

Project #: DEV 09-1004 SP#: 09SR074 Project Name: Marlin Drive Water & Sewer Extension

Specifications	Testing Requirement	Method of Verification	Completed	Initial	Comments
Utility Excavation and Backfill (Section 11), Embankment (Section 14)	Contractor shall provide proctor(s). Compaction tests (moisture and density) shall be taken per Standard Specifications. NOTE: Testing reports shall be provided at the pre-paving meeting.	Compaction testing -- to be taken a minimum of every 200' horizontally and 3' vertically. NOTE: If material changes in the field, contact testing agency to provide new proctor test for material being used.	yes / no / N/A	AS	
	Undercut or scarify roadway embankment per Geotechnical Report recommendations.	Discuss the proposed means and methods with City Observer prior to construction. City Observer shall verify.	yes / no / N/A	AS	
	Final sub-grade compaction	Call City Observer to schedule. Observer shall verify sub-grade through proof rolling or other means.	yes / no / N/A		
Granular Material - Base Course, and gravel cushion (Section 20)	Base course shall be placed in maximum of 4" lifts	Perform minimum of one compaction test per 4" lift, or as directed	yes / no / N/A		
SCHEDULE A PRE-PAVING MEETING PRIOR TO PLACING ANY ASPHALT OR PORTLAND CEMENT CONCRETE			yes / no / N/A		
Portland Cement Concrete Pavement (Section 40), Concrete curb and Gutter (Section 60), Concrete Sidewalk (Section 61)	For sidewalk and curb and gutter, a minimum of one test shall be performed per each day of pouring, or as directed.	Testing shall include slump, air content, 7 day strength (minimum 1 cylinder), 28 day strength (minimum 2 cylinders). Provide results to City Observer prior to project acceptance.	yes / no / N/A		
	For concrete pavement, a minimum of one test shall be performed per 250 LF of pavement or as directed.	Testing shall include slump, air content, 7 day strength (minimum 1 cylinder), 28 day strength (minimum 2 cylinders). Provide results to City Observer prior to project acceptance.	yes / no / N/A		
Asphalt Concrete (Section 31)	Mix design	Submit a mix design from the batch plant with a standard density (Marshall)			
	Compaction testing	Perform minimum of one (1) non destructive (nuclear gauge) test per 200 tons of asphalt or as directed.	yes / no / N/A		
Water Piping Systems (Section 8)	High end and low end chlorine - wait at least 24 hrs but no more than 48 hours to flush the line after the high end chlorine concentration is confirmed. The high end concentration is 25 ppm min. After flushing the concentration shall be no higher than the prevailing system concentration or 1ppm.	Call City Observer to observe and confirm chlorine concentration. Discuss the method and location of flushing. City Observer shall confirm the low end chlorine concentration.	yes / no / N/A		
	Pressure testing (mains and large diameter private lines)- test line at 150% of the normal working pressure or the maximum pressure for the class of pipe for a minimum of 2 hours.	Call City Observer to verify beginning pressure and start time of the test. The City Observer shall witness the pressure per Standard Specifications.	yes / no / N/A		
	Coliform bacteria test (2 tests) - performed after flushing and at least 24 hours apart	Provide test results to City Observer prior to project completion	yes / no / N/A		
	Cathodic test station base reading	Call City Observer to schedule	yes / no / N/A		
	Inspection of valves	Call City Observer to schedule	yes / no / N/A		
	Test tracer wire	Call City Observer to schedule	yes / no / N/A		
Sanitary Sewer (Section 9)	Exfiltration water or ow pressure air test - per specifications	City Observer shall witness	yes / no / N/A		
	Manhole water or air vacuum test - performed per specs and prior to placing casting	City Observer shall witness	yes / no / N/A		
	Pipe deflection testing - 30 days after installation	Mandrel test shall be performed, City Observer shall witness	yes / no / N/A		
	TV or Camera pipe, performed by City Utility Maintenance Division	Call City Observer to schedule	yes / no / N/A		
Pipe Culverts (Section 54)	TV or Camera pipe, performed by City Utility Maintenance Division	Call City Observer to schedule	yes / no / N/A		
General	Submit information for all materials including but not limited to: aggregate materials, pipe, fittings, appurtenances, etc.; manholes and barrels; signs and posts, erosion and sediment control items.	Submit all materials to the Engineer of Record. The engineer of record shall submit the materials to the City after they have approved them.	yes / no / N/A		

THIS LIST IS INTEND FOR GENERAL GUIDANCE, AND IS BY NO MEANS COMPREHENSIVE - FOR DETAILS ON TESTING AND CONSTRUCTION SPECIFICATIONS REFER TO CITY OF RAPID CITY STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION CURRENT EDITION