

Section 37 - Standard Details

- I. Introduction – Standard Details have been developed to provide uniformity throughout HRSD. These details can be provided in electronic format. The FIRM must review all the Standard Details and select the ones that are appropriate for any given project. The FIRM must develop other details as required to incorporate into Bid Documents.
- II. Listing of Standard Details – These standard details are available in AutoCAD format upon request. These listed Standard Details are included as PDF files in this manual.

A. Series 100: Miscellaneous

100	Standard Cover Sheet
101	Exterior Bollard Detail
102	Bollard Location Detail
103	Load Test Hinged Bank Box
104A/B	Flush-Mount Groundwater Monitoring Well
105	Standard Benchmark Sheet Template

B. Series 200: Collection Systems and Appurtenances

200A/B	Manhole with Extended Monolithic Base
201	Concrete Shallow Manhole with Extended Base
203	Connection into Existing Manholes
204	Sewer Manhole Flow Channel
205	Interior Gravity Main Drop Connection to Existing Manhole
206	Exterior Drop Connection with Precast Concrete Manhole
207	Interior Force Main Drop Connection to Existing Manhole
208	Precast Concrete Manhole Adjustment
209	Manhole Insert
226	Service Lateral & Gravity Main Connection to Existing Stub-out
227	Standard Manhole Frame and Cover
228	Watertight Manhole Frame and Cover
229A/B	Sanitary Service Lateral Installation
230	Sanitary Sewer Service Connection for New or Existing Gravity Main
231	Sanitary Service Lateral Deactivation
232	Alternate Service Lateral Connection to Existing Gravity Sewer Main
276	Sanitary Sewer Service Clean Out Frame and Cover (Traffic Rated)

- 277 Vacuum Air Intake Valve
- 278 Lateral Connection to Existing Vacuum Valve Pit Vacuum System Division Valve

C. Series 300: Interceptors and Appurtenances

- 300 Connection to Existing HRSD Valve with No Potential for Additional Development
- 301 Connection to Existing HRSD Valve with Future Development Potential
- 302 Connection to Existing HRSD Valve with Imminent Development Potential
- 303 New Wet Tap with No Additional Development Potential
- 304 New Wet Tap with Additional Development Potential
- 305 New Wet Tap with Imminent Development Potential
- 306A/B/C 2" Private Force Main Connection to Existing 2" HRSD Force Main Stub
- 307 Lawnes Point Private Connection Detail
- 308 Private Force Main Connection to HRSD Manhole
- 309 Private Force Main Service Connection Saddle to Existing HRSD Force Main
- 326 Horizontal Gate Valve
- 327 Vertical Gate Valve
- 328 Valve Box & Riser for Mainline Valve
- 329 Valve Box & Riser for Bypass Valves
- 330 Valve Riser Adjustment
- 331A/B Roadside Ditch Valve Box
- 332 Tracer Wire Locator Box
- 333 Eccentric Plug Valve Detail
- 351 Manual Air Vent
- 352A/B Air Release Valve Box Adjustment
- 353 Roadside Ditch Air Vent
- 354 Air Vent Frame & Cover
- 355 Automatic Air Release Valve Box
- 376 Tapping Saddle for Cast Iron, Ductile Iron, RC, PVC & Steel Pipes
- 377 Tapping Saddle for Concrete Cylinder Pipe
- 378A/B Steel Pipe Casing
- 379 Male Transition Adapter from Ductile Iron M.J. Spigot to Concrete Pipe
- 380 Female Transition Adapter from Ductile Iron M.J. Spigot to Concrete Pipe
- 381 Pressure Sensor Installation
- 382 Line-Stop Concrete Block for Concrete Pipe
- 383 Line-Stop Concrete Block for Ductile Iron Pipe
- 386 Support Crossing for Force Main or Gravity Main

D. Series 400: Pump Stations and PRS

- 400A/B Small Communities Submersible Pump Station Layout Plan
- 401A/B Diesel Fuel Double Wall Underground Storage Tank
- 402A/B Underground Storage Tank Installation

E. Series 500: Cathodic Protection for Pipes

- 500A/B Cathodic Protection Test Station and Terminal Board Wiring
- 501 Cathodic Protection Isolation Detail
- 502 Anode Test Station
- 503 Monitoring Test Station
- 504 Monitoring Test Station (with Riser)
- 505 Isolation Flange Test Station
- 506 Isolation Flange Test Station (with Riser)
- 507 Anode Header Cable Splice – Wye Type
- 508A Typical Thermite Weld Procedures on Bonding Plate
- 508B Typical Royston Handy Cap IP™ Installation
- 509 Isolating Flange Kit
- 510 Typical Bonding Plate
- 511 Copper Wire to Pipe Pin Brazing Procedures
- 521 Ductile Iron Pipe Galvanic System AC Ground Mat
- 522 Ductile Iron Pipe Galvanic System Insulating Corporation
- 523 Ductile Iron Pipe Galvanic System Main Bonding

F. Series 600: Cathodic Protection for Buildings

- 600 Installation of Discrete Galvanic Anodes
- 601 Installation of Distributed Galvanic Anodes
- 602 Distributed Galvanic Anodes at Top of Wall
- 603 Installation of Drilled-in Galvanic Anodes
- 604 Conductive Mortar Bridge for use with High Resistivity Repair Mortars
- 605 Typical Galvanic Anode Layout
- 606 Typical Galvanic Anode Connections
- 626 Removal of Unsound Concrete Typical Section
- 627 Concrete Rebuild Typical Section
- 628 Minimum Cover Concrete Rebuild
- 629 Removal of Unsound Concrete Corner Section
- 630 Concrete Rebuild Corner Section
- 631 Reinforcing Section Loss Table
- 632 Lap Splice – Option 1
- 633 Lap Splice Lengths – Option 1

634	Mechanical Splice – Option 2 Typical Removal Section
635	Mechanical Splice – Option 2 Typical Rebuild Section
636	Weld Splice – Option 3
637	Weld Splice Details – Option 3
638	Weld Splice Details – Option 3
639	Supplemental Reinforcement Requirements
640	Adhesive-Grouted Dowel Layout
641	Concrete Rebuild Embed Plate
642	Horizontal Shallow Depth (2" Max) Concrete Rebuild
643	Vertical Shallow Depth (2" Max) Concrete Rebuild
644	Partial Depth Concrete Rebuild Core Hole
645	Full Depth Concrete Rebuild Core Hole
646A/B	Spall Repair with Exposed Reinforcing Steel
651	Joint Sealant

G. Series 700: Electrical and Instrumentation Details

700	Wet Well Pump Wiring Electrical Backboard
701A/B	Antenna Installation
702A/B	Intrinsic Safety Panel
703	Temporary Pump Connection Box, Connector and Control Wave Serial Port
704	Actuator Vault Electrical Backboard
705	Flow Meter and Pressure Vault Electrical Plan
706	Actuator Vault Electrical Plan
707A/B	Wet Well Instrumentation Installation
708	Standard Loop Schematic for Centrifuge Pump Feed
709	Standard Loop Schematic for Pump Valve
710	Standard Loop Schematic for Centrifuge Pump Monitoring Process
711	Standard Loop Schematic for Centrifuge Pump Control
712	Standard Loop Schematic for Polymer Feed Pump
713	Schematic for Pump Run Status Wiring to Local PLC
714A/B/C/D	Free Standing Equipment Mounting Rack
715	Lightning Protection
716A	FRP Cable Tray Straight Section Assembly
716B	FRP Cable Tray 90 Degree Vertical Outside Bend Assembly
717	Standard Pump Station Control Panel Power Wiring

End of Section