

HALDIMAND COUNTY

DESIGN CRITERIA

SECTION S

MINIMUM TESTING REQUIREMENTS

Revised 2015

HALDIMAND COUNTY MINIMUM TESTING REQUIREMENTS

Revision Date: Dec. 2000

MATERIAL	AREA/ USAGE	TEST	SAMPLING FREQUENCY & TEST REQUIREMENTS	TEST LOCATION IDENTIFICATION
Native Material	Sewer Trench	Compaction	Min. every 15m, .6m max. lift, 95%	Street, distance from downstream M.H., distance above pipe or below final grade ie: Street A, MH23 + 30m, 1.8m above pipe
	Watermain	Compaction	Min. every 15m, .6m max. lift, 95%	Street, station, offset, distance above pipe or below finished grade ie: Street A, 0 + 310, 5.5m Rt, 1m above pipe
	Subgrade	Compaction	Min. every 15m AZ@ pattern 95% 98% desirable in top 1m	Street, Station, offset ie Street A, 0 + 105, 3.5m Lt
	Watermain Road Crossings	Compaction	Each Crossing, 95%	Street, Station
	Utility Trenches*	Compaction	Each Crossing, 95%	Street, Station
* Utility crossings are to be installed prior to base asphalt				
	Service Trenches**	Compaction	Random Selection 25% of lots 95%	Lot Number
** If Storm and Sanitary Services are installed with mainline sewer, this requirement is waived. Only water service trenches will have to be reported separately				
Granulars A& B	Roadway	Compaction	Min. every 15m AZ@ Pattern 100%	Street, Station, offset ie: Street A, 0 + 105, 3.5m LT
		Moisture Content	Min. every 15m AZ@ pattern	Street, Station, offset ie: Street A, 0 + 105, 3.5m LT

MATERIAL	AREA/ USAGE	TEST	SAMPLING FREQUENCY & TEST REQUIREMENTS	TEST LOCATION IDENTIFICATION
		Gradation Percent Crushed PN#(site specific)	<ul style="list-style-type: none"> - Granulars are to be sampled at source and gradation checked prior to delivery AND - min. 1 check per 100m of road for an 8.5m road - gradation to conform to OPSS Muni 1010 	Street, Station offset ie: Street A, 0 + 105, 3.5m LT
	Utility Trenches	Compaction	Each Crossing 100%	Street, Station
	Curblin Bedding	Compaction	Every 15m	Street, Station Lt or Rt or North, South, East, West
	Driveway	Compaction Contamination	33% of Driveways at random, 100% - Check to ensure there is 150mm of un-contaminated material	Lot or house #, distance from curb or garage

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Asphalt HL3 & HL8 1101 1103 1150	Roadway	Compaction	15m each lane w/nuclear device 92% HL Mixes as per Table 10 OPSS 310 91% HDDB and Superpave Mixes as per Table 10 OPSS 310 (310.08.06.01)	Street, Station, Lt or Rt or North, South, East, West or adjacent lot ie: Street A, 0 + 225, South lane
	Roadway	Sampling	every 150m each lane (every 100 m on Industrial roads)	As Above
	Roadway	Asphalt Temperature	every 150m each lane, 120C Min As per PGAC Manufactures Mix Temperature (310.07.06.01, 1150)	As Above
		Ambient Temperature	Each Sample As per OPSS 310.06.02	
	Roadway	Marshall Tests (1150.07.03)	2 per day of paving from samples taken	As Above
	Roadway	Extraction Tests (1150.07.03)	2 per day of paving from samples taken	As Above
Asphalt HL3,HL3a, HL8	Driveway	Marshall Tests	2 per day of paving	Lot or house #, distance from curb or garage
	Driveway	Extraction Tests	2 per day of paving	As Above

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	Driveway	Compaction	w/nuclear device 92% HL Mixes as per Table 10 OPSS 310 (310.08.06.01)33% of Driveways at random	As Above
	Driveway	Temperature	120C Min As per PGAC Manufactures Mix Temperature (310.07.06.01	As Above
All Asphalt Test results are to correspond to all OPSS Standards				
If there are failures, further testing will be done on the samples to determine the limits of the failures.				
Corrective action will depend on nature and extent of failures.				

MATERIALS	AREA/ USAGE	TEST	SAMPLING FREQUENCY & TEST REQUIREMENTS	TEST LOCATION IDENTIFICATION
Concrete (OPSS Muni 904) (OPSS Muni 1350) CSA A23.1, CSA A23.2	Sidewalk	Compressive Strength	- 3 location per 500m of sidewalk - min 3 cyls. per location for 7 & 28 day breaks	Station, Lt. or Rt. or adjacent lot or house number
		Slump	First 3 trucks or until consistent, at sampling & every 3 rd truck	As Above
		Air Content	First 3 trucks or until consistent, at sampling & every 3 rd truck	As Above
	Curb and Gutter	Compressive Strength	- 3 locations per 500m of Curbing - min. 3 cyls. per location for 7 & 28 day breaks	As Above
		Slump	First 3 trucks or until consistent, at sampling & every sample location	As Above
		Air Content CSA A23.1	First 3 trucks or until consistent, at sampling & every sample location	As Above
	Structures	Compressive Strength	2 sets (3 samples ea) per pour	As Above
		Slump	First 3 trucks and every 3 rd truck after and with samples	As Above
		Air Content	First 3 trucks and every 3 rd truck after and with samples	As Above

Notes:

- 1) Additional Testing may be required by the Engineering Manager depending upon site conditions.
- 2) if requested by the Manager of Engineering results of compaction tests for sewer trenches will be plotted on a plan/profile drawing at the site in addition to being submitted to the Engineering Manager in a Tabular Form
- 3) Subgrade will be proof rolled in the presence of the Developers Engineer and Soils Consultant. The Soils Engineer shall issue a certificate of compaction and approval prior to the placement of granular materials, stating that the trenches, services and road subgrade have been backfilled, compacted and tested in accordance with the County's testing criteria and is suitable for the placement of granular materials.
- 4) The Soils Engineer shall issue a certificate of compaction and approval of granular materials prior to the placement of Hot Mix Asphalt.
- 5) All concrete testing shall meet the requirements of CSA A23.1 and CSA A23.2 and applicable Ontario Provincial Standards and Specifications.

