APPENDIX H

CONSTRUCTION

| *2030 Astoria Cove* ***Building 1*** | | Air Compressor Engine: 275 HP Fuel: Diesel | | Asphalt Paver Engine: 130 HP Fuel: Diesel | | Asphalt Roller Engine: 18 HP Fuel: Gasoline | | Backhow / Loader Engine: 50 HP Fuel: Diesel | | Chain Saw Engine: 5 HP Fuel: Gasoline | | Circular Saw Engine: Fuel: Electric | | Concrete Power Trowel Engine: 11 HP Fuel: gasoline | | Concrete Pump Truck Engine: 460 HP Fuel: Diesel | | Concrete saw (walk behind) Engine: 16 HP Fuel: Gasoline | | Concrete Truck Engine: 330 HP Fuel: Diesel | | Crane: 500 Ton hydraulic Engine: 563 HP Fuel: Diesel | | Crane: Manitowoc 999 with Luffing Jib Engine: 390 HP Fuel: Diesel | | Crane: Top Climber Engine: 190 HP Fuel: Diesel | | Cut off saw Engine: 4.5 HP Fuel: Gasoline | | Delivery Truck: Stake Body or Box Engine: 250 HP Fuel: Diesel | | Delivery Truck: Tractor Trailer Engine: 500 HP Fuel: Diesel | | Drill Rigs: Rock Drill Engine: 90 HP Fuel: Diesel | | Pile Rig Engine: 600 HP Fuel: Diesel | | Dump Truck Engine: 550 HP Fuel: Diesel | | Excavator Engine: 240 HP Fuel: Diesel | | Fuel Truck Engine: 350 HP Fuel: Diesel | | Generators Engine: 11 HP Fuel: Gasoline | | Hoist Engine: 40 HP Fuel: Electric | | Hoist Engine: Fuel: Diesel | | Jack Hammer Engine: Pneumatic Fuel: | | Masonry Bench Saw Engine: 6 HP Fuel: Gasoline | | Mortar Mixer Engine: 6 HP Fuel: Gasoline | | Powder Actuated Device Engine: NA Fuel: NA | | Rebar Bending Machine Engine: 11 HP Fuel: Diesel | | Sledge Hammer Engine: NA Fuel: NA | | Spray on Fire Proof Pump Engine: 150 HP Fuel: Diesel | | Table Saw Electric Engine: 5 HP Fuel: Electric | | Table Saw Engine: 12 HP Fuel: Gasoline | | Vibrator Plate Compactor Engine: 6 HP Fuel: Gasoline | | Water Pumps Engine: 15 HP Fuel: Gasoline | | Welding Machines Engine: 23 HP Fuel: Gasoline | |
|---|---|---

| *2030 Astoria Cove* ***Building 2*** | | Air Compressor Engine: 275 HP Fuel: Diesel | | Asphalt Paver Engine: 130 HP Fuel: Diesel | | Asphalt Roller Engine: 18 HP Fuel: Gasoline | | Backhow / Loader Engine: 50 HP Fuel: Diesel | | Chain Saw Engine: 5 HP Fuel: Gasoline | | Circular Saw Engine: Fuel: Electric | | Concrete Power Trowel Engine: 11 HP Fuel: gasoline | | Concrete Pump Truck Engine: 400 HP Fuel: Diesel | | Concrete saw (walk behind) Engine: 16 HP Fuel: Gasoline | | Concrete Truck Engine: 330 HP Fuel: Diesel | | Crane: 500 Ton hydraulic Engine: 563 HP Fuel: Diesel | | Crane: Manitowoc 999 with Luffing Jib Engine: 390 HP Fuel: Diesel | | Crane: Top Climber Engine: 190 HP Fuel: Diesel | | Cut off saw Engine: 4.5 HP Fuel: Gasoline | | Delivery Truck: Stake Body or Box Engine: 250 HP Fuel: Diesel | | Delivery Truck: Tractor Trailer Engine: 500 HP Fuel: Diesel | | Drill Rigs: Rock Drill Engine: 90 HP Fuel: Diesel | | Pile Rig Engine 600 HP Fuel: Diesel | | Dump Truck Engine: 550 HP Fuel: Diesel | | Excavator Engine: 240 HP Fuel: Diesel | | Fuel Truck 350 HP Engine Fuel: Diesel | | Generators Engine: 11 HP Fuel: Gasoline | | Hoist 40 HP Engine: Fuel: Electric | | Hoist Engine: Fuel: Diesel | | Jack Hammer Engine: Pneumatic Fuel: | | Masonry Bench Saw Engine: 6 HP Fuel: Gasoline | | Mortar Mixer Engine: 6 HP Fuel: Gasoline | | Powder Actuated Device Engine: NA Fuel: NA | | Rebar Bending Machine Engine: 11 HP Fuel: Diesel | | Sledge Hammer Engine: NA Fuel: NA | | Spray on Fire Proof Pump Engine: 150 HP Fuel: Diesel | | Table Saw Electric Engine: 5 HP Fuel: Electric | | Table Saw Engine: 12 HP Fuel: Gasoline | | Vibrator Plate Compactor Engine: 6 HP Fuel: Gasoline | | Water Pumps Engine: 15 HP Fuel: Gasoline | | Welding Machines Engine: 21 HP Fuel: Gasoline | |
|---|---|---

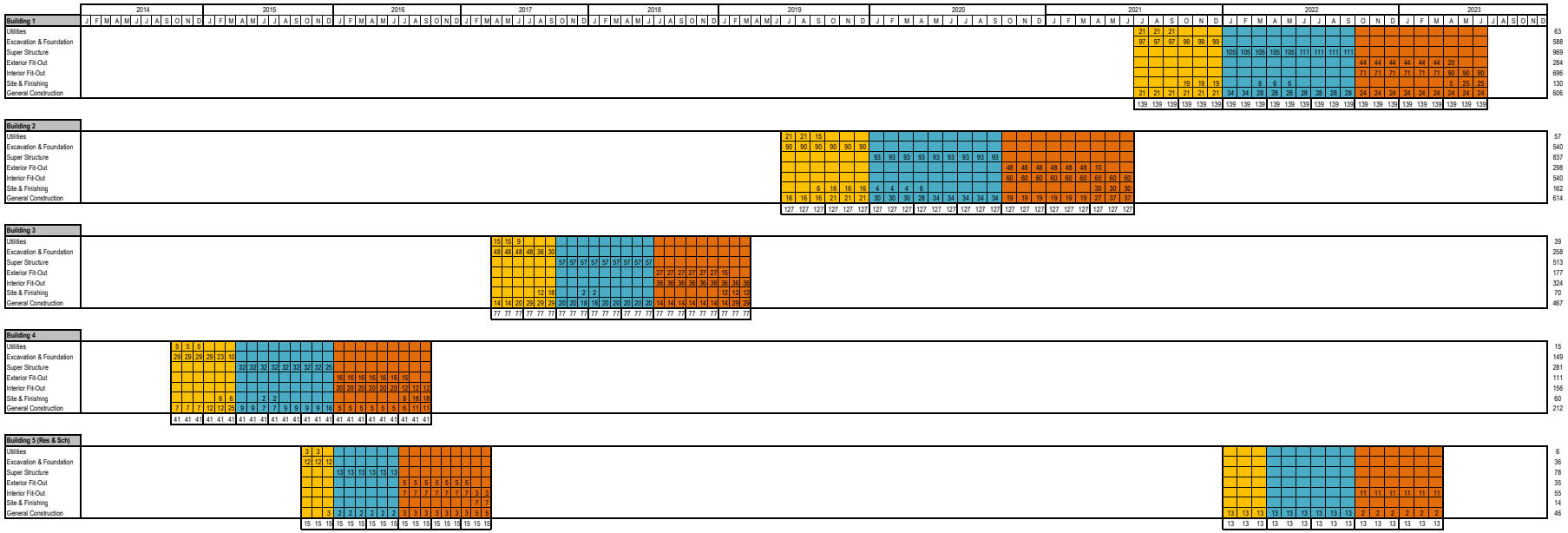
| *2030 Astoria Cove* ***Building 3*** | | Air Compressor Engine: 275 HP Fuel: Diesel | | Asphalt Paver Engine: 130 HP Fuel: Diesel | | Asphalt Roller Engine: 18 HP Fuel: Gasoline | | Backhow / Loader Engine: 50 HP Fuel: Diesel | | Chain Saw Engine: 5 HP Fuel: Gasoline | | Circular Saw Engine: Fuel: Electric | | Concrete Power Trowel Engine: 11 HP Fuel: gasoline | | Concrete Pump Truck Engine: 460 HP Fuel: Diesel | | Concrete saw (walk behind) Engine: 16 HP Fuel: Gasoline | | Concrete Truck Engine: 330 HP Fuel: Diesel | | Crane: 500 Ton hydraulic Engine: 563 HP Fuel: Diesel | | Crane: Manitowoc 999 with Luffing Jib Engine: 390 HP Fuel: Diesel | | Crane: Top Climber Engine: 190 HP Fuel: Diesel | | Cut off saw Engine: 4.5 HP Fuel: Gasoline | | Delivery Truck: Stake Body or Box Engine: 250 HP Fuel: Diesel | | Delivery Truck: Tractor Trailer Engine: 500 HP Fuel: Diesel | | Drill Rigs: Rock Drill Engine: 90 HP Fuel: Diesel | | Pile Rig Engine: 600 HP Fuel: Diesel | | Dump Truck Engine: 550 HP Fuel: Diesel | | Excavator Engine: 240 HP Fuel: Diesel | | Fuel Truck Engine: 350 HP Fuel: Diesel | | Generators Engine: 11 HP Fuel: Gasoline | | Hoist Engine: 40 HP Fuel: Electric | | Hoist Engine: Fuel: Diesel | | Jack Hammer Engine: Pneumatic Fuel: | | Masonry Bench Saw Engine: 6 HP Fuel: Gasoline | | Mortar Mixer Engine: 6 HP Fuel: Gasoline | | Powder Actuated Device Engine: NA Fuel: NA | | Rebar Bending Machine Engine: 11 HP Fuel: Diesel | | Sledge Hammer Engine: NA Fuel: NA | | Spray on Fire Proof Pump Engine: 150 HP Fuel: Diesel | | Table Saw Electric Engine: 5 HP Fuel: Electric | | Table Saw Engine: 12 HP Fuel: Gasoline | | Vibrator Plate Compactor Engine: 6 HP Fuel: Gasoline | | Water Pumps Engine: 15 HP Fuel: Gasoline | | Welding Machines Engine: 21 HP Fuel: Gasoline | |
|---|---|---

| 2030 Astoria Cove Building 4 | | Air Compressor Engine: 275 HP Fuel: Diesel | | Asphalt Paver Engine: 130 HP Fuel: Diesel | | Asphalt Roller Engine: 18 HP Fuel: Gasoline | | Backhow / Loader Engine: 90 HP Fuel: Diesel | | Chain Saw Engine: 5 HP Fuel: Gasoline | | Circular Saw Engine Fuel: Electric | | Concrete Power Trowel Engine: 11 HP Fuel: gasoline | | Concrete Pump Truck Engine: 460 HP Fuel: Diesel | | Concrete saw (walk behind) Engine: 16 HP Fuel: Gasoline | | Concrete Truck Engine: 330 HP Fuel: Diesel | | Crane: 500 Ton hydraulic Engine: 563 HP Fuel: Diesel | | Crane: Manitowoc 999 with Luffing Jib Engine: 390 HP Fuel: Diesel | | Crane: Top Climber Engine: 190 HP Fuel: Diesel | | Cut off saw Engine: 4.5 HP Fuel: Gasoline | | Delivery Truck: Stake Body or Box Engine: 250 HP Fuel: Diesel | | Delivery Truck: Tractor Trailer Engine: 500 HP Fuel: Diesel | | Drill Rigs: Rock Drill Engine: 90 HP Fuel: Diesel | | Pile Rig Engine: 600 HP Fuel: Diesel | | Dump Truck Engine: 550 HP Fuel: Diesel | | Excavator Engine: 240 HP Fuel: Diesel | | Fuel Truck Engine: 150 HP Fuel: Diesel | | Generators Engine: 11 HP Fuel: Gasoline | | Hoist Engine: 40 HP Fuel: Electric | | Hoist Engine: Fuel: Diesel | | Jack Hammer Engine: Pneumatic Fuel: | | Masonry Bench Saw Engine: 6 HP Fuel: Gasoline | | Mortar Mixer Engine: 6 HP Fuel: Gasoline | | Powder Actuated Device Engine: N/A Fuel: N/A | | Rebar Bending Machine Engine: 11 HP Fuel: Diesel | | Sledge Hammer Engine: N/A Fuel: N/A | | Spray on Fire Proof Pump Engine: 150 HP Fuel: Diesel | | Table Saw Electric Engine: 5 HP Fuel: Electric | | Table Saw HP Engine: 12 Fuel: Gasoline | | Vibrator Plate Compactor Engine: 6 HP Fuel: Gasoline | | Water Pumps Engine: 15 HP Fuel: Gasoline | | Welding Machines Engine: 23 HP Fuel: Gasoline | |
|---|---|---

2030 Astoria Cove
Building 5
Residential

			Phase	Air Compressor Engine: 275 HP Fuel: Diesel		Asphalt Paver Engine: 130 HP Fuel: Diesel		Asphalt Roller Engine: 18 HP Fuel: Gasoline		Backhow / Loader Engine: 90 HP Fuel: Diesel		Chain Saw Engine: 5 HP Fuel: Gasoline		Circular Saw Engine: Fuel: Electric		Concrete Power Trowel Engine: 11 HP Fuel: gasoline		Concrete Pump Truck Engine: 460 HP Fuel: Diesel		Concrete Truck Engine: 330 HP Fuel: Diesel		Crane:500 Ton hydraulic Engine: 563 HP Fuel: Diesel		Cut off saw Engine: 4.5 HP Fuel: Gasoline	
				84		75		71		77		78		76		75		Noise dB(A)		85		72		76	
				number on site	Daily use Factor	number on site	Peak Use Factor	number on site	Peak Use Factor	number on site	Peak Use Factor	number on site	Peak Use Factor	number on site	Peak Use Factor	number on site	Peak Use Factor	number on site	Peak Use Factor	number on site (per month)	Peak Use Factor (per site)	number on site	Peak Use Factor	number on site	Peak Use Factor
				Air Compressor -1	Air Compressor 2	Asphalt paver 1	Asphalt paver 2	Asphalt Roller-1	Asphalt Roller-2	Backhow 1	Backhow-2	Chain Saw 1	Chain Saw 2	Circular Saw-1	Circular Saw-2	Power Trowel 1	Power Trowel-2	Concrete Pump-1	Concrete Pump-2	concrete truck-1	concrete truck-2	Crane: 500 Ton hydraulic 1	Crane: 500 Ton hydraulic-2	Cut off saw-1	Cut off saw-2
2015	Residential	Jun																							
		Jul																							
		Aug																							
		Sep																							
		Oct	D/EX/F	35	100%					39	40%	52	20%	54	20%										
		Nov	D/EX/F	35	100%					39	40%	52	20%	54	20%					50	70%			35	12%
		Dec	D/EX/F	35	100%					39	40%	52	20%	54	20%			8	80%	50	70%	24	75%	35	12%
2016		Jan	SS	35	100%					39	40%	46	20%	54	20%	8	10%	8	80%	72	70%	24	75%	35	12%
		Feb	SS	35	100%					39	20%			54	20%	8	10%	8	80%	72	70%	24	75%	35	12%
		Mar	SS	35	100%									54	20%	8	10%	8	80%	72	70%	24	75%	35	12%
		Apr	SS											36	25%	8	10%	8	80%	72	70%	24	75%		
		May	SS											36	25%	8	10%	8	80%	72	70%	24	75%		
		Jun	SS											36	25%	8	10%	8	80%	72	70%	24	75%		
		Jul	Ext/Int											36	25%	8	10%	8	80%	72	70%	24	50%		
		Aug	Ext/Int											36	25%	8	10%	8	80%	50	70%	24	40%		
		Sep	Ext/Int											36	25%			8	80%	25	70%				
		Oct	Ext/Int											36	25%			4	60%	25	70%				
		Nov	Ext/Int											36	25%										
		Dec	Ext/Int											36	25%										
2017		Jan	Ext/Int											36	25										
		Feb	Ext/Int																						
		Mar	Ext/Int			48	65%	12	80%																
		Apr																							
		May																							
		Jun																							
		Jul																							
		Aug																							
		Sep																							
		Oct																							
		Nov																							
		Dec																							
2022	School	Jan																							
		Feb																							
		Mar																							
		Apr	SS	35	100%					39	40%			54	20%	8	10%	8	80%	72	70%			35	12%
		May	SS	35	100%					39	20%			54	20%	8	10%	8	80%	72	70%	24	75%	35	12%
		Jun	SS	35	100%									54	20%	8	10%	8	80%	72	70%	24	75%	35	12%
		Jul	SS											36	25%	8	10%	8	80%	72	70%	24	75%		
		Aug	SS											36	25%	8	10%	8	80%	72	70%	24	75%		
		Sep	SS											36	25%	8	10%	8	80%	72	70%	24	75%		
		Oct	Ext/Int											36	25%	8	10%	8	80%	72	70%	24	50%		
		Nov	Ext/Int											36	25%	8	10%	8	80%	50	70%	24	40%		
		Dec	Ext/Int											36	25%										
2023		Jan	Ext/Int											36	25%										
		Feb	Ext/Int																						
		Mar	Ext/Int			48	65%	12	80%																
		Apr																							
		May																							
		Jun																							
		Jul																							
		Aug																							
		Sep																							
		Oct																							
		Nov																							
		Dec																							

			Phase	Delivery Truck: Stake Body or Box Engine: 250 HP Fuel: Diesel		Delivery Truck: Tractor Trailer Engine: 500 HP Fuel: Diesel		Dump Truck Engine: 550 HP Fuel: Diesel		Excavator Engine: 240 HP Fuel: Diesel		Fuel Truck Engine: 350 HP Fuel: Diesel		Generators Engine: 11 HP Fuel: Gasoline		Jack Hammer Engine: Pneumatic Fuel:		Masonry Bench Saw Engine: 6 HP Fuel: Gasoline		Mortar Mixer Engine: 6 HP Fuel: Gasoline		Powder Actuated Device Engine: NA Fuel: NA		Rebar Bending Machine Engine: 11 HP Fuel: Diesel		Sledge Hammer Engine: NA Fuel: NA		Spray on Fire Proof Pump Engine: 150 HP Fuel: Diesel		Table Saw Electric Engine: 5 HP Fuel: Electric		Vibrator Plate Compactor Engine: 6 HP Fuel: Gasoline		Water Pumps Engine: 15 HP Fuel: Gasoline		Welding Machines Engine: 23 HP Fuel: Gasoline	
				Noise dB(A)		Noise dB(A)		84		77		Noise dBA		68		72		76		63		75		80		75		76		76		80		76		73	
				number on site (per month)	Peak (per day per site)	number on site (per month)	Peak (per day per site)	number on site (per month)	Peak trucks (per hour per site)	number on site	daily use factor	number on site	daily use factor	number on site	daily use factor	number on site	daily use factor	number on site	daily use factor	number on site	daily use factor	number on site	Daily use Factor	number on site	daily use factor	number on site	daily use factor	number on site	daily use factor	number on site	daily use factor	number on site	daily use factor	number on site	daily use factor	number on site	daily use factor
				truck-1	truck-2	tractor trailer-1	tractor trailer-2	Dump truck-1	Dump truck-2	Excavator-1	Excavator-2	Fuel truck -1	Fuel truck -1	Generator -1	Generator -2	Jack Hammer 1	Jack Hammer 2	Bench Saw 1	Bench Saw 2	Mixer 1	Mixer 2	Powder Actuated Device-1	Powder Actuated Device-2	Bending Machine -1	Bending Machine -2	Sledge Hammer-1	Sledge Hammer-1	Fire Proof Pump -1	Fire Proof Pump -2	Electric Table Saw - 1	Electric Table Saw - 2	Vibrator Compactor -1	Vibrator Compactor -2	Water Pump 1	Water Pump 2	Welding Machines -1	Welding Machines -2
2015	Residential	Jun																																			
		Jul																																			
		Aug																																			
		Sep																																			
		Oct	D/EX/F	18	12%	2	10%	205	80%	48	65%	1	6%	60	100%							60	30%	18	70%	36	15%					15	20%	8	40%		
		Nov	D/EX/F	18	12%	2	10%	205	80%	48	65%	1	6%	60	100%	18	20%					60	30%	18	70%	36	15%					20	20%	8	40%		
		Dec	D/EX/F	18	12%	2	10%	125	70%	48	65%	1	6%	60	100%	18	20%					60	30%	18	70%	36	15%					20	20%	8	40%	5	22%
2016		Jan	SS	18	12%	2	10%	125	70%	48	65%	1	6%	60	100%	18	20%					60	30%	18	70%	36	15%									5	22%
		Feb	SS	18	12%	4	13%	125	70%	24	50%	1	6%	60	100%	18	20%	48	45%			72	65%	18	70%	24	7%									5	22%
		Mar	SS	18	12%	4	13%			24	50%	1	6%	60	100%			48	45%	24	90%	72	65%	18	40%			12	40%	75	65%					5	22%
		Apr	SS	18	12%	4	13%			24	50%							48	45%	24	90%	72	65%					12	40%	75	65%						
		May	SS	18	12%	4	13%											48	45%	24	90%							12	40%	75	65%						
		Jun	SS	18	12%													48	45%	24	90%							12	40%	75	65%						
		Jul	Ext/Int	18	12%													24	25%	24	90%	72	65%					12	40%	75	65%					5	22%
		Aug	Ext/Int	18	12%													24	25%	24	90%	72	65%					12	30%	75	65%					5	22%
		Sep	Ext/Int	18	12%													24	25%	24	90%	72	65%							75	65%					5	22%
		Oct	Ext/Int	18	12%													24	25%	24	90%									75	65%						
		Nov	Ext/Int	18	12%																									75	65%						
		Dec	Ext/Int	18	12%																									75	65%						
2017		Jan	Ext/Int	18	12%																									50	65%						
		Feb	Ext/Int	18	12%																									50	65%						
		Mar	Ext/Int																																		
		Apr																																			
		May																																			
		Jun																																			
		Jul																																			
		Aug																																			
		Sep																																			
		Oct																																			
		Nov																																			
		Dec																																			
2022	School	Jan																																			
		Feb																																			
		Mar																																			
		Apr	SS	18	12%	2	10%	125	70%	48	65%	1	6%	60	100%	18	20%					60	30%	18	70%	36	15%									5	22%
		May	SS	18	12%	4	13%	125	70%	24	50%	1	6%	60	100%	18	20%	48	45%			72	65%	18	70%	24	7%									5	22%
		Jun	SS	18	12%	4	13%	125	70%	24	50%	1	6%					48	45%	24	90%	72	65%	18	40%			12	40%	75	65%					5	22%
		Jul	SS	18	12%	4	13%			24	50%	1	6%					48	45%	24	90%	72	65%	18	70%			12	40%	75	65%						
		Aug	SS	18	12%	4	13%			24	50%							48	45%	24	90%	72	65%	18	40%			12	40%	75	65%						
		Sep	SS	18	12%													48	45%	24	90%	72	65%					12	40%	75	65%						
		Oct	Ext/Int	18	12%													24	25%	24	90%	60	20%					12	40%	75	65%					5	22%
		Nov	Ext/Int	18	12%													24	25%	24	90%	60	20%					12	30%	75	65%					5	22%
		Dec	Ext/Int	18	12%													24	25%	24	90%									75	65%					5	22%
2023		Jan	Ext/Int	18	12%																									50	65%						
		Feb	Ext/Int	18	12%																									50	65%						
		Mar	Ext/Int																																		
		Apr																																			
		May																																			
		Jun																																			
		Jul																																			
		Aug																																			
		Sep																																			
		Oct																																			
		Nov																																			
		Dec																																			


2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
J F M A M J J A S O N D
Building 1
Utilities 63
Excavation & Foundation 588
Super Structure 969
Exterior Fit-Out 284
Interior Fit-Out 696
Site & Finishing 130
General Construction 606
Building 2
Utilities 57
Excavation & Foundation 540
Super Structure 637
Exterior Fit-Out 298
Interior Fit-Out 540
Site & Finishing 162
General Construction 614
Building 3
Utilities 39
Excavation & Foundation 258
Super Structure 513
Exterior Fit-Out 177
Interior Fit-Out 324
Site & Finishing 70
General Construction 467
Building 4
Utilities 15
Excavation & Foundation 149
Super Structure 281
Exterior Fit-Out 111
Interior Fit-Out 156
Site & Finishing 60
General Construction 212
Building 5 (Res & Sch)
Utilities 6
Excavation & Foundation 36
Super Structure 78
Exterior Fit-Out 35
Interior Fit-Out 55
Site & Finishing 14
General Construction 46