6 MIL POLYETHYLENE "CAP" TO BE INSTALLED IN TRENCHES WITHIN THE PAVED SURFACE OF STATE HIGHWAYS

SHEETING IF USED SHALL BE LEFT IN PLACE BELOW TOP OF PIPE ZONE

TRENCH WIDTH WS OR WU

WS/2 OR WU/2 WU/2

NO LEDGE OR UNEXCAVATED MATERIAL SHALL PROJECT BEYOND THIS LINE

PIPE ZONE

PAYMENT LIMITS FOR NORMAL EXCAVATION

COMPACTED SCREENED GRAVEL AGAINST UNDISTURBED MATERIAL OR SHEETING

UNDISTURBED MATERIAL

PAYMENT LIMITS FOR ROCK EXCAVATION

HALF SECTION IN EARTH

HALF SECTION IN ROCK

M& E
METCALF & EDDY

SEWER TRENCH SECTIONS FOR PVC PIPE
18-IN. DIAMETER AND SMALLER

DATE
SCALE: NONE 1 004295 2-1.1.4
6 MIL POLYETHYLENE "CAP" TO BE INSTALLED IN TRENCHES WITHIN THE PAVED SURFACE OF STATE HIGHWAYS.

SHEETING IF USED SHALL BE LEFT IN PLACE BELOW TOP OF PIPE ZONE, EXCEPT WHERE OTHERWISE INDICATED OR DIRECTED.

TRENCH WIDTH Ws OR Wu

Wu/2 OR Ws/2

NO LEDGE OR UNEXCAVATED MATERIAL SHALL PROJECT BEYOND THIS LINE.

PAYMENT LIMITS FOR NORMAL EXCAVATION

COMPACTED SCREENED GRAVEL AGAINST UNDISTURBED MATERIAL OR SHEETING

UNDISTURBED MATERIAL

PAYMENT LIMITS FOR ROCK EXCAVATION

HALF SECTION IN EARTH

HALF SECTION IN ROCK

SEWER TRENCH SECTIONS FOR DI PIPE 18-IN. DIAMETER AND SMALLER

METCALF & EDDY

DATE

SCALE: NONE 1 004295 2-1.1.3
Sheeting shall be used, and shall be left in place below top of pipe zone.

Backfill with bank-run gravel, fine aggregate, or screened gravel, as directed.

Detail not shown are same as for sewer trench sections shown elsewhere.

Note: To be used where unsuitable foundation material exists below normal depth.
<table>
<thead>
<tr>
<th>Diameter of Pipe D</th>
<th>Wu Unsheeted</th>
<th>Wu Sheeted</th>
</tr>
</thead>
<tbody>
<tr>
<td>12&quot; and smaller</td>
<td>3'-0&quot;</td>
<td>4'-2&quot;</td>
</tr>
<tr>
<td>15&quot;</td>
<td>3'-2&quot;</td>
<td>4'-4&quot;</td>
</tr>
<tr>
<td>18&quot;</td>
<td>3'-6&quot;</td>
<td>4'-8&quot;</td>
</tr>
<tr>
<td>21&quot;</td>
<td>3'-10&quot;</td>
<td>5'-0&quot;</td>
</tr>
<tr>
<td>24&quot;</td>
<td>4'-2&quot;</td>
<td>5'-4&quot;</td>
</tr>
<tr>
<td>27&quot;</td>
<td>4'-6&quot;</td>
<td>5'-8&quot;</td>
</tr>
<tr>
<td>30&quot;</td>
<td>4'-10&quot;</td>
<td>6'-0&quot;</td>
</tr>
<tr>
<td>36&quot;</td>
<td>5'-6&quot;</td>
<td>6'-8&quot;</td>
</tr>
<tr>
<td>42&quot;</td>
<td>6'-2&quot;</td>
<td>7'-4&quot;</td>
</tr>
<tr>
<td>48&quot;</td>
<td>6'-10&quot;</td>
<td>8'-0&quot;</td>
</tr>
</tbody>
</table>
GENERAL NOTES

1. SEWER TRENCHES MAY BE EXCAVATED WIDER THAN TRENCH WIDTH WS ABOVE THE TOP OF PIPE ZONE.

2. BELOW THE TOP OF PIPE ZONE THE TRENCH SHOULD NOT BE EXCAVATED BEYOND THE TRENCH WIDTH WS.

3. IF EXCAVATION AND BACKFILL BELOW NORMAL DEPTH IS REQUIRED, SHEETING MUST BE USED.

4. SHEETING, IF USED, IN ALL CASES SHALL BE LEFT IN PLACE BELOW A LINE 1'-0" ABOVE THE TOP OF THE PIPELINE, UNLESS OTHERWISE INDICATED OR DIRECTED.

5. ALL EXTERIOR SURFACES OF MANHOLE GRADE ADJUSTMENT COURSES SHALL BE COVERED WITH 1/4" TO 3/8" MASONRY CEMENT PLASTER.

6. ALL OPENINGS IN PRECAST REINFORCED CONCRETE MANHOLE BASES FOR WHICH PIPES ARE TO CONNECT SHALL BE LOCK JOINT FLEXIBLE MANHOLE SLEEVES, MANUFACTURED BY INTERFACE CORPORATION, PARISPPANY, NEW JERSEY 07054 OR AN ACCEPTABLE EQUIVALENT.

7. NO TREES OR TREE LIMBS ALONG THE ENTIRE ROUTE OF CONSTRUCTION ON PUBLIC WAYS SHALL BE CUT UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

8. IN ADDITION TO COMPLIANCE WITH THE REQUIREMENTS OF THE SECTION TITLED "SAFETY" OF THE SPECIAL CONDITIONS, THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES AND SHALL PROVIDE ALL NECESSARY CONTINUOUS BARRIERS OF SUFFICIENT TYPE, SIZE AND STRENGTH TO PREVENT ACCESS TO ALL OPEN EXCAVATIONS AT THE COMPLETION OF EACH DAYS WORK.

9. ALL ELEVATIONS BASED ON U.S.G.S. MEAN SEA LEVEL.

10. TOPOGRAPHY FROM AERIAL SURVEY MADE BY AERIAL DATA REDUCTION ASSOCIATES, INC., 9285 COMMERCE HWY., P.O. BOX 557, PENNSAUKEN, NEW JERSEY 08110, IN APRIL, 1975.

11. EXACT LOCATIONS OF HOUSE CONNECTIONS AND CHIMNEYS TO BE DETERMINED IN THE FIELD BY THE ENGINEER. HOUSE CONNECTIONS SHALL BE 6-IN. PVC PIPE. ALL HOUSE CONNECTIONS SHALL TERMINATE AT THE PROPERTY LINE. THE LAST LENGTH OF PIPE AT THE PROPERTY LINE SHALL BE A MAXIMUM LENGTH OF 2'-0" AS INDICATED ON DETAIL 2-1.2.4.

12. LOCATION OF UTILITIES AND PROPERTY LINES ARE FROM THE BEST INFORMATION AVAILABLE. EXACT LOCATION AND COMPLETENESS IS NOT GUARANTEED.

13. CHIMNEYS SHALL BE A MINIMUM OF SEVEN-FEET BELOW THE STREET SURFACE.

14. STANDARD MANHOLE FRAMES AND COVERS SHALL BE CATALOG NO. LT102 AS MANUFACTURED BY E.L. LeBARON FOUNDRY CO., BROCKTON, MA. 02403 OR APPROVED EQUAL PRODUCT.
15. ALL WATERTIGHT FRAMES AND COVERS SHALL BE PAMTIGHT NO. 62115 AS MANUFACTURED BY PONT-A-MOUSSEN, INC. OR APPROVED EQUAL PRODUCT. ALL WATERTIGHT FRAMES SHALL BE SECURED TO THE MANHOLE CONES AS INDICATED ON DETAIL 2-1.5.61.

16. HEADWALLS, SIGNS, GUARDRAILS AND ANY OTHER OBJECTS DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION. PAYMENT FOR THIS WORK SHALL BE INCLUDED UNDER THE APPROPRIATE BID ITEM FOR CONSTRUCTING SEWERS.

17. PRIOR TO THE START OF CONSTRUCTION, TEST PITS SHOULD BE DUG AS NECESSARY TO DETERMINE LOCATION AND DEPTH OF UTILITIES.

18. EXISTING UTILITIES INTERFERING WITH THE WORK SHALL BE RELOCATED AS DIRECTED BY THE ENGINEER IN THE FIELD.


20. ALL UNEXCAVATED ROCK WITHIN 3'-0" HORIZONTALLY OF THE ENDS OF BUILDING CONNECTIONS, BRANCHES, AND STUBS, AND DOWN TO A HORIZONTAL PLANE 6" BELOW THE BOTTOMS OF SUCH CONNECTIONS, BRANCHES, AND STUBS, SHALL BE REMOVED. SEE SPECIFICATIONS.

21. IN THOSE GRASSED AND WOODED AREAS DISTURBED BY THE CONTRACTOR'S OPERATION, THE SURFACE SHALL BE RESTORED WITH A MINIMUM OF 6" OF SEEDED TOPSOIL, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. PAYMENT FOR THIS WORK SHALL BE INCLUDED UNDER THE APPROPRIATE BID ITEM FOR CONSTRUCTING SEWERS.

22. WHERE REMOVAL AND RESETTING OF EXISTING METAL BEAM GUARDRAILS OR CABLE GUARDRAILS IS NECESSARY, REFER TO SECTIONS 9.01, 9.10, 9.11, AND 9.12 OF THE STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS, BRIDGES AND INCIDENTAL CONSTRUCTION FOR CONSTRUCTION METHODS. PAYMENT FOR THIS WORK SHALL BE INCLUDED UNDER THE APPROPRIATE BID ITEM FOR CONSTRUCTING SEWERS.

23. THE CONTRACTOR IS INSTRUCTED TO "CALL BEFORE YOU DIG" AT 1-800-922-4455 IN ADVANCE OF CONSTRUCTION.
6 MIL POLYETHYLENE "CAP" TO BE INSTALLED IN TRENCHES WITHIN THE PAVED SURFACE OF STATE HIGHWAYS

BUILDING CONNECTION MIN. SLOPE 1/4" PER FOOT UNLESS OTHERWISE DIRECTED

PAYMENT LIMITS FOR BUILDING CONNECTIONS

PROVIDE 2" X 2" OAK MARKER

PROVIDE SCREENED GRAVEL TO 1 FT. ABOVE PIPE END AND 3 FT. BEYOND

UNDISTURBED MATERIAL

SCREENED GRAVEL ENVELOPE

SCALE: NONE

MEETCALF & EDDY

BUILDING CONNECTION
(FOR PVC PIPE)
REFER TO ISOMETRIC DETAIL AT RIGHT WHERE ADDITIONAL BUILDING CONNECTION IS NEEDED.

SEWER MAIN WITH GASKETED T-BRANCH COMPATIBLE TO RECEIVE 6" PVC PIPE

BUILDING CONNECTION WHERE REQUIRED, REFER TO TYPICAL DETAIL

NOTE
USE ADDITIONAL TOP SECTION TO ACCOMMODATE ANOTHER BUILDING CONNECTION.

6" PVC CLEANOUT PLUG

JOIN TOP SECTIONS WITH 6" LENGTH OF PLAIN END PVC PIPE

RECTANGULAR RISER SECTION(S) 1,2,3,4 FT. LENGTHS

BASE SECTION

ISOMETRIC VIEW

PLAN

SECTION A-A
ALUMINUM SPLASH PLATE DETAIL

SECTION A-A

PIPE SIZE TABLE

<table>
<thead>
<tr>
<th>INLET SEWER D1</th>
<th>DROP PIPE D2</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>10</td>
</tr>
<tr>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

NOTES:

1. DETAILS OF DROP MANHOLE TO BE SAME AS FOR TYPICAL MANHOLE EXCEPT AS SHOWN.
2. ALUMINUM TO BE 6061-T6 ALLOY AND TEMPER.
3. COUPLING: ELASTOMERIC PLASTIC SLEEVE WITH STAINLESS STEEL CLAMP BANDS. MATERIALS PER ANSI C425.
4. RUBBER RING WATER STOP: MATERIALS PER ANSI C923.
ADJUST TO REQUIRED GRADE WITH A MINIMUM OF TWO COURSES OF BRICK MASONRY OR REINFORCED CONCRETE GRADING RINGS

MH FRAME AND COVER

MORTAR

PRECAST REINFORCED CONCRETE MH CONE

BUTYL RUBBER SEALANT (TYP)

PRECAST REINFORCED CONCRETE MH BARREL

5" MIN.

4'0" DIAM.

MH STEPS

11" MAX.

3'0" OR 4'0"

COMBINATION OF 1, 2

3 OR 4 FT. LENGTHS

SEWER MANHOLE RISER AND ECCENTRIC CONE TOP TYPE A

M&F METCALF & EDDY
ADJUST TO REQUIRED GRADE WITH A MINIMUM OF TWO COURSES OF BRICK MASONRY OR REINFORCED CONCRETE GRADING RINGS

11" MAX.

CLASS A CONCRETE COLLAR – TO BE PLACED WHEN PERMANENT PAVEMENT IS PLACED. PAVEMENT UNDER "MANHOLE FRAMES AND COVERS".

COMBINATION OF 1, 2, 3 OR 4 FT. LENGTHS

SEWER MANHOLE RISER AND ECCENTRIC CONE TOP TYPE B

DATE: 2-1-5-42

SCALE: NONE
MH FRAME AND COVER

ADJUST TO REQUIRED GRADE WITH A MINIMUM OF TWO COURSES OF BRICK MASONRY OR REINFORCED CONCRETE GRADING RINGS

PAVEMENT:
TOP COURSE
BINDER COURSE

6" (TYP.)

PRECAST REINFORCED CONCRETE MH FLAT SLAB TOP

6" MIN.
#4 HOOP (1" COVER)
BUTYL RUBBER SEALANT

MH STEPS (IF REQ'D.)

2" CLEAR COVER

1" CHAMFER

2'-0" DIA.

4'-0" DIA.

CLASS A CONCRETE COLLAR - TO BE PLACED WHEN PERMANENT PAVEMENT IS PLACED, PAVEMENT TO BE PLACED UNDER "MANHOLE FRAMES AND COVERS".

PRECAST REINFORCED CONCRETE MH BARREL

SECTION A-A

PLAN OF PRECAST SLAB

#4 HOOP
#4 TIE
#6

2" CLEAR COVER

PRECAST FLAT SLAB TOP FOR SHALLOW MANHOLE - TYPE B
4 - 3/4"Ø TYPE 316 STAINLESS STEEL STUD TYPE CONCRETE ANCHORS

STAINLESS STEEL BEVELED WASHER

MORTAR

4" MIN.

FRAME

PRECAST REINFORCED CONCRETE MH CONE

8"

4" MIN.

FRAME

STAINLESS STEEL BEVELED WASHER

MORTAR

PRECAST REINFORCED CONCRETE MH FLAT SLAB TOP
NOTES:

1. THE PIPE SHALL BE PROPERLY SECURED TO PREVENT DISPLACEMENT DURING THE POURING OF CONCRETE ENCASEMENT.

2. LIMIT OF CONCRETE ENCASEMENT SHALL BE SHOWN ON THE PIPE PROFILE OR AS DIRECTED.
Sheeting shall be used, and shall be left in place, below the narrow trench limit.

3/4 in. coarse aggregate

Compacted sand

Line of narrow trench limit

Limit of normal depth

Excavate below normal depth

Note: Sand may be replaced by an approved filter fabric.

Gradation requirements

<table>
<thead>
<tr>
<th>Sieve Size</th>
<th>Percentage by Weight Passing</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/4&quot; coarse aggregate</td>
<td>Sand</td>
</tr>
<tr>
<td>1&quot;</td>
<td>100</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>90 - 100</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>20 - 55</td>
</tr>
<tr>
<td>#4</td>
<td>0 - 10</td>
</tr>
<tr>
<td>#16</td>
<td>95 - 100</td>
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<tr>
<td>#50</td>
<td>50 - 85</td>
</tr>
<tr>
<td>#100</td>
<td>10 - 30</td>
</tr>
<tr>
<td></td>
<td>2 - 10</td>
</tr>
</tbody>
</table>
NOTES:

1. PRESSURE SEWER HOUSE CONNECTION TO BE INSTALLED A MINIMUM 48" BELOW FINISHED GRADE AND WITH A MINIMUM 1'-0" VERTICAL BELOW AND 10'-0" HORIZONTAL CLEARANCE FROM ANY WATER HOUSE CONNECTION, UNLESS OTHERWISE SHOWN ON THE CONSTRUCTION DRAWING OR AS DIRECTED BY THE ENGINEER.

2. USE NECESSARY BENDS/FITTINGS TO MAINTAIN MINIMUM DEPTHS AND CLEARANCES. USE COMBINATIONS OF 45° BENDS AND OTHER FITTINGS IN LIEU OF 90° BENDS.

3. ALL FITTINGS TO BE BLOCKED OR ANCHORED IN ACCORDANCE WITH DETAILS G-4 AND G-5.

4. PRESSURE SEWER HOUSE CONNECTIONS SHALL HAVE MINIMUM 1'-0" CLEARANCE BELOW WATER MAINS AT CROSSING, WHERE CLEARANCES IN NOTE 1 AND THIS NOTE CANNOT BE MAINTAINED, PRESSURE SEWER JOINTS WITHIN 10 FEET OF WATER LINE SHALL BE ENCASED WITH CONCRETE MINIMUM 4" THICK AND AT LEAST 18" EACH SIDE OF JOINT.

5. SET GRAVITY SEWER T SO THAT OUTLET IS SET 45° TO 90° FROM THE HORIZONTAL.

6. PROVIDE SCREENED GRAVEL BEDDING, OAK MARKER, PLUG, CAPS, AND OTHER APPURTENANCES IN ACCORDANCE WITH DETAILS 2-1.2.4 TITLED GRAVITY SEWER BUILDING CONNECTION.

7. PROVIDE NECESSARY FITTINGS TO ADAPT FROM MAINLINE SEWER TO 1-1/4" PRESSURE SEWER HOUSE CONNECTION INCLUDING 2" BY 4" SDR21 (BELT) X SDR35 (SPIGOT) ADAPTER MANUFACTURED BY THE HARRINGTON CORPORATION, LYNCHBURG, VIRGINIA 24506, OR EQUIVALENT.