

| WIND EXPOSURE & VELOCITY | | |
|--------------------------|---------------|---------------------|
| NOISE BARRIER TYPE | WIND EXPOSURE | WIND VELOCITY (MPH) |
| 20A | B1 | 80 |
| 20B | B1 | 90 |
| 20C | B2 | 80 |
| 20D | B2 | 90 |

| SOIL TYPE | |
|-----------|---|
| SOIL TYPE | ANGLE OF INTERNAL FRICTION ϕ (DEGREES) |
| D1 | 32 |
| D2 | 38 |

| TIE SPACING | |
|-----------------|---------|
| BAR "A" SIZE | SPACING |
| #4 | 6" O.C. |
| #5 | 6" O.C. |
| #6 | 5" O.C. |
| #7, #8, #9, #10 | 4" O.C. |

| WALL HT H | TYPE 20A | | | | | |
|-----------|----------|----------|---------|---------|----------|--------------------|
| | DEPTH D1 | DEPTH D2 | BAR "A" | BAR "B" | BAR "C" | PILASTER SPACING L |
| 6' - 0" | 5' - 6" | 5' - 0" | 6 ~ #6 | 4 ~ #4 | #5 @ 32" | 16' - 0" |
| 8' - 0" | 6' - 6" | 5' - 6" | 6 ~ #6 | 4 ~ #4 | #5 @ 32" | 16' - 0" |
| 10' - 0" | 7' - 0" | 6' - 0" | 6 ~ #6 | 4 ~ #4 | #5 @ 32" | 16' - 0" |
| 12' - 0" | 7' - 9" | 6' - 6" | 6 ~ #6 | 4 ~ #5 | #5 @ 32" | 16' - 0" |
| 14' - 0" | 8' - 3" | 7' - 0" | 6 ~ #6 | 4 ~ #5 | #5 @ 32" | 16' - 0" |
| 16' - 0" | 9' - 0" | 7' - 6" | 6 ~ #6 | 4 ~ #6 | #5 @ 32" | 16' - 0" |
| 18' - 0" | 9' - 6" | 8' - 0" | 6 ~ #6 | 4 ~ #7 | #5 @ 32" | 16' - 0" |
| 20' - 0" | 10' - 3" | 8' - 6" | 6 ~ #6 | 6 ~ #7 | #5 @ 32" | 16' - 0" |
| 22' - 0" | 10' - 9" | 9' - 0" | 6 ~ #6 | 6 ~ #8 | #5 @ 32" | 16' - 0" |
| 24' - 0" | 11' - 3" | 9' - 6" | 6 ~ #6 | 6 ~ #9 | #5 @ 32" | 16' - 0" |

| WALL HT H | TYPE 20B | | | | | |
|-----------|----------|----------|---------|---------|----------|--------------------|
| | DEPTH D1 | DEPTH D2 | BAR "A" | BAR "B" | BAR "C" | PILASTER SPACING L |
| 6' - 0" | 6' - 6" | 5' - 9" | 6 ~ #6 | 4 ~ #4 | #5 @ 32" | 16' - 0" |
| 8' - 0" | 7' - 6" | 6' - 6" | 6 ~ #6 | 4 ~ #4 | #5 @ 32" | 16' - 0" |
| 10' - 0" | 8' - 6" | 7' - 0" | 6 ~ #6 | 4 ~ #5 | #5 @ 32" | 16' - 0" |
| 12' - 0" | 9' - 3" | 7' - 9" | 6 ~ #6 | 4 ~ #6 | #5 @ 32" | 16' - 0" |
| 14' - 0" | 10' - 0" | 8' - 6" | 6 ~ #6 | 4 ~ #7 | #5 @ 32" | 16' - 0" |
| 16' - 0" | 11' - 0" | 9' - 0" | 6 ~ #6 | 6 ~ #8 | #5 @ 32" | 16' - 0" |
| 18' - 0" | 11' - 9" | 9' - 9" | 6 ~ #6 | 6 ~ #9 | #5 @ 32" | 16' - 0" |
| 20' - 0" | 12' - 6" | 10' - 3" | 6 ~ #7 | 6 ~ #10 | #5 @ 32" | 16' - 0" |
| 22' - 0" | 12' - 6" | 10' - 3" | 6 ~ #7 | 6 ~ #10 | #5 @ 32" | 16' - 0" |
| 24' - 0" | 12' - 6" | 10' - 3" | 6 ~ #7 | 6 ~ #10 | #5 @ 32" | 12' - 0" |

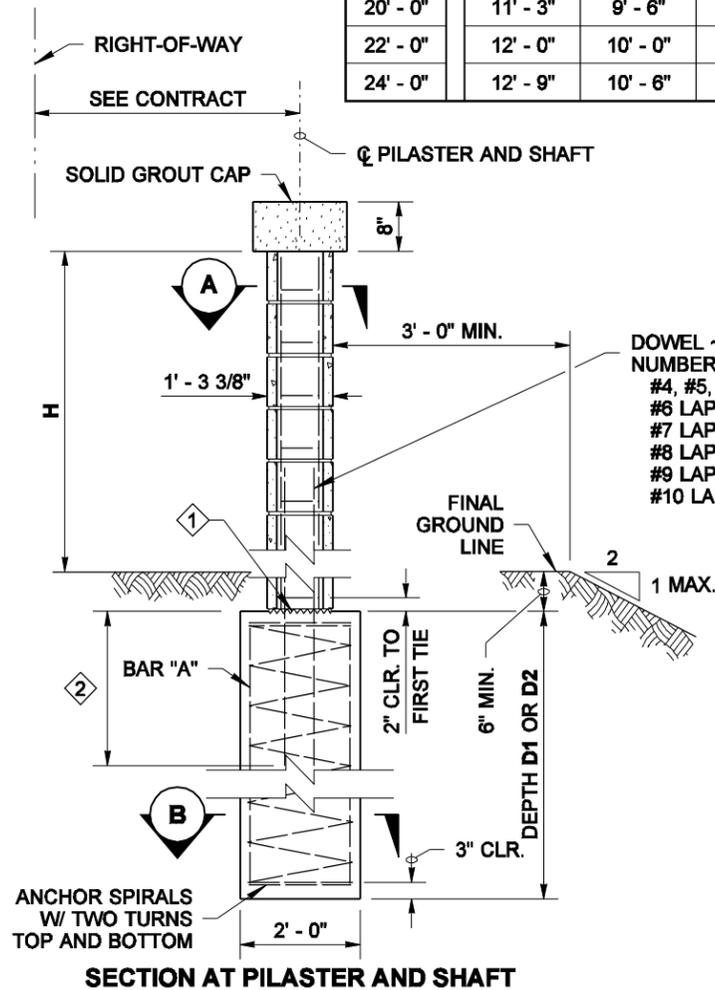
| WALL HT H | TYPE 20C | | | | | |
|-----------|----------|----------|---------|---------|----------|--------------------|
| | DEPTH D1 | DEPTH D2 | BAR "A" | BAR "B" | BAR "C" | PILASTER SPACING L |
| 6' - 0" | 6' - 3" | 5' - 3" | 6 ~ #6 | 4 ~ #4 | #6 @ 32" | 16' - 0" |
| 8' - 0" | 7' - 0" | 6' - 0" | 6 ~ #6 | 4 ~ #4 | #6 @ 32" | 16' - 0" |
| 10' - 0" | 7' - 9" | 6' - 6" | 6 ~ #6 | 4 ~ #5 | #6 @ 32" | 16' - 0" |
| 12' - 0" | 8' - 6" | 7' - 3" | 6 ~ #6 | 4 ~ #5 | #6 @ 32" | 16' - 0" |
| 14' - 0" | 9' - 3" | 7' - 9" | 6 ~ #6 | 4 ~ #6 | #6 @ 32" | 16' - 0" |
| 16' - 0" | 10' - 0" | 8' - 3" | 6 ~ #6 | 4 ~ #7 | #6 @ 32" | 16' - 0" |
| 18' - 0" | 10' - 9" | 9' - 0" | 6 ~ #6 | 6 ~ #7 | #6 @ 32" | 16' - 0" |
| 20' - 0" | 11' - 3" | 9' - 6" | 6 ~ #6 | 6 ~ #8 | #6 @ 32" | 16' - 0" |
| 22' - 0" | 12' - 0" | 10' - 0" | 6 ~ #7 | 6 ~ #9 | #6 @ 32" | 16' - 0" |
| 24' - 0" | 12' - 9" | 10' - 6" | 6 ~ #7 | 6 ~ #10 | #6 @ 32" | 16' - 0" |

| WALL HT H | TYPE 20D | | | | | |
|-----------|----------|----------|---------|---------|----------|--------------------|
| | DEPTH D1 | DEPTH D2 | BAR "A" | BAR "B" | BAR "C" | PILASTER SPACING L |
| 6' - 0" | 7' - 0" | 6' - 0" | 6 ~ #6 | 4 ~ #4 | #6 @ 32" | 16' - 0" |
| 8' - 0" | 8' - 3" | 7' - 0" | 6 ~ #6 | 4 ~ #5 | #6 @ 32" | 16' - 0" |
| 10' - 0" | 9' - 3" | 7' - 9" | 6 ~ #6 | 4 ~ #6 | #6 @ 32" | 16' - 0" |
| 12' - 0" | 10' - 3" | 8' - 6" | 6 ~ #6 | 4 ~ #7 | #6 @ 32" | 16' - 0" |
| 14' - 0" | 11' - 0" | 9' - 3" | 6 ~ #6 | 6 ~ #8 | #6 @ 32" | 16' - 0" |
| 16' - 0" | 12' - 0" | 9' - 9" | 6 ~ #6 | 6 ~ #9 | #6 @ 32" | 16' - 0" |
| 18' - 0" | 12' - 9" | 10' - 6" | 6 ~ #7 | 6 ~ #10 | #6 @ 32" | 16' - 0" |
| 20' - 0" | 13' - 0" | 10' - 6" | 6 ~ #7 | 6 ~ #10 | #6 @ 32" | 14' - 0" |
| 22' - 0" | 13' - 0" | 10' - 6" | 6 ~ #8 | 6 ~ #10 | #6 @ 32" | 12' - 0" |
| 24' - 0" | 13' - 6" | 11' - 3" | 6 ~ #8 | 6 ~ #10 | #6 @ 32" | 12' - 0" |

CMU = CONCRETE MASONRY UNIT

NOTES

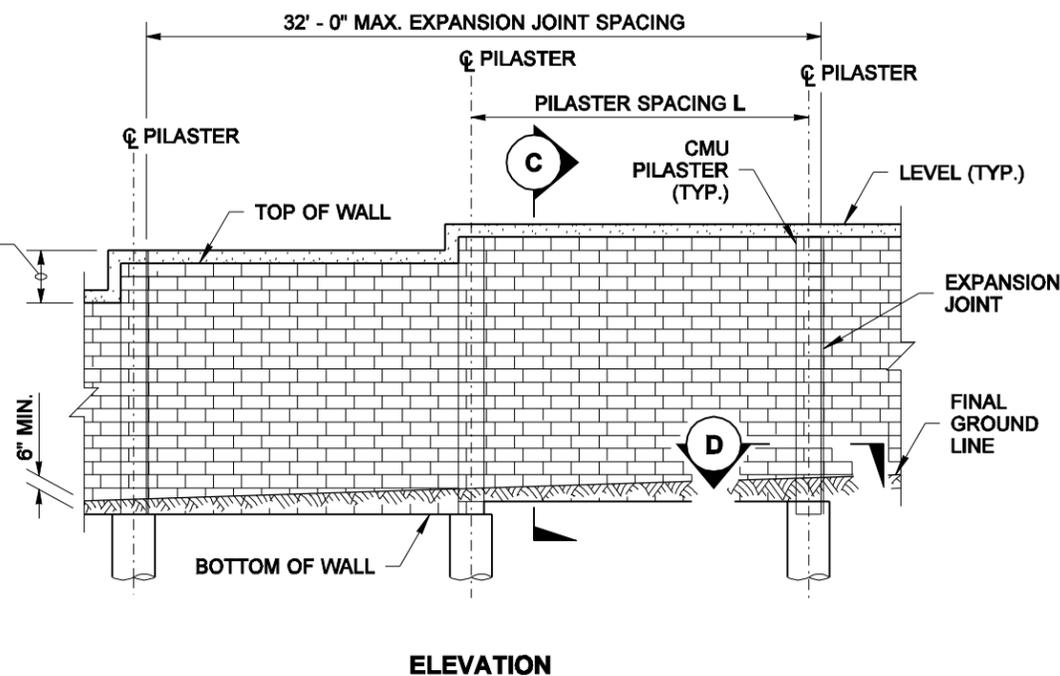
1. Wall to be designated Noise Barrier Wall Type 20A, 20B, 20C, or 20D. The Contract specifies actual wall designations.
2. For intermediate wall heights, use the next higher H.
3. All masonry shall be hollow unit and installed as running bond.
4. All masonry is to be specially inspected.
5. All Concrete Masonry Unit (CMU) cells that have vertical steel reinforcing bars or bond beam units shall be filled with grout.
6. Panels shall have at least 3 feet of level ground on each side.
7. See "Masonry Wall Finishes and Details" sheet for masonry block finishes, special shapes, sizes and layouts.
8. The Contract specifies actual foundation requirements D1 or D2.



DOWEL ~ PROVIDE SAME NUMBER & SIZE AS BAR "B".
 #4, #5, LAP 2' - 6"
 #6 LAP 2' - 10"
 #7 LAP 3' - 9"
 #8 LAP 4' - 11"
 #9 LAP 6' - 3"
 #10 LAP 7' - 11"

- 1 CONSTRUCTION JOINT WITH ROUGHENED SURFACE
- 2 DOWEL EMBEDMENT LENGTH = 40 x BAR "B" DIAM.

TWO BLOCKS MIN., THREE BLOCKS MAX.



MASONRY WALL ON SHAFT FOUNDATION



EXPIRES AUGUST 23, 2006

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NOISE BARRIER WALL TYPE 20
STANDARD PLAN D-2.68-00

SHEET 1 OF 2 SHEETS

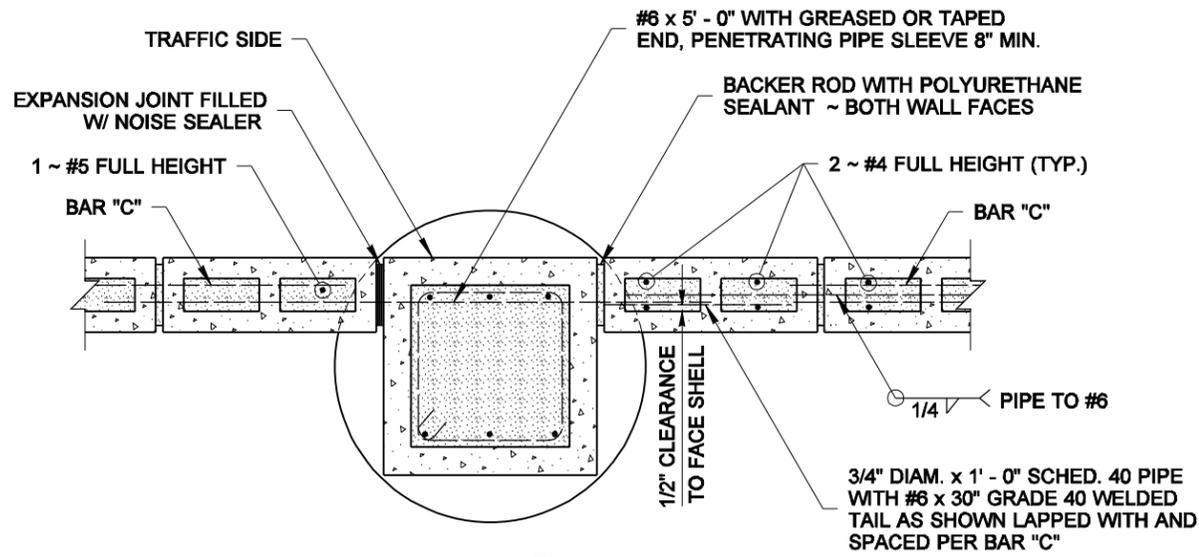
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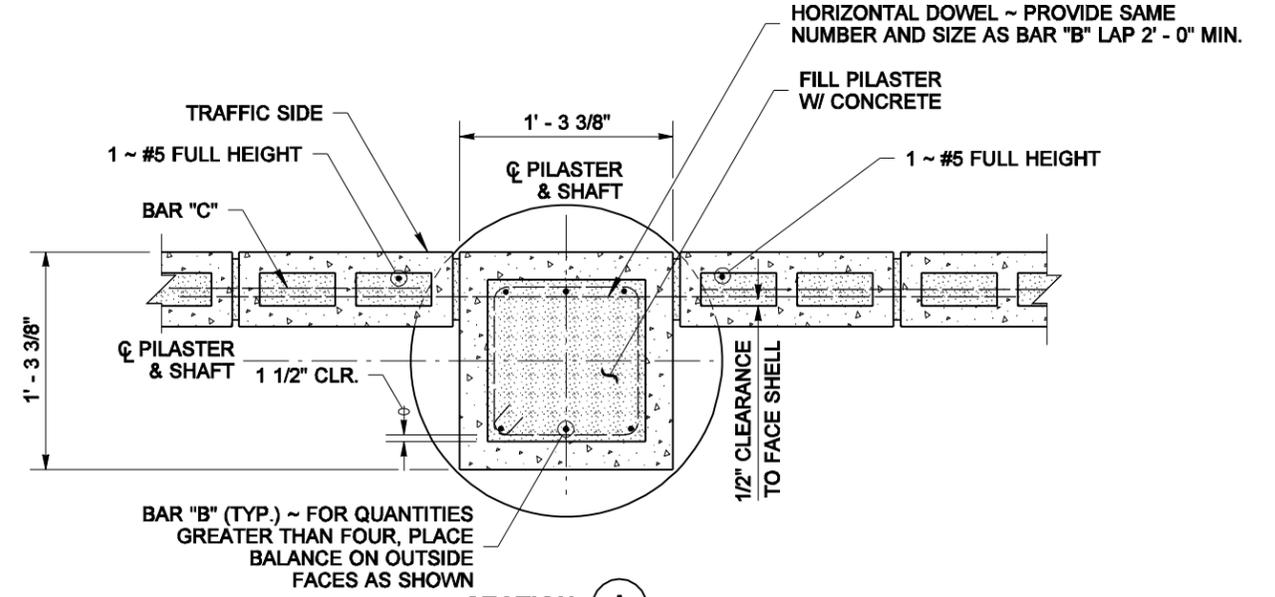
STATE DESIGN ENGINEER

DATE

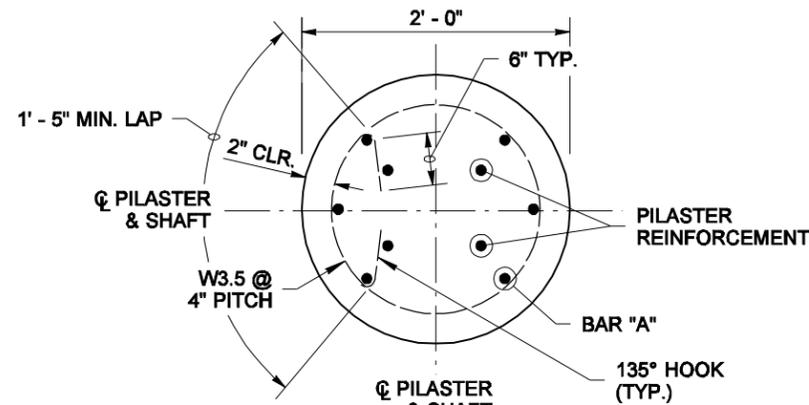




SECTION D
TYPICAL EXPANSION JOINT

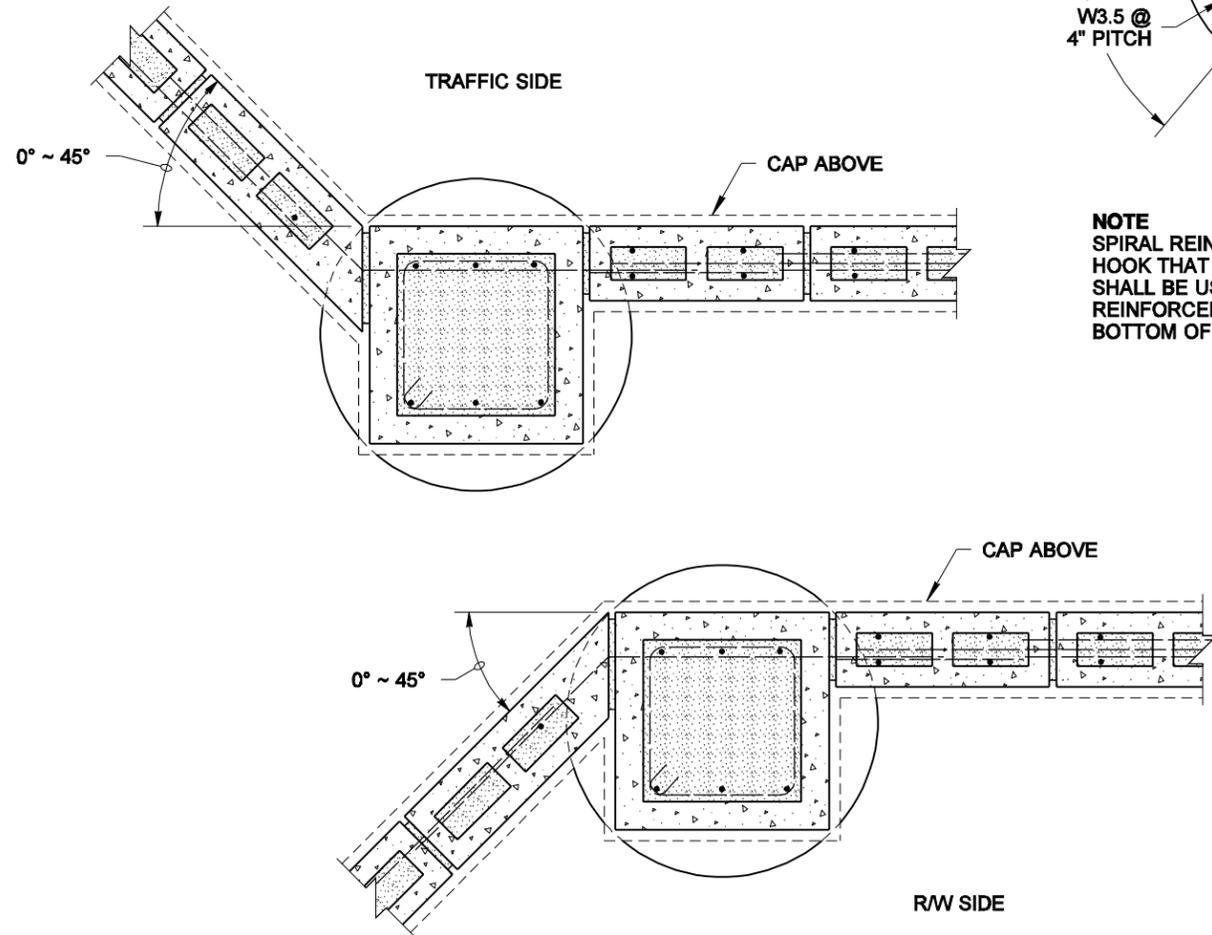


SECTION A

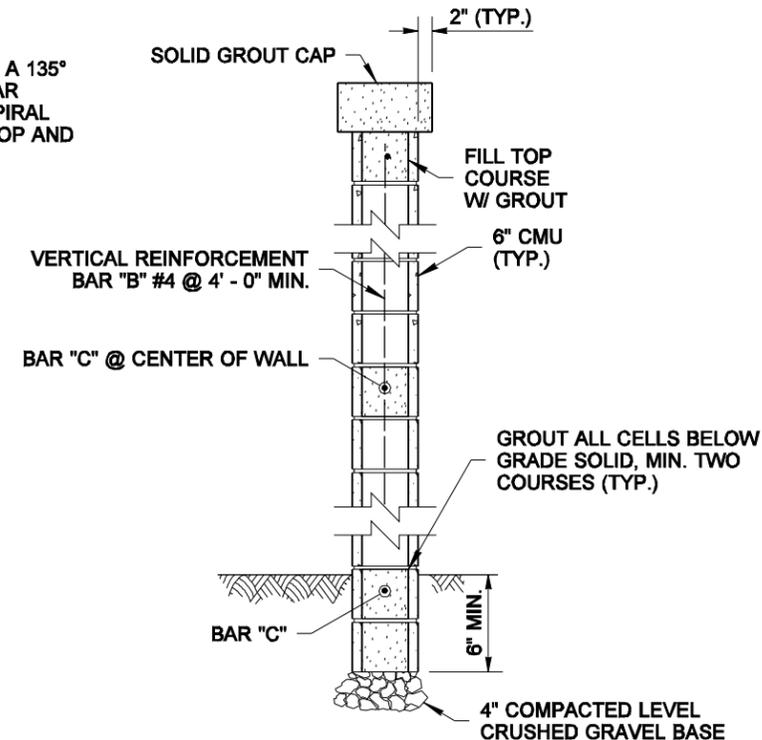


SECTION B

NOTE
SPIRAL REINFORCEMENT SHALL BE LAPPED 17" MIN. A 135° HOOK THAT IS HOOKED AROUND A LONGITUDINAL BAR SHALL BE USED TO TERMINATE THE ENDS OF THE SPIRAL REINFORCEMENT AT LAPPED SPLICES AND AT THE TOP AND BOTTOM OF SHAFT.



ANGLE POINT PLAN



SECTION C

MASONRY WALL ON SHAFT FOUNDATION



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NOISE BARRIER WALL TYPE 20
STANDARD PLAN D-2.68-00

SHEET 2 OF 2 SHEETS

APPROVED FOR PUBLICATION

Harold J. Peterfeso 11-10-05

STATE DESIGN ENGINEER

DATE

