

## Appendix B

### STANDARD DETAILS

#### **Manholes and Appurtenances**

- 010 Standard Manhole
- 020 Pre – Cast/Poured In Place Manhole Base
- 030 Manhole Connections
- 040 Shallow Flat Top Manhole
- 050 Flat Top Manhole
- 060 Mechanical Inside Drop Manhole
- 080 Open Inside Drop Manhole
- 090 Inside Drop Manhole, with Bowl
- 100 Manhole Step
- 110 Suburban and Standard Manhole Frame and Cover (Sanitary)
- 120 Stormwater Manhole Lid
- 130 Water Tight Manhole Frame and Cover
- 140 Concrete Manhole Closure Collar
- 150 Manhole Chimney Seal
- 160 Large Pre-Cast Concrete Manhole
- 170 Large Pre-Cast Concrete Manhole – Bases
- 180 Large Pre-Cast Concrete Manhole – Types
- 190 Large Pre-Cast Concrete Manhole Base Slabs
- 200 Large Pre-Cast Concrete Manhole – Long. Base Section Reinforcement
- 210 Large Pre-Cast Concrete Manhole – Base Section Reinforcement 108" & 120"
- 220 Large Pre-Cast Concrete Manhole – Top Slabs
- 230 T- Top Manhole with 48" Riser
- 250 Water Quality Manhole (Snout) A
- 260 Water Quality Manhole (Snout) B
- 270 Flow Control Structure Detail

#### **Storm Structures**

- 300 Gutter and Curb Inlet Catch Basin (CG – 2)
- 310 Gutter and Curb Inlet Catch Basin (CG – 2) Reinforcement
- 320 Catch Basin Frame and Grate (CG – 2)
- 330 Inlet Catch Basin (CG – 30)
- 340 Inlet Catch Basin (CG – 48)
- 350 Curb Inlet Manhole (CG - 48 M.H.)
- 360 Modified Curb Inlet Manhole (MOD.CG – 48 M.H.)
- 370 Top – Curb Inlet Manhole and Modified Curb Inlet Manhole (CG – 48M.H. and MOD. CG – 48 M.H.)
- 380 Area Drain Type II
- 390 Ditch Inlet
- 400 Ditch Inlet Frame and Grate

**Pipes**

- 500 Standard Cleanout
- 510 Cleanout Frame and Cover
- 520 Side Sewer / Side Storm Pipeline
- 530 Inserta – Tee
- 550 Concrete Cap
- 560 Concrete Encasement / Closure Collar
- 570 Concrete Anchor Wall
- 580 ODOT Pipe Slope Anchor
- 590 Trench Backfill Details
- 600 T – Cut Asphalt Details
- 610 Bore Detail
- 620 Creek Crossing Restoration

**Stormwater Management**

- 700 Detention Pond
- 701 Detention Pond Construction & Maintenance Notes
- 705 Water Quality Swale
- 706 Water Quality Swale Construction & Maintenance Notes
- 710 Outflow Control Structure
- 711 Orifice Plate and Guide
- 715 Concrete Spreader Detail
- 720 Infiltration Planter
- 725 Non – Structural Infiltration Planter/Rain Garden
- 730 Flow Through Planter
- 735 Non – Structural Flow Through Planter
- 740 Perforated Pipe Details
- 742 Growing Medium Specification For Vegetated Facilities
- 745 Street Side Planter Without Street Parking
- 750 Street Side Planter With Street Parking
- 752 Curb Cut Out
- 753 Curb Cut Out Top Rail
- 755 Modified CG – 30 Inlet With Sump
- 758 Beehive Inlet
- 760 Overflow/Inlet Structure
- 762 Concrete Check Dam
- 765 Public Water Quality Facility Access
- 770 Vegetated Filter Strip
- 775 Porous Pavement
- 780 Porous Pavers
- 790 Rip Rap Details
- 791 Removable Bollard
- 792 Chain Link Fence And Gate
- 793 Tree Planting – Container/Burlap
- 794 Vegetated Corridor Sinage

## **Erosion Control**

### Erosion Prevention:

- 800 Matting Channel Installation
- 805 Matting Slope Installation
- 810 Plastic Sheeting

### Runoff Control:

- 815 Pipe Slope Drain
- 820 Outlet Protection - Rip Rap
- 825 Outlet Protection - Stilling Basin
- 830 Surface Roughening - Cat Tracking
- 835 Surface Roughening - Stair Stepping/Grooving Slopes
- 840 Check Dam - Rock
- 845 Check Dam - Bio Filter Bag
- 850 Diversion Dike/Swale

### Sediment Control:

- 855 Construction Entrance
- 860 Oak Mats
- 865 Tire Wash - Manual Hose Wash
- 870 Tire Wash - Drive Through
- 875 Sediment Fence
- 880 Wattles
- 885 Wattles - Single Family Application
- 890 Filter Berm Rock/Compost
- 895 Sidewalk Subgrade
- 900 Concrete Washout
- 905 Curb and Gutter Inlet Protection
- 910 Inlet Protection - Type 3
- 915 Inlet Protection - Type 4
- 920 Inlet Protection - Type 5
- 925 Inlet Protection - Type 6
- 930 Sediment Trap
- 935 Sediment Basin
- 940 Spacing Tables
- 945 Standard Erosion Control Notes for Sites Less Than 1 Acre
- 950 Sediment Bag

## **Pump Stations**

- 1000 General Title Sheet
- 1000b General CWS Drafting Procedures
- 1001 Wastewater Pump Station and Force Main Design Data Summary Table (Page 1)
- 1002 Wastewater Pump Station and Force Main Design Data Summary Table (Page 2)
- 1003 Conceptual Site Schematic
- 1005 Chain Link Fence & Gate
- 1007 Force Main Pressure Gauge

- 1009 Yard Hydrant
- 1011 Reduced Pressure Backflow Preventer
- 1012 Bypass Manhole
- 1013 Air Release Valve Assembly Plan View
- 1014 Air Release Valve Assembly Elevation view
- 1015 Mushroom Style ARV Vent & Valve Box Details
- 1016 Tracer Box & Pipe Warning Sign Details
- 1017 Heavy Duty Chain Holder
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### **Flow Monitoring**

- 1100 Sanitary Sewer Permanent Flow Monitor Details (Manhole Conduit Installation)
- 1105 Conduit Trench Backfill Details (Flow Monitors)

### **Testing Forms**

- 1200 Air Test Form
- 1205 Nomograph
- 1210 Manhole Vacuum Test Form
- 1215 Manhole Hydrostatic Test

### **Computational Aids**

- 1250 Average velocities for Estimating Travel Time for Overland Flows
- 1255 Headwater Depth for Corrugated Pipe W/Inlet Control
- 1260 Headwater Depth for Smooth Interior Pipe Culverts with Inlet Control
- 1265 Head for Culverts (Pipe / "N" = 0.012), Flowing Full with Outlet Control

- 1270 Head for Culverts (Pipe / "N" = 0.024), Flowing Full with Outlet Control
- 1275 Rational Method Rainfall Intensities
- 1280 24-Hour Rainfall Depths
- 1285 Design Storm Distribution Chart