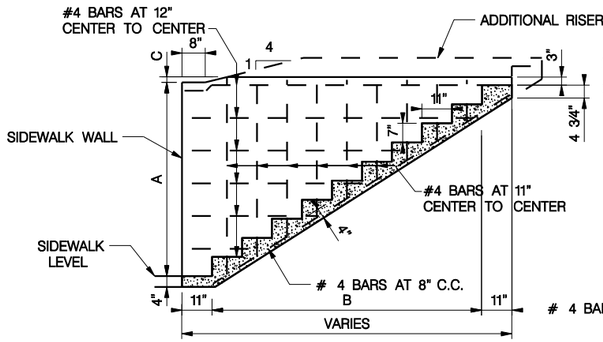
USER: SIECAW
DATE: Friday, March 17, 2006
DGN: ...\standard\2006\lsp615.dgn

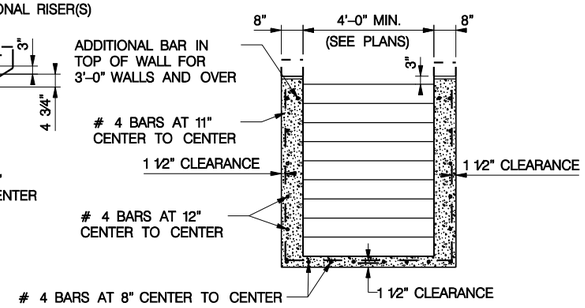
| CITY OF LINCOLN NEBRASKA | CITY PROJECT NO. | SHEET NO. |
|---|---|---|
| | LSP | 1 |
| | Date: 03-2006 | Drawn: CAW |
| | Scale NONE | Checked: |
| | | Approved: |

| WALL DIMENSIONS | | | NO. OF RISERS | RETAINING WALL STEPS FOR 4 FOOT WALK | | | | | | | | | | RETAINING WALL STEPS FOR 5 FOOT WALK | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | PER 1 ADD. RISER | | PER 2 ADD. RISER | | PER 3 ADD. RISER | | PER 4 ADD. RISER | | | | PER 1 ADD. RISER | | PER 2 ADD. RISER | | PER 3 ADD. RISER | | PER 4 ADD. RISER | |
| A | B | C | | CONC. (C.Y.) | STL. (LBS.) | CONC. (C.Y.) | STL. (LBS.) | CONC. (C.Y.) | STL. (LBS.) | CONC. (C.Y.) | STL. (LBS.) | CONC. (C.Y.) | STL. (LBS.) | CONC. (C.Y.) | STL. (LBS.) | CONC. (C.Y.) | STL. (LBS.) | CONC. (C.Y.) | STL. (LBS.) | CONC. (C.Y.) | STL. (LBS.) | CONC. (C.Y.) | STL. (LBS.) |
| 2'-0" | 1'-10" | 0" | 3 | 0.69 | 50 | 0.17 | 17 | 0.30 | 29 | ——— | ——— | ——— | ——— | 0.72 | 54 | 0.19 | 19 | 0.34 | 33 | ——— | ——— | ——— | ——— |
| 3'-0" | 3'-8" | 2" | 5 | 1.14 | 90 | 0.18 | 22 | 0.33 | 38 | 0.45 | 52 | ——— | ——— | 1.26 | 100 | 0.21 | 24 | 0.39 | 43 | 0.54 | 59 | ——— | ——— |
| 4'-0" | 5'-6" | 4" | 7 | 1.73 | 130 | 0.21 | 25 | 0.40 | 44 | 0.55 | 61 | 0.67 | 75 | 1.90 | 144 | 0.24 | 28 | 0.45 | 49 | 0.63 | 68 | 0.77 | 84 |
| 5'-0" | 7'-4" | 6" | 9 | 2.43 | 180 | 0.24 | 29 | 0.45 | 50 | 0.63 | 68 | 0.78 | 84 | 2.65 | 197 | 0.27 | 31 | 0.50 | 54 | 0.70 | 75 | 0.87 | 93 |
| 6'-0" | 8'-3" | 1" | 10 | 2.90 | 208 | 0.30 | 30 | 0.57 | 58 | 0.80 | 81 | 1.00 | 103 | 3.16 | 227 | 0.32 | 34 | 0.61 | 66 | 0.87 | 93 | 1.10 | 119 |



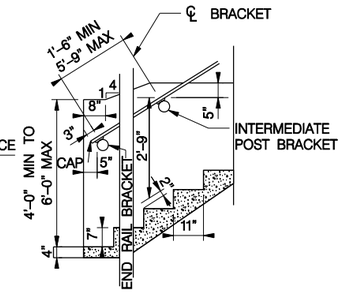

**LONGITUDINAL SECTION OF STEPS FOR WALLS 2'-0" TO 6'-0"**

NO SCALE

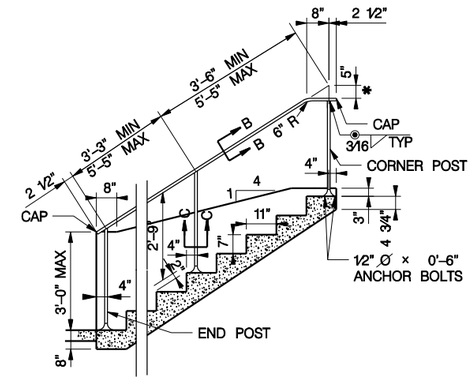



**TYPCAL CROSS-SECTION OF STEPS**

NO SCALE




FOR 4'-0" WALL AND OVER

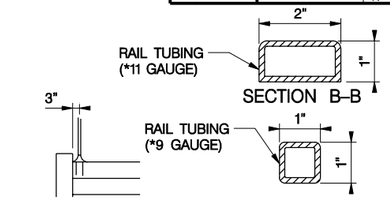



FOR 3'-0" WALLS AND UNDER

LONGITUDINAL SECTIONS OF

**HANDRAIL DETAILS FOR RETAINING WALL STEPS**

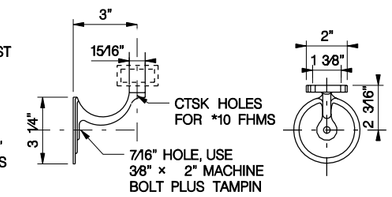
NO SCALE



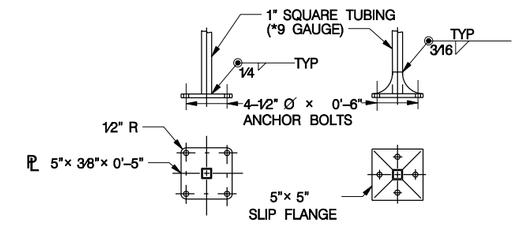

**PART END VIEW**

SECTION C-C

**STRUCTURAL** TUBING




**MALLEABLE IRON HANDRAIL BRACKET DETAIL**




ALTERNATE I ALTERNATE II

**TYPICAL POST DETAIL**

| TERRACE STEPS TYPE I | | | | |
|---|---|---|---|---|
| SIDEWALK WIDTH | MINIMUM 2 RISERS | | PER ADD. RISER | |
| | CONC. (C.Y.) | STL. (LBS.) | CONC. (C.Y.) | STL. (LBS.) |
| 3'-0" | 0.52 | 55 | 0.203 | 19.29 |
| 4'-0" | 0.63 | 62 | 0.246 | 22.02 |
| 5'-0" | 0.74 | 74 | 0.289 | 26.13 |
| 6'-0" | 0.85 | 82 | 0.341 | 28.90 |

NOTES:

MINIMUN DEPTH OF EMBEDMENT FOR REINFORCING STEEL SHALL BE 1 1/2".

ALL REINFORCING STEEL SHALL BE EPOXY COATED.

CHAMFER ALL EXPOSED EDGES OF CONCRETE 3/4".

QUANTITIES SHOWN ARE COMPUTED USING DIMENSIONS SHOWN ON THIS PLAN. THE DIMENSION MAY BE VARIED TO CONFORM TO FIELD CONDITIONS

| TERRACE STEPS TYPE II | | | | |
|---|---|---|---|---|
| SIDEWALK WIDTH | MINIMUM 2 RISERS | | PER ADD. RISER | |
| | CONC. (C.Y.) | STL. (LBS.) | CONC. (C.Y.) | STL. (LBS.) |
| 3'-0" | 0.28 | 27 | 0.114 | 9.17 |
| 4'-0" | 0.34 | 34 | 0.139 | 11.28 |
| 5'-0" | 0.41 | 38 | 0.164 | 12.67 |
| 6'-0" | 0.47 | 45 | 0.188 | 14.78 |

NOTES FOR HANDRAILS:

HANDRAIL SHALL BE INSTALLED ON RETAINING WALL STEPS AND ALL TYPE II STEPS WITH 4 RISERS OR MORE.

RAILING SHALL BE INSTALLED ON TYPR I TERRACE STEPS.

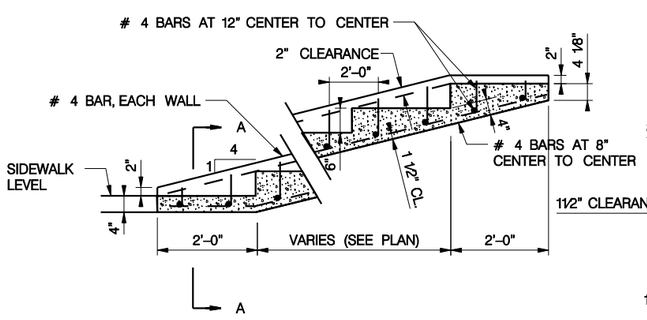
PLACE END RAIL BRACKET AT LOCATION OF INTERMEDIATE RAIL BRACKET WHEN SPACING OF BRACKET IS LESS THAN 1'-6".

DIMENSIONS MARKED THUS * ARE FOR 7" AND 11" TREADS.

ALL HANDRAILS TO BE STRUCTURAL TUBING A.S.T.M. A-36, GAGE AS SHOWN.

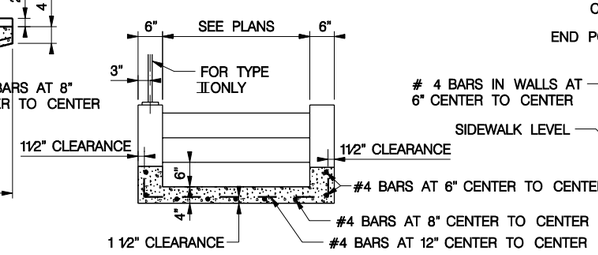
STEPS SHALL BE FIELD MEASURED FOR FABRICATION OF HANDRAIL.

HANDRAIL SHALL BE GIVEN TREE COATS OF PAINT.



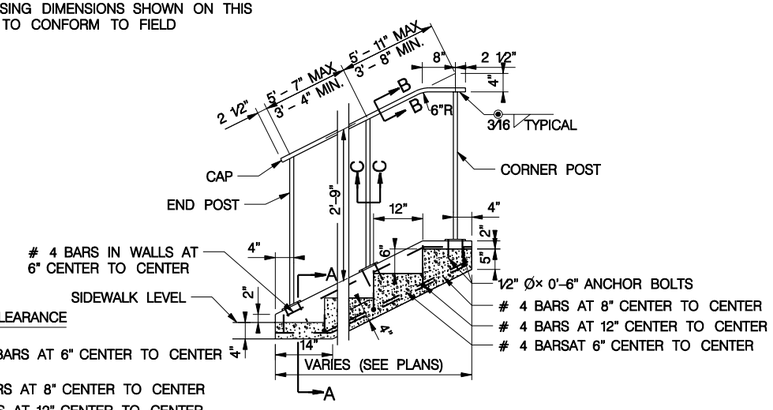

**TYPICAL SECTION OF TERRACE STEPS TYPE I**

NO SCALE




**TYPICAL SECTION A-A OF TYPE I & II STEPS**

NO SCALE




**TYPICAL SECTION & HANDRAIL DETAILS OF TERRACE STEPS TYPE II**

NO SCALE

PROFESSIONAL CIVIL ENGINEER
THOMAS S. SHAFER
E-10679
STATE OF NEBRASKA

**REINFORCED CONCRETE STEPS AND HANDRAILS**
**L.S.P. 615**