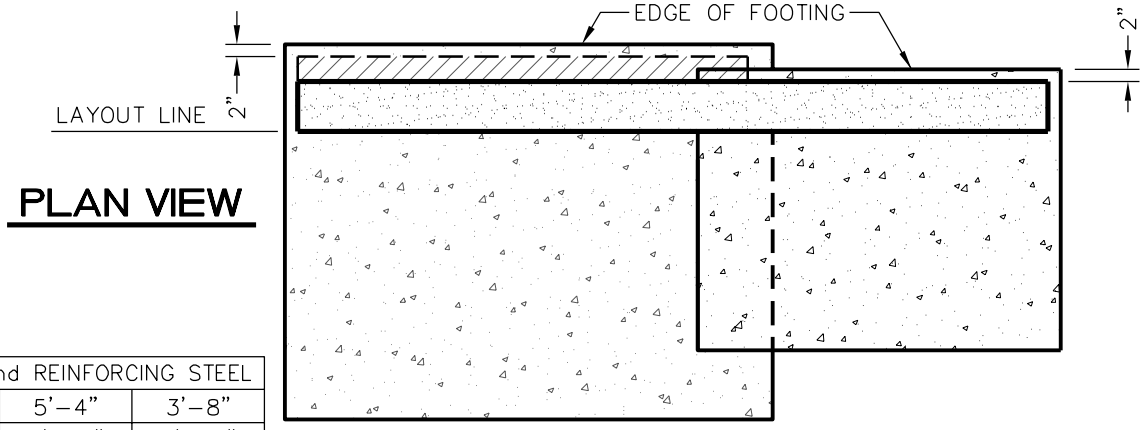
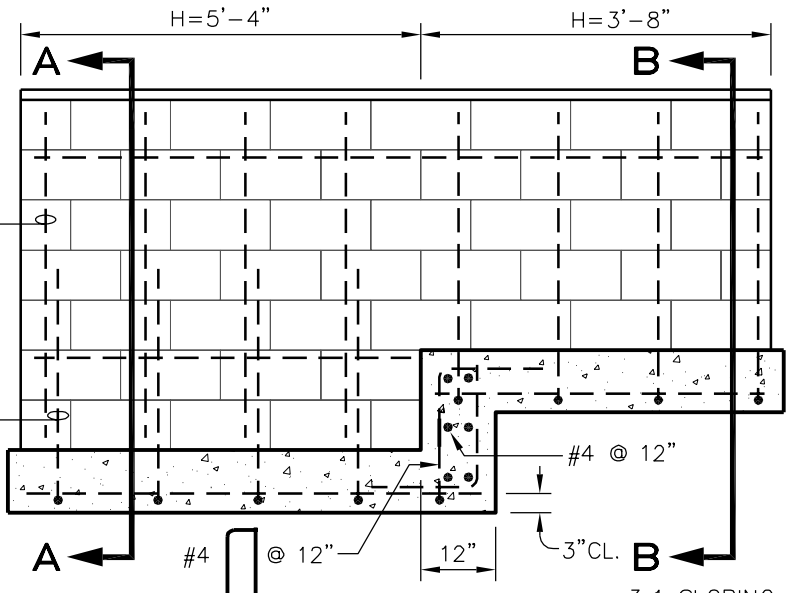


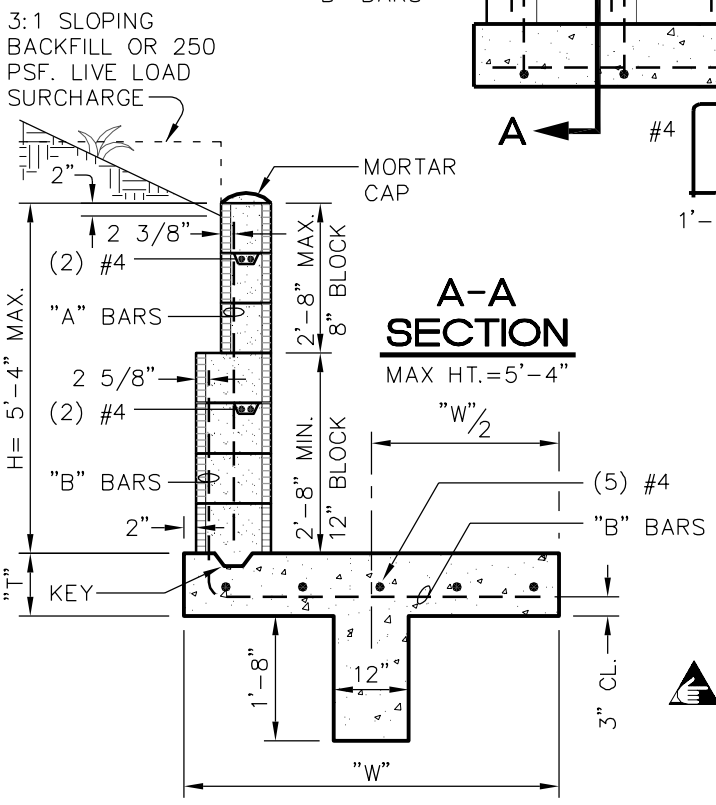

## PLAN VIEW

| DIMENSIONS and REINFORCING STEEL | | |
|---|---|---|
| H (MAX) | 5'–4" | 3'–8" |
| T (MIN) | 0'–10" | 0'–10" |
| W (MIN) | 5'–0" | 3'–9" |
| "A" BARS | #4 @ 16" | N/A |
| "B" BARS | #6 @ 16" | #4 @ 16" |
| MAX. TOE PRESS. (PSF) | 700 | 550 |



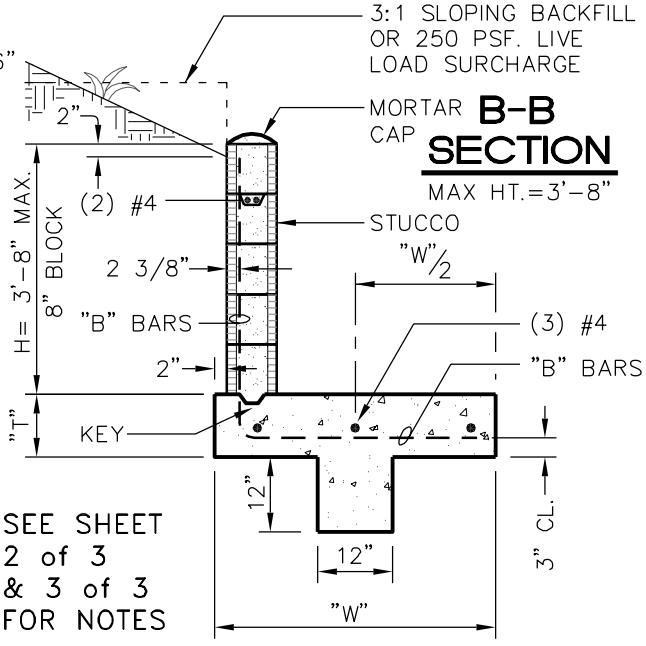

## ELEVATION

(HORIZONTAL REINFORCEMENT NOT SHOWN)




## A-A SECTION

MAX HT.=5'–4"




## B-B SECTION

MAX HT.=3'–8"

SEE SHEET 2 of 3 & 3 of 3 FOR NOTES

TOWN of CLAYTON

USE WITH THE TOWN of CLAYTON STANDARD SPECIFICATIONS ONLY

# TYPICAL MASONRY RETAINING WALL

| SCALE: | DETAIL # |
|---|---|
| Not To Scale | 408.02 |
| REVISION DATE: | SHEET #: |
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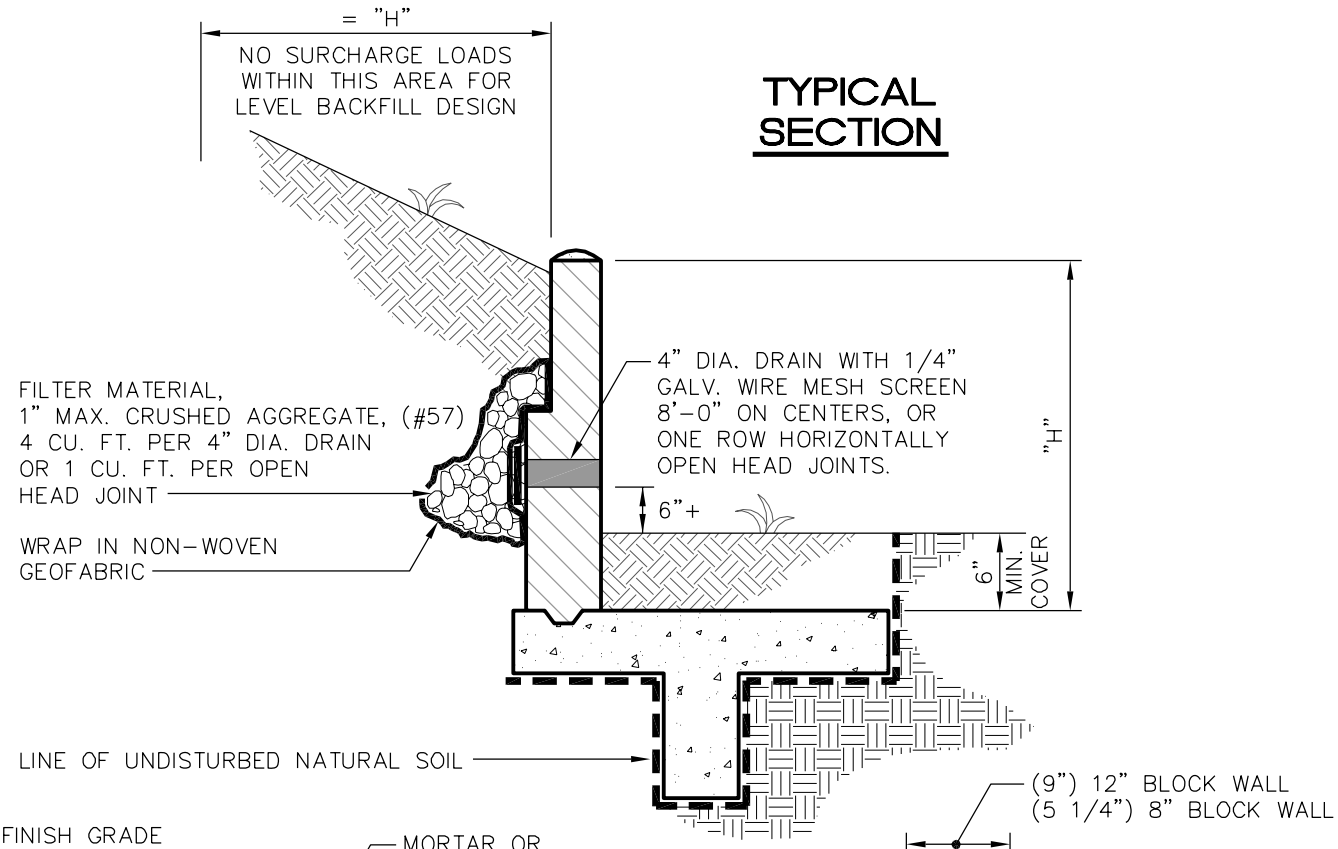


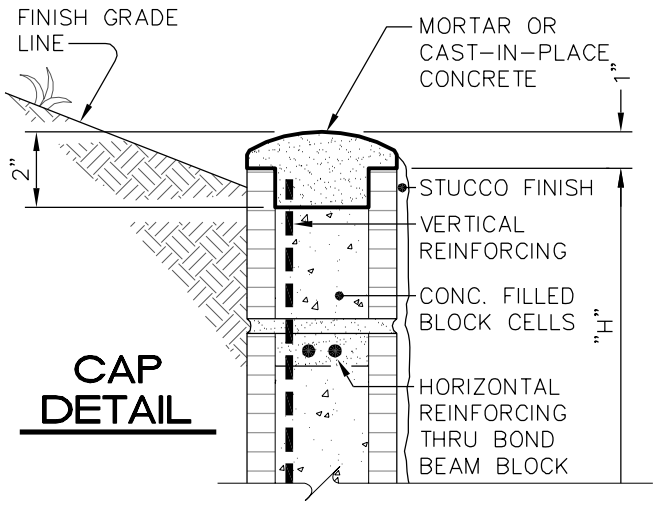


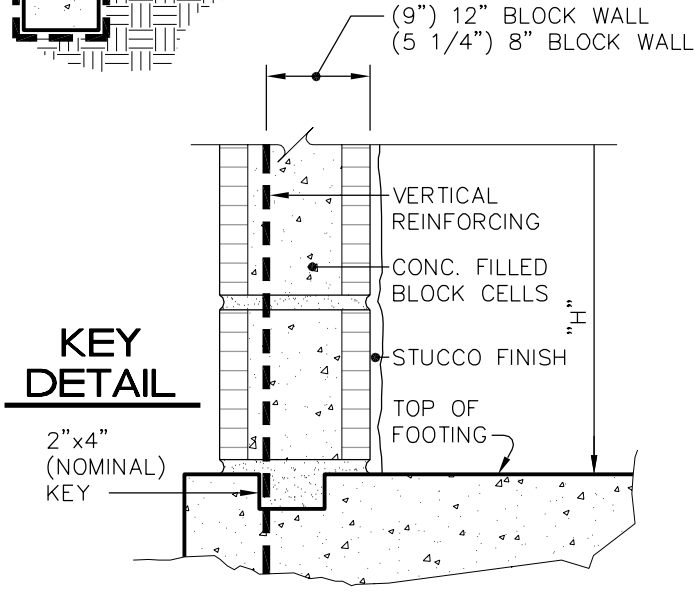


## NOTES:

1. All masonry retaining walls shall be constructed with cap, key, and drainage details as shown heron.
2. Fill all block cells solid w/3,000 psi concrete with pea gravel aggregate. Maximum vertical lift of cell fill = 4'-0".
3. Max. length of wall without vertical expansion joint shall be 60'.
4. Steps in footing shall be in modular 8" increments.
5. Do not permit horizontal reinforcement to cross vertical expansion joints.
6. The Town of Clayton will accept other type walls (Masonry segmental retaining walls, Gravity) if plans are prepared and sealed by a NC PE.

TOWN of CLAYTON

USE WITH THE TOWN of CLAYTON STANDARD SPECIFICATIONS ONLY

# TYPICAL MASONRY RETAINING WALL

| SCALE: | DETAIL # |
|---|---|
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## CONCRETE

1. All concrete shall be 3,000 psi.

## FINISH

1. Place a stucco finish on wall face.

## DESIGN CONDITIONS

1. Walls are to be used for the loading conditions shown for each type wall.
2. Design H shall not be exceeded.
3. Footing key is required except as shown otherwise or when found unnecessary by the Town Engineer.
4. Special footing design is required where foundation material is incapable of supporting toe pressure listed in table.

## DESIGN DATA

Reinforced Masonry:
F'm = 600 psi
Fm = 200 psi
Fs = 20,000 psi
n = 50
Earth = 120 pcf and equivalent fluid
pressure = 36 psf per foot of height

Reinforced Concrete:
F'c = 3000 psi
Fs = 20,000 psi
n = 50

walls shown for 1 –1/2:1 unlimited sloping surcharge are designed in accordance with Rankine's formula for unlimited sloping surcharge with ø = 33°–42'

## REINFORCEMENT

1. Conform to ASTM A615, Grade 60.
2. Bars shall lap 40 diameters, where spliced, unless otherwise shown on the plans.
3. Bends shall conform to the Manual of Standard practice, A.C.I.
4. Backing for hooks is four diameters.
5. All bar embedments are clear distances to outside of bar.
6. Spacing for parallel bars is center to center of bars.

## MASONRY

1. All reinforced masonry retaining walls shall be constructed of regular weight standard grade "A" units conforming to ASTM designation C–90 and manufactured in accordance with requirements of the Concrete Masonry Association Specifications. All masonry shall conform to the regulations of the NC Building Code.

## MASONRY MORTAR

1. The mortar shall be type S or M.
2. Mortar in horizontal joints shall fully cover all face shell and web members. Vertical joints shall be buttered to a depth greater than the thickness of the face shells of the block. Furrowing of mortar will not be permitted.

## EXCAVATION AND BACKFILL

1. Compaction of backfill material by jetting or ponding with water will not be permitted. Each layer of backfill shall be moistened as directed by the Engineer and thoroughly tamped, rolled or otherwise compacted until the relative compaction is not less than 90%.
2. No backfill material shall be deposited against masonry retaining walls until the grout has developed a strength of 2,000 pounds per square inch in compression as determined by test 2" cubes, or until the masonry retaining wall has cured for a minimum of 14 days.

## OPTIONAL MORTAR KEY

1. Embedment of the first course of black in a poured footing may be omitted by providing a mortar key. The key is formed by embedding a flat 2" x 4" flush with the top of the freshly poured footing. Remove the 2" x 4" after the concrete has started to harden.

NORTH CAROLINA CLAYTON 1869

TOWN of CLAYTON

USE WITH THE TOWN of CLAYTON STANDARD SPECIFICATIONS ONLY

# TYPICAL MASONRY RETAINING WALL

| SCALE: | DETAIL # |
|---|---|
| Not To Scale | 2408.02 |
| REVISION DATE: | SHEET #: |
| July, 2010 | 3 of 3 |