGINEERING INC. RECOMMENDS THAT THE OWNER OR CONTRACTOR OBTAIN A SOILS REPORT.
3. POOL ENGINEERING INC. (PEI) RECOMMENDS THAT THE PROPERTY OWNER AND/OR POOL CONTRACTOR RETAIN A LICENSED GEOTECHNICAL CONSULTANT TO OBTAIN GEOTECHNICALLY RELATED DESIGN CRITERIA FOR THE PROPOSED POOL SITE. IT IS THE RESPONSIBILITY OF THE PROPERTY OWNER AND/OR POOL CONTRACTOR TO REQUIRE THAT THE LICENSED GEOTECHNICAL CONSULTANT CONFIRM THAT THE POOL STRUCTURAL PLANS PROVIDED MEET THE REQUIREMENTS OF THE PROJECT SITE AND THE GEOTECHNICAL REPORT. WHEN A GEOTECHNICAL REPORT HAS NOT BEEN PROVIDED TO PEI, IT IS THE OWNER AND/OR CONTRACTOR'S RESPONSIBILITY TO VERIFY THAT THE SITE GEOTECHNICAL CONDITIONS ARE SUITABLE FOR CONSTRUCTION OF THE PROPOSED POOL BASED ON THE PEI PLANS BEING USED.
4. THIS PLAN IS NOT VALID WITHOUT ADDITIONAL SURCHARGE DETAILS WHEN THE CONDITIONS AS SHOWN IN DETAIL #3 APPLY (PER CBC SECTION 1808.7.3). ALL POOLS SHALL COMPLY WITH SLOPE SETBACKS PER CBC SECTION 1808.7.3.
5. THE STANDARD POOL STRUCTURAL PLAN IS NOT INTENDED TO BE APPLICABLE TO NON-STRUCTURAL ITEMS INCLUDING BUT NOT LIMITED TO PLUMBING, ELECTRICAL, FENCING, CONCRETE DECKING AND POOL GEOMETRICS.
6. DECKING CONSTRUCTION IS SHOWN AS RECOMMENDED MINIMUM CONSTRUCTION AND DOES NOT DEMONSTRATE A SYSTEM THAT WILL RESIST HEAVING DUE TO SOIL EXPANSION.
7. ALL CONSTRUCTION SHALL COMPLY WITH THE 2022 EDITIONS OF THE CALIFORNIA BUILDING CODE (CBC), CALIFORNIA ELECTRICAL CODE (CEC), CALIFORNIA MECHANICAL CODE (CMC), CALIFORNIA PLUMBING CODE (CPC), CALIFORNIA ENERGY CODE, 2022 BUILDING ENERGY EFFICIENCY STANDARDS, 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE, AND LOCAL ORDINANCES.
8. POOLS WITH DIVING BOARDS SHALL MEET DIVING BOARD MANUFACTURER'S POOL GEOMETRIC STANDARDS AND/OR LOCAL CODES.
9. SAFETY & SAFETY EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH LOCAL CODES.
10. PUBLIC POOLS REQUIRE COUNTY HEALTH DEPARTMENT APPROVAL AND PROVISIONS FOR ASSISTIVE DEVICES FOR THE DISABLED.
11. CONTRACTOR OR OWNER SHALL VERIFY ALL FIELD CONDITIONS & DIMENSIONS AT JOB SITE AND SHALL BE RESPONSIBLE FOR JOB SITE CONDITIONS AND THE SAFETY OF ALL PERSONS AND PROPERTY DURING THE COURSE OF CONSTRUCTION.
12. POOL LENGTH, GRADE BREAK LOCATIONS & DEPTH DIMENSIONS AS NOTED ON THE PLOT PLAN SHALL COMPLY WITH ANSI/APSP/PHTA SUGGESTED MINIMUM STANDARDS FOR RESIDENTIAL POOLS AND LOCALLY ADOPTED POOL AND SPA CODES. PUBLIC POOLS SHALL COMPLY WITH APPLICABLE STATE AND LOCAL HEALTH DEPT. REGULATIONS.

ELECTRICAL AND PLUMBING

1. ALL ELECTRICAL SHALL BE IN CONFORMANCE WITH THE 2022 CEC.
2. POOL SHELL AND PERIMETER PAVED AND UNPAVED SURFACES SHALL BE BONDED IN ACCORDANCE WITH CEC 680.26(B). BONDING TO PERIMETER SURFACES SHALL BE PROVIDED AS SPECIFIED IN CEC 680.26(B)(2)(A) OR (2)(B) AND SHALL BE ATTACHED TO THE POOL REINFORCING STEEL OR COPPER CONDUCTOR GRID AT A MINIMUM OF FOUR (4) POINTS UNIFORMLY SPACED AROUND THE PERIMETER OF THE POOL.
3. OBTAIN ELECTRICAL AND PLUMBING PERMITS ALONG WITH POOL BUILDING PERMIT.
4. ALL EQUIPMENT SHALL BE LISTED AND INSTALLED PER MANUFACTURERS RECOMMENDATIONS AND IN ACCORDANCE WITH LOCAL REGULATIONS.
5. POOLS SHALL BE EQUIPPED WITH A FILTERING SYSTEM.
6. BACKWASH SHALL BE DISPOSED OF IN AN APPROVED MANNER.
7. POOL/SPA WATER HEATER AND GAS PIPING INSTALLATION TO BE IN CONFORMANCE WITH THE CPC.
8. SUCTION OUTLETS SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH ANSI/APSP-7 AND 2022 CBC SECTION 3109.2 (HS CODE §§ 115920–115929).
9. POTABLE WATER SUPPLY TO SWIMMING POOLS, SPAS, AND HOT TUBS SHALL BE PROTECTED FROM BACKFLOW IN ACCORDANCE WITH CPC 603.5.20
10. CHEMICAL DISPENSERS SHALL COMPLY WITH 2022 CPC SECTION 603.5.21 REQUIREMENTS FOR PROTECTION AGAINST BACKFLOW AND COMPLY WITH ASSE 1055.

STRUCTURAL NOTES

1. SOIL SHALL HAVE A MINIMUM BEARING VALUE OF 1500 PSF. CONCRETE SHALL BE PLACED AGAINST UNDISTURBED SOIL OR APPROVED COMPACTED FILL. THIS PLAN IS NOT SUITABLE WHERE POTENTIAL EXISTS FOR DIFFERENTIAL MOVEMENT FROM DISSIMILAR SOIL CONDITIONS UNDER POOL, INCLUDING BUT NOT LIMITED TO CUT–FILL TRANSITIONS.
2. ALL REINFORCING STEEL SHALL BE DEFORMED BARS & CONFORM TO ASTM A615 GRADE 40 FOR #3 BARS AND #4 BARS. SPLICES TO BE LAPPED A MINIMUM OF 24". MINIMUM CLEARANCE BETWEEN PARALLEL BARS IS 2 1/2". #5 BARS USED ON SUPPLEMENTARY DETAILS SHALL BE GRADE 60 (UNLESS NOTED) AND BE LAPPED A MIN OF 30".
3. (1) #4 BAR IS EQUIVALENT TO AND MAY BE USED IN PLACE OF (2) #3 BARS, WITH THE EXCEPTION THAT IF #4 BARS ARE USED FOR THE BASIC GRID, THE MAXIMUM SPACING IS #4 BARS AT 18" O.C..
4. BONDING/GROUNDING (PER THE CEC) OF THE STRUCTURAL REINFORCING MUST BE INSTALLED PRIOR TO PLACEMENT OF CONCRETE/SHOTCRETE.
5. PORTLAND CEMENT SHOTCRETE SHALL CONFORM TO ASTM C150 AND SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 2,500 PSI AND A WATER/CEMENT RATIO LESS THAN OR EQUAL TO 0.45.
6. WHERE SHOTCRETE IS EXPOSED TO SOIL OR WATER CONTAINING DELETERIOUS AMOUNTS OF WATER SOLUBLE SULFATE, OR WHERE INTENDED TO HAVE LOW PERMEABILITY WHERE EXPOSED TO WATER, SHOTCRETE SHALL HAVE A MIN. COMPRESSIVE STRENGTH OF 4,500 PSI, W/C RATIO ≤ 0.45, AND SHALL UTILIZE TYPE V CEMENT.
7. KEEP CONCRETE DAMP CONTINUOUSLY FOR 14 DAYS.
8. ALL INTERIOR SURFACES OF POOL/SPA SHALL BE COATED WITH A WATERPROOF SURFACE.

GLAZING IN HAZARDOUS LOCATIONS

GLAZING SHALL COMPLY WITH THE CBC SECTION 2406.4, INCLUDING LOCALLY ADOPTED AMENDMENTS.

1. GLAZING IN WALLS AND FENCES USED AS A BARRIER SHALL BE SAFETY GLAZING WHEN ALL OF THE FOLLOWING CONDITIONS ARE PRESENT:
   A. THE BOTTOM EDGE OF THE GLAZING IS LESS THAN 60" ABOVE ANY STANDING OR WALKING SURFACE.
   B. THE GLAZING IS WITHIN 5 FEET OF A SWIMMING POOL OR SPA DECK AREA.

CONTINUOUS SHOTCRETE INSPECTION

WHERE REQUIRED BY THE PERMITTING AGENCY, PNEUMATIC CONCRETE PLACEMENT SHALL BE INSPECTED BY A SPECIAL INSPECTOR IN CONFORMANCE WITH CBC SECTION 1704, WHO SHALL SUBMIT A STATEMENT INDICATING COMPLIANCE WITH THE PLANS AND SPECIFICATIONS.

TITLE 24

1. PUMPS SHALL BE SIZED PER SECTION 150(p) OF THE LATEST ADOPTED EDITION OF THE BUILDING ENERGY EFFICIENCY STANDARDS.
2. A LENGTH OF STRAIGHT PIPE GREATER THAN OR EQUAL TO 4 PIPE DIAMETERS SHALL BE INSTALLED BEFORE THE PUMP.
3. ALL ELBOWS SHALL BE SWEEP ELBOWS.
4. MANDATORY REQUIREMENTS FOR POOL & SPA HEATING SYSTEMS & EQUIPMENT:
   4.1. SYSTEM IS CERTIFIED WITH: THERMAL EFFICIENCY THAT COMPLIES WITH THE APPLIANCE EFFICIENCY REGULATIONS, READILY ACCESSIBLE ON-OFF SWITCH, WEATHERPROOF OPERATING INSTRUCTIONS ON ENERGY EFFICIENT OPERATIONS, NO ELECTRIC RESISTANCE HEATING AND NO PILOT LIGHT.
   4.2. SYSTEM IS INSTALLED WITH:
   A) AT LEAST 36" PIPE BETWEEN FILTER & HEATER FOR FUTURE SOLAR HEATING.
   B) COVER FOR OUTDOOR POOLS OR OUTDOOR SPA.
   4.3. POOL SYSTEM HAS DIRECTIONAL INLETS & A CIRCULATION PUMP TIME SWITCH TO PERMIT OFF PEAK OPERATION.

FENCING AND BARRIERS

1. PRIOR TO FILLING, THE POOL AND OR SPA SHALL BE COMPLETELY ENCLOSED BY 5' MIN. HIGH FENCING & GATES WITH NO OPENINGS 4" OR GREATER. GATES TO BE SELF-CLOSING & SELF-LATCHING WITH LATCH A MIN. OF 5' HIGH. ACCESS GATES THROUGH FENCING SHALL OPEN AWAY FROM THE POOL. MAXIMUM VERTICAL CLEARANCE FROM GROUND TO POOL FENCING SHALL NOT EXCEED 2 INCHES. WHERE THIS VARIES FROM LOCAL CODES, THE LOCAL CODES SHALL PREVAIL.
2. BARRIERS SHALL COMPLY WITH CBC SECTION 3109.2 (HS CODE §§ 115920–115929), INCLUDING LOCALLY ADOPTED AMENDMENTS.
   A. IN THE COUNTY OF LOS ANGELES, BARRIERS REQUIRED BY CHAPTER 11.50 OF THE LOS ANGELES COUNTY HEALTH AND SAFETY CODE AND ORDINANCE 95–0039 SHALL BE REQUIRED. THESE BARRIER REQUIREMENTS SHALL BE ATTACHED TO THE SWIMMING POOL SITE PLAN.

COUNTY OF LOS ANGELES SPECIAL NOTES

1. IN THE COUNTY OF LOS ANGELES, THE DEPARTMENT OF PUBLIC WORKS, BUILDING & SAFETY/LAND DEVELOPMENT DIVISION NOTES TITLED BARRIERS FOR SWIMMING POOL, SPAS, AND HOT TUBS FOR R–3 OCCUPANCIES SHALL BE ATTACHED TO AND MADE A PART OF THE SITE PLAN.
2. CONSTRUCTION TO BE PER THE LATEST ADOPTED EDITION OF THE LOS ANGELES COUNTY BUILDING CODE (LACBC).
3. IN LOS ANGELES COUNTIES SETBACK TO TOE OF ASCENDING SLOPE SHALL NOT BE LESS THAN 1 1/2 FEET & SETBACK TO TOP OF DESCENDING SLOPE SHALL NOT BE LESS THAN 2 1/2 FEET.
4. ALL POOL CONSTRUCTION SHALL BE BASED ON AN EQUIVALENT FLUID PRESSURE EQUAL TO OR GREATER THAN 60 P.C.F., UNLESS A SOILS REPORT IS SUBMITTED FOR REVIEW.

CITY OF SIMI VALLEY SPECIAL NOTES

1. SEE THE ATTACHED "CITY OF SIMI VALLEY RESIDENTIAL SWIMMING POOL NOTES" FOR BUILDING CODE REQUIREMENTS AND DISPOSAL OF POOL WASTEWATER.
2. THE MINIMUM DESIGN EQUIVALENT FLUID PRESSURE (EFP) IS 60 PSF/FT (PCF) FOR POOLS SET IN LEVEL GRADE/LEVEL BACKFILL THAT MEET THE CITY OF SIMI VALLEY SLOPE SETBACK REQUIREMENTS FOR POOL PROJECTS THAT DO NOT SUBMIT OR REQUIRE A SOILS REPORT (CBC TABLE 1610.1).

UNINCORPORATED COUNTY OF ORANGE SPECIAL NOTES

1. WHERE SITE SPECIFIC SOIL TESTING HAS NOT BEEN PERFORMED:
   1.1. POOLS SHALL BE DESIGNED FOR A MINIMUM DESIGN EQUIVLENT FLUID PRESSURE (E.F.P.) OF 100 P.S.F.
   1.2. ALL CONCRETE IN CONTACT WITH SOIL SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH (F'_c) EQUAL TO 4,500 P.S.I., TYPE V CEMENT, AND W/C RATIO EQUAL TO 0.45. (THIS SHALL SUPERSEDE ALL OTHER LOWER F'_c SPECIFICATIONS SET FORTH).
   1.3. DROWNING PREVENTION SAFETY FEATURES SHALL BE PROVIDED PER COUNTY ORDINANCE NO. 19–006 SECTION AV100.

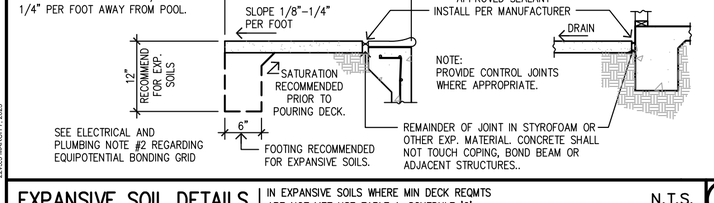
COUNTY OF SAN BERNARDINO SPECIAL NOTES

1. THESE PLANS ARE FOR PRIVATE RESIDENTIAL USE ONLY.
2. ALL POOL CONSTRUCTION SHALL COMPLY WITH THE 2021 INTERNATIONAL SWIMMING POOL AND SPA CODE (ISPSC) AND COUNTY OF SAN BERNARDINO INFORMATION BULLETIN IB–0007. PERMIT APPLICANT SHALL PROVIDE PLANS SHOWING POOL ARCHITECTUAL DESIGN AND GEOMETRY.
3. IN THE ABSENCE OF SITE SPECIFIC SOIL TESTING: POOL CONSTRUCTION SHALL BE BASED ON AN E.F.P. OF 60 P.C.F. OR GREATER AND ALL CONCRETE IN CONTACT WITH SOIL SHALL HAVE AT MIN: F'_c = 4,500 PSI, TYPE V CEMENT AND W/C RATIO = 0.45
4. ENGINEER OF RECORD SHALL PROVIDE SITE PLAN REVIEW STAMP AND SIGNATURE ON SITE PLAN VERIFYING APPROPRIATE PROPOSED POOL LOCATION.

CITY OF SANTA CLARITA SPECIAL NOTES

CONSTRUCTION MATERIALS, CONCRETE, PLASTER, DIRT, GRAVEL, SAND, AND ACIDS AS WELL AS ANY WASH WATERS ARE PROHIBITED FROM ENTERING THE STREET, GUTTER, AND STORM DRAIN SYSTEM PER THE SANTA CLARITA MUNICIPAL CODE.
USE PROPER BEST MANAGEMENT PRACTICES TO PREVENT OR CAPTURE ANY CONSTRUCTION ACTIVITY RUNOFF INTO THE STORM DRAIN SYSTEM.

TYPICAL LONGITUDINAL SECTION — N.T.S. — 2

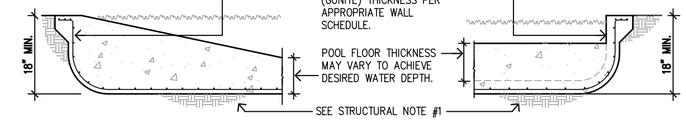


NOTE:
WHEN ACTUAL SITE CONDITIONS EXCEED THE LIMITATIONS BELOW OR ADDITIONAL SURCHARGES NOT COVERED BY THIS PLAN ARE PRESENT, ADDITIONAL SURCHARGE DETAILS ARE REQUIRED.

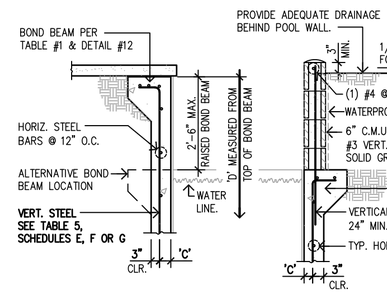
POOLS SHALL COMPLY WITH SLOPE SETBACKS (CBC 1808.7.3)

SURCHARGE CONDITIONS — ADDITIONAL SPECIAL DETAILS REQUIRED FOR CONDITIONS ABOVE — N.T.S. — 3

SLOPING ENTRIES SHALL CONFORM TO ANSI/APSP/ICC–5 AND/OR THE ISPSC (WHERE ADOPTED)



STANDARD WALL SECTION — N.T.S. — 1



MASONRY NOTES:

1. CONCRETE BLOCK SHALL BE NORMAL WEIGHT UNITS (135 PCF), CONFORMING TO CBC/IBC SEC. 2103, AND ASTM C 90. ALL CONCRETE BLOCK SHALL HAVE A DESIGN STRENGTH OF $f'm$ = 2000 psi.
2. GROUT SHALL CONFORM TO CBC/IBC SEC. 2103 & ASTM C 476 WITH $f'c$=2,000 PSI.
3. MORTAR SHALL BE TYPE M WITH $f'c$ = 2500 psi AND SHALL CONFORM TO CBC/IBC SEC. 2103 & ASTM C 270.

TABLE NO. 5 RAISED BOND BEAM

NON-EXPANSIVE	EXPANSIVE	NO DECK/HIGH EXP.
E	F	G

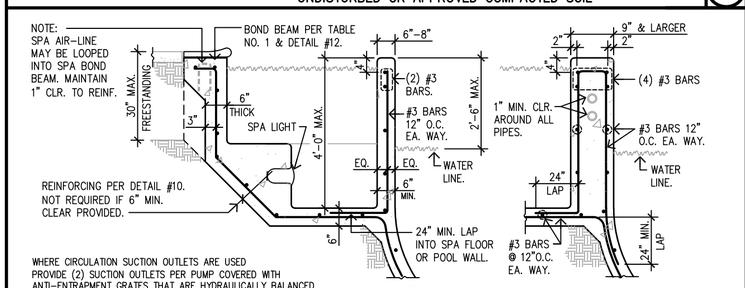
E.F.P.	30 P.C.F.		45 P.C.F.		62.4 P.C.F.	
D	C	VERTICAL STEEL	C	VERTICAL STEEL	C	VERTICAL STEEL
3'6"	3"	#3 @ 6"	3"	#3 @ 6"	3"	#3 @ 6"
4'0"	3"		3"		4"	
4'6"	3"		3½"		5"	
5'0"	3"	#3 @ 6"	3½"	#3 @ 6"	5"	#3 @ 6"
5'6"	3"		4"		6"	
6'0"	3"		5"		7"	
6'6"	4"		6"		8"	
7'0"	5"		6"	#3 @ 4"	8"	#3 @ 3"
7'6"	5½"		6"		8"	
8'0"	6"		7"		8"	
8'6"	6"		8"		8"	
9'0"	9"		10"		11½"	
10'0"	9"		11"		12"	
11'0"	9"		11"		12½"	

ITEM NOT APPLICABLE — POOL ENGINEERING, INC.

NOTES — BY THE USE OF THIS PLAN, THE USER ACKNOWLEDGES THAT HE HAS READ & UNDERSTANDS ALL OF THE NOTES INCLUDED HEREIN. — 6

SPA DETAILS — SPA DETAILS MAY BE USED FOR SPAS WITHOUT POOLS. — N.T.S. — 7

SHALLOW FEATURES — MAINTAIN 18" MIN. EMBEDMENT INTO UNDISTURBED OR APPROVED COMPACTED SOIL — N.T.S. — 4



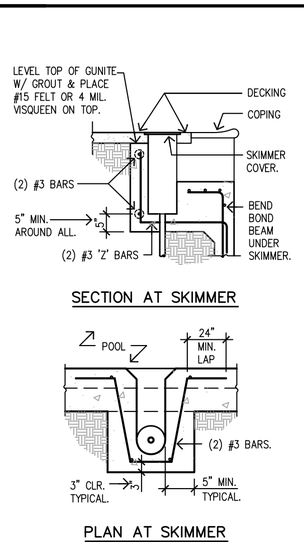
WHERE CIRCULATION SUCTION OUTLETS ARE USED PROVIDE (2) SUCTION OUTLETS THAT ARE HYDRAULICALLY BALANCED AND SYMMETRICALLY PLUMBED THROUGH "T" FITTINGS. DRAINS SHALL BE SEPARATED BY THREE FEET IN ANY DIMENSION. SEE ELECTRICAL AND PLUMBING NOTE 8.

DAM WALL	6" DAM	– LAP INTO SPA REINF.
HORIZ. BAR LAP SPLICE:	12" DAM	– LAP INSIDE BARS INTO SPA REINF. – LAP OUTSIDE BARS INTO POOL REINF.

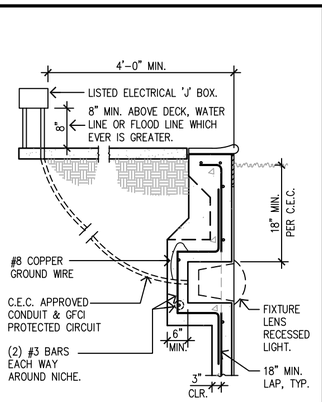
RAISED BOND BEAM — N.T.S. — 5

EXPANSIVE SOIL DETAILS | IN EXPANSIVE SOILS WHERE MIN DECK REQMTS ARE NOT MET USE TABLE 1, SCHEDULE 'C' — N.T.S. — 8

SKIMMER DETAIL — N.T.S. — 9

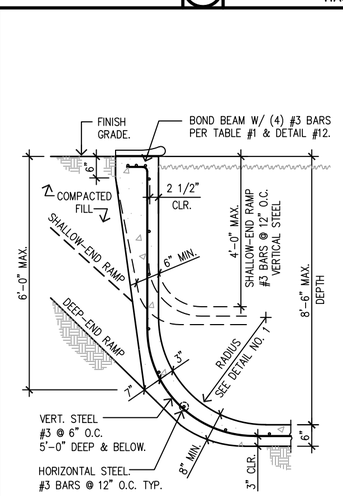


SECTION AT LIGHT — N.T.S. — 10



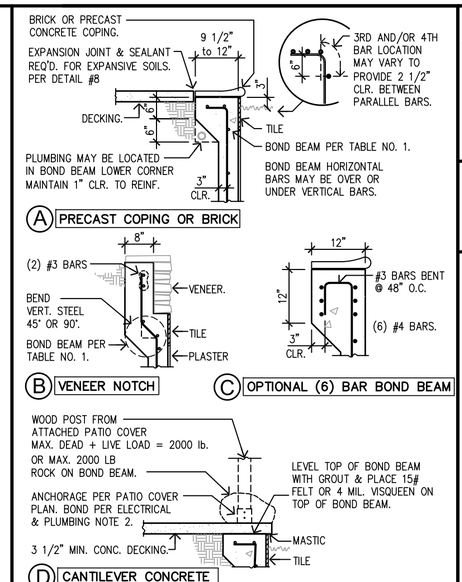
NOTES:
1. INSTALL NO. 8 COPPER GROUND WIRE FROM LIGHT NICHE TO BRASS CONDUIT TO POOL REBAR, OR NON–METALLIC CONDUIT CAN BE USED WITH INSULATED NO. 8 COPPER WIRE INTERIOR W/ APPROVED POTTING COMPOUND PER THE C.E.C.
2. SWIMMING POOL LIGHTING FIXTURES SHALL COMPLY WITH APPLICABLE UNDERWRITERS' LABORATORIES REQUIREMENTS FOR LIGHTING FIXTURES U.L. STANDARD 676.

SHALLOW/DEEP END RAMP — 11

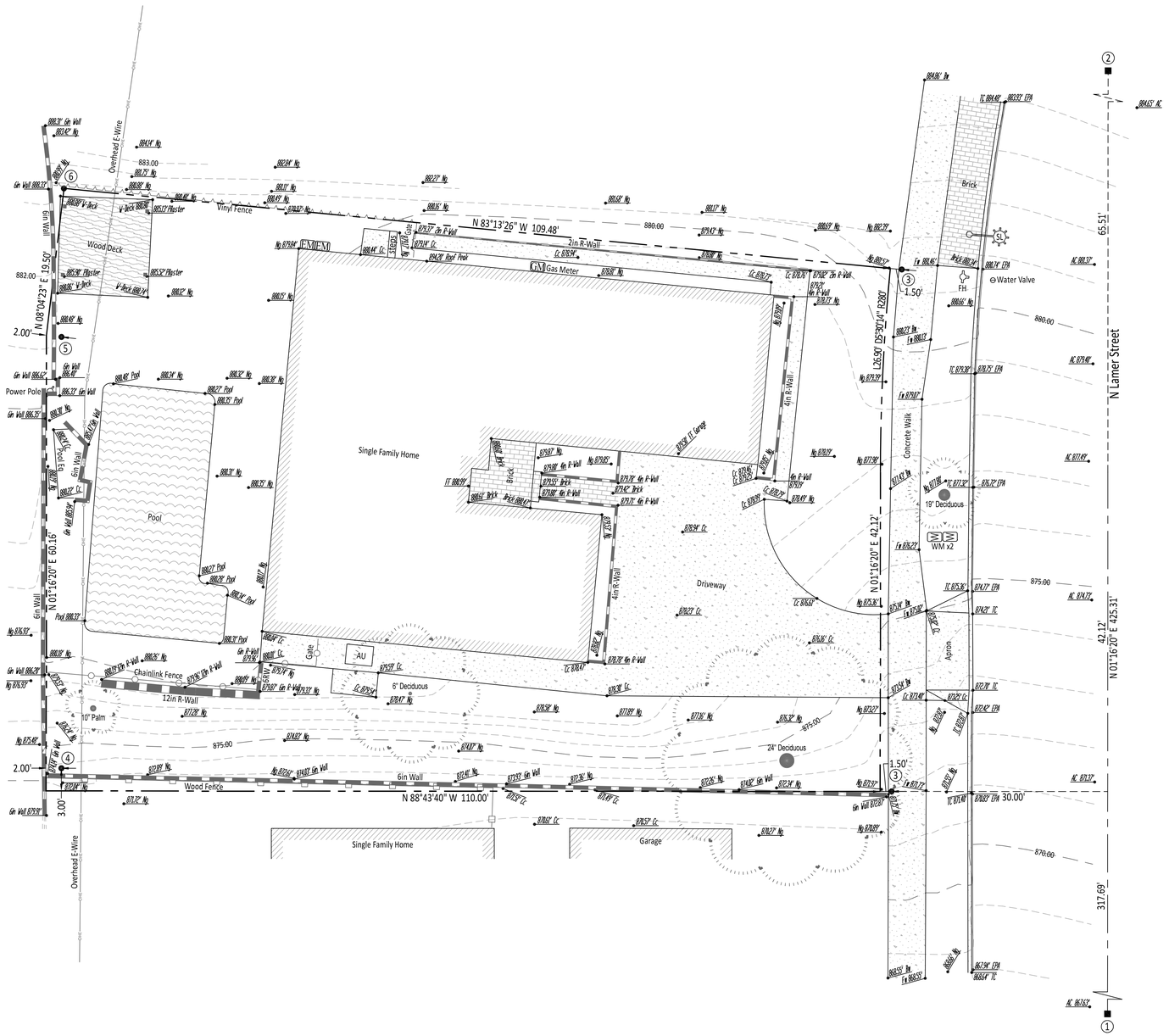


NOTE:
EXTRA REINFORCING TO EXTEND 24" MIN. EACH SIDE OF RAMP.

BOND BEAM DETAILS — N.T.S. — 12



PROPERTY



Legend

- Lot Line
- Tree Dripline
- Wall
- Wood Fence
- Electric Meter
- Gas Meter
- Point Established or Found
- Point Set
- Street Light
- Sewer Manhole
- Sewer Clean Out
- Tree Trunk
- Water Meter
- Building
- Concrete
- Pool

Abbreviations

AC	Asphalt
AU	A/C Unit
Cc	Concrete
Bw	Back of Walk
FF	Finished Floor
FH	Fire Hydrant
FL	Flowline
Fw	Front of Walk
GM	Gas Meter
Ng	Natural Ground
R-Wall	Retaining Wall
SL	Street Light
ssco	Sewer Clean Out
TC	Top of Curb
WM	Water Meter
6RW	6in R-Wall

References

R1 Tract No. 18923 M.B. 576~1-5
R2 PWFB1818~900-901
R3 PWFB1818~756-757

Monuments

1. Found spike & LS 4016 washer per R2.
2. Found spike & LS 4016 washer per R3.
3. Set LS 7764 tag on lot line produced 1.50' from lot corner.
4. Set 5/8" rebar with LS 7764 cap on double offset from lot lines as shown.
5. Set 5/8" rebar with LS 7764 cap on 2.00' offset from lot corner.
6. Set 5/8" rebar with LS 7764 cap at lot corner.

LICENSED LAND SURVEYOR
MARK E. PRICE
LS 7764
STATE OF CALIFORNIA
01-27-2024

0 8 16 24

Revisions	Date

Basis of Bearings:
Bearing = North 01°16'20" East

Centerline of Lamer Street per Tract No 18923 M.B. 576 Pages 1 - 5.

Benchmark 2205-1
Elevation = 844.86 Feet

N CL OF SCOTT RD. ABOUT 48
FT E OF THE CL OF KEYSTONE ST. TOP
NW CORNER OF A 14x2 FOOT CATCH
BASIN WITH DROP INLET, N OF
SCOTT RD.

Client:

Project Number
24-0030

Date	01-25-2024
Drawn	JA
Approved	MP
Scale	1" = 8'
Sheet	1 of 1

IZONE Engineering & Testing
13406 Saticoy St.
North Hollywood, CA 91605
(747) 200-7722
office@izone-engineering.com

Boundary & Topographic Survey

2925 N Lamer St.
Burbank, CA 91605
Lot 87 Tract 18923
M.B. 576 Pages 1 - 5
APN 2471-022-028