

## INTRODUCTION

THE CITY OF LAGUNA NIGUEL STANDARD WALL PLAN APPLIES TO RETAINING WALLS, SITE RETAINING WALLS, AND BLOCK FENCES OVER 3 FEET HIGH AND LESS THAN 6 FEET HIGH WITH A RETAINING CONDITION, MEASURED FROM THE BOTTOM OF FOOTING.

ANY OTHER CONFIGURATION WILL REQUIRE A STRUCTURAL DESIGN, PREPARED BY A REGISTERED PROFESSIONAL ENGINEER OR LICENSED ARCHITECT. BLOCK WALLS NOT INCORPORATING A RETAINING CONDITION MAY USE THE BLOCK WALL STANDARD # 117.

WALLS THAT ARE CONSTRUCTED ON OR ADJACENT TO THE COMMON PROPERTY LINE ARE REQUIRED TO FILL OUT **FORM 112 - COMMON WALL AGREEMENT**. PROJECTS WITHOUT A SIGNED COMMON WALL AGREEMENT FORM WILL NOT BE ISSUED.

THE "COMMON WALL AGREEMENT" NEEDS TO CONTAIN THE FOLLOWING INFORMATION:

- IDENTIFY PROPERTY OWNERS
- IDENTIFY THE AFFECTED LOTS
- PROVIDE A GENERAL DESCRIPTION OF THE LOCATION AND NATURE OF THE PARTY WALL (REFERENCE TO A PLAN OR DRAWINGS AS AN EXHIBIT WOULD BE PREFERRED)
- SIGNATURES OF EACH PROPERTY OWNER

THE COMMON WALL AGREEMENT WILL BE SUBMITTED TO THE PLANNING DIVISION FOR PROCESSING AND APPROVAL.

IF THE PROPERTY IS LOCATED WITHIN A HOMEOWNERS ASSOCIATION (HOA), AN HOA APPROVAL LETTER IS REQUIRED PRIOR TO PERMIT ISSUANCE.

THE DISCHARGE OF POLLUTANTS, CONSTRUCTION MATERIALS OR CONSTRUCTION BY-PRODUCTS ONTO CITY STREETS OR STORM DRAINS IS PROHIBITED

FINISH GRADE AROUND THE STRUCTURE SHALL BE SLOPED BY 2% AWAY FROM THE BUILDING FOR DRAINAGE PURPOSES

THIS STANDARD PLAN CAN NOT BE USED WHEN ANY OF ONE OF THE FOLLOWING CONDITIONS EXIST: WALLS THAT SUPPORT ANY SURCHARGE, WALLS SUPPORTING A BACK SLOPE, WALLS THAT ARE LOCATED ON OR ABOVE A COASTAL BLUFF, WALLS THAT ARE LOCATED IN AN AREA WITH A HISTORY OF SLOPE FAILURE OR WALLS THAT ARE LOCATED WITHIN OR ADJACENT TO ANY FLOOD PLAIN OVERLAY DISTRICT.

## GENERAL INFORMATION

A SEPARATE PERMIT(S) IS/ARE REQUIRED FOR ACCESSORY BUILDINGS, SWIMMING POOLS, SHORING, RETAINING WALLS, BLOCK WALLS OVER 42" FEET IN HEIGHT, PATIO COVERS, DEMOLITION, ETC.

## CONCRETE MIX

THE CONCRETE TRANSIT MIXED FOR FOOTINGS SHALL MEET THE STRENGTH OF  $F'_c = 4500\text{psi}$  TYPE V. WATER/CEMENT RATIO OF 0.45, UNLESS A SOILS REPORT RECOMMENDS OTHERWISE. PORTLAND CEMENT SHALL CONFORM TO ASTM C 150, TYPE V. DEPUTY INSPECTION IS NOT REQUIRED. PROVIDE A "TRIP" TICKET BATCH PLANT RECEIPT FOR VERIFICATION OF CONCRETE MIX (4500psi, TYPE V)

## CONCRETE BLOCK

GRADE "N" UNITS ASTM C-90  $f'_m=1,500$  PSI

## MORTAR MIX

MORTAR SHALL BE FRESHLY PREPARED AND UNIFORMLY MIXED IN THE RATIO BY VOLUMES OF 1 PART CEMENT, 1/2 PART LIME PUTTY, 4 1/2 PARTS SAND AND SHALL CONFORM TO ASTM C 270. IF PLASTIC TYPE CEMENT IS USED, THE LIME PUTTY SHALL BE OMITTED. CELLS WITH REINFORCEMENT SHALL NOT CONTAIN MORTAR PROJECTIONS OVER 1/4".

## GROUT MIX

GROUT SHALL BE OF FLUID CONSISTENCY. RATIO BY VOLUMES 1 PART CEMENT, 3 PARTS SAND OR 1 PART PORTLAND CEMENT, 3 PARTS SAND, 2 PARTS PEA GRAVEL (3/8" AGGREGATE). UNITS SHALL BE LAID A MAXIMUM OF 4 FEET BEFORE GROUTING. LIFTS UP TO 5 FEET MAY BE ALLOWED WITH THE USE OF CLEANOUTS AT THE REINFORCEMENT CELLS.

## REINFORCING STEEL

REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM A 615 GRADE 60 FOR #5 AND LARGER AND ASTM GRADE 40 FOR #4 AND SMALLER. LAP SPLICES SHALL LAP A MINIMUM OF 24" OR 40 TIMES THE REBAR DIAMETER, WHICH EVER IS GREATER.

## WALL DRAINAGE

PROVISIONS SHALL BE MADE TO RELIEVE HYDROSTATIC PRESSURE VIA A SUB DRAIN LOCATED BEHIND THE WALL. INSTALL SLOPED TO DRAIN 4" PERFORATED DRAIN LINE WITH FILTER FABRIC AND A MINIMUM 12" WIDE GRAVEL BACKFILL OR LEAVE OUT THE HEAD JOINTS IN THE FIRST COURSE OF BLOCK EVERY 32" AT GRADE LEVEL.

## FOOTINGS

FOOTING DESIGN IS BASED ON 1,500 PSF BEARING PRESSURE MAXIMUM WITHOUT A SOILS REPORT.

## INSTRUCTIONS:

1. FILL IN TITLE PAGE
2. DRAW THE SITE PLAN ON PAGE 2, SHOW LOCATION AND LENGTH OF WALLS.
3. IDENTIFY WHICH DETAILS ARE BEING USED ON PAGE 3

OWNER'S NAME \_\_\_\_\_

OWNER'S ADDRESS \_\_\_\_\_

CITY, STATE, ZIP \_\_\_\_\_

OWNER'S PHONE NUMBER \_\_\_\_\_

APN # \_\_\_\_\_

CONTRACTOR'S NAME \_\_\_\_\_ LIC. NUMBER \_\_\_\_\_

CONTRACTOR'S ADDRESS \_\_\_\_\_

CITY, STATE, ZIP \_\_\_\_\_

TOTAL AREA OF ALTERATION \_\_\_\_\_

PROJECT VALUATION \_\_\_\_\_

HOMEOWNERS ASSOCIATION APPROVAL  YES  NO

SCOPE OF WORK:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## PLEASE READ AND SIGN

THE OWNER AND/OR CONTRACTOR, AS THE APPLICANT FOR THIS PERMIT, HAS READ AND UNDERSTANDS THE INFORMATION ON THESE PAGES AND AGREE TO CONSTRUCT THE PROPOSED WALLS AS SHOWN ON THESE PLANS.

ALTERNATE WALL DESIGNS MAY BE POSSIBLE WHEN PROVIDED WITH AN ENGINEERED ANALYSIS. USE OF THIS CONVENTIONAL STANDARD DESIGN IS AT THE USERS RISK AND CARRIES NO IMPLIED OR INFERRED GUARANTEE AGAINST FAILURE OR DEFECTS.

NOTE: THESE PLANS WILL BE REVIEWED FOR COMPLIANCE TO THE DESIGN ASSUMPTIONS OF THIS HANDOUT AND FOR CODE COMPLIANCE BASE ON THE APPLICANT'S PROVIDED INFORMATION. SITE CONDITIONS THAT DIFFER FROM THE INFORMATION PROVIDED MAY REQUIRE ADDITIONAL REVIEW, FEES AND SEPERATE APPROVALS.

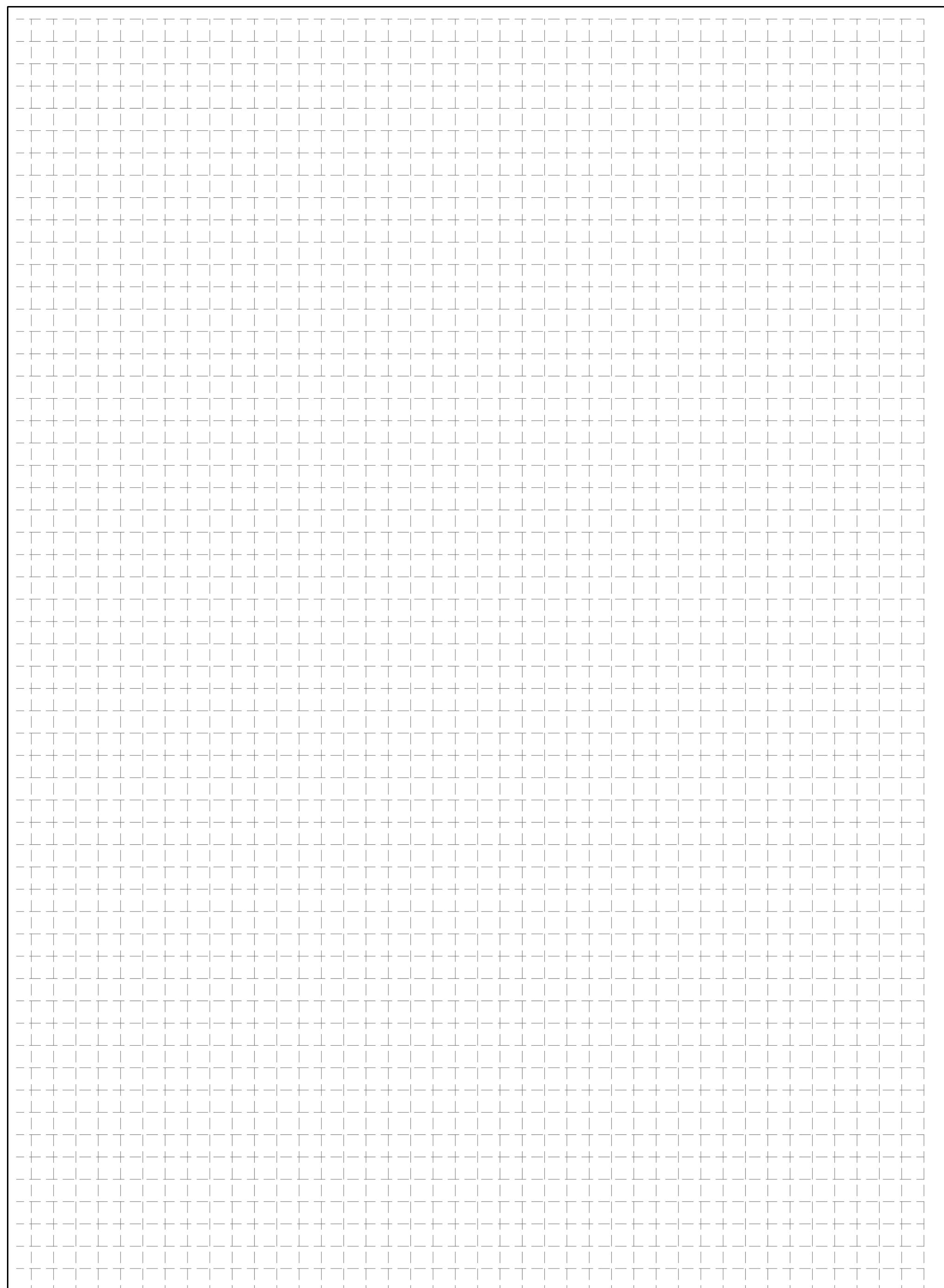
ALL WORK SHALL CONFORM TO THE CURRENT CALIFORNIA CODE OF REGULATIONS TITLE 24 AS AMENDED BY THE CITY OF LAGUNA NIGUEL MUNICIPAL CODE AND LOCAL ORDINANCES.

SIGNATURE OF OWNER/APPLICANT \_\_\_\_\_

DATE \_\_\_\_\_



## SECTIONS



**SECTIONS**  
SHEET 2 OF 3



**CITY OF LAGUNA NIGUEL**  
COMMUNITY DEVELOPMENT, BUILDING and SAFETY DIVISION  
30111 CROWN VALLEY PKWY, LAGUNA NIGUEL, CA 92677

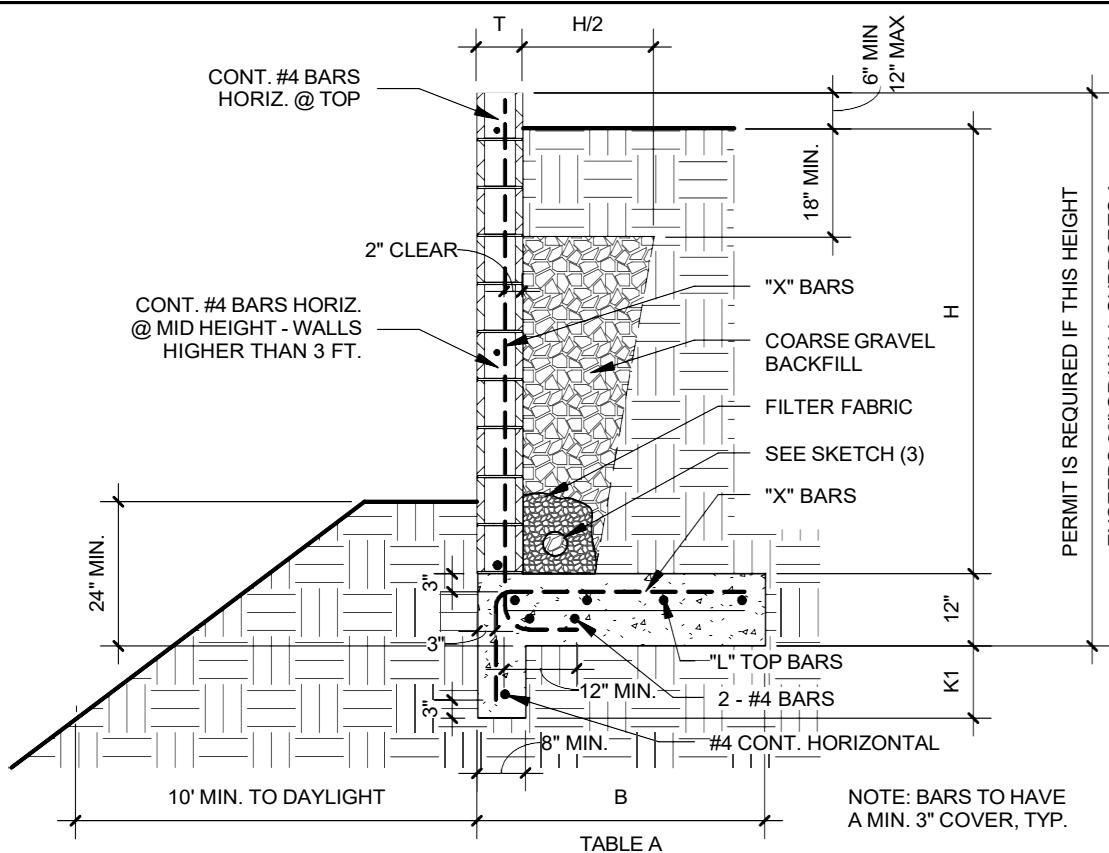
**RETAINING WALL STANDARD**

**119 - RETAINING WALLS**

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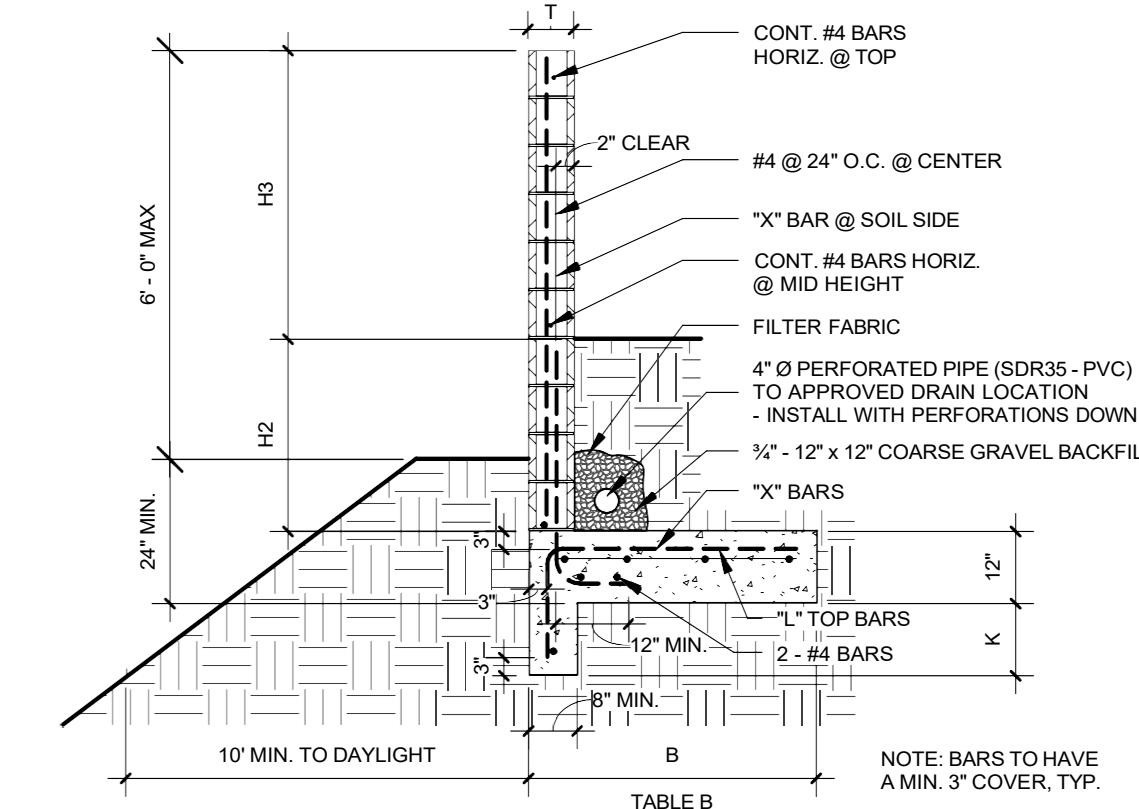
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### RETAINING WALL STANDARD



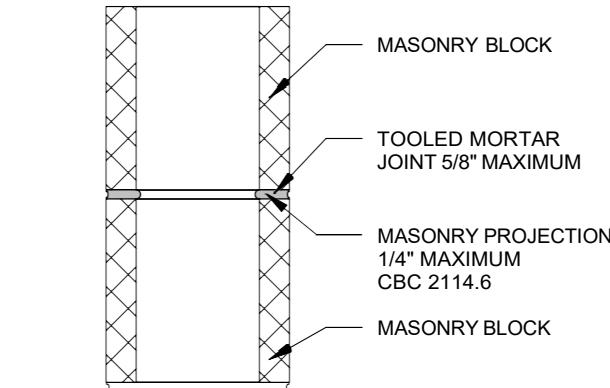
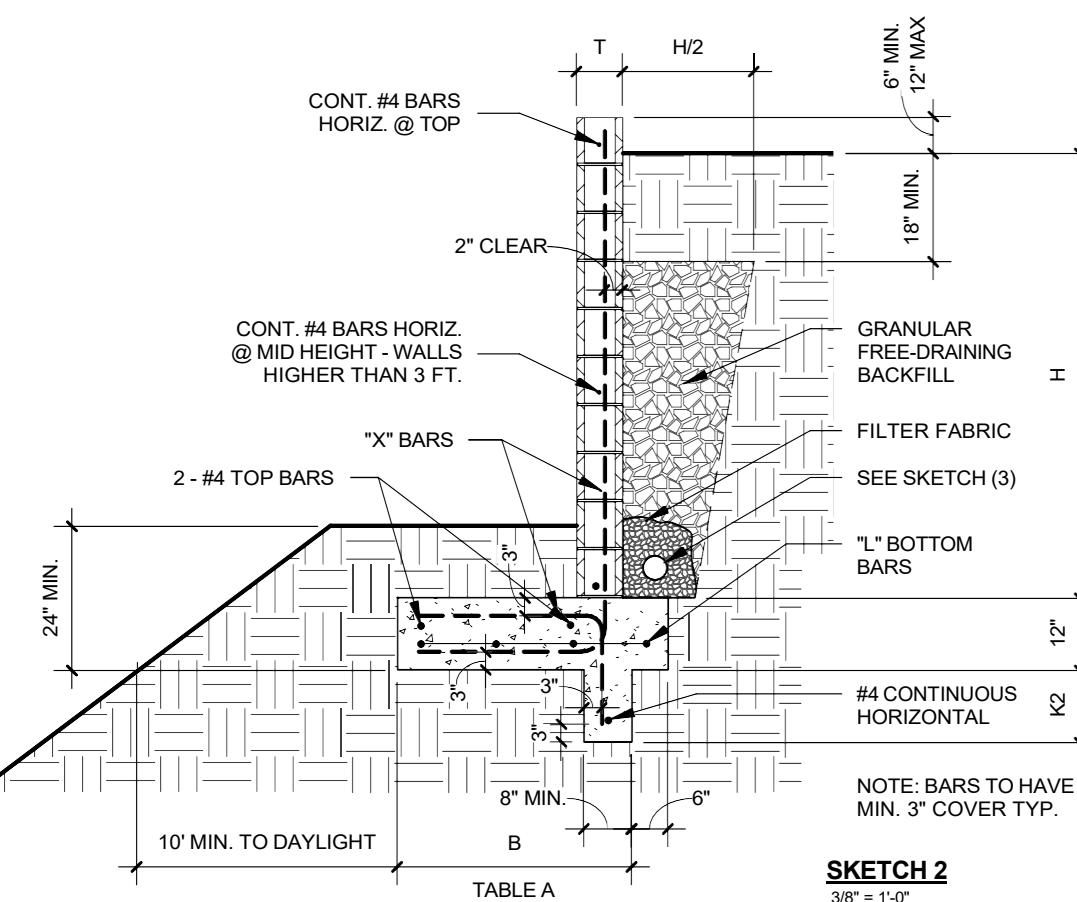
**SKETCH 1**

3/8" = 1'-0"



**SKETCH 3**

3/8" = 1'-0"



PRIOR TO GROUTING, THE GROUT SPACE SHALL BE CLEAN SO THAT ALL SPACES TO BE FILLED DO NOT CONTAIN MORTAR PROJECTIONS, MORTAR DROPPINGS, AND/OR OTHER FOREIGN MATERIALS. WALLS WITH EXCESS MORTAR DROPPINGS OR DEBRIS WILL REQUIRE CLEANOUTS.

#### MORTAR JOINT DETAIL

1 1/2" = 1'-0"

MIN BAR LAP	
#3 & #4	24"
#5	25"

#### RETAINING WALL INFORMATION TABLE A

H	B	T	X	L	K1	K2
>2' - 3'	3' - 0"	6"	#3 @ 24" O.C.	3 - #4	-	12"
>3' - 4'	3' - 8"	8"	#4 @ 24" O.C.	4 - #4	8"	18"
>4' - 5'	4' - 8"	8"	#5 @ 16" O.C.	4 - #5	12"	24"

SEE SKETCH (1) & (2)

#### FENCE / WALL INFORMATION TABLE B

H3	H2	B	T	X	L	K
4' - 5'	1' - 2'	3' - 8"	8"	#4 @ 24" O.C. @ CL	4 - #4	-
3' - 4'	2' - 3'	4' - 0"	8"	#4 @ 16" O.C. @ CL	4 - #4	12"
2' - 3'	3' - 4'	4' - 6"	8"	#5 @ 16" O.C. @ CL	4 - #4	16"

SEE SKETCH (3)

VERTICAL BARS SHALL BE LAPPED 2 FEET WHERE NOT CONTINUOUS. ALL HOOKS SHOWN SHALL BE STANDARD 90° HOOKS. SOLID GROUT ALL CELLS FOR THE ENTIRE WALL  
DESIGN BASED ON 60 PCF ACTIVE SOIL PRESSURE

**INSTRUCTIONS:**  
HIGHLIGHT OR CIRCLE BOTH THE WALL SECTION TO BE USED AND THE WALL HEIGHT OF THE APPLICABLE TABLE.

**NO SURCHARGE ALLOWED**



**SECTIONS**

SHEET 3 OF 3