

Burlington Harbor Marina

Existing Conditions: Description of existing conditions, description of existing stormwater system existing drainage issues, connectivity to City system

The site is located on two parcels of land owned by the City of Burlington abutting Lake Champlain. There are three primary project components and the following will describe the stormwater management within each one.

1. Employee Parking Lot east of buildings. This area currently hosts a 3,950 SF satellite bit. conc. parking lot and green space area that is served by Penny Lane. Stormwater from this areas flows via sheet flow from the parking lot in an easterly direction to an existing catch basin. Flows are then conveyed from this structure via a series of 18" HDPE pipes to Lake Champlain at an outfall located at the north end of the Fishing Pier parking lot.
2. Fishing Pier Parking Lot - This 10,370 SF parking lot for the Fishing Pier and 6,840 SF lot and circulation area for the Water Department Pump Station building currently benefits from two separate collection and conveyance systems that discharge to outfalls to Lake Champlain. The Middle parking lot system includes two catch basins which in turn are conveyed through a series of 12" CMP's to the outfall. The south system located at the south end of the parking lot receives flows from the west end of Penny Lane and conveys these flows and that from one catch basin within the parking to a drainage manhole and then via a 15" RCP to the outfall located just north of the fishing pier.
3. Picnic Shelter Pavilion Area and Water Dept. Parking Lot. – The existing 2,790 SF Pavilion shelter and connector walkways is located between the lake and the Water Dept. Parking lot to the east. Under existing conditions, runoff from the parking lot is collected in a sole catch basin located in the southwest corner of the facility and is conveyed in a 12" CMP to the Lake Champlain outfall. The remaining area near the shelter either drain back to the sole catch basin or sheet flow to the lake.

Proposed Conditions: description of proposed conditions, brief description of proposed stormwater system, proposed method of discharge to receiving water or City system (overland flow, direct connection via pipe, existing or new manhole or CB). General Statement: The underlying sand subgrade of the site provide suitable infiltration rates in support of the use of permeable pavement and permeable pavers without the use of underdrains.

1. Employee Parking Lot east of buildings. Consistent with the original WAN approval, this area will be redeveloped with an expanded parking lot. The shape of the lot has been reconfigured to enable a sweeping pedestrian access to be installed along the east edge of the facility from Penny Lane to the Moran Plant.

This 21,430 SF parking facility constructed with pervious pavement will replace the existing 3,950 SF impervious parking lot.

A small amount of curbing will be installed on Penny Lane to provide transition curbing from Penny Lane into the new parking facility.

2. Fishing Pier Parking Lot - The existing parking lot is being removed in favor of:
 - a. The creation of the Waterfront Park North within the northern two-thirds of the project site. This will include the creation of new green space and a series of hardscape access ways and sitting areas. A series of trees will be placed in a stone dust surface treatment along the west edge of the park. This site will continue to sheet flow toward the existing CB location.
 - b. The existing bit. conc. located on the west side of the Water Department Pump Station Building is proposed to be resurfaced with CIP concrete. No change in sheet flow away from the building is proposed.
 - c. The far southern third of the site will be converted into a marina drop-off area that integrates with the access way to the Fishing Pier. The proposed surfaces include pervious pavers in the parking locations, and impervious pavers in the inner and outer limits of the drop-off area. 5' green space bands line the outside edges of the parking spaces. Infiltration into the planting bands will be promoted for those portions of the impervious

perimeter walkway. The pervious pavers will minimize the surface flows to the existing catch basin located at the west end of Penny Lane.

Not including the 5,810 SF of resurfacing of the existing bit. conc. surface north of the Pump Station building, the total proposed impervious surface area here is 12,388 SF.

3. Picnic Shelter Pavilion Area and Water Dept. Parking Lot. – The existing Pavilion will be removed in favor of the creation of the Mariana Yard. The majority of the yard area will be comprised of 8,120 SF of permeable pavers. The far south end of the parking lot green space will be converted into 2,770 SF of impervious bit. conc. surface in support of improving Water Dept. delivery truck circulation and parking opportunities in this area. The south end of the Marina Yard is proposed to be comprised of 2,110 SF of impermeable concrete surface.

The existing catch basin located at the southwest corner of the existing parking lot will be replaced with a deep sump catch basin in support of reducing the sediment load discharges to the lake.

The construction of the concrete pavement at the south end of the Marina yard offsets the existing impervious associated with the Pavilion on this portion of the property. The expansion of the south parking lot surface represents an increase in impervious area to the existing 6,825 SF parking lot. Combined with the proposed 2,770 SF expansion of the lot, the contributory surface area to the proposed deep sump catch basin remains less than the 0.25 acre design threshold set forth in the State's draft Stormwater Manual.