STORM MANHOLE
24" RING & COVER

NOTE:

1. CASTING SPECIFICATIONS: ASTM A-48 WITH A MINIMUM TENSILE STRENGTH OF 30,000 PSI (CLASS 30). (NEENAH TYPE R-1706 RING & COVER OR EQUIVALENT).

2. TOTAL MINIMUM WEIGHT APPROXIMATELY 410 LBS.

3. DO NOT USE IN APPLICATIONS WHERE MANHOLES ARE SUBJECTED TO DRAINAGE WAYS.
NOTES:
1. ALL TRENCHES SHALL BE BACKFILLED IN ACCORDANCE WITH THE ABOVE DETAIL UNLESS OTHERWISE SPECIFIED BY THE TOWN.
2. PRIOR TO PLACEMENT OF ASPHALT/CONCRETE, PAVEMENT EDGE SHALL BE SAW CUT TO A CLEAN, VERTICAL & STRAIGHT EDGE.
3. 1-SAC SAND/CEMENT SLURRY MAY BE SUBSTITUTED FOR BACKFILL MATERIAL.
4. TRENCH WIDTH SHALL NOT BE MORE THAN 16" NOR LESS THAN 12" WIDER THAN THE DIAMETER OF THE PIPE.
5. USE #4 REBAR AT 2' CENTERS ALONG THE PERIMETER OF CONCRETE REPLACEMENT SECTIONS.
6. 95% COMPACTION IS REQUIRED ON ALL TRENCHING ZONES, BOTH IMPROVED & UNIMPROVED AREAS.
7. IN UNIMPROVED AREAS, ALL DISTURBED AREAS SHALL BE REGRADED, SEEDED & MULCHED.
8. IN CONCRETE ROADWAYS, A MINIMUM OF 1/2 PANEL WIDTH OR 10' x 5' SECTION WILL BE ALLOWED TO REMAIN, OTHERWISE THE ENTIRE CONCRETE PANEL MUST BE REPLACED.
9. BEDDING MATERIAL DEPTH WHEN INSTALLING STORM SEWER SHALL BE UP TO SPRING LINE, EXCEPT IN AREAS OF UNSUITABLE BACKFILL, THEN BEDDING MATERIAL SHALL BE 12" ABOVE PIPE.
**Type 16 Details**

**Top Section Details**

- **Corner Reinforcement**
  - Lap (Top)
  - Standard Mck (Top) / Inside Face

- **Separate Placement Inlet Wall Penetration (Typ.)**
  - Note: L = extend bar maximum length 0.45 maintaining 3" clear

- **Connection Outlet**
  - Contractor to form & pour curb around pipe (open) and pour smooth placing around pipe with non shrink grout.

- **Curb Box Beam Anchor Bar (Typ.)**
  - Note: M = embed bar (calculated)

**Frame Placement on Frame Placement of Adj. Curb Support Rail (Typ.)**

**Frame Placement on Adj. Curb Support Rail (Typ.)**

**Type 16 Pile General Notes**

1. **Reinforcement Clearances**
   - E = exposed / F = for
   - F = fixed

2. **Curb Placement**
   - M = embed bar (calculated)

3. **Concrete Class B**

4. **Prefabricated and Reinforced Elements**
   - Per Final Mnd M 199

5. **Floor Channels and Holes**
   - Shall be formed by shaping Class B concrete or approved material

6. **Exposed Concrete Corners**
   - Shall be chamfered 12"

7. **Floor Slope**
   - May be poured matching with base

8. **Top Section Details**
   - **Frame Placement (Typ.)**
     - Curb Box (Top) / Inside Face
     - Curb Box (Top) / Inside Face

9. **All Reinforcing Steel**
   - Shall be ASTM 4165, Grade 60 deformed bars, all reinforcing steel shall be deformed.

10. **Pile Placement**
    - Shall be formed both inside and outside, casting of reinforced against earth is not permitted.

11. **Contractor To Form**
    - Stamped flow arched into the top surface of the pile box (vertical) to indicate the direction of grout flow. These stamped arrows shall be 6" long and 1/2" in depth. For piles in slump conditions, the stamped flow arrows shall indicate the preferred direction of grout flow.

12. **Steps**
    - Shall be provided when pile dimensions exceed 5" and shall be in accordance with AASHTO M 199

13. **Subgrade**
    - Shall be a combination of Class B concrete or approved material, per Final Mnd M 199

14. **Subgrade**
    - Shall be included in excavated material and filled with Class B concrete, per Final Mnd M 199