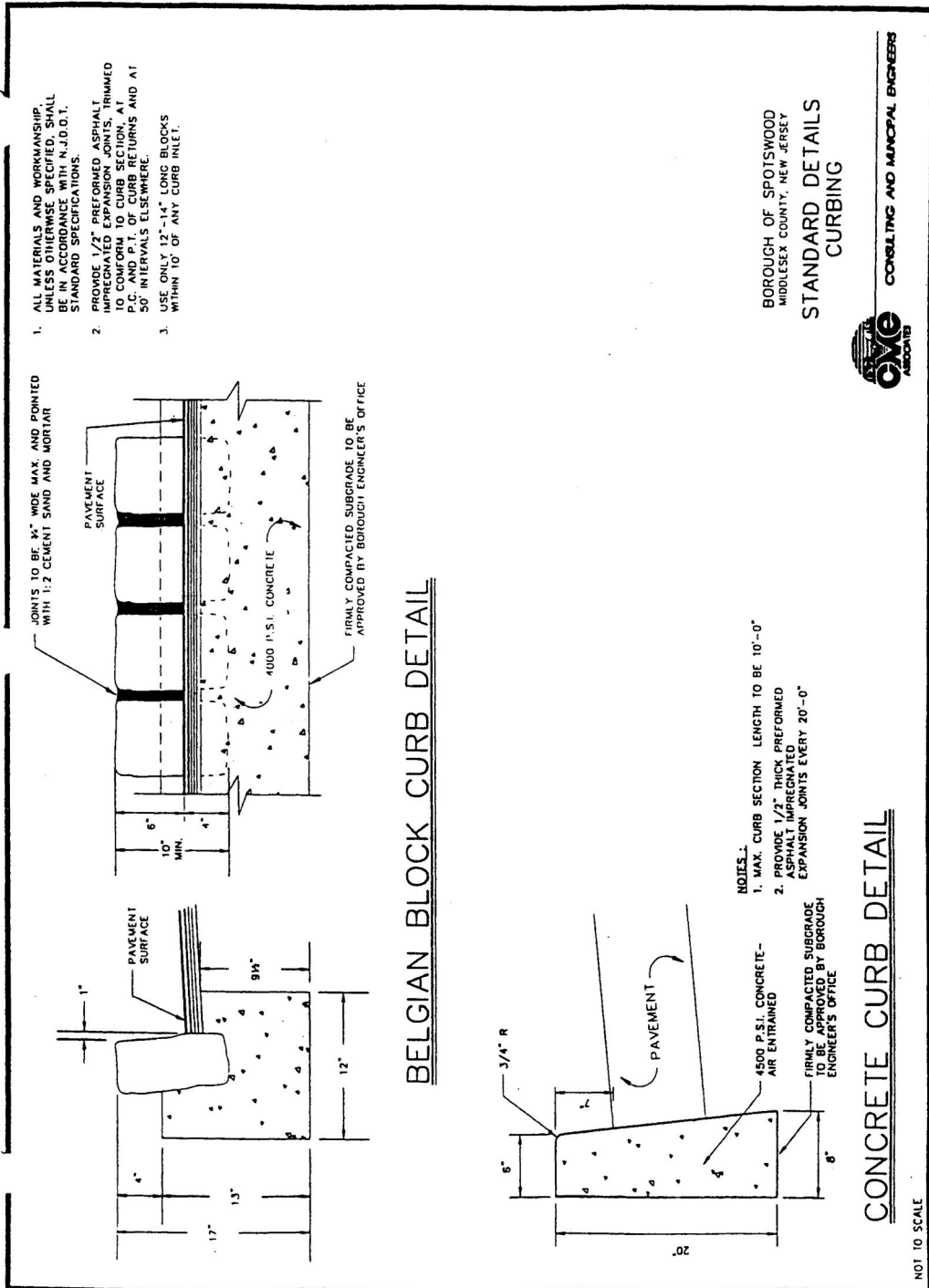


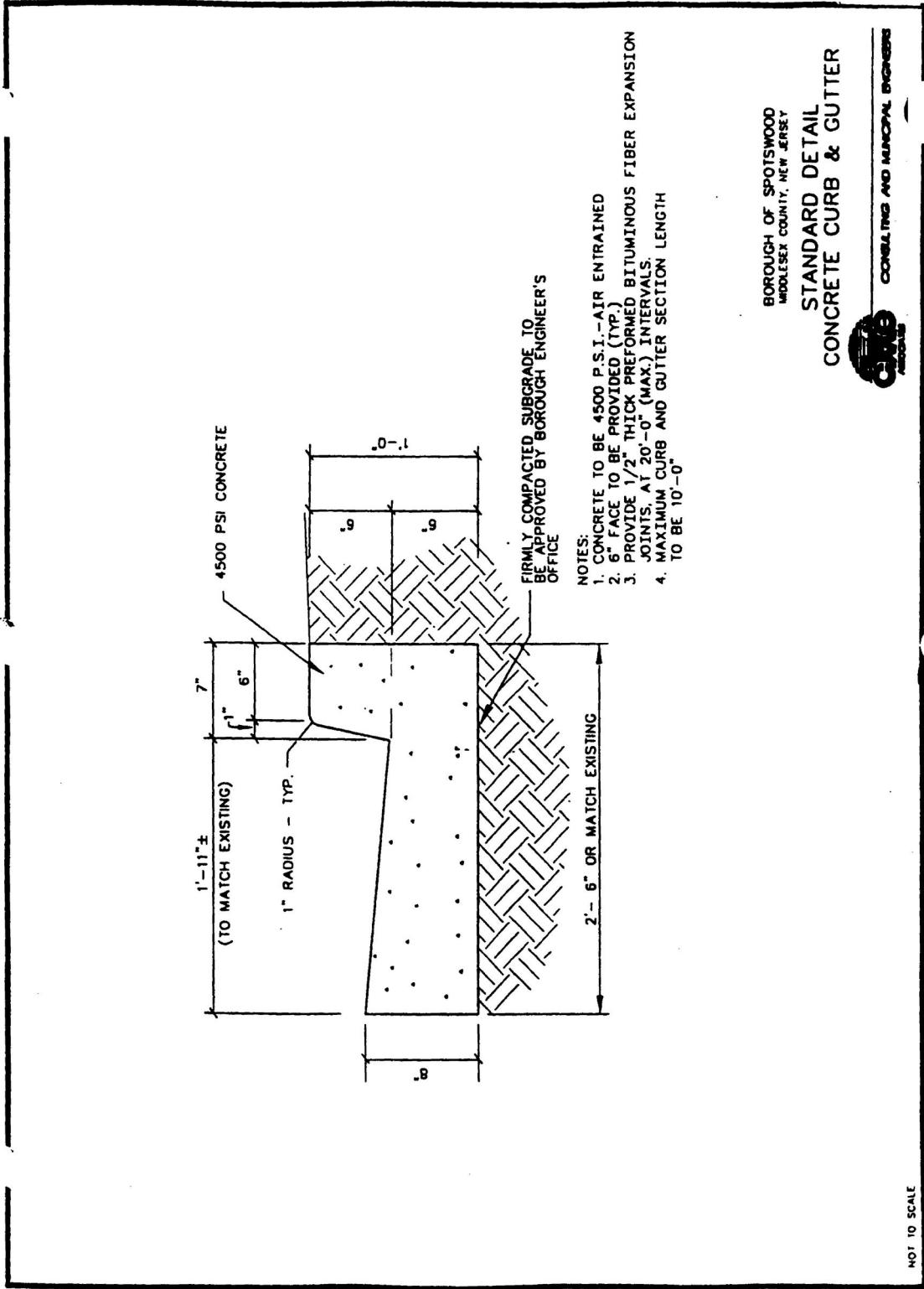
LAND DEVELOPMENT

120 Attachment 2

Borough of Spotswood

Standard Details





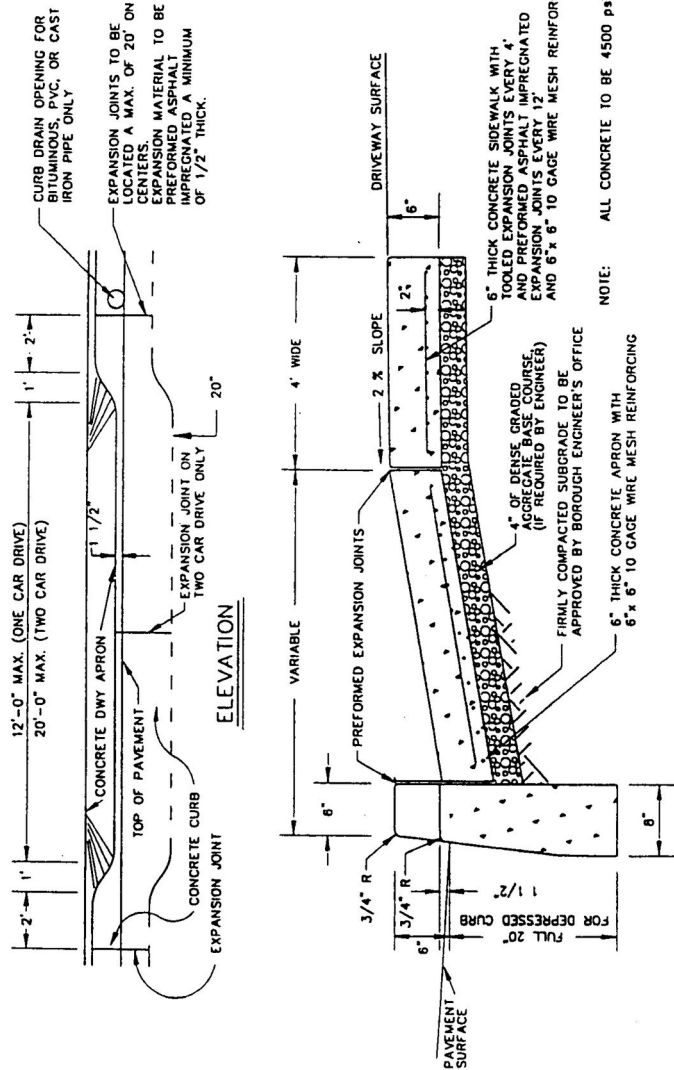
BOROUGH OF SPOTSWOOD
MIDDLESEX COUNTY, NEW JERSEY

STANDARD DETAIL
CONCRETE CURB & GUTTER

CONSULTING AND MUNICIPAL ENGINEERS

NOT TO SCALE

LAND DEVELOPMENT

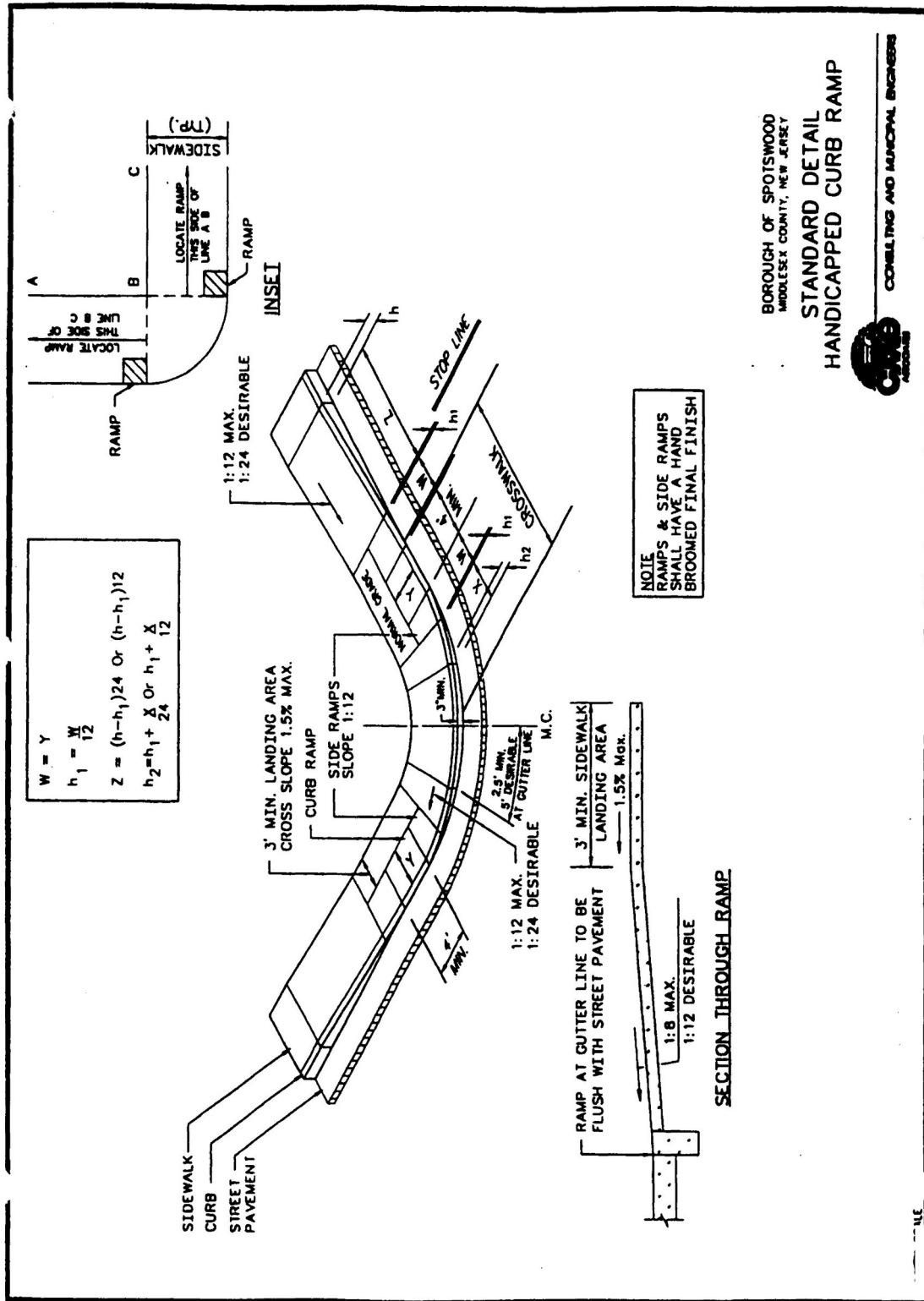


BOROUGH OF SPOTSWOOD
MIDDLESEX COUNTY, NEW JERSEY
STANDARD DETAIL
DRIVEWAY ENTRANCE
DEPRESSED CURB, DRIVEWAY APRON & SIDEWALK



CONSULTING AND MUNICIPAL ENGINEERS

NOT TO SCALE



BOROUGH OF SPOTSWOOD
 MIDDLESEX COUNTY, NEW JERSEY
STANDARD DETAIL
HANDICAPPED CURB RAMP

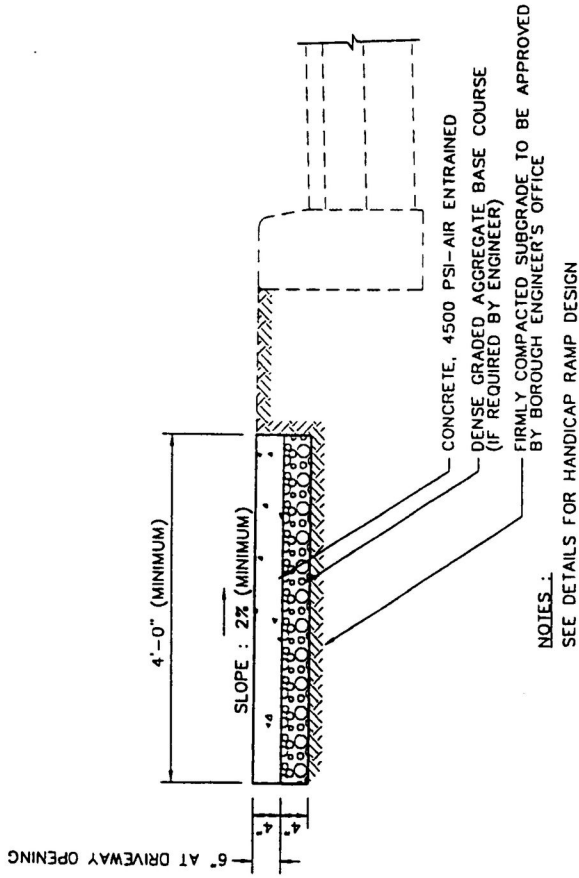


CONSULTING AND MUNICIPAL ENGINEERS

LAND DEVELOPMENT

NOTE:

- 1. PROVIDE TOOLED EXPANSION JOINTS EVERY 4' AND PREFORMED ASPHALT IMPREGNATED EXPANSION JOINTS EVERY 12'

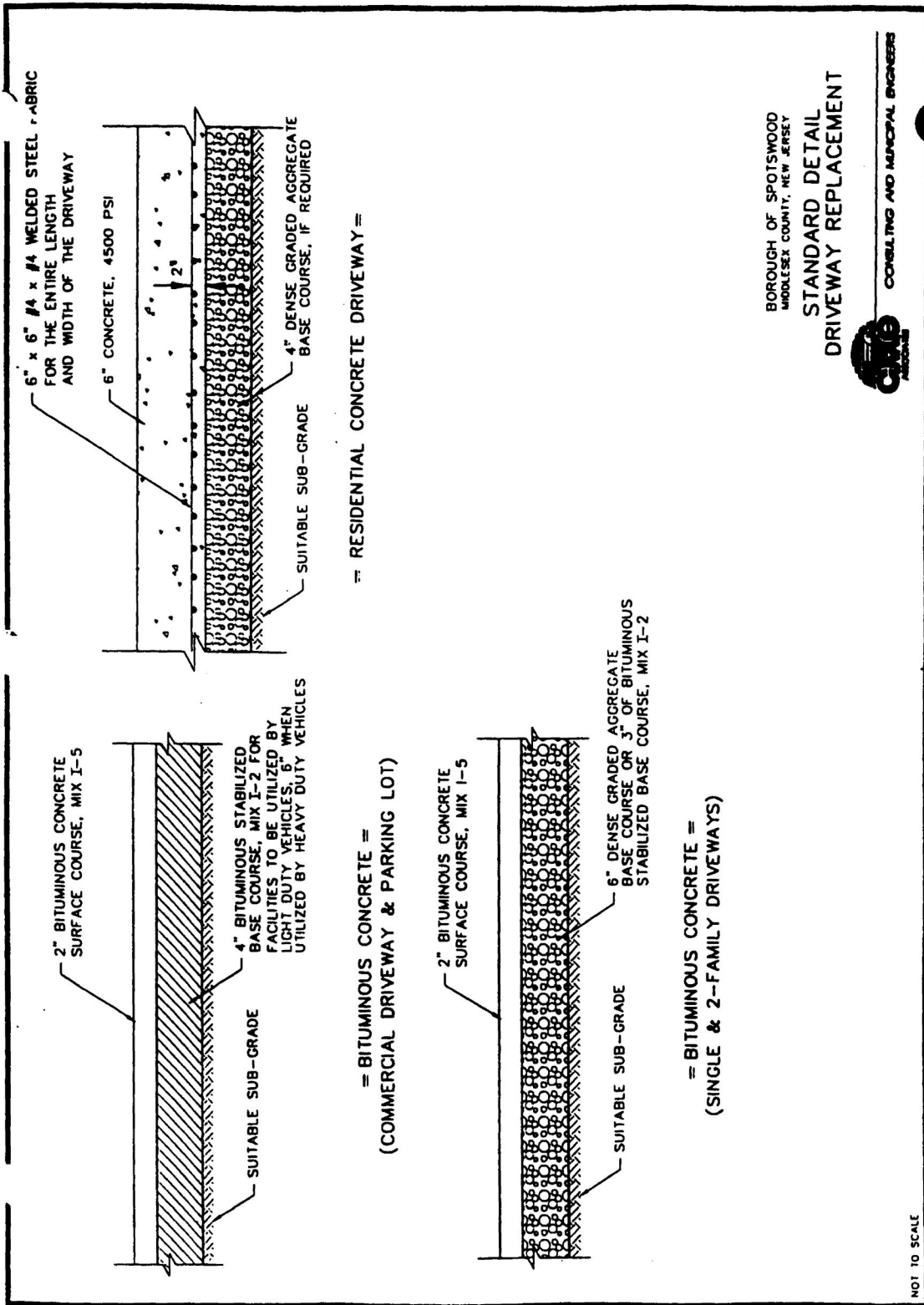


BOROUGH OF SPOTSWOOD
MIDDLESEX COUNTY, NEW JERSEY

STANDARD DETAIL
TYPICAL CONCRETE SIDEWALK

CONSLING AND MUNICIPAL ENGINEERS
ASSOCIATED

NOT TO SCALE

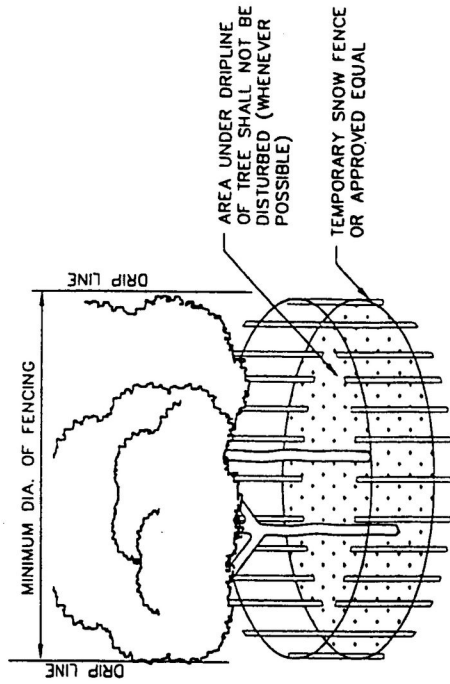


BOROUGH OF SPOTSWOOD
MIDDLESEX COUNTY, NEW JERSEY

**STANDARD DETAIL
DRIVEWAY REPLACEMENT**

CONSULTING AND MUNICIPAL ENGINEERS

LAND DEVELOPMENT



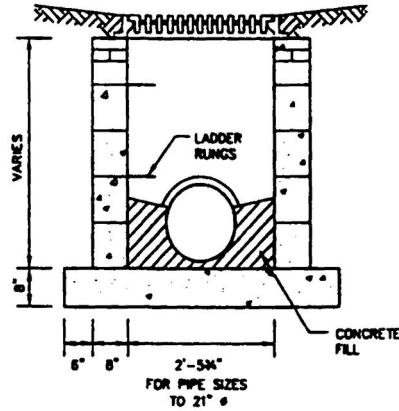
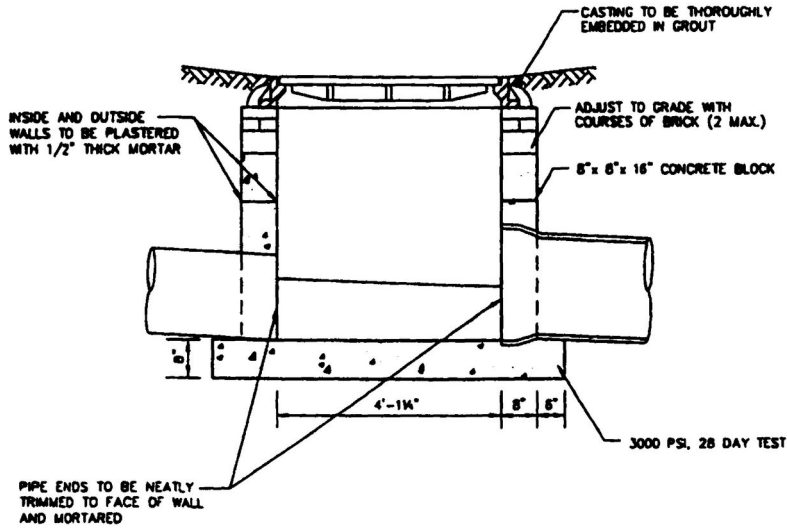
BOROUGH OF SPOTSWOOD
MIDDLESEX COUNTY, NEW JERSEY

STANDARD
TREE PROTECTION DETAIL



NOT TO SCALE

SPOTSWOOD CODE



NOTES:

1. CAMPBELL CASTING PATTERN No. 3408 OR EQUIVALENT
2. DROP FRONT LADDER RUNGS TO BE ALCO No. 14889 or APPROVED EQUAL SPACING TO BE 12" O.C. PORTION OF RUNGS TO BE EMBEDDED IN CONCRETE TO BE EPOXY COATED.
3. SPECIAL DESIGNS SHALL BE PROVIDED FOR INLETS WITH PIPE SIZES GREATER THAN 21" ø
4. WHERE INLETS ARE GREATER THAN 8" DEEP DOUBLE BLOCK WALLS ARE REQUIRED

BOROUGH OF SPOTSWOOD
MIDDLESEX COUNTY, NEW JERSEY

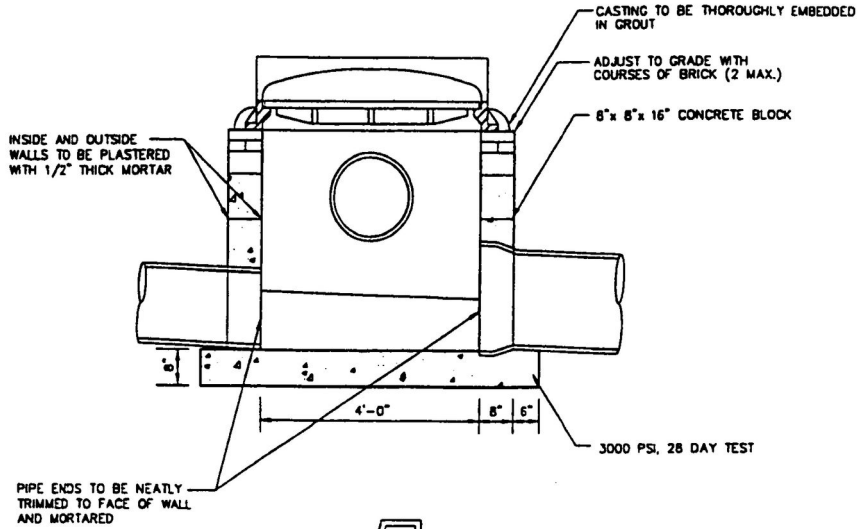
STANDARD DETAIL
TYPE "A" INLET



CONSULTING AND MUNICIPAL ENGINEERS

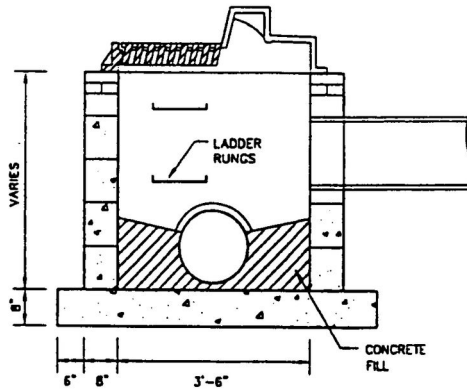
NOT TO SCALE

LAND DEVELOPMENT



INSIDE AND OUTSIDE WALLS TO BE PLASTERED WITH 1/2" THICK MORTAR

PIPE ENDS TO BE NEATLY TRIMMED TO FACE OF WALL AND MORTARED



NOTES:

1. CURB FACE TO BE 8"
2. CABBELL CASTING PATTERN No. 2618 "BICYCLE SAFE GRATING" or EQUIVALENT
3. DROP FRONT LADDER RUNGS TO BE ALCO No. 14869 or APPROVED EQUAL SPACING TO BE 12" O.C. PORTION OF RUNGS TO BE EMBEDDED IN CONCRETE TO BE EPOXY COATED.
4. WHERE INLETS ARE GREATER THAN 8' DEEP DOUBLE BLOCK WALLS ARE REQUIRED

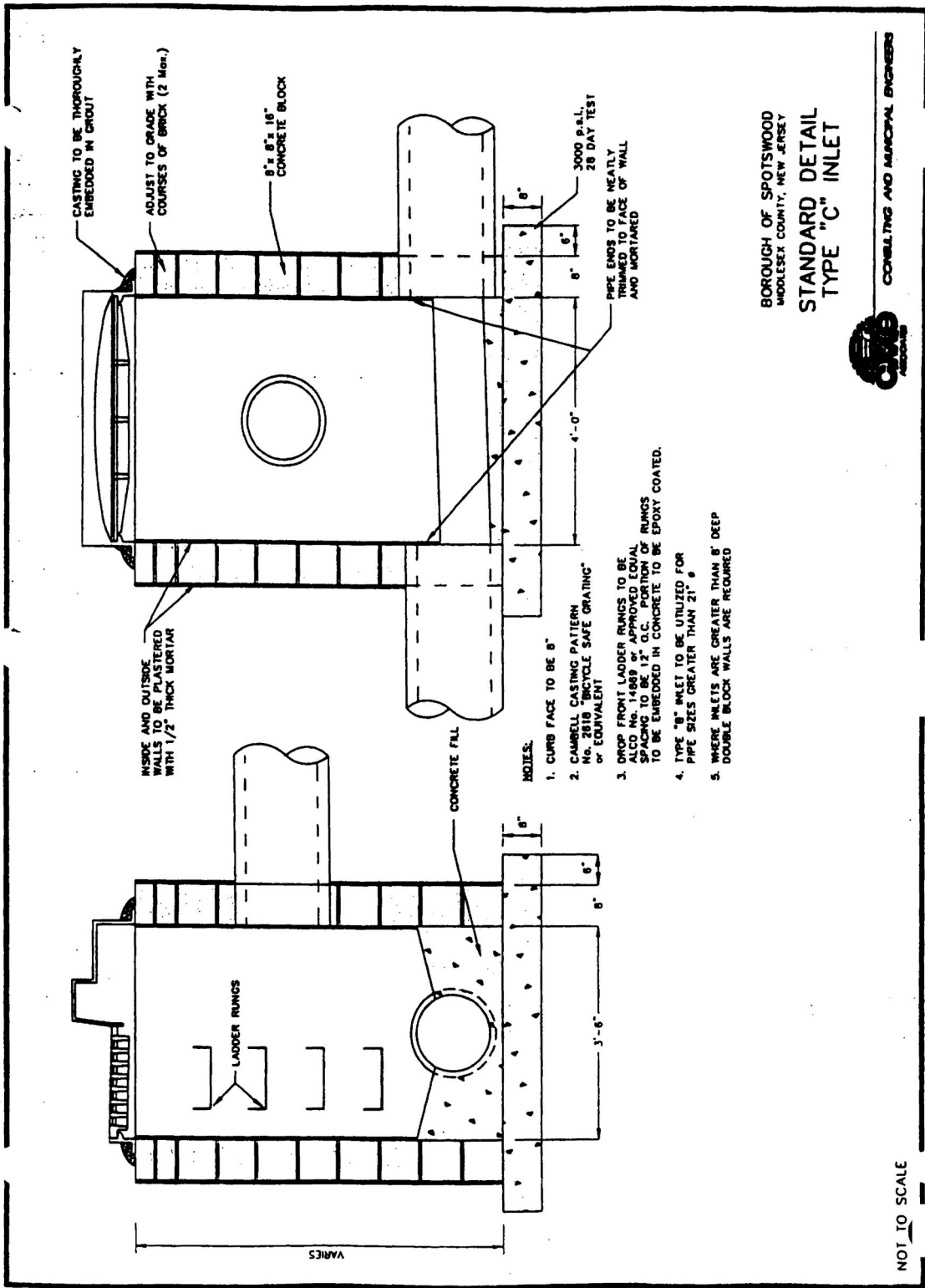
BOROUGH OF SPOTSWOOD
MIDDLESEX COUNTY, NEW JERSEY

STANDARD DETAIL
TYPE "B" INLET



CONSULTING AND MUNICIPAL ENGINEERS

NOT TO SCALE



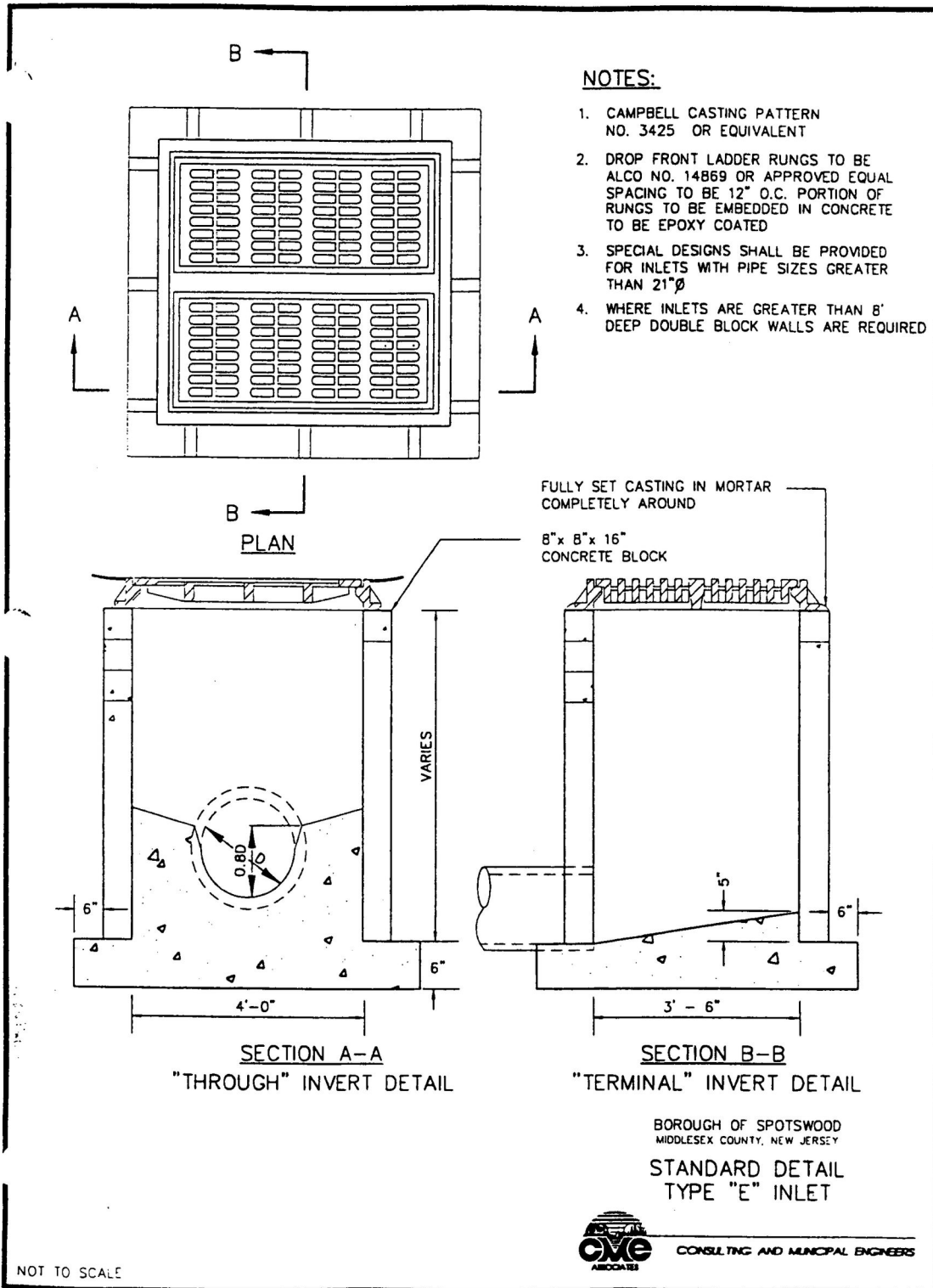
BOROUGH OF SPOTSWOOD
MIDDLESEX COUNTY, NEW JERSEY
**STANDARD DETAIL
TYPE "C" INLET**



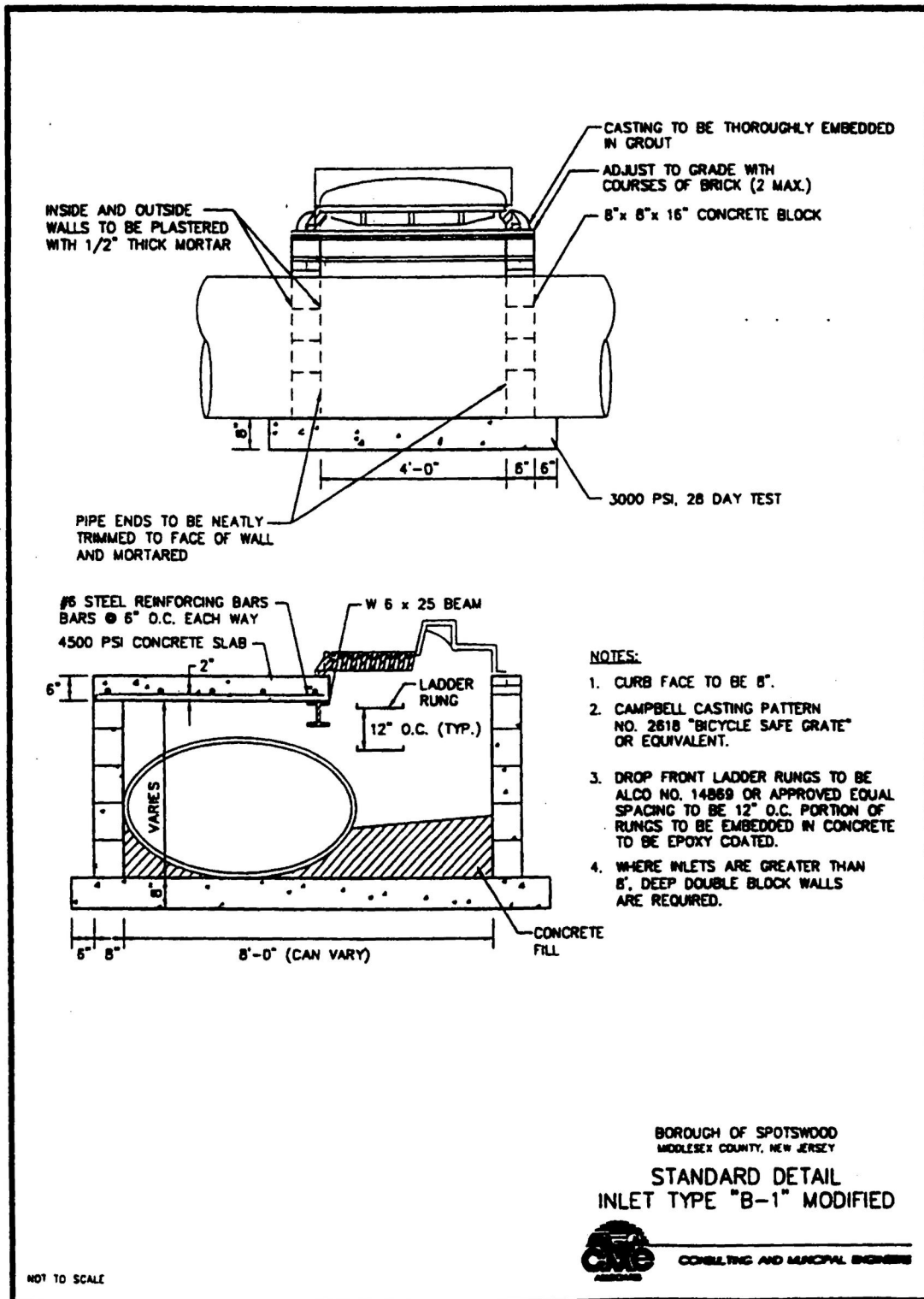
CONSULTING AND MUNICIPAL ENGINEERS

NOT TO SCALE

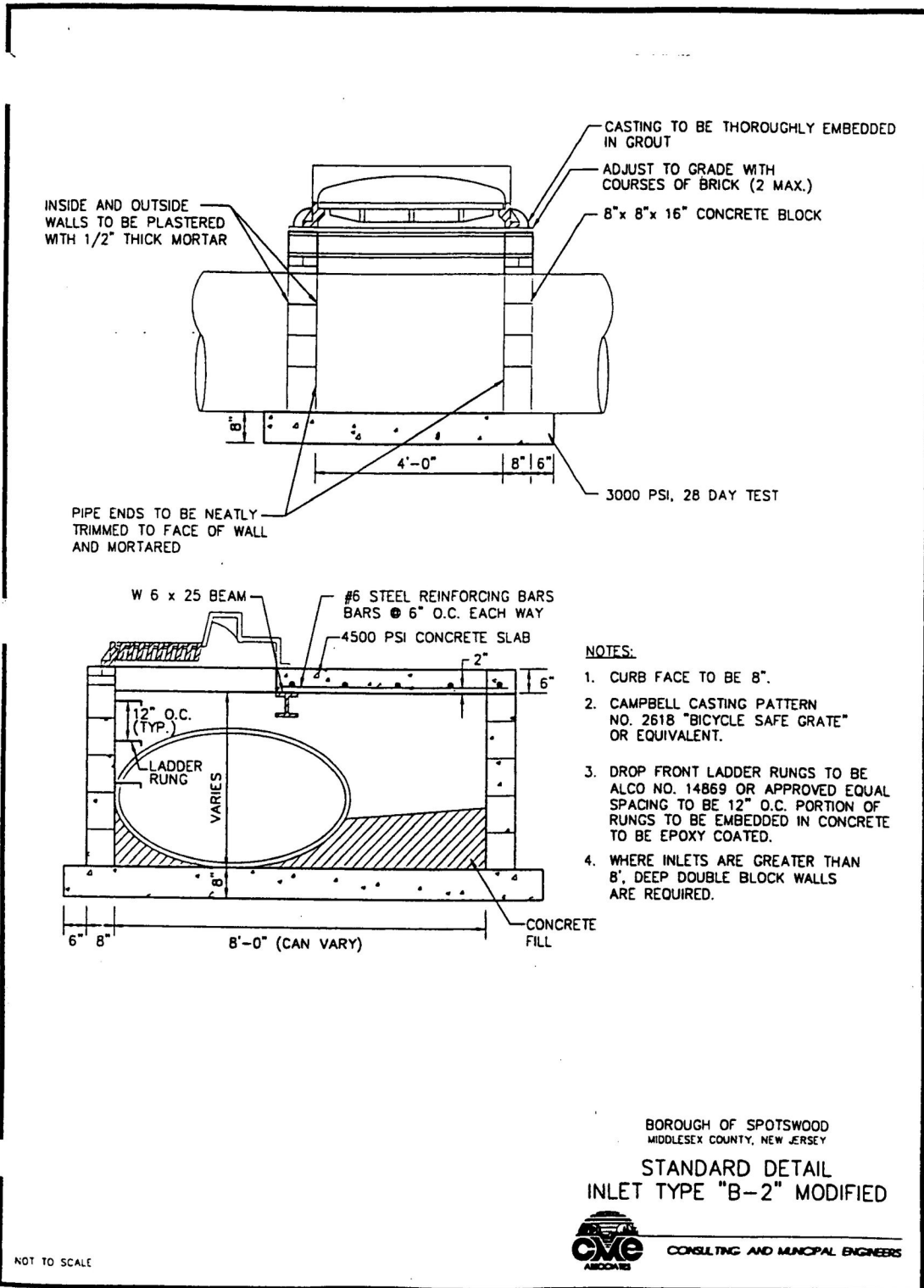
LAND DEVELOPMENT



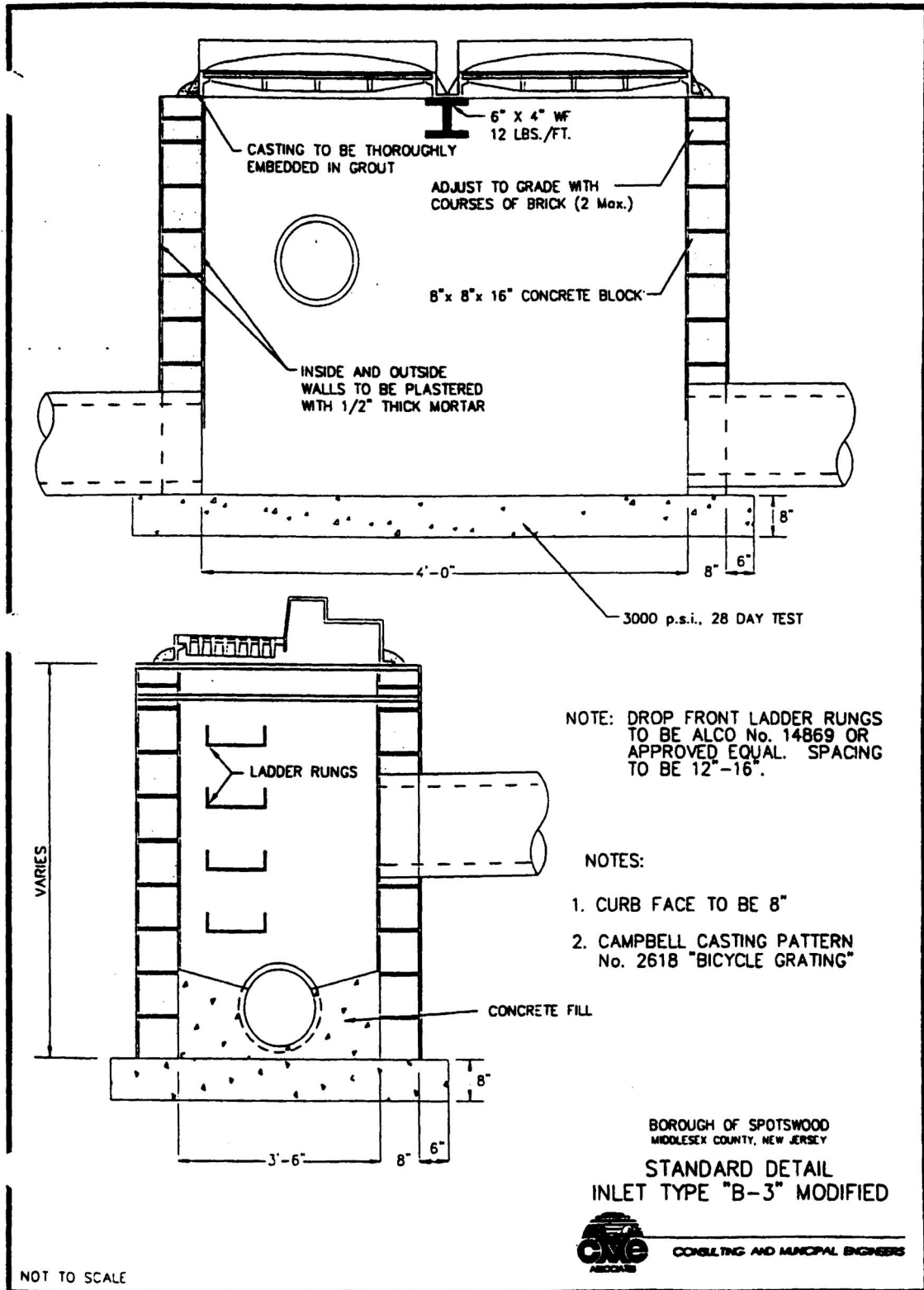
SPOTSWOOD CODE

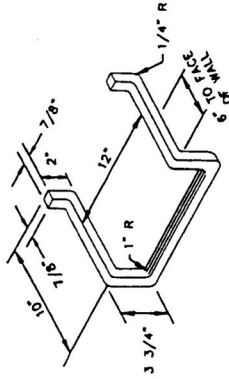


LAND DEVELOPMENT



SPOTSWOOD CODE

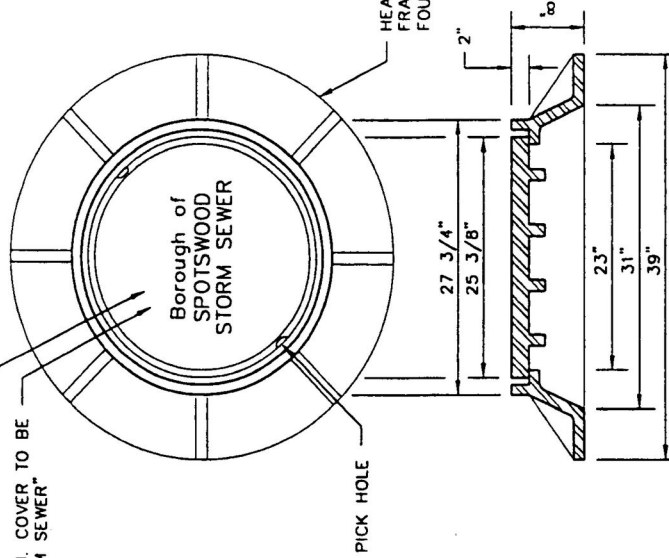




ALUMINUM LADDER RUNG

NOTE: PORTION EMBEDDED IN MASONRY TO BE COATED WITH COAL TAR PITCH, VARNISH OR OTHER APPROVED MATERIAL.

STORM SEWER M.H. COVER ONLY, TO HAVE A MIN. OF (6) 3/4" HOLES
 STORM SEWER M.H. COVER TO BE LABELED: "STORM SEWER"



M.H. FRAME & COVER

BOROUGH OF SPOTSWOOD
 MIDDLESEX COUNTY, NEW JERSEY

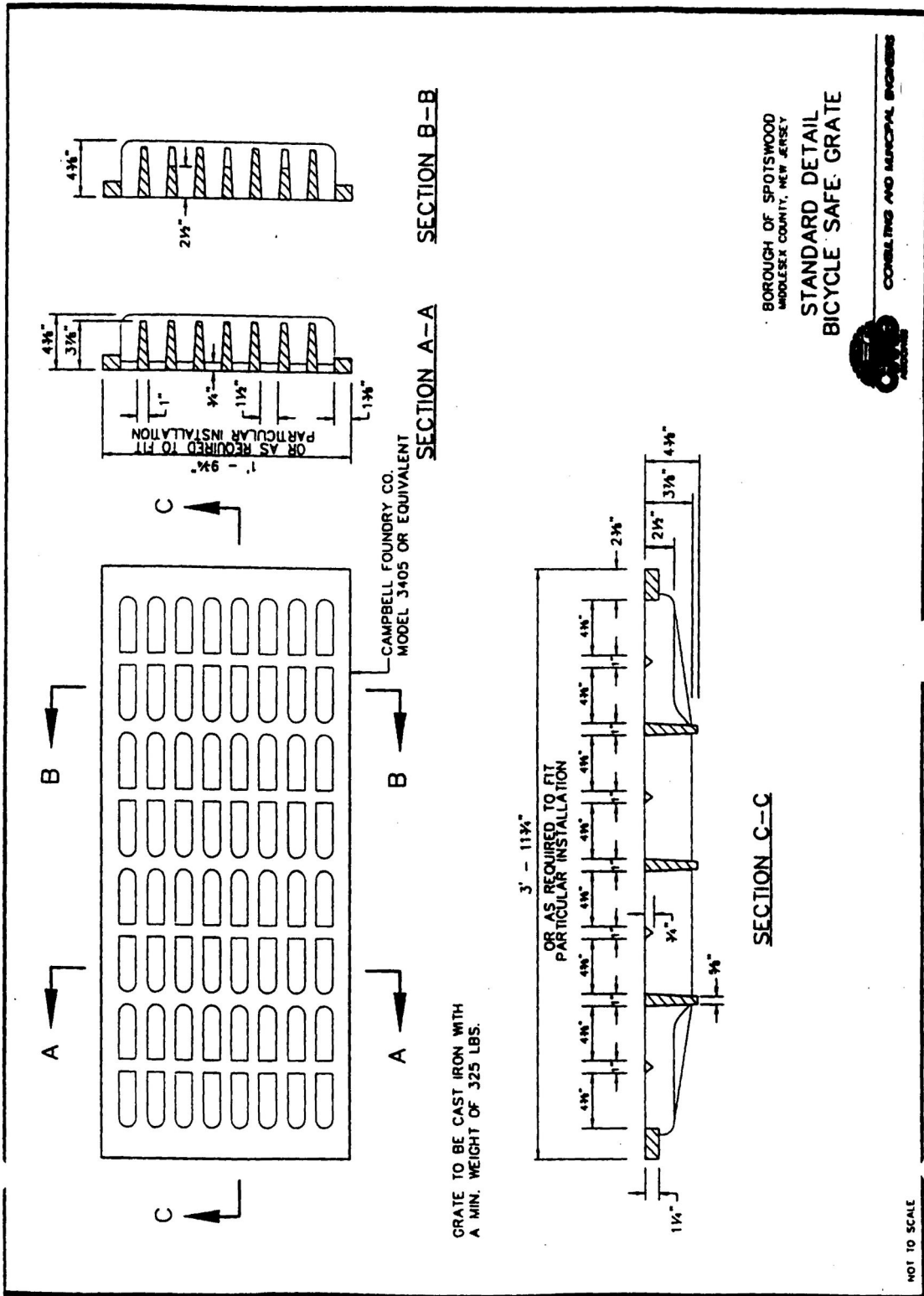
STANDARD DETAIL
 STORM SEWER
 MANHOLE FRAME, COVER &
 ALUMINUM LADDER RUNG



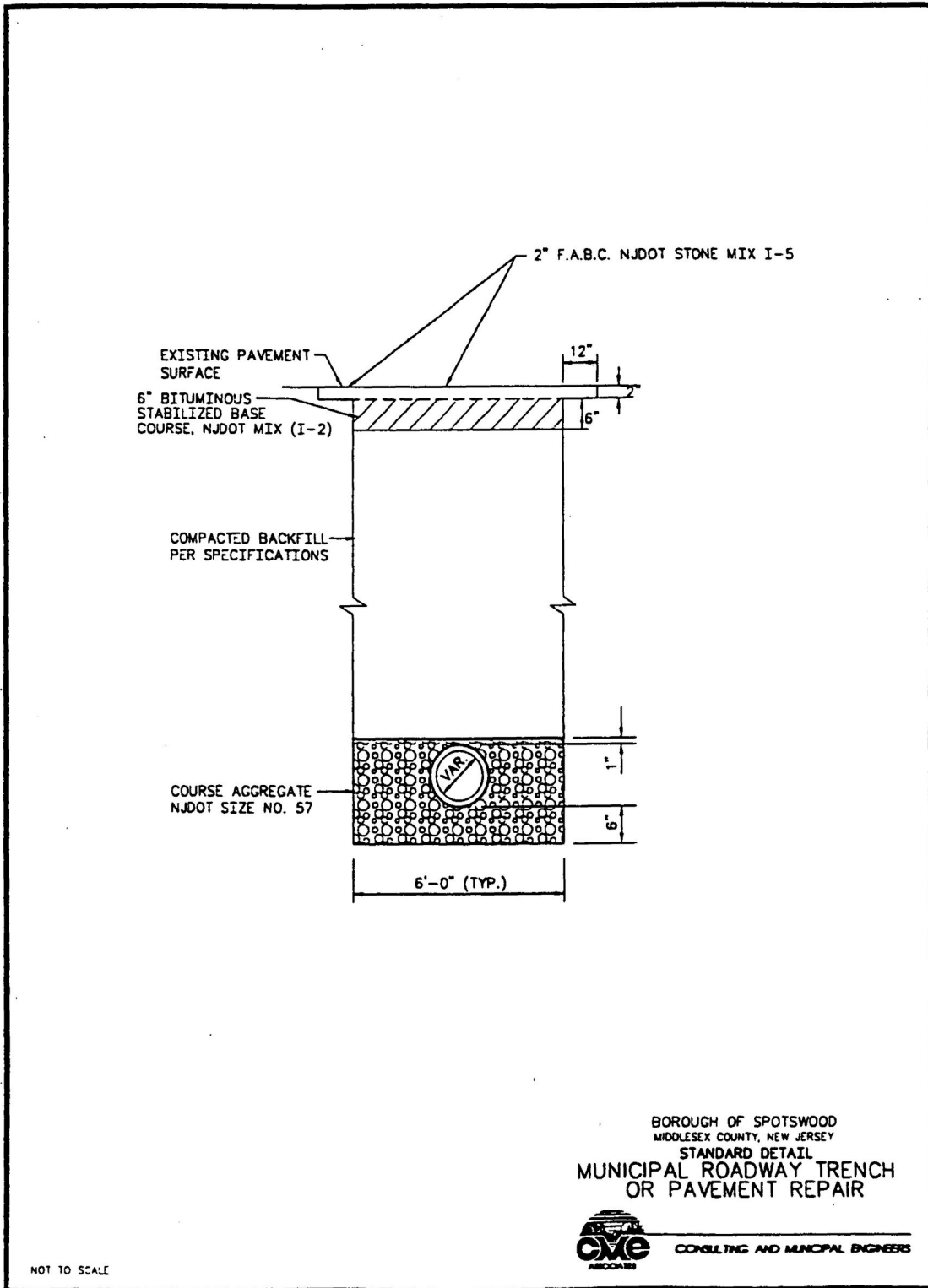
CONSULTING AND MUNICIPAL ENGINEERS

NOT TO SCALE

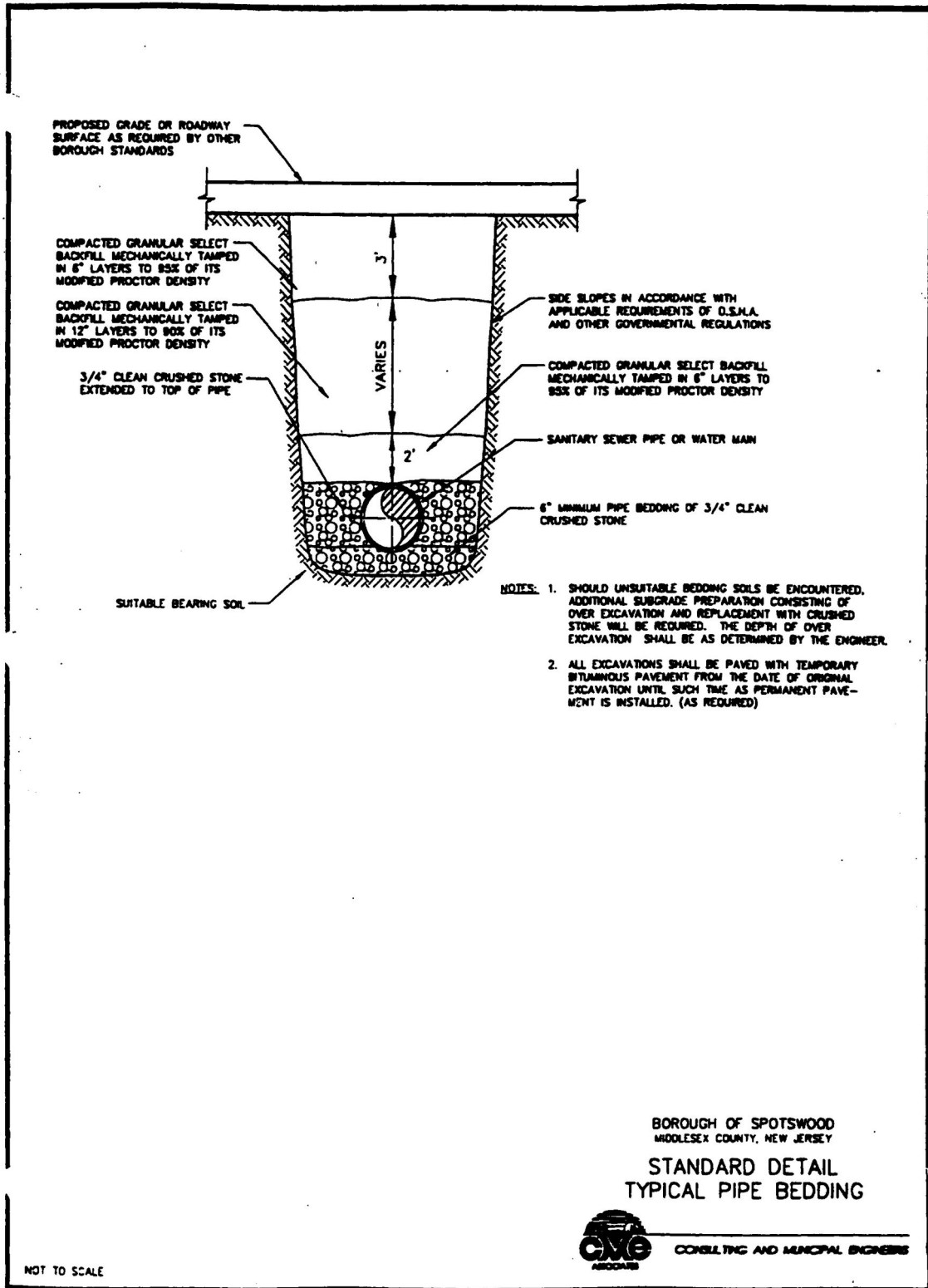
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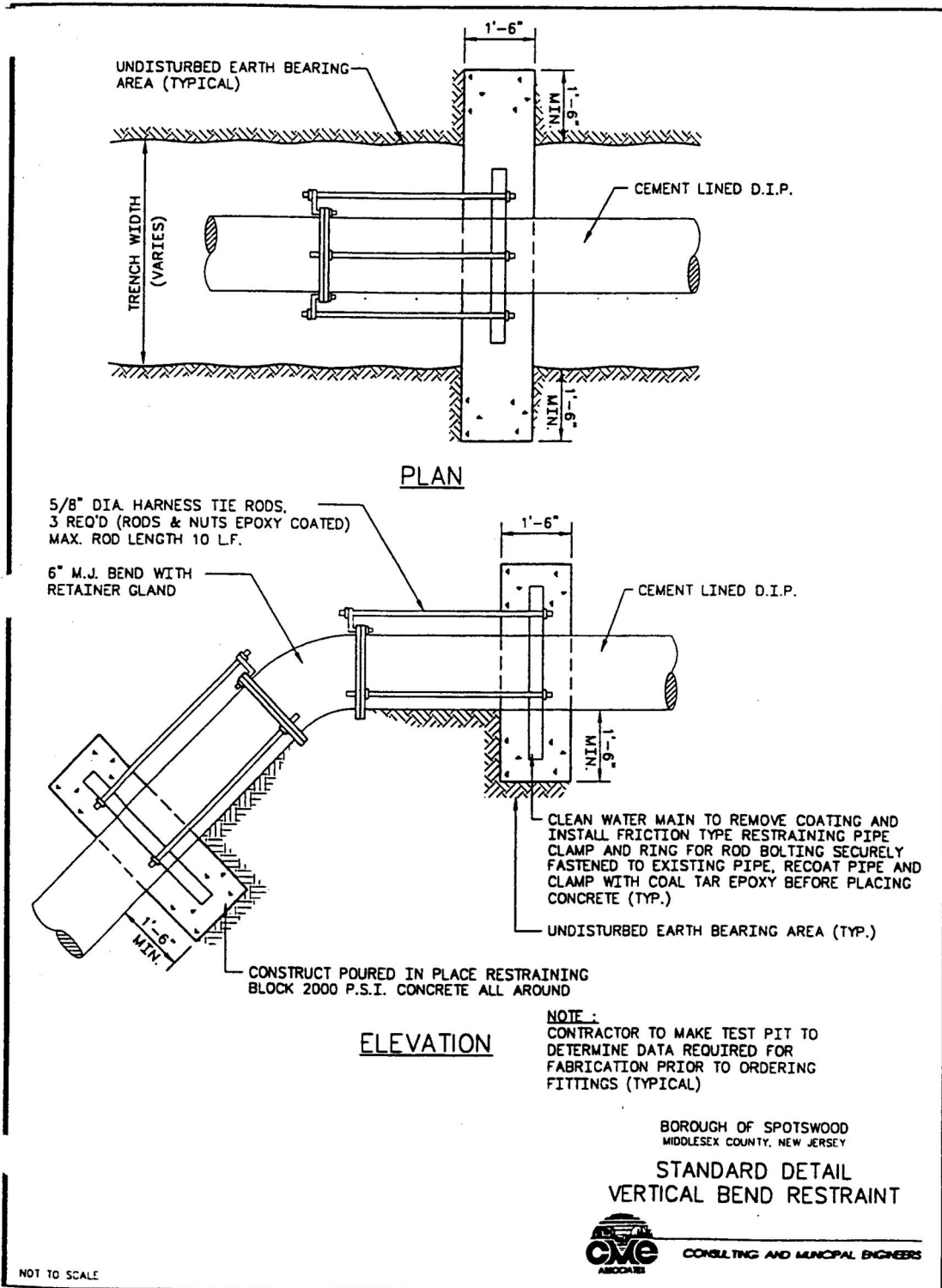
LAND DEVELOPMENT

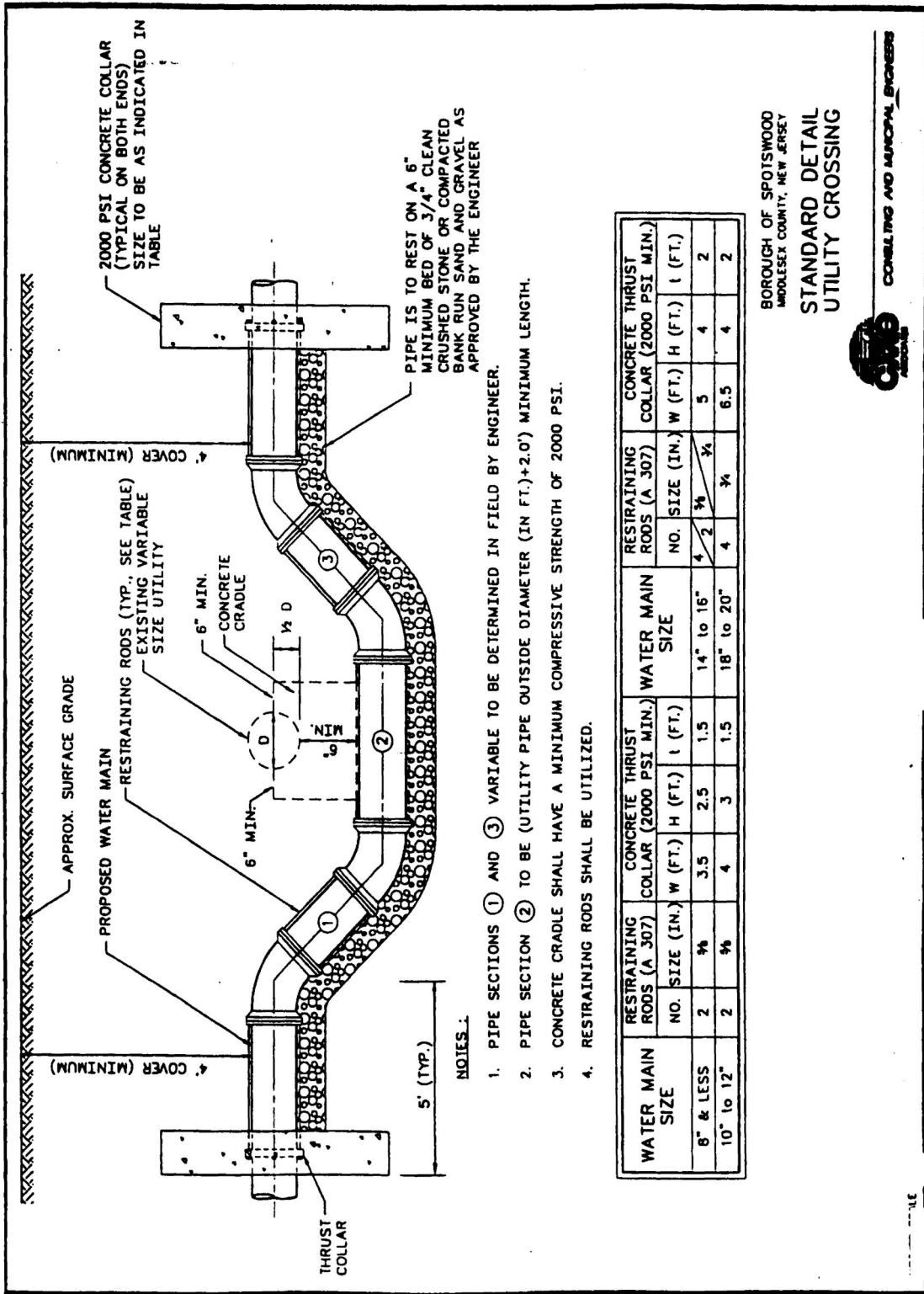


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LAND DEVELOPMENT



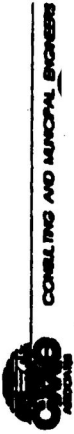


NOTES:

1. PIPE SECTIONS ① AND ③ VARIABLE TO BE DETERMINED IN FIELD BY ENGINEER.
2. PIPE SECTION ② TO BE (UTILITY PIPE OUTSIDE DIAMETER (IN FT.)+2.0') MINIMUM LENGTH.
3. CONCRETE CRADLE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2000 PSI.
4. RESTRAINING RODS SHALL BE UTILIZED.

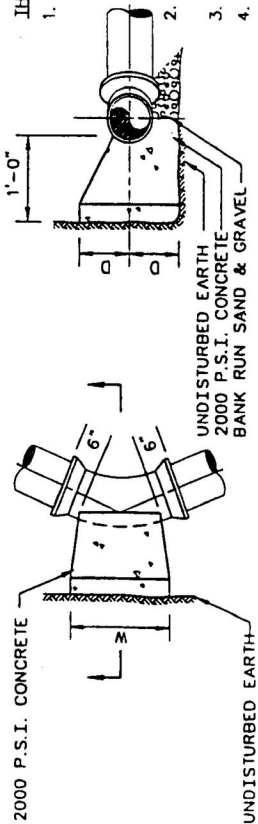
| WATER MAIN SIZE | RESTRAINING RODS (A 307) | | CONCRETE THRUST COLLAR (2000 PSI MIN.) | | WATER MAIN SIZE | | RESTRAINING RODS (A 307) | | CONCRETE THRUST COLLAR (2000 PSI MIN.) | |
|-----------------|--------------------------|------------|--|---------|-----------------|------------|--------------------------|---------|--|------------|
| | NO. | SIZE (IN.) | W (FT.) | H (FT.) | NO. | SIZE (IN.) | W (FT.) | H (FT.) | NO. | SIZE (IN.) |
| 8" & LESS | 2 | 3/4 | 3.5 | 2.5 | 1.5 | 14" to 16" | 4 | 2 | 3/4 | 5 |
| 10" to 12" | 2 | 3/4 | 4 | 3 | 1.5 | 18" to 20" | 4 | 3/4 | 6.5 | 4 |

BOROUGH OF SPOTSWOOD
MIDDLESEX COUNTY, NEW JERSEY
STANDARD DETAIL
UTILITY CROSSING

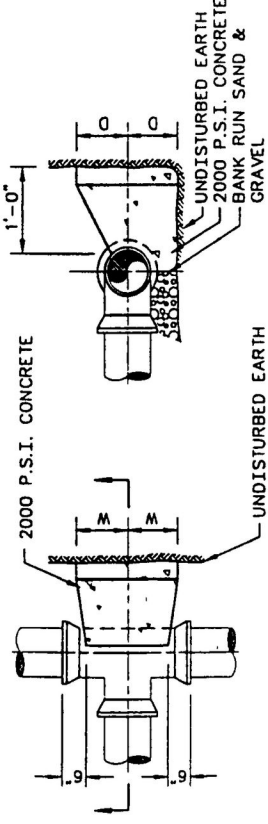


THRUST BLOCK NOTES:

1. BEARING AREAS SHOWN ARE BASED ON 2000 P.S.F. ALLOWABLE BEARING PRESSURE, WHERE SOILS ARE ENCOUNTERED WITH A POORER BEARING CAPACITY, THE CONTRACTOR SHALL INCREASE THE BEARING AREA AS MAY BE DIRECTED BY THE ENGINEER OR STRAP THE JOINTS IN A MANNER APPROVED BY THE ENGINEER.
2. ALL THRUST BLOCKS SHALL BE POURED DIRECTLY AGAINST THE UNDISTURBED EARTH.
3. NO JOINTS SHALL BE COVERED WITH CONCRETE.
4. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2000 P.S.I.
5. ALL THRUST BLOCKS FOR VERTICAL BENDS SHALL INCLUDE STRAPS TO SECURE FITTING TO BLOCK AND CONCRETE QUANTITY SHALL BE INCREASED AS DIRECTED BY ENGINEER.
6. ALL THRUST BLOCKS WERE DESIGNED FOR 100 P.S.I. NORMAL OPERATING PRESSURE. THE THRUST BLOCKS FOR HIGH PRESSURE LINES IF ANY SHALL BE INCREASED IN SIZE AS DIRECTED BY THE ENGINEER.



BENDS

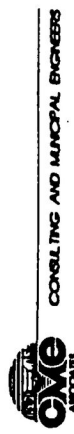


TEES

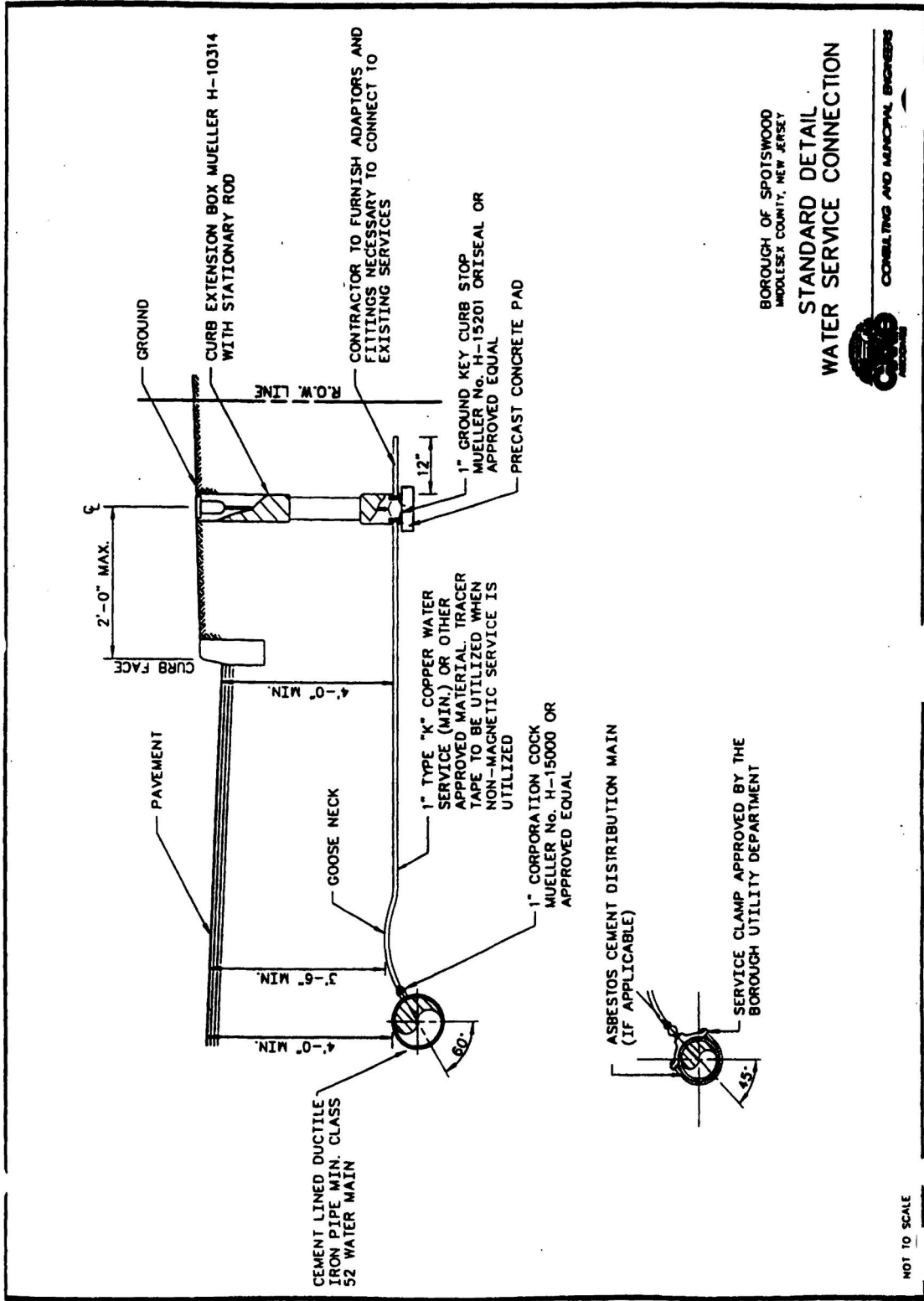
| DESCRIPTION OF FITTINGS | MINIMUM DIMENSIONS (IN FEET) | DIAMETER OF PIPE | | | | | |
|-------------------------|------------------------------|------------------|------|------|------|------|------|
| | | 6" | 8" | 10" | 12" | 14" | 16" |
| TEES | W | 1.25 | 1.50 | 1.75 | 2.00 | 2.25 | 2.50 |
| | D | 1.25 | 2.00 | 2.25 | 2.50 | 2.75 | 3.00 |
| 90° BENDS | W | 2.00 | 3.00 | 3.50 | 4.00 | 4.50 | 6.00 |
| | D | 1.50 | 2.00 | 2.25 | 2.50 | 3.00 | 3.50 |
| 45° BENDS | W | 1.50 | 2.00 | 2.50 | 3.00 | 3.50 | 4.00 |
| | D | 1.00 | 1.25 | 1.75 | 2.00 | 2.50 | 2.75 |
| 22 1/2° BENDS | W | 1.50 | 1.50 | 2.00 | 2.50 | 3.00 | 3.50 |
| | D | 1.00 | 1.00 | 1.50 | 1.50 | 2.00 | 2.00 |
| 11 1/4° BENDS | W | 1.00 | 1.25 | 1.50 | 1.50 | 2.00 | 2.50 |
| | D | 1.00 | 1.00 | 1.25 | 1.25 | 1.50 | 1.50 |
| CAPS | W | 1.25 | 1.50 | 1.75 | 2.00 | 2.25 | 2.50 |
| | D | 1.25 | 2.00 | 2.25 | 2.50 | 2.75 | 3.00 |

NOTE : ALL W&D DIMENSIONS IN FEET

BOROUGH OF SPOTSWOOD
MIDDLESEX COUNTY, NEW JERSEY
STANDARD DETAIL
THRUST BLOCKS



NOT TO SCALE



BOROUGH OF SPOTSWOOD
MIDDLESEX COUNTY, NEW JERSEY

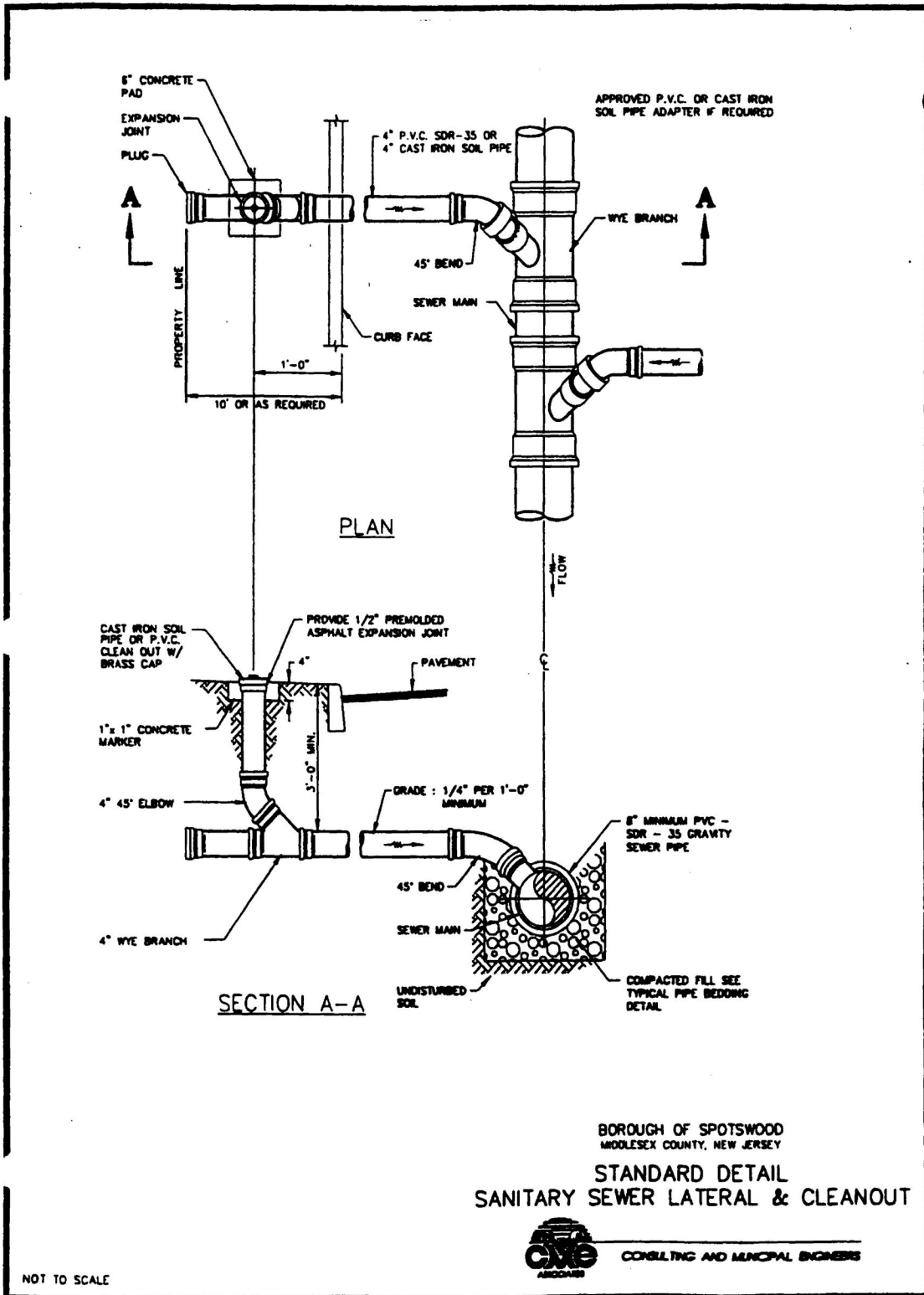
STANDARD DETAIL
WATER SERVICE CONNECTION

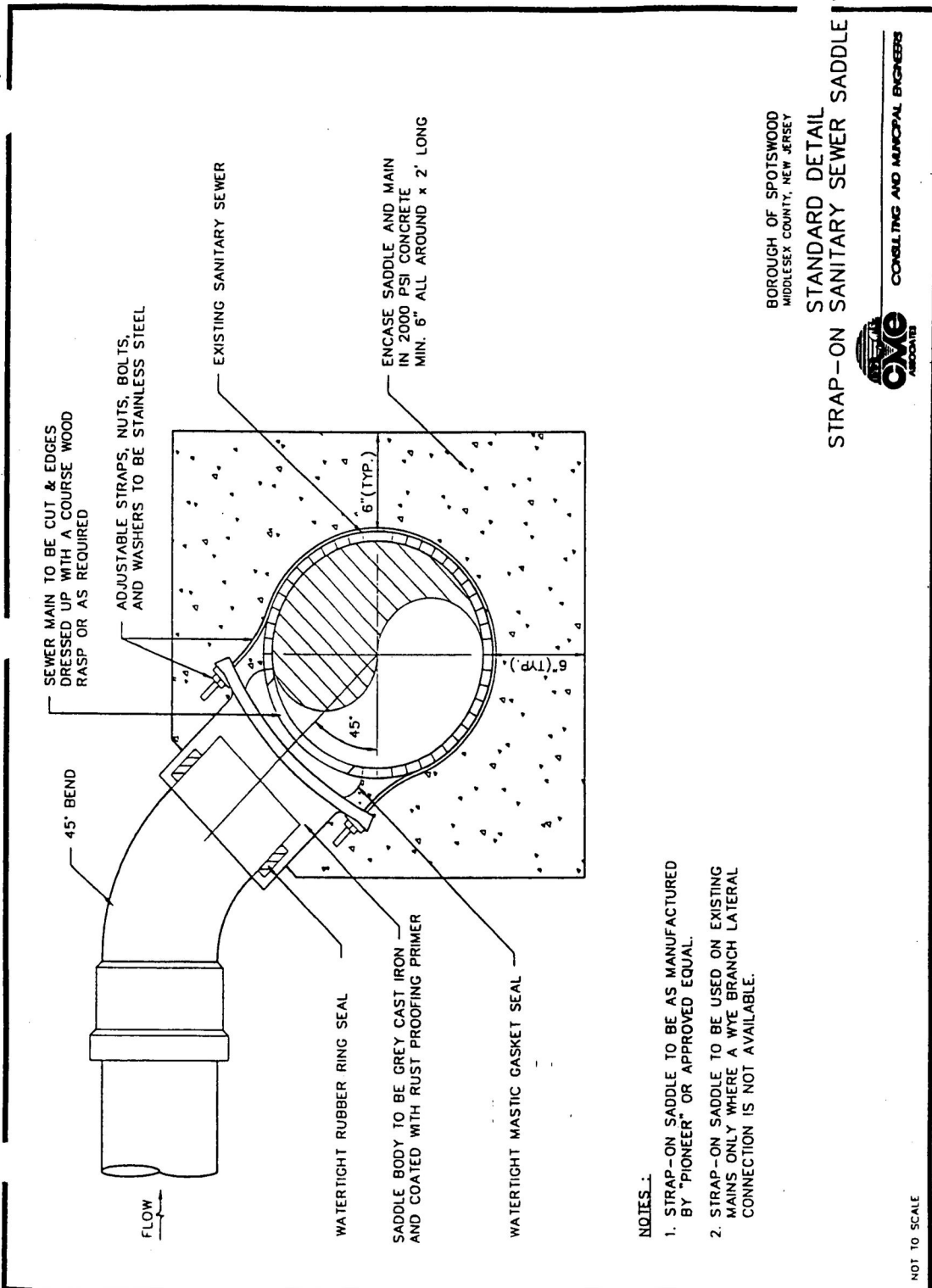


CONSULTING AND MUNICIPAL ENGINEERS

NOT TO SCALE

SPOTSWOOD CODE



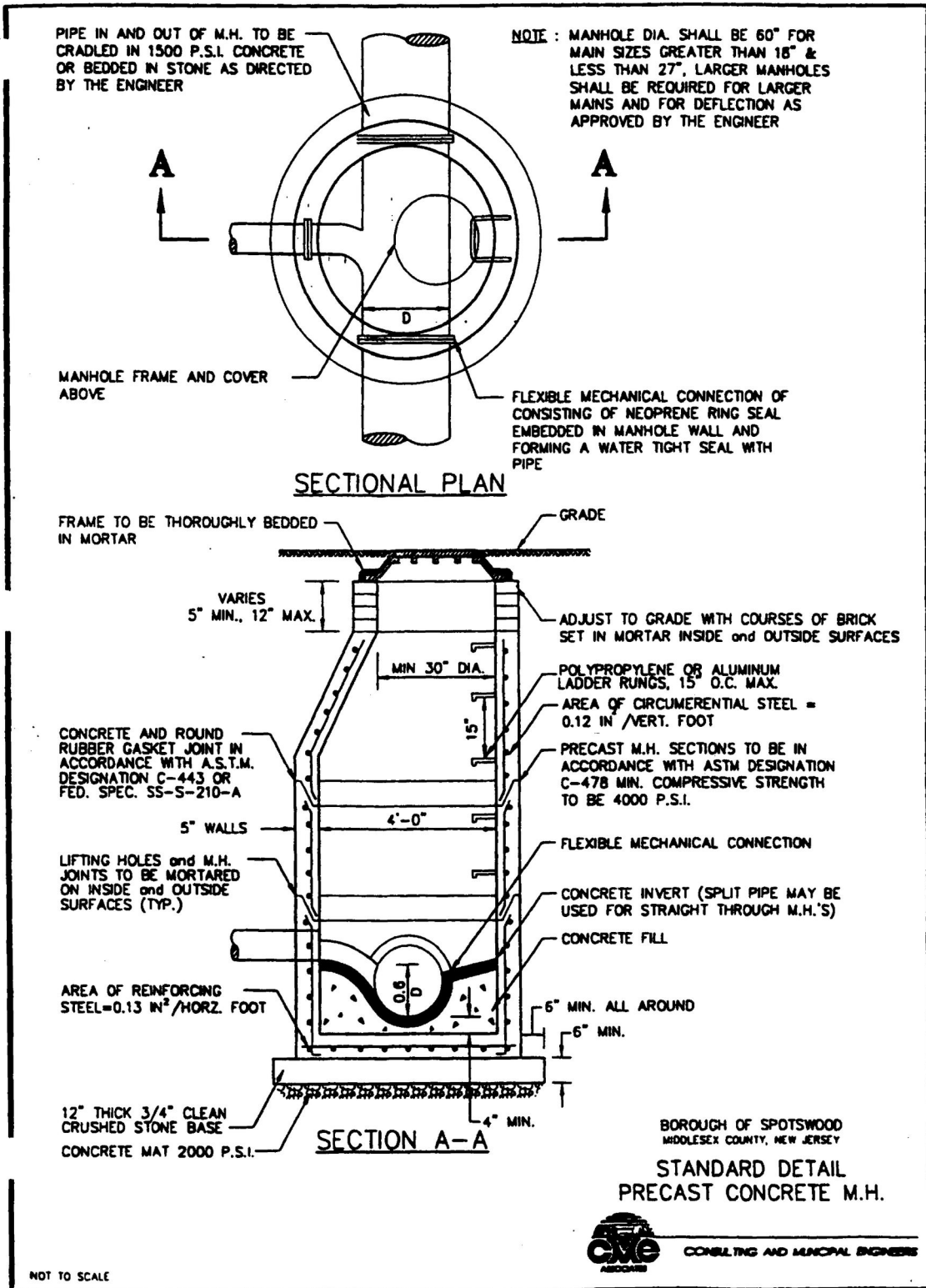


BOROUGH OF SPOTSWOOD
MIDDLESEX COUNTY, NEW JERSEY

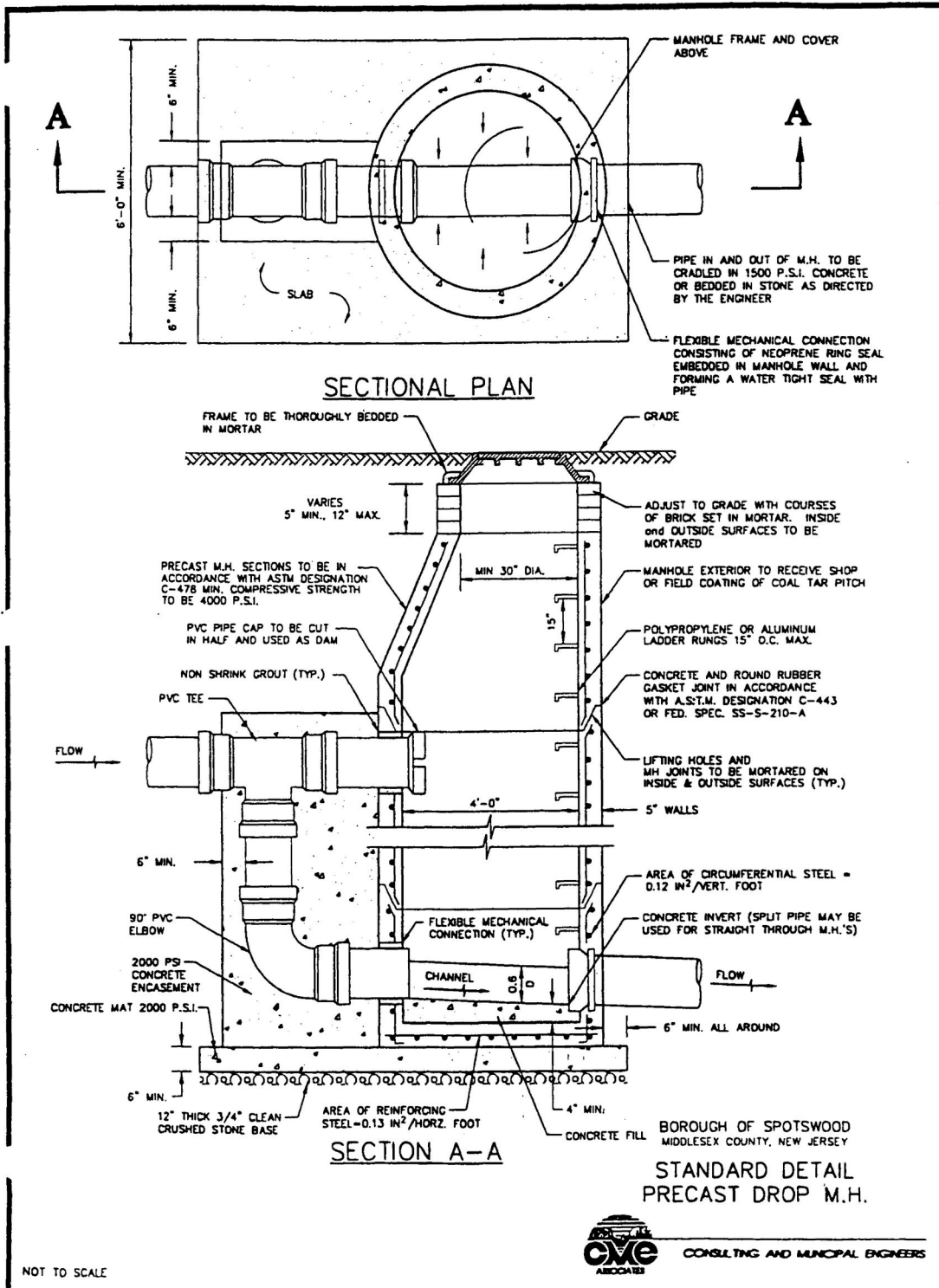
STANDARD DETAIL
STRAP-ON SANITARY SEWER SADDLE



SPOTSWOOD CODE

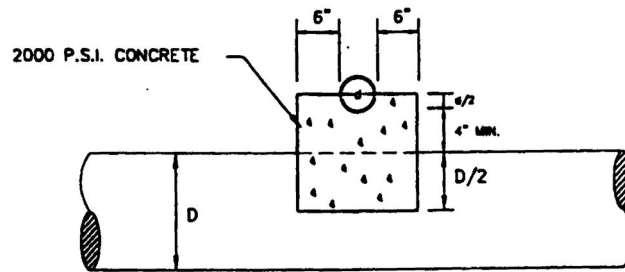
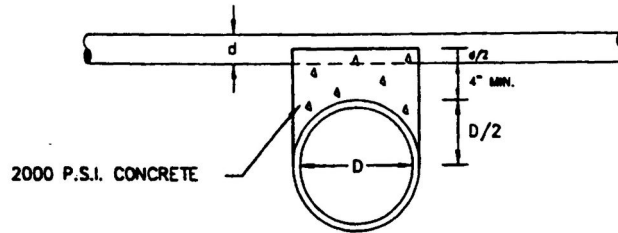
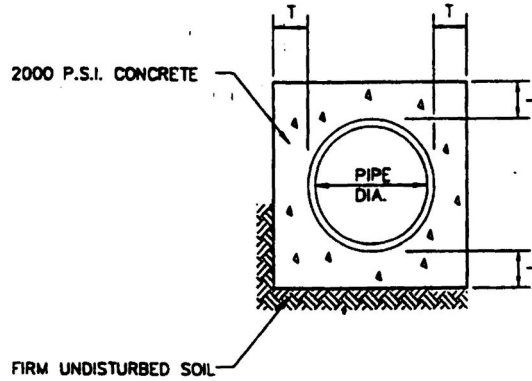


LAND DEVELOPMENT



SPOTSWOOD CODE

| DIMENSIONS | | | | | | | | | | | | | | |
|------------|----|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| DIA. | 6" | 8" | 10" | 12" | 15" | 18" | 21" | 24" | 27" | 30" | 36" | 42" | 48" | 54" |
| T | 5" | 5.5" | 5.5" | 6" | 6" | 6" | 6" | 6" | 6" | 7" | 8" | 9" | 10" | 12" |



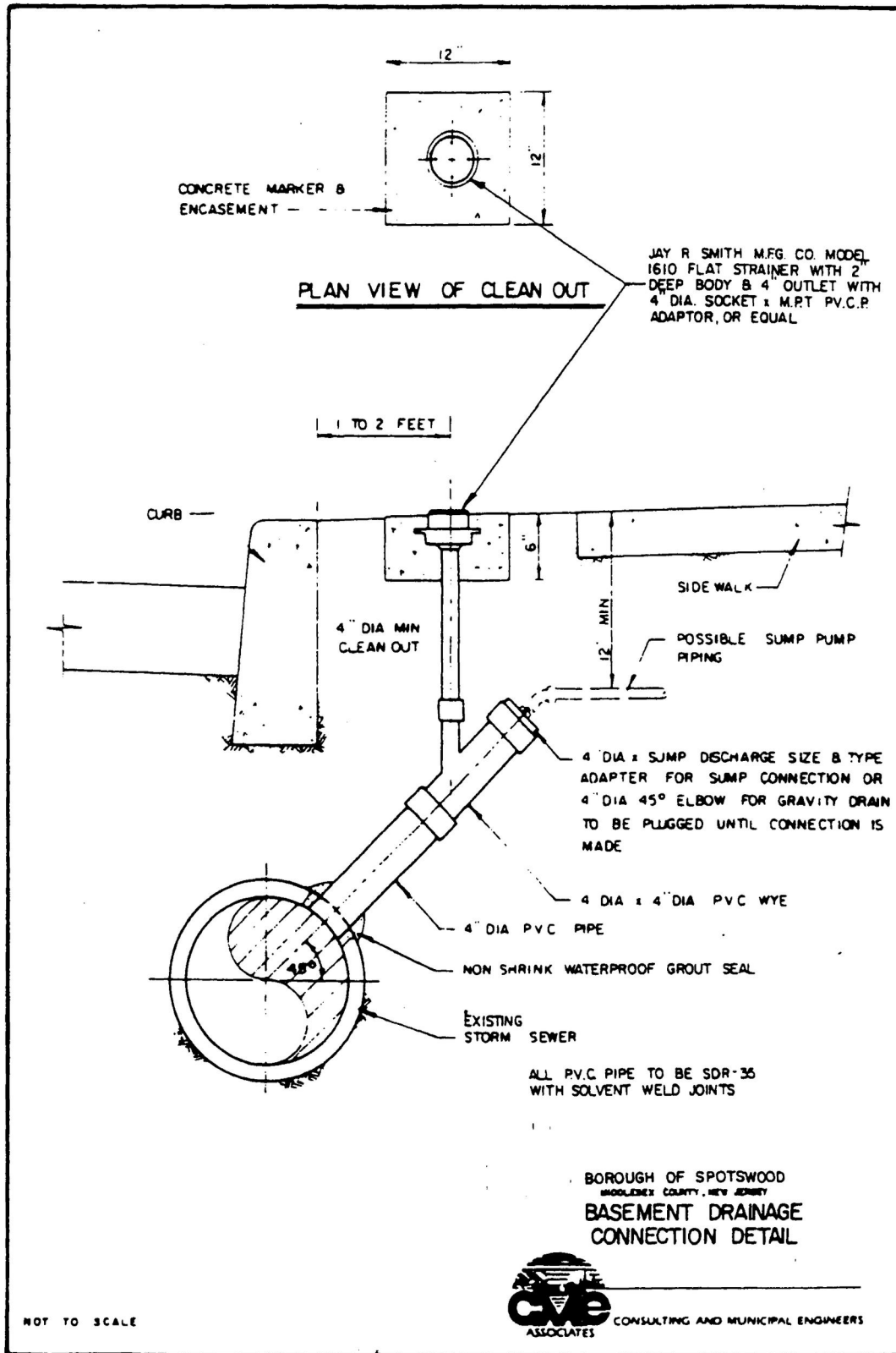
BOROUGH OF SPOTSWOOD
 MIDDLESEX COUNTY, NEW JERSEY
STANDARD DETAIL
CONCRETE ENCASUREMENT & CRADLE



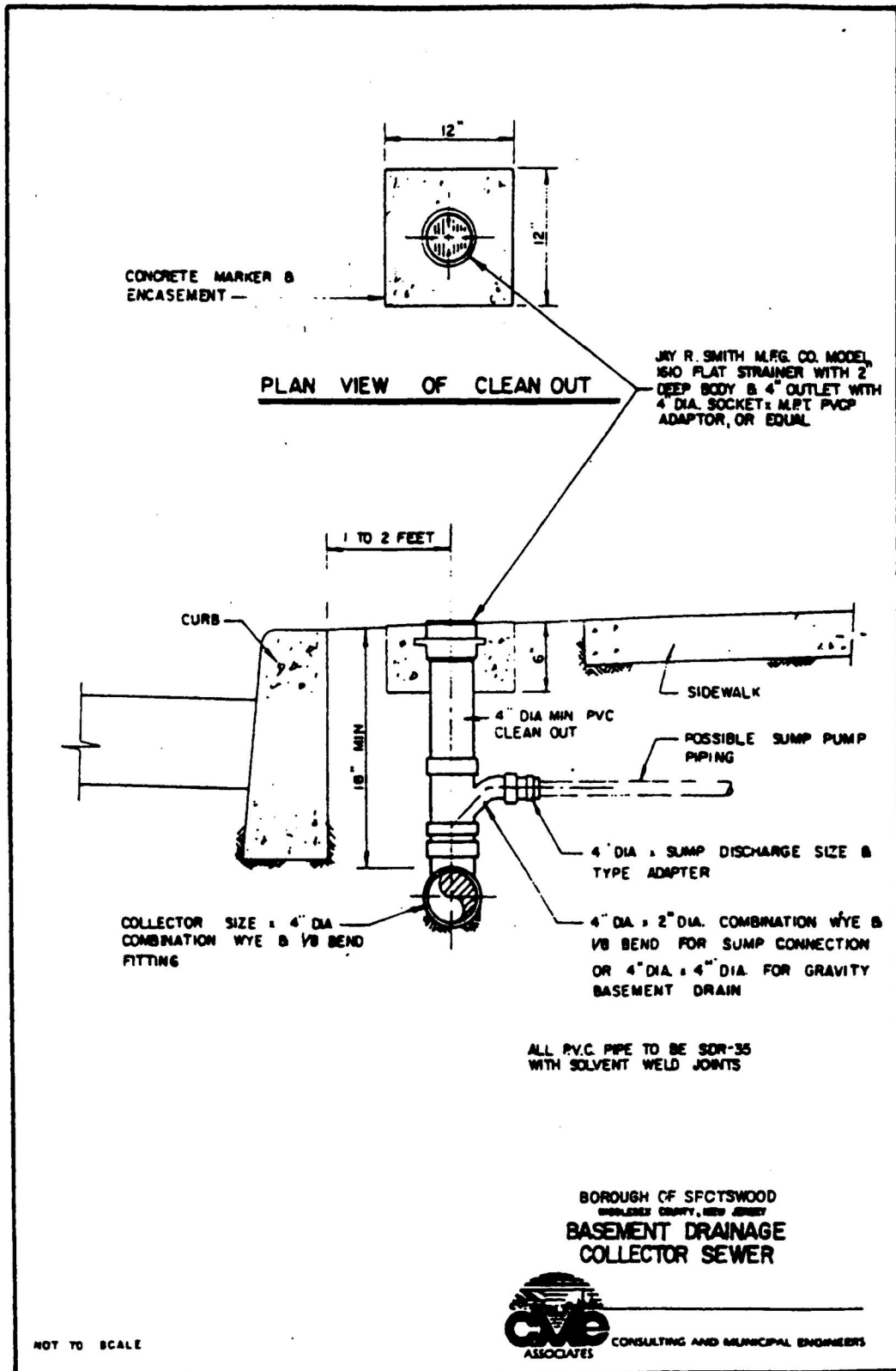
CONSULTING AND MUNICIPAL ENGINEERS

NOT TO SCALE

LAND DEVELOPMENT



SPOTSWOOD CODE



BOROUGH OF SPOTSWOOD
MIDDLESEX COUNTY, NEW JERSEY
**BASEMENT DRAINAGE
COLLECTOR SEWER**



CONSULTING AND MUNICIPAL ENGINEERS
ASSOCIATES

NOT TO SCALE

LAND DEVELOPMENT

**BASEMENT DRAINS - MINIMUM SLOPES %
COLLECTOR DRAINAGE SYSTEM**

| # DWELLINGS SERVED | COLLECTOR SIZE | | | | | |
|--------------------|----------------|-------|-------|-------|-------|-------|
| | 4" | 6" | 8" | 10" | 12" | 15" |
| 1 | 1.00% | 0.76% | 0.40% | 0.28% | — | — |
| 2 | 4.00% | 0.76% | 0.40% | 0.28% | — | — |
| 3 | — | 1.02% | 0.40% | 0.28% | — | — |
| 4 | | 1.82% | 0.42% | 0.28% | — | — |
| 5 | | 2.84% | 0.61% | 0.28% | — | — |
| 6 | | 4.09% | 0.86% | 0.28% | 0.22% | — |
| 7 | | — | 1.20% | 0.36% | 0.22% | — |
| 8 | | | 1.56% | 0.48% | 0.22% | — |
| 9 | | | 1.98% | 0.60% | 0.23% | 0.15% |
| 10 | | | 2.44% | 0.74% | 0.28% | 0.15% |
| 11 | | | 2.96% | 0.90% | 0.34% | 0.15% |
| 12 | | | 3.52% | 1.07% | 0.40% | 0.15% |
| 13 | | | 4.13% | 1.25% | 0.47% | 0.15% |
| 14 | | | | 1.46% | 0.55% | 0.17% |
| 15 | | | | 1.67% | 0.63% | 0.19% |
| 16 | | | | 1.90% | 0.72% | 0.22% |
| 17 | | | | 2.15% | 0.81% | 0.25% |
| 18 | | | | 2.41% | 0.91% | 0.28% |
| 19 | | | | 2.68% | 1.01% | 0.31% |
| 20 | | | | 2.97% | 1.12% | 0.34% |
| 21 | | | | 3.28% | 1.24% | 0.38% |
| 22 | | | | 3.60% | 1.36% | 0.41% |
| 23 | | | | 3.93% | 1.49% | 0.45% |
| 24 | | | | 4.28% | 1.62% | 0.49% |
| 25 | | | | — | 1.76% | 0.53% |
| 26 | | | | | 1.90% | 0.58% |
| 27 | | | | | 2.05% | 0.62% |
| 28 | | | | | 2.20% | 0.67% |
| 29 | | | | | 2.36% | 0.72% |
| 30 | | | | | 2.52% | 0.77% |



BOROUGH OF SPOTSWOOD
MIDDLESEX COUNTY, NEW JERSEY
**COLLECTOR DRAINAGE
SYSTEM CHART**

CONSULTING AND MUNICIPAL ENGINEERS