Hamilton Heights School Corporation
Curriculum Map Civil Construction Fundamentals

Course Title: Civil Construction Fundamentals	Quarter 1	Academic Year: 2025-2026

Essential Questions						
Unit Name	Total Days	Standards Number	Knowledge Objectives	Skills Objectives	Specific Assessments	Specific Resources
1. Intro. To Civil Construction	5		Introductions to the various trades	Explore	Verbal	
OSHA 30	45		Take OHSA 30 course	Learn various skills of safety	Get a OSHA 30 card	
3.Types of Soils	25		Objectives Learning Objective 1 • Describe the different types and characteristics of soils. a Identify the types of soils. b Describe the properties of soils. c Explain how soil density is determined. d Explain how moisture affects soil. Learning Objective 2 • Describe the factors that affect soil excavation. a Explain what the swell factor is and how to calculate the swell factor of soils. b Explain what the	Performance Tasks Performance Task 1 (Learning Objective 1) • Identify five basic types of soils and summarize their characteristics. Performance Task 2 (Learning Objective 1) • Read results from a field density test and explain what additional compaction effort is needed. Performance Task 3 (Learning Objective 2) • Compute shrinkage and relative compaction	Soils End of Module Exam Testing soil fundementals Aggregate classification	

			shrink factor is and how to calculate the shrink factor of soils. c Describe how swell and shrink factors affect cycle times and equipment selection. Learning Objective 3 • Describe working in various soil conditions. a Describe the weight bearing and flotation properties of different soils. b Explain how soil characteristics affect machine performance. c Describe how soil conditions can affect trenching safety.			

Course Title: Heavy Highway I	Quarter 2:	Academic Year: 2025-2026

Essential Questions						
Unit Name	Total Days	Standards Number	Knowledge Objectives	Skills Objectives	Specific Assessments	Specific Resources
Work Zone Safety	10		Traffic control principles	Know signs and barricade activity	Lab activity	
Marking and underground utilities	10		811 system	Locating utilities	Lab activity	
Work site	36	Year	Working with machines	Track steer,	Sandbox Labs	

principals – Equipment operation		long	of the trades	Mini-excavators		

Course Title: Civil Construction I	Quarter 3:	Academic Year: 2025-2026

Essential Questions						
Unit Name	Total Days	Standards Number	Knowledge Objectives	Skills Objectives	Specific Assessments	Specific Resources
Excavation Math	5		Learn calculations	Develop a working worksheet	Use of apps	
Earth moving	36 Year round		Classroom activities on moving techniques	Actual skill set in Sandbox		

Course Title: Civil Construction I	Quarter 4:	Academic Year: 2021-22

Essential Questions						
Unit Name	Total Days	Standards Number	Knowledge Objectives	Skills Objectives	Specific Assessments	Specific Resources
Site grading	20		Stake reading the writing	Machine use Laser level use	Laser level use	
Trenches and excavation	15		Trench models and safety practices	Machine use Laser level use	Laser level use	
Learning outcomes	10		Demonstrate safe practices in civil	Read and interpret construction documents	Operate safely and communicate effectively	Apply principles safety of soil testing and math

			construction environments.	and site layouts	with construction equipment	and equipment operations