City of Goodyear Materials Testing Frequency Guide Revised 10/19/09

MAG SECTION	MATERIALS	TYPE OF TEST REQUIRED	SAMPLING SOURCE	MINIMUM SAMPLING FREQUENCY
Roadway/ Aspalt				
211, 301	Subgrade, Roadway	Moisture-Density (Proctor)	In-Place	1 – Per soil type
		Compaction	In-Place	1 – Per 400 ft. per lane, 1 per cul-de-sac
		Gradation	In-Place	1 – Per soil type
		PI	In-Place	1 – Per soil type
211, 301	Subgrade, Engineered Fill	Moisture-Density (Proctor)	In-Place	1 – Per soil type
		Compaction	In-Place	1 – Per 400 ft. per lift per lane, and 1 per cul-de-sac
309	Subgrade, Lime Stablized	Moisture-Density (Proctor)	In-Place	1 – Per soil type
		Compaction	In-Place	1 – Per 400 ft. per lift per lane, and 1 per cul-de-sac
		Gradation	In-Place	1 – Per soil type
		PH	In-Place	1 - Per soil type
		PI	In-Place	1 – Per soil type
		Swell	In-Place	1 – Per soil type
301,702	Aggregate Base	Moisture- Density (Proctor)	Stockpile, Conveyor Belt	1 – Per source
		Compaction	In-Place	1 – Per 400 ft. per lift, and 1 – Per cul-de-sac
		Gradation	Stockpile, conveyor Belt	1 – Per source
		PI	Stockpile, Conveyor Belt	1 – Per source
Structures				
	Building Pads, residential	Compaction	In-Place	1 – Per 3 lots, and 1 – Per lot / pad at final grade
	Building Pads, commercial	Compaction	In-Place	1 – Per lift during construction of fill (20,000 Sq. ft.) and 1 – Per lot / pad at final grade
		Gradation	In-Place	1 – Per soil type
		PI	In-Place	1 – Per soil type
301, 702	Aggregate Base	Moisture- Density (Proctor)	Stockpile, Conveyor Belt	1 – Per source
		Compaction	In-Place	1 – Per structure per 4’ of fill (alternate locations of tests)
		Gradation	Stockpile, conveyor Belt	1 – Per source
		PI	Stockpile, Conveyor Belt	1 – Per source
Trenching				
601	Trench Backfill, Structure Backfill	Moisture-Density (Proctor)	In-Place, Stockpile	1 – Per soil type
		Gradation	In-Place	1 – Per soil type
		Compaction	In-Place	1- Per 400 ft per lift
	Water and Sewer service lines			25% of total, tested at random locations
	Street Crossings			1 – Per lane per 4’ of fill

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Sampling / Testing				
340, 505, 725	Concrete Slab, Structural and Roadway	Compressive Strength	At Discharge	1 – Set of 4 cylinders per 50 cubic yards or per pour if less
725		Slump	At Discharge	1 – Each per sample
		Temperature	At Discharge	1 – Each per sample
324, 725	Concrete Pavement	Compressive Strength	At Discharge	1 – Set of 4 cylinders per 50 cubic yards
		Slump	At Discharge	1 – Per sample
		Temperature	At Discharge	1 – Per sample
		Flexural Strength	At Discharge	1 – Set of 4 beams per ½ day of production
		Air Entrainment	At Discharge	1 – Each per sample
		Unit Weight	At Discharge	1 - Each per sample
505, 506	Pre-Cast Concrete Structures		By Supplier	Certificate of Compliance, 1 – Per delivery
725, 728	Lean Mix Concrete	Compressive Strength	At Discharge	1 – Set of 4 cylinders per structure
728	½ Sack CLSM, Controlled Low Strength Materials	Compressive Strength	At Discharge	1 – Set of 4 cylinders per source
725, 776	Mortar	Compressive Strength	At Discharge	1 – set minimum of 4 mortar cylinders per structure
		Temperature	At Discharge	1 – Per sample
725, 776	Grout	Compressive Strength	At Discharge	1 – Set minimum of 4 grout prisms per structure
		Slump	At Discharge	1 – Per sample
		Temperature	At Discharge	1 – Per sample
701, 710	Asphaltic Concrete	Gradation	Stockpile, Cold Feed	2 – Minimum per source / per day
	Mineral Aggregate	Specific Gravity	Stockpile, Cold Feed	1 - Per source
		Abrasion	Stockpile, Cold Feed	1 – Per source
		Sand Equivalence	Stockpile, Cold Feed	1 – Per day minimum
		Crushed Faces	Stockpile, Cold Feed	1 – Minimum per project
321, 332	Asphaltic Concrete	Maximum Density (Marshall)	In-Place	1 – Per day or 500 tons of production
701, 710	Hot In-Place	Maximum Density (Rice)	In-Place	1 – Per day or discretion of Engineer
		Extraction	In-Place	1 – Per maximum density sample
		Gradation	In-Place	1 – Per maximum density sample
		Compaction	In-Place	1 – per 400 ft. per lane per lift
		Compaction / Core	In-Place	At discretion of Engineer
	Asphaltic Concrete Cold Mix Recycle	Maximum, Density (Marhsall)	In-Place	1 – Per day or 500 tons of production
		Extraction	In-Place	1 – Per maximum density sample
		Gradation	In-Place	1 – Per maximum density sample
		Compaction	In-Place	1 – Per placement