SECTION 31 20 00

EARTHWORK

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\*\* NOTE TO SPECIFIER \*\* This is a generic ARCAT specification, provided in the style and format of all ARCAT manufacturer's specifications. The Notes to Specifier are intended to provide guidance in editing the text. Delete and add text as required for your individual project.

1. GENERAL
	1. SECTION INCLUDES

\*\* NOTE TO SPECIFIER \*\* Delete items below not required for project.

* + 1. Excavation, filling, compacting and grading operations both inside and outside building limits as required for below-grade improvements and to achieve grades and elevations indicated. Provide trenching and backfill for mechanical and electrical work and utilities.
		2. Subbase materials, drainage fill, common fill, and structural fill materials for slabs, pavements, and improvements.
		3. Suitable fill from off-site if on-site quantities are insufficient or unacceptable, and legal disposal of excess fill off-site.
		4. Rock excavation without blasting unless blasting is specifically authorized.
	1. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Delete any sections below not relevant to this project; add others as required.

* + 1. Section 31 13 16 - Selective Tree and Shrub Trimming.
	1. SUBMITTALS
		1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
		2. Product Data: Manufacturer's data sheets on each product to be used, including:
			1. Preparation instructions and recommendations.
			2. Storage and handling requirements and recommendations.
			3. Installation methods.
		3. Test Reports: Submit for approval test reports, list of materials and gradations proposed for use.
	2. QUALITY ASSURANCE
		1. Installer Qualifications: Minimum 2 year experience installing similar products.
	3. PRE-INSTALLATION MEETINGS
		1. Convene minimum two weeks prior to starting work of this section.
	4. DELIVERY, STORAGE, AND HANDLING
		1. Deliver and store products in manufacturer's unopened packaging bearing the brand name and manufacturer's identification until ready for installation.
		2. Handling: Handle materials to avoid damage.
	5. PROJECT CONDITIONS
		1. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.
	6. SEQUENCING
		1. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.
1. PRODUCTS
	1. MANUFACTURERS

\*\* NOTE TO SPECIFIER \*\* Insert acceptable manufacturers. To research manufacturers, search www.arcat.com for the title of this section.

* + 1. Acceptable Manufacturers: \_\_\_\_\_\_.

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

* + 1. Substitutions: Not permitted.
		2. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.
	1. MATERIALS
		1. Earthwork:
			1. Subbase Material: Graded gravel or crushed stone.
			2. Bedding Course: Graded crushed gravel and sand.
			3. Borrow Soil: Off-site soil for fill or backfill.
			4. Drainage Fill: ashed gravel or crushed stone.
			5. Common Fill: Mineral soil free from unsuitable materials.
			6. Structural Fill: Graded gravel.
			7. Impervious Fill: Gravel and sand mixture.
1. EXECUTION
	1. PREPARATION
		1. repare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
	2. INSTALLATION
		1. Excavation is unclassified and includes excavation to subgrade regardless of materials encountered. Repair excavations beyond elevations and dimensions indicated as follows:
			1. At Structure: Concrete or compacted structural fill.
			2. Elsewhere: Backfill and compact as directed.
		2. Maintain stability of excavations; coordinate shoring and bracing as required by authorities having jurisdiction. Prevent surface and subsurface water from accumulating in excavations. Stockpile satisfactory materials for reuse, allow for proper drainage and do not stockpile materials within drip line of trees to remain.
		3. Compact materials at the optimum moisture content as determined by ASTM D 1557 by aeration or wetting to the following percentages of maximum dry density:
			1. Structure, Pavement, Walkways: Subgrade and each fill layer to 95 percent of maximum dry density to suitable depth.
			2. Unpaved Areas: Top 6 inches of subgrade and each fill layer to 90 percent maximum dry density.
		4. Place acceptable materials in layers not more than 8 inches loose depth for materials compacted by heavy equipment and not more than 4 inches loose depth for materials compacted by hand equipment to subgrades indicated as follows:
			1. Structural Fill: Use under foundations, slabs on grade in layers as indicated.
			2. Drainage Fill: Use under designated building slabs, at foundation drainage and elsewhere as indicated.
			3. Common Fill: Use under unpaved areas.
			4. Subbase Material: Use under pavement, walks, steps, piping and conduit.
		5. Grading Tolerances Outside Building Lines:
			1. Lawns, unpaved areas, and walks, plus or minus 1 inch.
			2. Pavements, plus or minus 1/2 inch.
		6. Grading Tolerance for Fill Under Building Slabs: Plus or minus 1/2 inch measured with 10-foot straightedge.
		7. Protect newly graded areas from traffic and erosion. Recompact and regrade settled, disturbed and damaged areas as necessary to restore quality, appearance, and condition of work.
		8. Control erosion to prevent runoff into sewers or damage to sloped or surfaced areas.
		9. Control dust to prevent hazards to adjacent properties and vehicles. Immediately repair or remedy damage caused by dust including air filters in equipment and vehicles. Clean soiled surfaces.
		10. Dispose of waste and unsuitable materials off-site in a legal manner.

END OF SECTION