

SERVICE FROST BOX

	<u>Earthw</u>	orks Testing	4.3. Material Testing			
∣ 1	General	requirements		4.3.1.	Slump test as per	
	1.1.1. 1.1.2.	Applicable test methods for earthwork testing specified in this section: Particle size analysis of fill materials: testing for conformance with specified graduation limits will utilize testing sieves complying with CAN/CGSB-8.2-M88 sieves testing woven wire metric		4.3.2.	Air content test a between 10% and	
	1.1.3.	Compaction testing: to ASTM D698, laboratory compaction characteristics of soil using standard effort.		4.3.3.	Strength test as p for each class of	
.2.	Testing	agency services				
	1.2.1.	Comply with requirements as outlined in division 01 book specification or as outlined by owner/developer.	5.	<u>Hot Mi</u>	ix Asphalt Paving	
			5.1. General Requirements			
.3.	Fill mate	rial testing		5.1.1.	Refer to municipa	
	1.3.1.	Provide on site, for testing purposes, 1.0 m3 of each type of imported fill material.		5.1.2.	Minimum thicknes	
	1.3.2.	Imported fill materials will be tested, before placement, for conformance with requirements specified by geotechnical recommendation and specification.	5.2.	Testing	Agency Services	
	1.3.3.	Native excavated material to be used as fill material will, before placement, be inspected for compliance		5.2.1.	Comply with requ	
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5.2.2. Cooperate with testing agency in site sampling for testing with requirements specified by geotechnical recommendation and specification. 1.4. Compaction testing 5.3. Material Testing 1.4.1. Compaction testing will be performed during fill material placement operations to ensure that specified 5.3.1. Minimum of one asphalt core from compacted mat per 1,000 m2 of hot-mix asphalt pavement to minimum compaction requirements are met.

2. <u>Earthwork</u>

2.1. General requirements 2.1.1. "earth excavation" includes:

- 2.1.1.1. Removal and disposal of obstructions, the extent of which is visible on ground surface. 2.1.1.2. Removal and disposal of earth and other materials encountered, of any classification, except rock.
- 2.1.1.1. Trenches in excess of 3.00m in width and pits in excess of 9m in either length or width will be classified as open excavation.

2.2. Unauthorized excavation

2.2.1. Unauthorized excavation shall be any excavation beyond elevations and dimensions indicated, without specific direction by consultant. 2.2.2. Fill unauthorized excavation to elevations and dimensions indicated, as directed by consultant. 2.2.3. Unauthorized excavation and remedial work shall be at contractor's expense.

2.3. Excavation levels

- 2.3.1. Notify consultant if unsuitable bearing materials are encountered at indicated elevations. 2.3.2. Carry excavation deeper and replace excavated material with suitable materials if and as directed by consultant.
- 2.3.3. Notify consultant if bearing conditions are fulfilled at elevations above those indicated.
- 2.3.4. Adjust excavation elevations if and as directed by consultant.
- 2.4. Preparation prior to commencing excavation:
- 2.4.1. Contact all affected utility companies regarding exact location and current status of all utilities, voltage of underground and overhead power lines and pressure of natural gas lines. 2.4.2. Notify consultant if any utility lines have been omitted from or incorrectly indicated on drawings.
- 2.4.3. Identify known underground utilities. stake and flag locations. identify and flag surface and aerial utilities.
- 2.4.4. Notify utility company to remove and relocate utility lines. 2.4.5. Expose building connections, service connections and utilities to be crossed to confirm horizontal and
- vertical alignment of existing utilities. 2.4.6. Expose existing utility lines by hand excavation to confirm location before machine digging within 600mm
- of lines. 2.4.7. Maintain and protect existing above and below grade utilities which pass through work area. protect active
- utility lines exposed by excavation, from damage. hand excavate to final elevations and dimensions. 2.4.8. Where existing pipes, ducts or other underground services intersect a trench, support trench in a manner approved by utility.
- 2.4.9. Where existing overhead line poles are adjacent to excavations, temporarily support poles in a manner approved by utility.
- 2.5. Dewatering
- 2.5.1. Maintain excavations free of water. provide pumps, piping, temporary drains, trenches, sumps, and related equipment to remove water. 2.5.2. Do not use sanitary sewers or private property for discharge of water.

2.6. Excavating

2.6.1. Strip topsoil from areas to be excavated or filled. 2.6.2. Do not excavate under wet conditions or when such conditions are anticipated.

2.7. Backfilling

2.7.1. Ensure areas to be backfilled are free of debris, snow, ice, water and that surfaces are not frozen. do not backfill over porous, wet, or spongy subgrade surfaces. 2.7.2. Backfill systematically, as early as possible, to allow maximum time for natural settlement.

2.8. Compaction

2.8.1. Compact fill materials using only mechanical methods. do not use hydraulic methods. 2.8.2. Do not perform compaction using vehicles and other equipment not designed for compacting. 2.8.3. Maintain optimum moisture content of materials being compacted, as required to attain specified compaction density.

3. <u>Site excavating, filling and grading</u>

3.1. Excavation

3.1.1. Excavate to elevations and dimensions indicated on drawings within a tolerance of ±50mm.

- 3.2. Placement and compaction of fill materials
- 3.2.1. Backfill excavations and fill to required subgrade elevations using fill materials specified by geotech recommendation. 3.2.2. Place fill materials in layers not exceeding loose thickness specified by geotech recommendation. 3.2.3. Compact each layer of fill to minimum percentages of standard proctor density specified by geotech
- recommendation. 3.3. Grading
- 3.3.1. Make changes in grade natural. blend slopes into level areas.
- 3.3.2. Unless otherwise indicated on drawings, slope grade away from building minimum 1:20. 3.3.3. Grade and shape surfaces within following tolerances from subgrade elevations indicated on drawings: 3.3.3.1. Landscaped areas: ±50mm.
- 3.3.3.2. Under paved areas: ±50mm.

3.3.3.3. Under sidewalks: ±50mm.

4.1. General Requirements

4.1.1. Refer to municipal standards or geotechnical report for concrete material specifications. 4.1.2. Minimum 32 MPa compressive strength at 28 days.

- 4.2. Testing Agency Services
- 4.2.1. Comply with requirements as outlined in division 01 of book specification or as outlined by owner/developer.
- 4.2.2. Cooperate with testing agency in site sampling for testing

	OVERALL SUBDIVISION ELEVATION MARKER	R + 684.85	FITTINGS:		ABBR	EVIATIONS:			LAND DEVELOPMENT SERVICES DISCLAIMER
`≻<` ?0?	DESIGN GRADE ELEVATION MARKER EXISTING GRADE ELEVATION MARKER TO EXISTING GRADE	€684.85 • 684.85 • 684.85 • 676.91	VALVE C/W THRUST BLOCK PIPE REDUCER C/W THRUST BLOCK PIPE BEND(S) 11.25/22.5°/45°/90° C/W THRUST BLOCK CROSS/TEE C/W THRUST BLOCK		AD ABD BOS BOW	AREA DRAIN ABANDONED BOTTOM OF SWALE BACK OF WALK	GUT LOG INV OBV	gutter Lip of gutter Invert Obvert	 "LAND DEVELOPMENT SERVICES" REVIEW AND APPROVAL OF THE LOT GRADING PLAN RELATES EXCLUSIVELY TO THE SURFACE DRAINAGE DESIGN, AND DOES NOT ADDRESS REQUIREMENTS FOR BUILDING FOUNDATIONS OR ANY OTHER USE OF
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OW OVERFLOW	SECTION/ELEVATION REFERENCE	DETAIL NUMBER	OVERLAND FLOW ARROW	\longrightarrow	FOW GND	FRONT OF WALK GROUND	TRW XING	TOP OF RETAINING WALL CROSSING	DETERMINE GROUND AND SUBSURFACE CONDITIONS THAT MAY AFFECT FOUNDATION DESIGN OR OTHER USE REQUIREMENTS.

- 4. <u>Concrete Curbs, Walks, Gutters</u>

4.3.1. Slump test as per CAN/CSA-A23.2-1C and CAN/CSA-A23.2-5C, taken between 10% and 90% points of discharge of a concrete load at minimum of every strength test. 4.3.2. Air content test as per CAN/CSA-A23.2-1C and CAN/CSA-A23.2-4C or CAN/CSA-A23.2-6C, taken between 10% and 90% points of discharge of a concrete load at minimum of every strength test. 4.3.3. Strength test as per CAN/CSA-A23.2-3C, minimum one test for each 60 m3 of concrete or fraction thereof, for each class of concrete produced in any one day from each individual plant/supplier.

5.1.1. Refer to municipal standards or geotechnical report for asphalt material specifications. 5.1.2. Minimum thickness and density as per geotechnical report or municipal standards.

Testing Agency Services 5.2.1. Comply with requirements as outlined in division 01 of book specification or as outline by owner/developer.

determine the thickness and density

HATC	HATCHING LEGEND						
	MILL AND OVERLAY ASPHALT – 50mm						
	NEW ASPHALT						

ARROV Suite 202, 13167 - 146 Street Edmonton, Tel: 780.801.6100 Info@ArrowOn	AB T5L 4S8 line.ca						
NOT FOR CONSTRUCTION DO NOT CONSTRUCT UNLE APPROVAL HAS BEEN RECE FROM ALL GOVERNING AUTHO LOT 1, BLOCK 23 PLAN 2958NY 4612 – 50 AVENUE	DN ISS IVED PRITIES						
CLIENT:	CONSORT, ALBERTA						
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CONSORT RCMP							
SITE IMPROVEMENT PLAN							
DESIGNED: RM CHECKED: RP DRAWING NUMBER:							



Y FINISHED GRADE @ MAXIMUM OF 3:1 SLOPE TOPSOIL

-COMPACTED BACKFILL TO 98% SPD.

20mm CRUSHED GRAVEL COMPACTED TO 98% SPD

 UNDISTURBED NATIVE MATERIAL OR PREPARED SUBGRADE COMPACTED TO 98% SPD



CONSULTANT TEAM:

CL	ENT:						
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