1.0 ATTACHMENT 1.A - ACTIVITY DESCRIPTION

1.1 Development Overview

The Nordic Aquafarm project is proposed to be located on the northwest side of Route 1 (Northport Avenue) in Belfast, Maine adjacent to the Belfast Reservoir Number One, as shown on the United States Geologic Survey (USGS) topographic map (See **Attachment 3)**. The project site consists of parcels owned by the Belfast Water District (BWD), Mathews Brothers and Sam Cassida. The development also includes easements to the northwest of the entire parcel to connect a sewer line to the existing Belfast city sewer on Northport Avenue, by way of Perkins Road and an easement through the Eckrote parcel for intake and outfall pipes. The primary access to the site will be off Route 1 at the current site access for the BWD. The proposed project is located within the Route 1 South Business Park district and is abutted to the north by the Mathews Brothers facility. The Residential II zone abuts the site to the north and east, with residential properties located directly north of the site and along Route 1. The General Purpose (GP) II district is located to the far north of the site beyond Perkins Road. The Rural Protection Zone is located across the Little River to the west of the site. The existing BWD parcel adjacent to the Lower Reservoir (also called Reservoir Number One), contains approximately 14 acres that will be retained by the City of Belfast and kept undeveloped as resource protection. There is an existing trail system through this Shoreland Zone area and along the reservoir and Little River.

Approximately 2 acres of the BWD parcel is currently developed with an office building, a former filter house, two garage buildings, and associated driveways and parking amounting to 0.4 acres of existing impervious surface. Existing site conditions are presented in plan **CD101;** note that all civil site plans can be found in **Attachment 1.B**. A concrete dam controls the water level to the reservoir, and piping associated with the former use of the reservoir as the water supply for the City of Belfast still exists adjacent to the dam and the office building. Historically, the Site was undeveloped agricultural land until 1887 when the lower dam was built, creating the Lower Reservoir. Concurrently, a pump house was constructed to provide water to downtown Belfast. The two turbine pumps ran off hydroelectric power from the dam with a coal fired steam pump generator as backup. Site infrastructure expanded around 1915 when water treatment structures, in the form of a filter house and concrete settling basin, were installed. In 1919, the Belfast Water Company was purchased by the City of Belfast and incorporated as the quasi-municipal non-profit entity known to this day as the BWD.

Use of the Lower Reservoir as the main water supply for the City of Belfast continued until 1956 when a gravel supply well installed in the north end of Belfast became operational, relegating the Lower Reservoir supply and Site infrastructure to emergency backup use only. Status as a backup supply remained until 1980, at which time the Lower Reservoir water supply and infrastructure were permanently removed from service and piping connections were sealed. Since 1980, the original pump house was renovated for use by the BWD as office space and two garages were built for equipment storage and repair space.

The entry to the existing BWD facility also includes an open grassed area and septic leach field.

The site has primarily coniferous vegetation cover within isolated areas of deciduous vegetation and bedrock outcrops. The site slopes gently to the South and Southwest into the Little River/Reservoir Number One. The terrain steepens within the 250-foot Resource Protection District with fingers of rivulets, channels and ravines exiting into the reservoir. The reservoir is controlled by a dam located just west of Route 1 and outlets into Belfast Bay. The site's geological investigations are based on surficial geology mapping for the State of Maine and augmented by field investigation during the hydrogeological and geotechnical drilling conducted for this permit application. A wetlands delineation, vernal pool investigation and wildlife habitat/endangered species investigation were also conducted for the site.

The project will require both potable domestic water for drinking and fish processing, and process water for salmon rearing. Domestic water is to be supplied by the BWD, the local public water supplier for Belfast and portions of Northport. Based on the changing environmental needs of salmon through their life cycle, process water will include both freshwater and saltwater sources. Freshwater sources of process water are proposed to include an on-site groundwater extraction well network, on-site surface water withdrawal from Belfast Reservoir Number One as back-up, and additional off-site supply from the BWD. Saltwater is proposed to be obtained from Belfast Bay through a seawater intake and pipeline. Collectively, the project is anticipated to use approximately 1,205 gallons per minute (gpm) and 3,925 gpm of saltwater at full operational capacity.

Treated wastewater will be discharged to Belfast Bay via an ocean discharge, the length and location of which is discussed in the Maine Pollution Discharge Elimination System (MEPDES) permit application submitted to the Maine Department of Environmental Protection (MEDEP) in October 2018.

Power currently enters the site from Route 1, runs to the Belfast Water District office building, and to the garage buildings. The proposed project also will have a power connection from the Route 1 transmission line, as shown on plan **CU100**. Substation and/or transmission line upgrades that may be required to support the facility at full build out will be the responsibility of Central Maine Power, the owner of the power grid.

The proposed development will be constructed in two phases. Phase 1 would consist of the following:

1. Office/Maintenance Building – 8,936 SF
2. Water/Wastewater Treatment Plant – 20,056 SF
3. Central Utility Plant (CUP) – 18,998 SF
4. Module 1 Building – 112,223 SF
5. Module 2 Building – 112,223 SF
6. Module 3 Building – 112,223 SF
7. Smolt 1 Building – 53,947 SF
8. Processing Building – 24,096 SF
9. Gate House – 298 SF

Phase 2 consists of:

1. Module 4 Building – 112,223 SF
2. Module 5 Building – 112,223 SF
3. Module 6 Building – 112,223 SF
4. Smolt 2 Building – 53,947 SF
5. Visitor Center – 2,188 square foot (SF)

Plans **C-102** and **C-101** show the final site topography and building layout upon completion of Phase 2. Including required impervious access drives, parking areas and delivery areas, the total new impervious area at the Site will be 24.2 acres at full build-out.

The topography of the site in the developed area is considered "rolling" but drops approximately 10 to 15 feet across the site. Stormwater control from both a quantity and quality standpoint, will require detention areas, water quality treatment facilities and erosion and sediment controls to prevent impact to the downslope Shoreland Zone area and the receiving water bodies.

Previous Wetland Alteration

Wetlands located on the Site have previously been altered during exploratory drilling activities associated with the project hydrogeologic investigations. These alterations included the construction of a temporary gravel road across wetlands for drill rig access and installation of bedrock exploratory wells within a wetland and 75-foot buffer zone of an unnamed intermittent stream marked on the local USGS topographic map. Three separate MEDEP Permit-By-Rule (PBR) applications were submitted and approved for the aforementioned activities. As bedrock well installation along the unnamed intermitted stream was adjacent and not in the resource the size of the alteration is considered zero; however, sediment and erosion control features were installed to minimize impacts from drilling to the adjacent waterway. The construction of the gravel road and associated bedrock well installed at its terminus impacted approximately 2,000 square feet (SF) of wetlands. This activity was conducted in November 2018 following permitting and approval under PBR# 67077.

1.2 Construction Phasing and Impacts

For each phase of major facility buildout there will be a series of subphases through which sitework and construction will proceed. The sections below provide an impact assessment for each construction phase, detailing the localized disturbances of soils and wetlands, along with the mitigating soil erosion and sediment control (SESC) and stormwater measures to be implemented. Further detail of building construction and overall construction timeline can be found in **Attachment 7**. Plans and detail views of the proposed intake/discharge pipeline system are presented in **CS101-CS104, CS301, CS501-CS505,** and **M-100**. Site phasing plans **CE-110** through **CE-118** will be referenced in each corresponding section, as will the SESC impact table presented in **Figure 1.2-1**, which is referenced from the Soil Erosion and Sedimentation Control plan found in **Attachment 8**.

During Phase 1 there will be two major construction efforts conducted concurrently: seawater access system construction and start of main facility buildout. All project phasing and progress within the site is aimed to allow for efficient and safe construction, and early facility start-up, while always minimizing disturbed areas and resource impacts.

Phase 1 – Intake/Discharge System

Section 1.2.1A: Pipeline Construction

The proposed pipeline for intake of freshwater and discharge of treated process water will run from the water treatment plant (WTP), across Route 1, and to Penobscot Bay. The intake system will consist of two 30" high density polyethylene (HDPE) pipes running in parallel to a submerged intake structure approximately 1.9km from where it crosses the shoreline. The discharge system is comprised of a single 36" HDPE pipe extending approximately 1km from the shore crossing to a submerged discharge diffuser. Both in the land and intertidal regions the pipes will be buried and won't emerge from the seabed until a depth of about 36', after which

they will continue to their termination points secured atop the seafloor. An overall plan and profile view of the pipeline route can be seen in drawing **CS101**. The following sections detail the phasing order of the intake/discharge system construction, corresponding to distances along the pipe route referenced in **CS101**.

Route 1 Crossing (Station 2+00 to 2+70)

Prior to the bypass installation, environmental controls, dewatering, and stabilization of the nearby existing wetlands and topography will be engineered and installed. Ditches and sediment traps will be maintained and ground water from the excavation be pumped to sediment bags or settlement ponds. The new temporary road base will be fully installed, paved and marked prior to commencing deep excavation. The proposed bypass plan can be viewed in plan **BP-1**.

Installation of the Route 1 crossing will begin with drilling and blasting of the deep rock followed by pavement removal and a temporary plunge/sediment pool within the pavement removal zone for any water to be pumped from the deep excavation. An initial cut will excavate the surface to bench down to a lower elevation. Then a stacked trench box or temporary sheet pile stabilized structure will be installed and maintained to provide for safe deep access. Deeper sump holes within the excavation will collect ground water for pumping into sediment bags or pools and pumping will remain continuous with perforated sump pits and well-suited pumps for this application. Due to the confined nature of this excavation, excessive storm events like rain or snow do not present much additional effort beyond adding a pump and sediment bags. This trench box/sheeting structure will extend down to stable bedrock and be tied back to soil anchors and/or temporary pilings in order to provide for the maximum clearance within the structure to place the large pipes. The new HDPE pipes will be placed and bedded, then backfilled to subgrade whereby the Route 1 roadway will be reconstructed to Maine Department of Transportation (MEDOT) standards and reopened to normal traffic. Based on the current plans it is expected the construction of the bypass, pipe installation, and reconstruction of Route 1 will disturb a total area of approximately 1.5 acres, the region of which is shown in **BP-1**. The expected wetland impact during this construction phase is 1,776 SF to wetland W6, however the region occupied by the bypass will be regraded and restored following completion of the pipeline crossing.

Upland Easement – Eckrote Property (Station 2+70 to 6+00)

This 330-foot zone will likely be done in two halves of approximately 165 feet each due to the need for working space. Construction will begin closest to Route 1 and extend half the length to the shoreline enabling use of that remaining area to place materials. Some trees will be cleared to begin this zone and the old shed that sits on the edge of a slope will be removed as directed by the landowner. The erosion and sediment controls to divert runoff and handle water will be installed to suit the next step which will need to be altered to suit the final excavated condition. Then the existing grade will be cut to a lower elevation followed by the application of stabilization fabric to cover the entire newly sloped surroundings that will be maintained for the entire construction duration until permanent seeding can be done the next growing season. Silt fence, ditching and sediment bags will be installed for this stage. During excavation, sumps will be maintained to collect groundwater that will be pumped to sediment bags, as there is no space for sediment pools. The HDPE pipes will be prefabricated nearby to the proper length and pulled in for mating to the stub end at Route 1. The easterly end of the trench and coffer/box structure will remain open for mating pipes in the next zone.

Once the first 165 feet of the pipes are installed and backfilled, the coffer/box structure will be jumped ahead for the next 165 feet to the shoreline that will repeat in the same manner. A three-sided coffer cell at the stream/high tide intersection will be installed to provide dry space for pipe mating below tide and allow the stream to remain flowing.

Once the pipes are installed and backfilled, the coffer structures will be removed, and the surface area will be graded and planted with final designed erosion controls and as agreed with the landowner. This process is estimated to have an area of impact of just over 0.3 acres (~13,200 SF) covering a 40' wide construction easement along the pipe route; a detailed view of this is shown in plan **CS103**. About 2,611 SF of salt marsh W11 will be impacted during excavation and pipeline installation in this region.

Intertidal – Mudflats (Station 6+00 to 13+50)

The intake and discharge pipes will be prefabricated in appropriate lengths at another location, floated and towed to the site and temporarily moored alongside the trench route. The pipes will ride the tides and set on the mudflat during low tide for a short period while the trench is prepared. The pipe will be positioned into the trench on an outgoing tide and joined to the preceding pipe at the 3-sided coffer at the shoreline. Then the pipes will be backfilled with the excavators shaping the trench surface to the original mudflat line. Then the excess soil, rocks and boulders will be removed and disposed of, leaving the mudflat in the same profile appearance as originally found. The most seaward pipe ends will protrude up out of the trench and float to enable attaching the next length of pipe which means the outward portion of the trench will be backfilled later once this piece is joined and submerged with the next piece of piping beyond. This will be located in the vicinity of the mean low water line to suit excavation with the tides in that the flat terrain provides little time at low tide to do much work. In the event ledge is encountered before the desired trench depth is achieved it will be profiled and submitted for evaluation. Ledge removal will be accomplished with a hoe ram or an excavator with a ripper tooth or a qualified blasting contractor with experience in underwater ledge removal.

Construction in this region will continue along the same 40' easement, resulting in about 0.7 acres of total disturbance to the mudflats during construction. Following pipe installation and backfill of the trench this area will be restored to its original condition.

Submerged in Water and Buried in Trench (Station 13+50 to 36+00)

For all remaining waterborne construction activities, Contractor will be in regular contact the mariner community, local Harbor Master and the US Coast Guard. The trench and pipe alignment will be established and maintained with "Dredgepack" surveying alignment system, a software specifically designed for this type of construction. Temporary H-pilings will also be used for tethering the floating pipes that await installation and the floating siltation boom which will surround the excavation. Floating 3-foot silt boom can be deployed to follow the excavation but must be of shallow depth to allow for tides and currents. Preassembled pipes with the concrete ballast blocks will be floated in next to the barges and readied for installation when the trench is prepared. The leading pipe end will always "tail" up to the surface for future adjoining of subsequent lengths in the dry. Backfill operations will be similar to the excavation operations. Divers will verify and provide video documentation that the backfill is adequate but not above the original seafloor profile. Once the pipe trench is backfilled, the remaining excess spoils will be loaded onto barges and sent to an upland disposal site. The seafloor topography will be smoothed to the original profile and once again verified by divers and video. The estimated region of temporary construction impact is just over 2 acres, following the path of the buried pipe.

Exposed upon Seafloor (Station 36+00 to 42+00 to 69+00)

The pipes once again will be preassembled in the concrete ballast blocks, floated to the site and tethered to temporary pilings and anchors as necessary. Floating silt booms will not be necessary in this zone. Divers will survey the piping route to identify obstacles or depressions that may affect the pipes from properly setting on the sea bottom. Those obstacles and depressions will be corrected and/ or removed, and the pipes floated into place and submerged in a controlled "sink" by filling the pipes with water. Divers will again verify and video the final condition. From this point forward permanent impact will be limited to the width of the pipes and the securing structure since the pipes will now be resting on the seafloor.

Spud barges will be positioned on location and divers will survey the existing bottom so obstacles can be removed, and the seafloor can be prepared to accept the final portions of piping. The discharge diffusers will be mated to the discharge pipe and will be sunk with the last leg of pipe. The intake structures will be crane-set, and divers will likely install a final insert pipe to join the pipe ends to the intake structure piping. Divers will survey and video the final configuration of these end points. The total impact to the seafloor in this final stage is a maximum of about 3 acres along a 40' construction channel following the pipe route. Given that the pipe is no longer buried it is expected that the actual impact will be significantly less than this.

Phase 1 – Main Site

Section 1.2.1B: Site Clearing

Drawing Reference: CE-110
SESC Table: Figure 1.2-1, Clearing

The initial main site efforts of Phase 1 construction will focus on the clearing of vegetated areas on or around the Phase 1 building footprints, construction of access roads, and clearing/stabilization of a temporary laydown area. The total limits of impact of this subphase will comprise approximately 33.6 acres, of which about 18.3 acres are currently forested; the exact boundaries of the overall construction area and clearing region are shown in the referenced plan. A stabilized construction entrance will be installed at the end of the existing paved region, and a temporary access bridge across stream 9 will be constructed to allow for access to the WTP building area. An existing cleared area comprising about **0.5 acres** will be stabilized and covered in gravel to serve as a temporary laydown area for materials and equipment during the clearing process. It should be noted that the forested areas will likely be cleared in phases based on the progression of facility construction, and only areas ready for construction will undergo grubbing and stabilization.

Section 1.2.2: Phase 1A

Drawing Reference: CE-111
SESC Table: Figure 1.2-1, Phase 1A

The referenced plan shows the limits of Phase 1A sitework and construction, which has an overall impact footprint of about 14 acres. Initial efforts will include the clearing, grubbing, and stabilization of about 1.9 acres to be used as a new laydown area, located within the footprint of the future Module 6 section of Building 2. This laydown area will be utilized for the remainder of the construction timeline until construction of Module 6 begins. A second gravel pad will be located within the footprint of building 7 at the Northeast corner of the site to be used for

temporary construction offices and storage. The area for the proposed WTP facility (building 8) will be grubbed, over-excavated, and stabilized in preparation for foundation work in the ensuing subphase.

The perimeter of the Phase 1 work limits will be enclosed with a silt fence to prevent construction runoff from impacting the surrounding environment. Along the Northern edge of the site a diversion trench will be excavated to redirect stormwater upgrade of the site with a rip rap stabilized slope. Diverted and collected stormwater and from the site will be redirected downgrade to a series of temporary plunge pools along the perimeter silt fence. The shaded roadways in the referenced plan show the expansion of paved access roads into the site, which will be further expanded as construction proceeds.

Section 1.2.3: Phase 1B

Drawing Reference: CE-112
SESC Table: Figure 1.2-1, Phase 1B

In this phase the focus of construction will be consolidated about the footprint of the Smolt facilities, with the limits of work comprising approximately 9.5 acres. The access roads will be expanded to encompass the Smolt 1&2 region, as shown in the referenced drawing. Temporary sediment ponds will be excavated to the North, Northwest, and South of the Smolt footprint, and a diversion trench will be installed to run along the North side of the uppermost access road. Over-excavation of the Smolt facility area will proceed from West to East, with no more than 80,000 SF of uncovered grubbed area present at any given point. This region will be backfilled to proper depth with granular borrow and prepared for foundation construction. The footprint of the WTP, which was stabilized in Phase 1A, will proceed with foundation construction.

Section 1.2.4: Phase 1C

Drawing Reference: CE-113
SESC Table: Figure 1.2-1, Phase 1C

Construction of the Smolt foundation will begin in this subphase, and sitework and grading will proceed East to the region encompassing the CUP, fish processing, and oxygen generation. The impact area during this phase will be limited to approximately 3.3 acres, with no additional construction of access roads or temporary stormwater collection points required. As with the Smolt facility, stabilization, and foundation preparation will occur, with no more than 80,000 SF of uncovered grubbed area present at any given point.

Section 1.2.5: Phase 1D

Drawing Reference: CE-114
SESC Table: Figure 1.2-1, Phase 1D

At this point the footprints of buildings 3, 4, 5, and 6 will be fully stabilized, and undergoing foundation and envelope construction. Construction will shift to building 1, starting with Module 1 in the Northwest corner of the site, with an initial area of work of about 4.6 acres. Approximately 26,200 SF of access roadway will be added to encompass the construction region. Any vegetated areas within this area will be cleared, unsuitable soils will be excavated to appropriate depth, and granular borrow will be used to fill the region in preparation of foundation construction.

Section 1.2.6: Phase 1E

Drawing Reference: CE-115
SESC Table: Figure 1.2-1, Phase 1E

Preparation of the building 1 area will continue East while the foundation construction of Module 1 is underway. The newly cleared, grubbed, and over-excavated area will encompass approximately 5 acres, comprising the remainder of the building 1 footprint. About 18,500 SF of access road will be added North of this region and will tie back into the existing road on the Northeast corner of the site. During this phase additional silt fencing will be installed along a 20' wide corridor for installation of the force main sewer line, extending from the Northeast corner of the site North to Perkins road, then following the road East before tying into the municipal sewer system. After installation of the silt fence is complete a trench will be dug along this route for installation of the force main piping, with a temporary stream diversion as noted in the referenced plan. Following the completion of Phase 1E construction efforts, overall site stabilization will take place in preparation for full Phase 1 facility operation. The riprap slope abutting the stormwater diversion trench along the Northern side of the site will be seeded and stabilized. Temporary stormwater collection points will either be filled and stabilized, or re-excavated and commissioned as part of the permanent stormwater system. Upon completion of Phase 1 the perimeter silt fence will be removed.

1.2.1 Phase 2

Section 1.2.7: Phase 2 Clearing

Drawing Reference: CE-116
SESC Table: Figure 1.2-1, Phase 2 Clearing

At the start of Phase 2 additional site clearing will be required. Silt fence will be installed downgrade of the site extending from the Southwest corner to the entrance access road. The total clearing area will comprise of approximately 7 acres. None of this area will be grubbed until stabilization and construction is ready to commence.

Section 1.2.8: Phase 2A

Drawing Reference: CE-117
SESC Table: Figure 1.2-1, Phase 2A

Following the clearing of the Phase 2 area and the installation of perimeter SESC measures, grubbing and over-excavation of the building 2 footprint will occur. Prior to this, excavation of downstream plunge pools and expansion of access roadways about the area of disturbance will occur. The access road will expand from the existing Phase 1 limits to encompass the footprint of building 2 before tying back into the main facility entrance. The initial area of disturbance will encompass just over 5 acres, with only a maximum of 80,000 SF being grubbed and uncovered at a time.

Section 1.2.9: Phase 2B

Drawing Reference: CE-118
SESC Table: Figure 1.2-1, Phase 2B

The over-excavated and stabilized areas of Phase 2A will begin to undergo foundation construction, starting with Module 4 in the Southwest corner of the site. Grubbing and over-excavation will proceed eastward to comprise the remainder of the Building 2 footprint, approximately 5 acres in area. Part of this will include the construction laydown area, which will be repurposed for Module 6. Upon completion of Building 2 envelope construction the downgrade stormwater infrastructure will be re-excavated and commissioned in permanent form. Site stabilization, landscaping, and establishment of buffers will occur for Phase 2 completion.

Figure 1.2-2 Presents the overall wetland and stream impacts, both temporary and permanent, from the construction of the proposed development. The overall wetland impact is estimated to be about 174,713 SF (approximately 4 acres), of which 5,622 SF will be able to be restored following completion of construction. The development will also affect approximately 1,215 linear feet (LF) of on-site streams, of which 1,180 feet will be permanently filled. Streams impacted upgrade by the development will be rewetted through channeling of stormwater, and restorative efforts will be made where possible. **Attachment 9** contains a detailed report of existing site conditions and resources, and **Attachment 13** contains details of the compensation work proposed to mitigate resource impacts by the facility construction.

Figure 1.2-1: SESC Impact Table

PHASE	PRIMARY TASKS	PREMANENTLY STABILIZED AREA - START OF PHASE	TOTAL WORK AREA	MAXIMUM OPEN AREA -GRUBBED AND NOT STABILIZED	SESC BMPS	AREA OF NEW ROADS	AREA OF NEW PADS	OTHER STABILIZED AREAS	PERMANENTLY STABILIZED AREA - END OF PHASE	ANTICIPATED TIMELINE
PHASE 1 CLEARING	Site Layout - Layout Phase 1 Limits of Work and tree clearing limits Installation of Stabilized Access Installation of Perimeter Erosion Controls Site Clearing – Logging and Clearing of Vegetation	22,000	795,000	0	Stabilized Construction Entrances Stabilized Haul Roads Stabilized Laydown Area Temporary Stream Crossing	0	0	0	26,000	2-4 weeks
PHASE 1A	Installation of Additional Perimeter Erosion Controls Construction of Runoff Diversions and Bypass Culverts Establishment of site access, laydown area, offices and storage -	26,000	610,000	80,000	Stabilized Cosntruction Entrances Silt Fence Silt fence/haybale barrier Erosion berms Temporary riprap slope stabilization Diversion trench Outlet plunge pools Bypass culverts Stabilized gravel pads	51,000	130,000	60,000	267,000	6-8 weeks
PHASE 1B	Construction of Temporary Sediment Basins and Stabilized Outlets Construction of Phase 1B Access Roads Excavation of unsuitable soils and subgrade preparation Pad and foundation preparation -Smolt Building	267,000	408,600	80,000	Temporary sediment basins Bench drain outlets Diversion trench Bypass culverts Building pad stabilization	260,600	104,200	60,000	691,800	8-10 weeks
PHASE 1C	Construction of Phase 1C Access Roads Excavation of unsuitable soils and subgrade preparation - Pad and foundation prep. - Oxygen Storage, Process, CUP, Switch Yard	691,800	143,600	80,000	Building pad stabilization	0	108,000	30,000	829,800	4-6 weeks
PHASE 1D	Construction of Phase 1D Access Roads Excavation of unsuitable soils and subgrade preparation - Pad and foundation preparation - Phase 1 Module Buildings West	829,800	199,200	80,000	Building pad stabilization	26,200	150,000	15,000	1,021,000	5-6 weeks
PHASE 1E	Construction of Phase 1E Access Roads Excavation of unsuitable soils and subgrade preparation - Pad and foundation preparation - Phase 1 Module Buildings East	1,021,000	214,500	80,000	Building pad stabilization	18,500	180,000	15,000	1,234,500	5-6 weeks
PHASE 1 FINISH	Landscaping, hardscaping and finish surface work in interior areas of Phase 1 work area, filling of temporary ponds, final stormwater BMPs	1,234,500	160,000	0	None	0	0	85,000	1,319,500	4-6 weeks
PHASE 2 CLEARING	Site Layout - Layout Phase 2 Limits of Work and tree clearing limits Installation of Perimeter Erosion Controls Connect Perimeter Erosion Controls to remaining Phase 1 BMPs Site Clearing – Logging and Clearing of Vegetation	1,319,500	290,000	0	Silt fence/haybale barrier Stabilized Haul Roads Stabilized Laydown Area (in place)	0	0	0	1,319,500	2-4 weeks
PHASE 2A	Construction of Phase 2A Access Roads Pad and foundation preparation - Phase 2 Module Buildings West	1,319,500	220,000	80,000	Temporary sediment basin Building pad stabilization Bypass culverts	44,000	161,000	15,000	1,539,500	5-6 weeks
PHASE 2B	Construction of Phase 2B Access Roads Pad and foundation preparation - Phase 2 Module Buildings East	1,539,500	195,500	80,000	Building pad stabilization	0	90,000	25,000	1,654,500	5-6 weeks

Figure 1.2-2: Wetland and Stream Impact Table

Wetland ID	[1]Temporary Impacts (SF)	Permanent Impacts (SF)	Impact Total (SF)	Impact Characterization
W1	0	115,674	115,674	Direct, Fill
W2	0	24,612	24,612	Direct, Fill
W3	0	5,057	5,057	Direct, Fill
W4	0	692	692	Direct, Fill
W5	0	18,672	18,672	Direct, Fill
W6	1,766	3,120	4,886	Direct, Fill
[2]W11	2,611	0	2,611	Direct, Excavation
W13	0	556	556	Direct, Fill
W15	0	708	708	Direct, Fill
W16	1,245	0	1,245	Direct, Excavation
Totals	5,622	169,091	174,713	

1 All temporary impacts are restored in place

2 W11 consists of 2,125 SF of temporary impact to Salt Marsh and 486 SF of temporary impact to Cobble Beach

Stream ID	[1]Temporary Impacts (LF)	Permanent Impacts (LF)	Impact Total (LF)	Impact Characterization
S3	0	635	635	Direct, Fill
S5	0	459	459	Direct, Fill
S6	0	86	86	Direct, Fill
S9	145	0	145	Direct, Temporary Culvert and Excavation
Totals	145	1,180	1,325	

1 All temporary impacts are restored in place