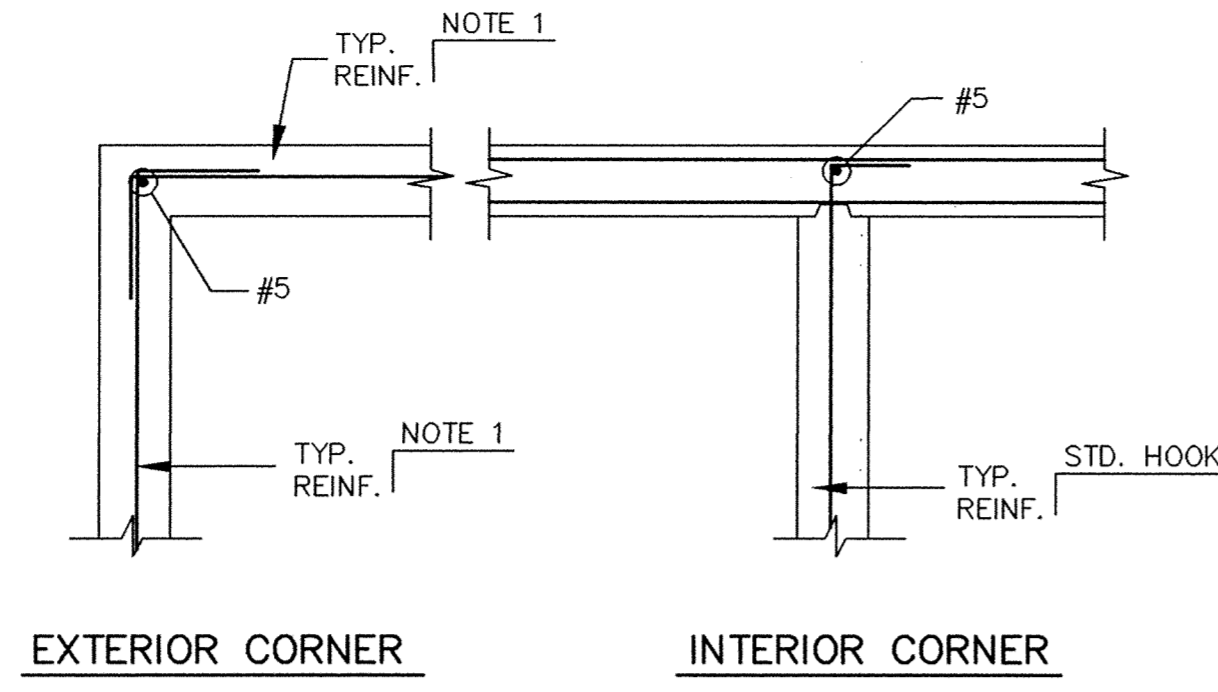


EXTERIOR CORNER INTERIOR CORNER

DOUBLE MAT



EXTERIOR CORNER INTERIOR CORNER

SINGLE MAT

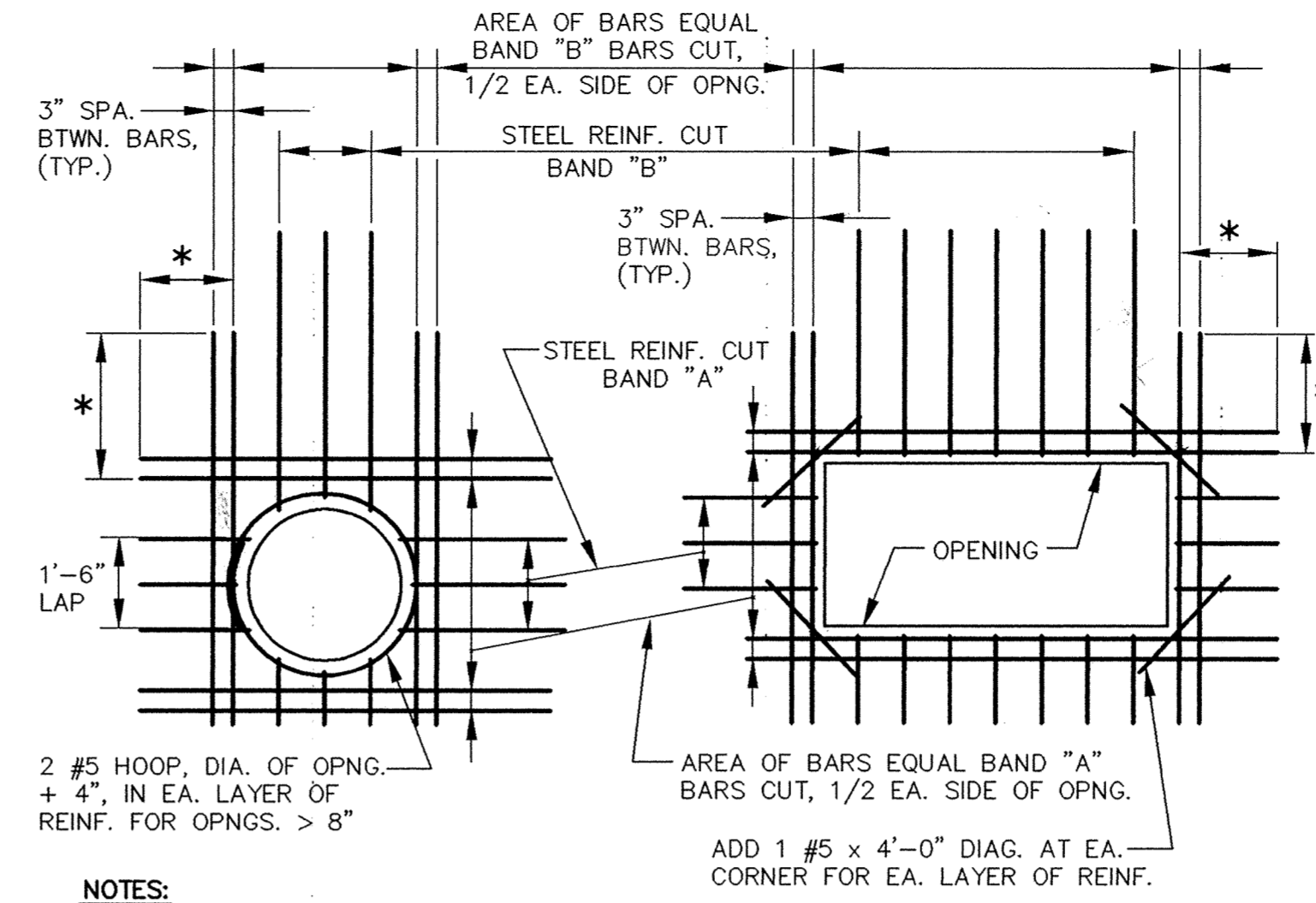
NOTES

- 90° HOOK SHALL BE OF SUFFICIENT LENGTH TO PROVIDE THE HORIZONTAL BAR LAP LENGTH SHOWN IN THE SPLICE LAP TABLE AT RIGHT.
- TYP. FOR ALL CORNERS UNLESS OTHERWISE SHOWN ON THE PLANS.

CONCRETE WALL CORNER DETAIL 1

No Scale

S28



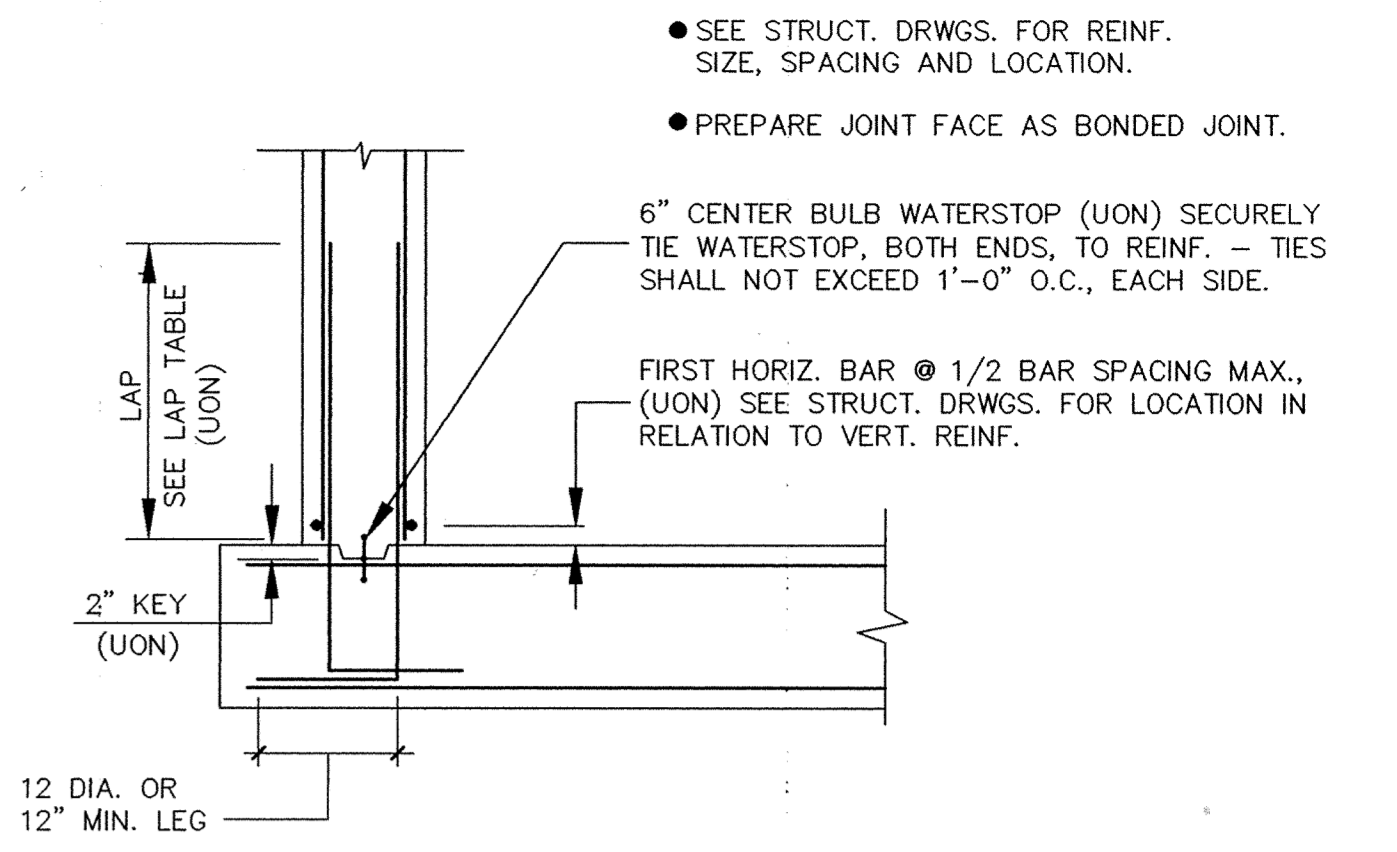
NOTES:

- * 42 BAR DIAMETERS UNLESS NOTED OTHERWISE ON PLANS.
- DO NOT WELD REINF. TO PIPE SLEEVES AND INSERTS.
- TYP. FOR ALL OPNGS. IN CONC. WALLS AND SLABS UNLESS INDICATED OTHERWISE ON PLANS.

OPENING REINFORCING DETAIL 2

No Scale

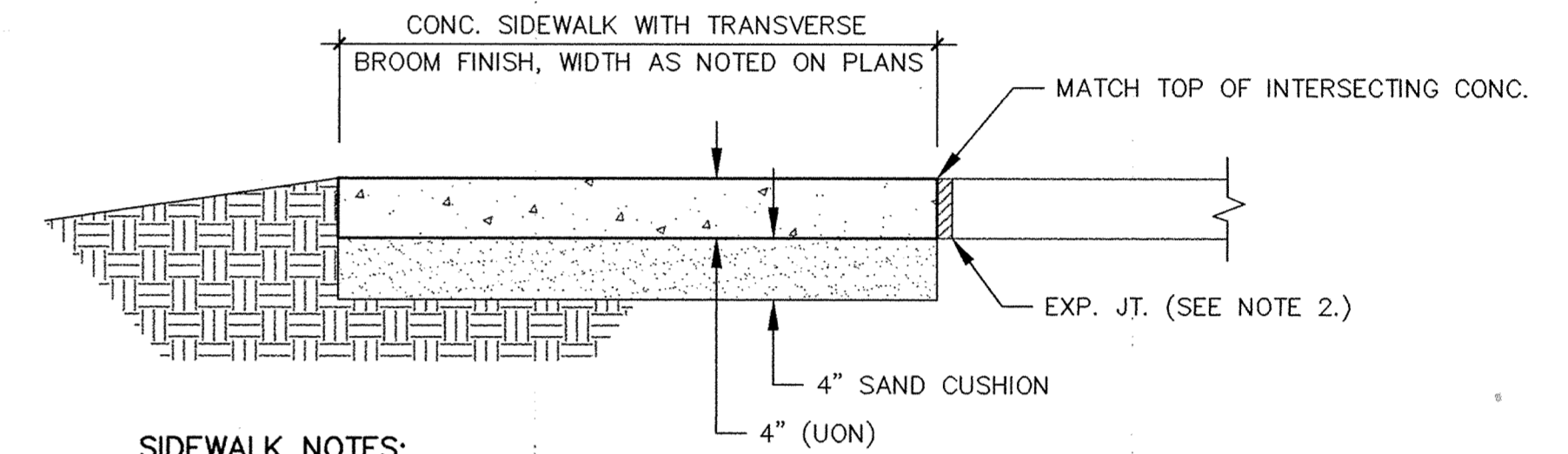
S28



FIXED WALL TO BASE SLAB C.J. DETAIL 3

No Scale

S28



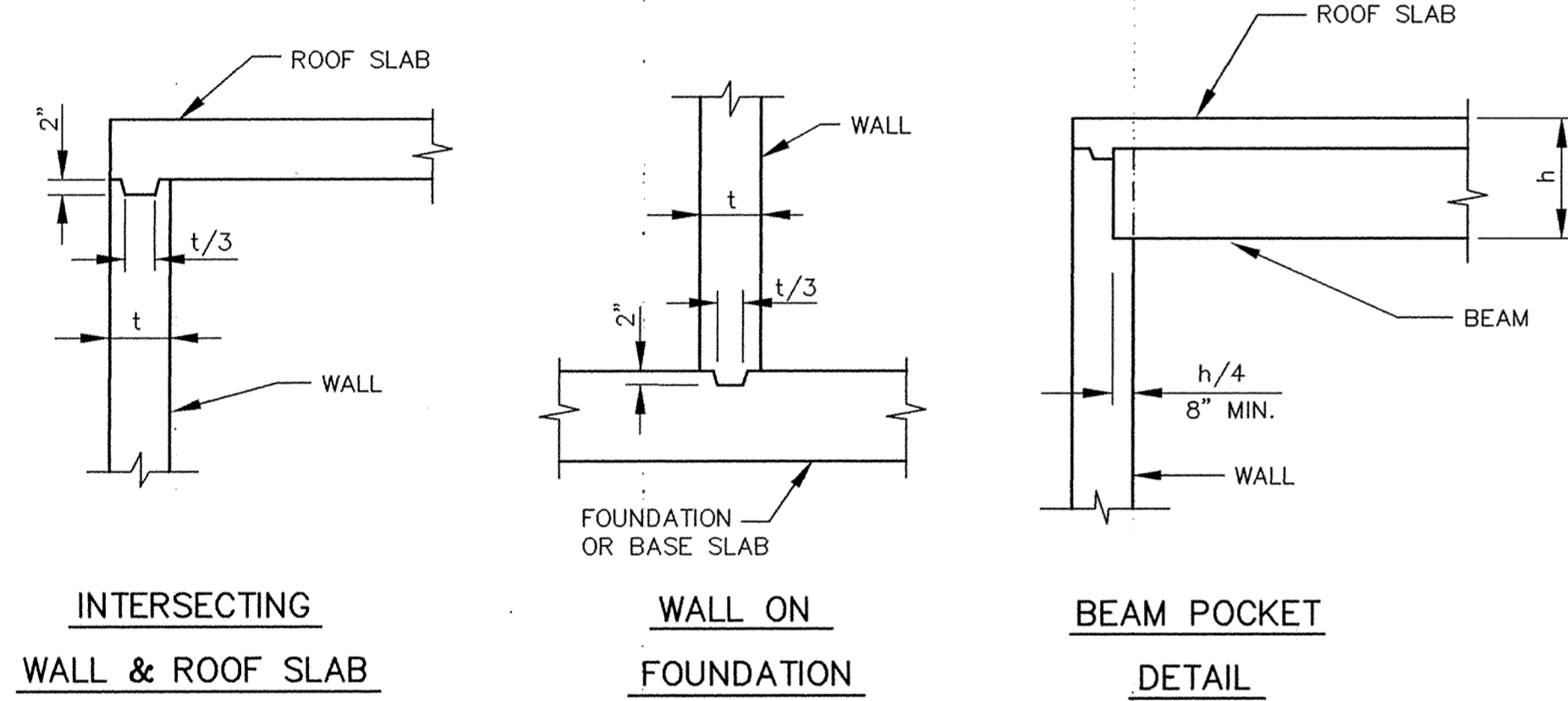
SIDEWALK NOTES:

- SIDEWALK SIDESLOPE SHALL BE 1/4" PER FT. FROM CENTERLINE OF SIDEWALK WHEN LONGITUDINAL SLOPE IS < 0.5%, 1/4" PER FT. FROM SIDE TO SIDE WHEN ABUTTING STRUCTURE OR ON CROSS SLOPE, AND FLAT WHEN LONGITUDINAL SLOPE IS > 0.5%.
- EXPANSION JOINTS SHALL BE 3/4" ASPHALT FIBER JOINT MATERIAL WITH JOINT SEALANT PLACED AT INTERSECTION OF BUILDINGS, STRUCTURES, OR PERPENDICULAR SIDEWALKS, EXISTING SIDEWALKS OR SLABS, AND AT 50' MAX. LONGITUDINAL SPACING.
- CONTROL JOINTS SHALL BE 1/8" SAWCUT OR TOOLED JOINTS 1" DEEP EQUIDISTANT AT 6'-0" MAX. SPACING.
- SAW CUTTING AND CURING COMPOUND APPLICATION SHALL BE COMPLETED BEFORE THE INITIAL SHRINKAGE TAKES PLACE AS DETERMINED BY THE ENGINEER.

CONCRETE SIDEWALK SECTION 6

No Scale

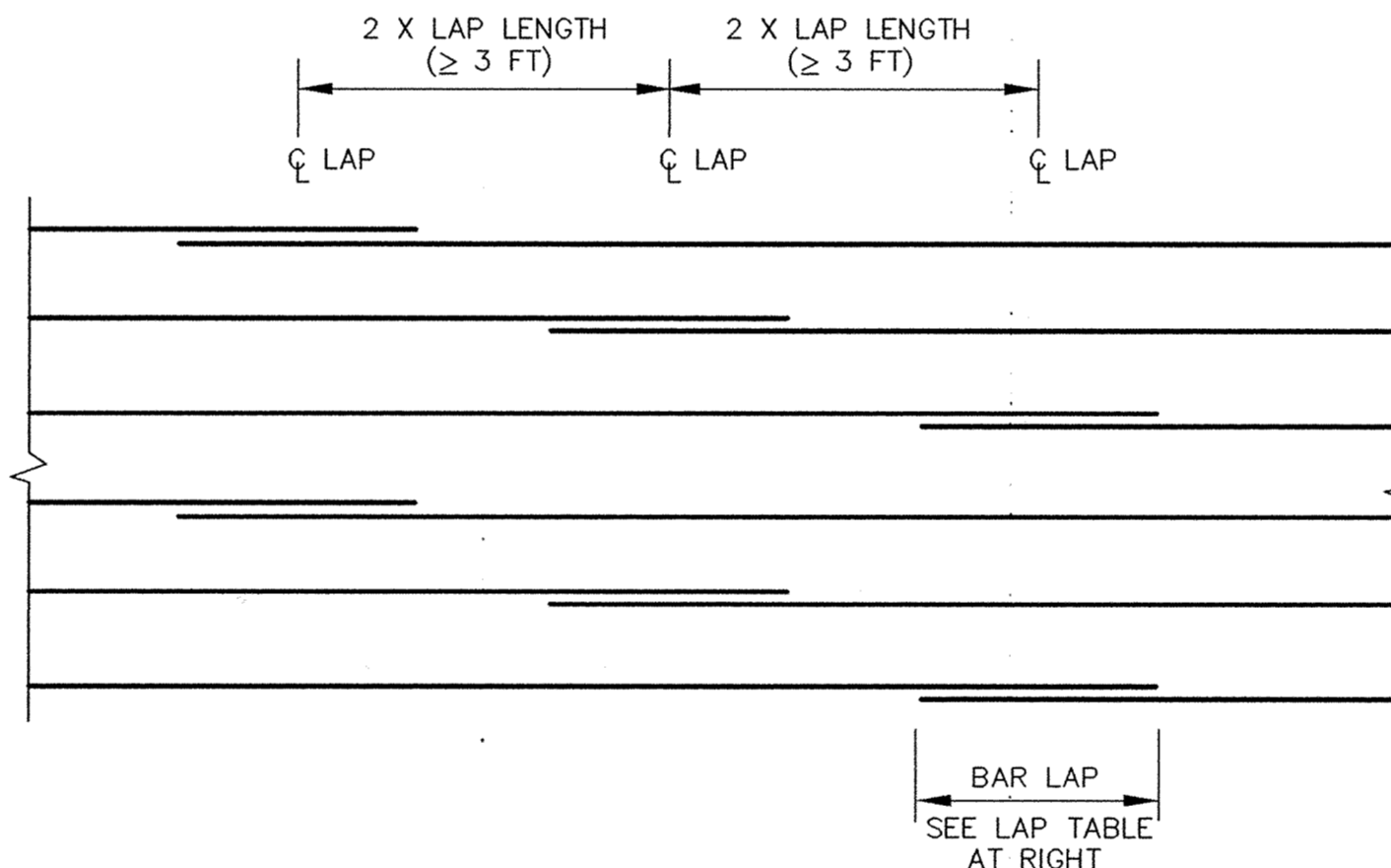
S28



INTERSECTING WALL & ROOF SLAB

WALL ON FOUNDATION

BEAM POCKET DETAIL



HORIZ. STAGGERED BAR LAP DETAIL 5

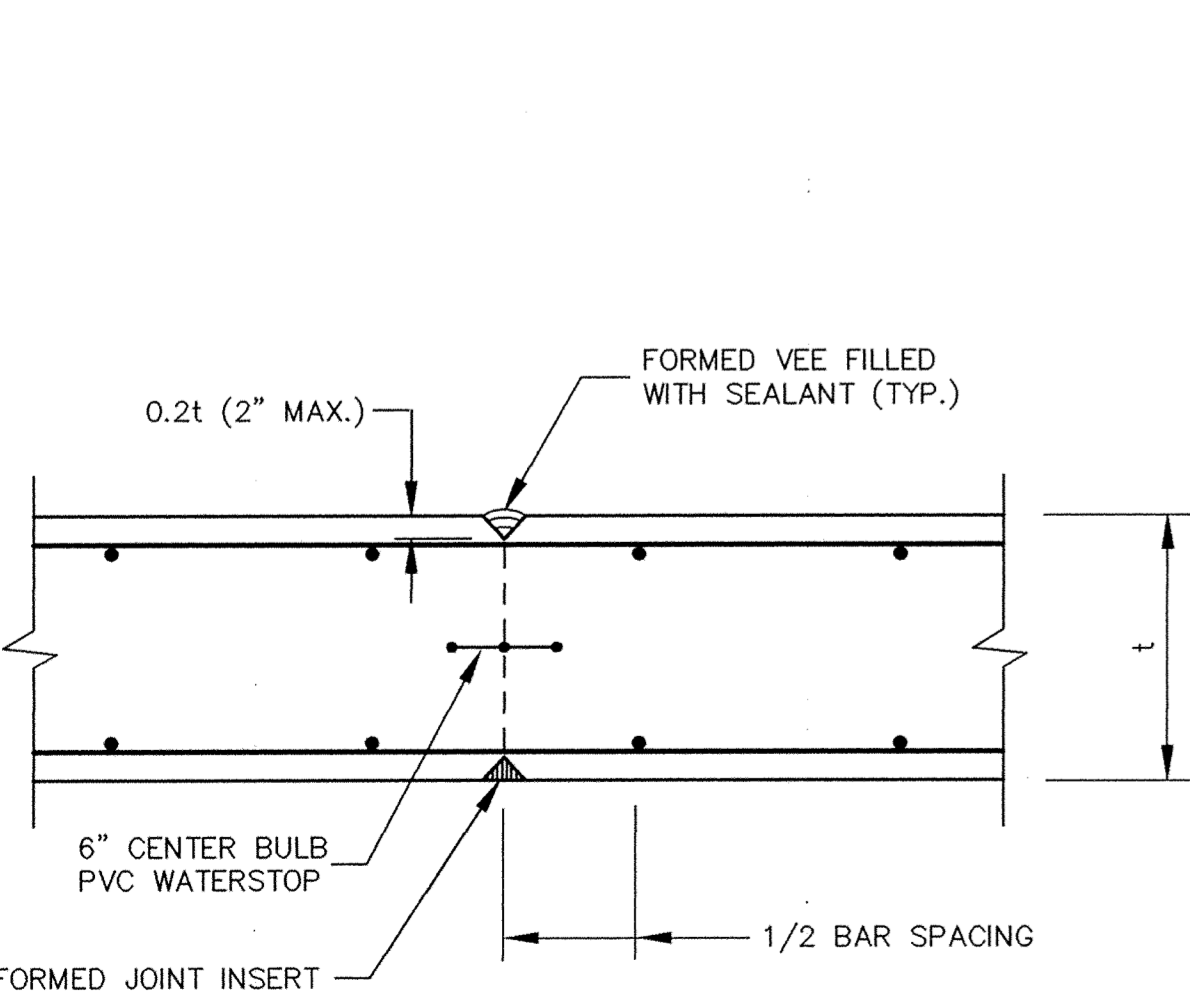
No Scale

TYPICAL CIRCULAR WALLS U.O.N. S28

CONSTRUCTION JOINT DETAILS 4

No Scale

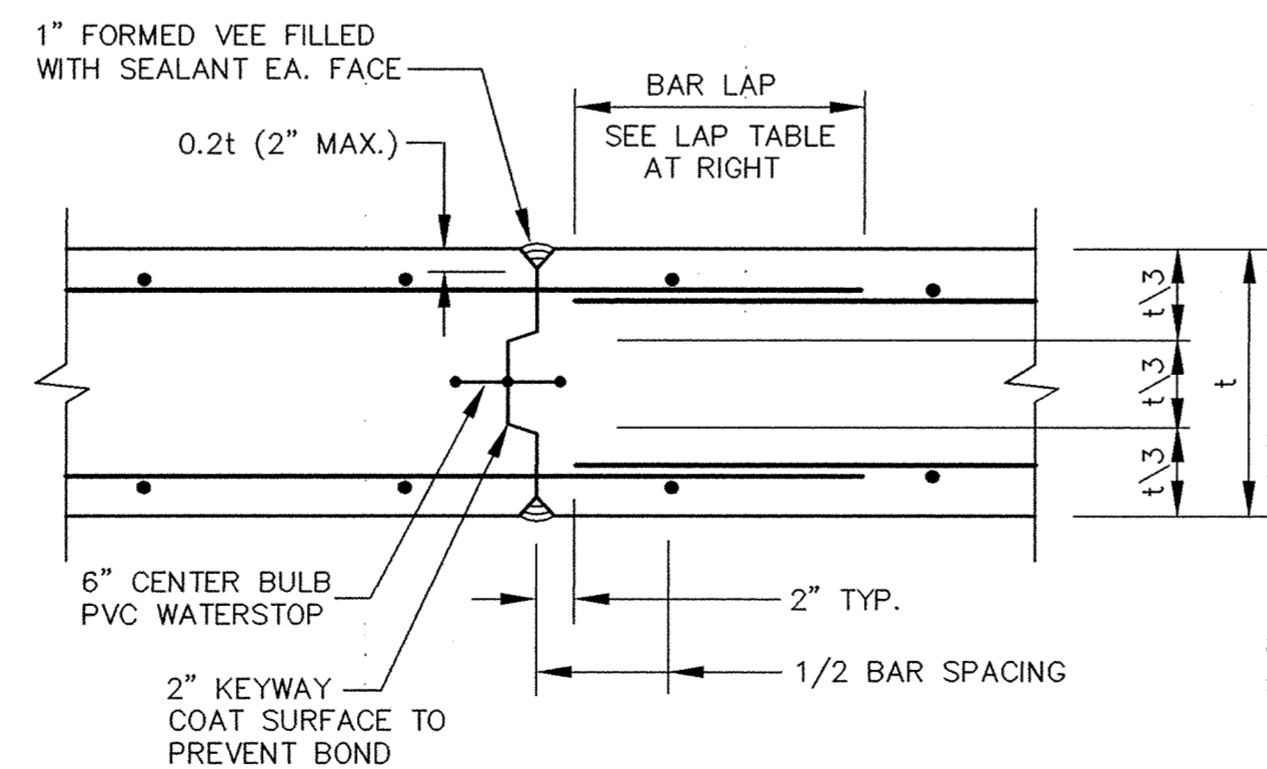
S28



SLAB CONTROL JOINT DETAIL 7

No Scale

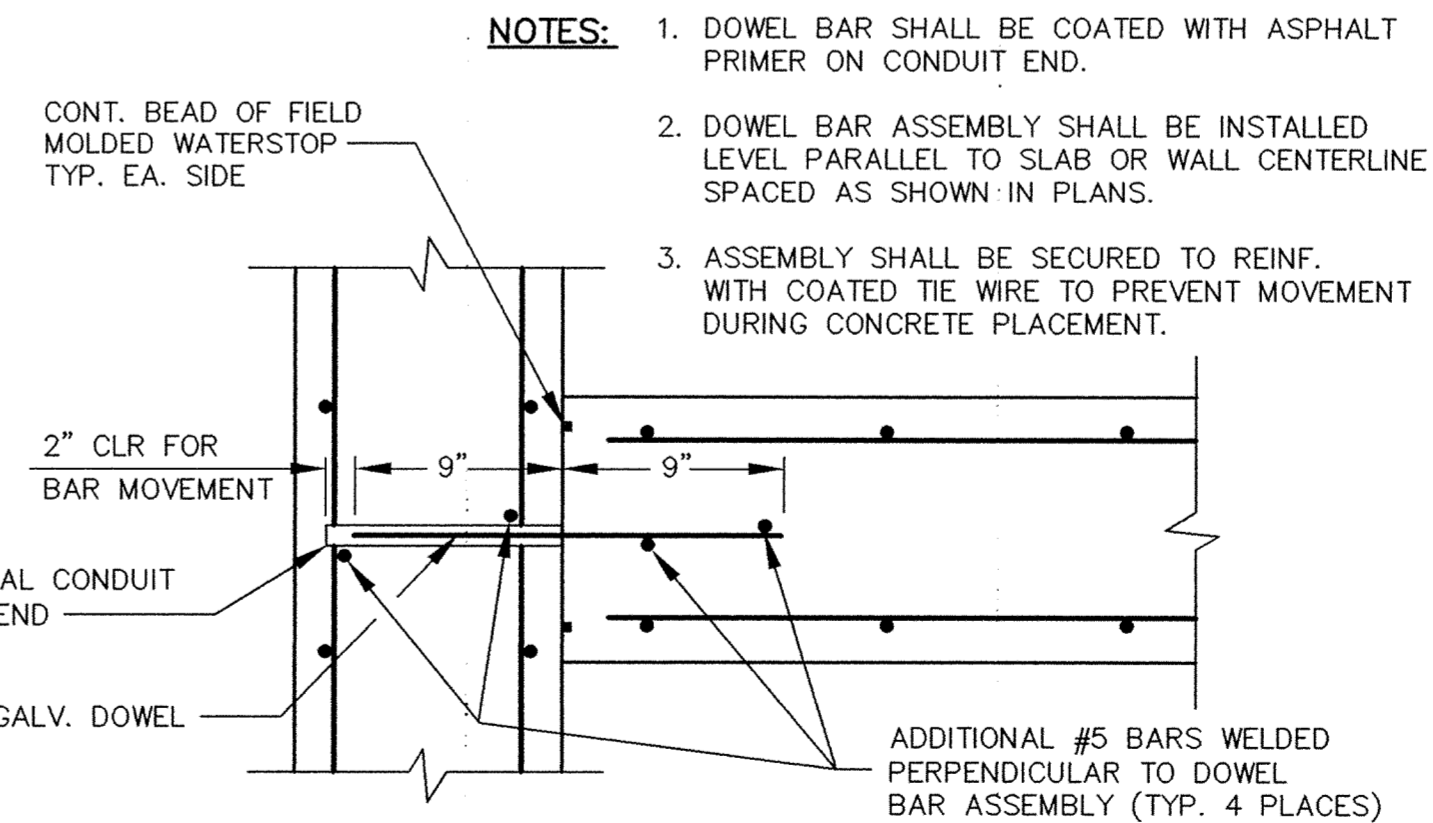
S28



SLAB AND WALL CONSTRUCTION JOINT DETAIL 8

No Scale

S28



DOWEL BAR JOINT DETAIL 9

No Scale

S28

NOTES:

- DOWEL BAR SHALL BE COATED WITH ASPHALT PRIMER ON CONDUIT END.
- DOWEL BAR ASSEMBLY SHALL BE INSTALLED LEVEL PARALLEL TO SLAB OR WALL CENTERLINE SPACED AS SHOWN IN PLANS.
- ASSEMBLY SHALL BE SECURED TO REINF. WITH COATED TIE WIRE TO PREVENT MOVEMENT DURING CONCRETE PLACEMENT.

REINFORCING BAR LAP TABLE

| BAR SIZE | MINIMUM BAR LAP LENGTH | |
|----------|------------------------|------------|
| | TOP BARS | OTHER BARS |
| #3 | 1'-6" | 1'-2" |
| #4 | 2'-0" | 1'-7" |
| #5 | 2'-6" | 1'-11" |
| #6 | 3'-0" | 2'-4" |
| #7 | 3'-6" | 2'-9" |
| #8 | 4'-0" | 3'-1" |

NOTES:

- LAPS SHOWN ARE BASED ON $f_c = 4000$ P.S.I., NORMAL WEIGHT CONCRETE, LAP CLASS B AND NON-EPOXY COATED REINFORCEMENT WITH COVER $\geq 2d$ AND BAR SPACING $\geq 3d$ O.C. FOR ALL OTHER CONDITIONS, PROVIDE BAR LAP LENGTH AS REQUIRED BY A.C.I. 318-89.
- TOP BARS REFERRED TO IN THE TABLE ABOVE ARE HORIZONTAL BARS WITH $\geq 12"$ OF CONCRETE CAST BELOW THE BAR. HORIZONTAL BARS IN WALLS SHALL REQUIRE LAPS AS INDICATED FOR TOP BARS.
- ALL BAR LAPS SHALL BE CONTACT SPLICES UNLESS OTHERWISE NOTED.
- USE LAP LENGTH FOR THE SMALLER BAR WHEN LAPPING DIFFERENT SIZE BARS.
- ALL REINFORCING BAR LAP LENGTHS SHALL BE AS SHOWN IN THE TABLE ABOVE UNLESS OTHERWISE NOTED.

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
Donald J. Campbell
 DATE 11/8/95 REG. NO. 22222

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| DATE | DESCRIPTION | DESIGNED <u>DLC</u> |
|------|-------------|---------------------|
| | | CHECKED <u>LJL</u> |
| | | DRAWN <u>TB GG</u> |
| | | GRAPHIC SCALE |
| | | 0 HORIZ. 4 |
| | | 0 VERT. 4 |

| | | |
|---|------------------------|------------|
| CITY OF ELK RIVER WASTEWATER TREATMENT FACILITY UPGRADE TYPICAL STRUCTURAL CONCRETE DETAILS | | S28 |
| DATE OCT. 1995 | SHEET 48 OF 112 SHEETS | |
| PROJECT NO. 230-151 | | |