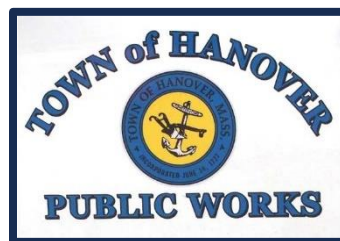


July 19, 2024

Final HHW Facility Programming Report for South Shore Recycling Cooperative



Introduction

Special Waste Associates (SWA) is pleased to provide this Programming Report to assist the South Shore Recycling Cooperative (SSRC) in the development of a depot for the collection of unwanted household chemicals, commonly referred to as household hazardous waste (HHW).

Project Understanding

SSRC was established in 1998 and has Inter-Municipal Agreements with 16 towns with approximately 400 thousand residents. SSRC provide education and HHW collection 10 events per year at 8 collection sites.

SSRC is planning with the Town of Hanover Public Works on the development of a collection site for unwanted household chemicals at the existing Hanover transfer station site. Historically, SSRC have provided collection events only at various towns in the south shore area. The development of a permanent collection facility at Hanover should provide better access to HHW collection and efficiencies in managing HHW year-round

Final approval for construction is dependent on development of required architectural and engineering plans and specification submitted to MA DEP and local permitting authorities. This programming report will provide the context and guidance to the design professionals in creating the required plans and specifications. SWA is available to provide additional services regarding certain design approaches and elements which are specific to the needs of an HHW collection facility.

The following pages provide additional project context, analysis of storage requirements, and a conceptual design layout to help direct the development of project design documents and construction.

Project Context

Historically collection HHW events have attracted 150 to 300 customers served over a 4-hour timeframe and participants sign up for certain times for service during the event, which reduces the level of queueing required and provides an even workflow.

The Hanover site will provide an anchor for HHW collection service 8 days per year for citizens within the service area. Additional collection events will be held in the outer areas of the service area and will not rely on the Hanover site, though reciprocity will allow them access.

Based on previous discussions with MassDEP staff, HHW collection centers may be regulated under the Hazardous Waste Rules Title 310 of the Code of MA Rules (CMR) and specifically at Sections 30.390 through 30.394. However, HHW can be collected at a solid waste transfer station without triggering section 30 of the hazardous waste rules if the local board of health has designated the solid waste facility to be “site assigned”. Although the paperwork has not been discovered, it is assumed that the Hanover transfer station is “site assigned”. Project proponents will continue to look for the paperwork that established the site assignment which likely dates back to the 1980’s.

Hanover Site

The Hanover transfer station is located on a closed landfill where it is advisable to avoid any subsurface development. Consequently, the preferred approach is to build a facility on top of the current landfill cap using a combination of a prefabricated hazardous materials building together with a manufactured building. These buildings will be delivered to the site by truck and installed with a portable crane on a prepared foundation.

Based on a site visit on May 10, 2024 an area of the existing Hanover solid waste and recycling transfer station was identified as a likely location for the HHW collection facility. The location on the site is shown in Figure 1 including approximate building location and customer traffic flow.

The orientation of the buildings on the site future expansion to the southeast or northwest and potentially to the northeast of the canopy area was moved in that direction. Shipping and receiving trucks can access the facility from three sides as currently configured.

There is electricity on site and it can be extended to the proposed HHW collection facility location. To avoid penetrating the landfill cover, it is desirable to avoid trenching to bring water to the facility. However, the plan is to install solar photovoltaic panels and batteries to power the HHW facility.

Permanent HHW collection facilities typically include emergency eyewash stations. A portable eyewash will be provided as required by Mass DLS.

Fencing will be installed to limit access to the HHW facility when the transfer station is open.

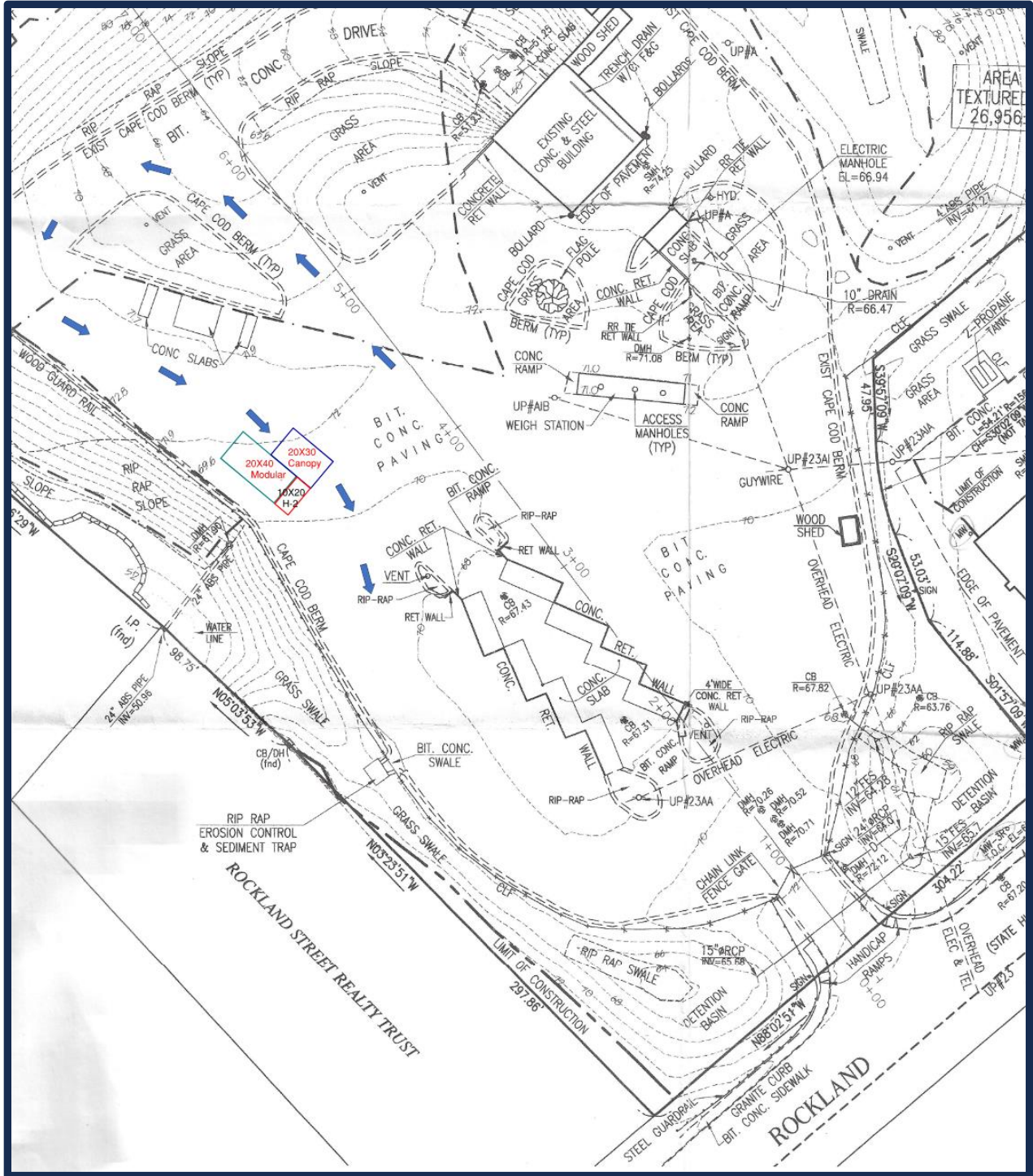


Figure 1 - Proposed Location for HHW Facility at Hanover Transfer Station

HHW Collection Analysis

By examining the shipping manifests from past HHW collection events we can evaluate the proportions of different waste types. This analysis provides a basis for allocating space required to safely process and store HHW prior to shipping offsite.

Table 1 shows the breakdown of the anticipated largest amount of HW collected by waste type from a large event by waste not including used oil.

HHW Facility Max. Storage		
Waste Type	Shipping Container Type	Count
Flam. Liquid	55-drum	14
Paint Related Material	CYB	8
Pesticide, Solid	CYB	1
Antifreeze	55-drum	5
Pesticide, Liquid	55-drum	10
Base	55-drum	1
Acid	55-drum	2
Ammonia	55-drum	2
Oxidizer	55-drum	4
Cleaners	55-drum	3
Other	55-drum	1
	Totals Number of Containers	51
	55-gallon drum equivalent	78

There are 51 containers, mostly 55-gallon drums, and cubic yard (C.Y.) boxes for paint related materials and solid pesticides. C.Y. boxes take the same space as about four 55-gallon drums. So, the total of all containers is the equivalent of 78 55-gal. drums. In Figure 2 the used oil is collection point is shown as a double-walled storage tank outside the buildings. A 26-ft box van truck holds the equivalent of about 50 55-gal. drums whereas a semi-trailer can hold 100+ 55-gallon drums. So, a larger collection event would be expected fill all of a normal 26 ft. box van or most of a full semi-truck trailer.

Conceptual Building Layout

Figure 2 provides and conceptual layout of the prefabricated hazardous materials building likely to carry an H-2 occupancy for flammable liquids processing and storage as well as the manufactured building which includes storage area for other HHW materials, an office/break area for employees to access a conditioned space and perform administrative duties.

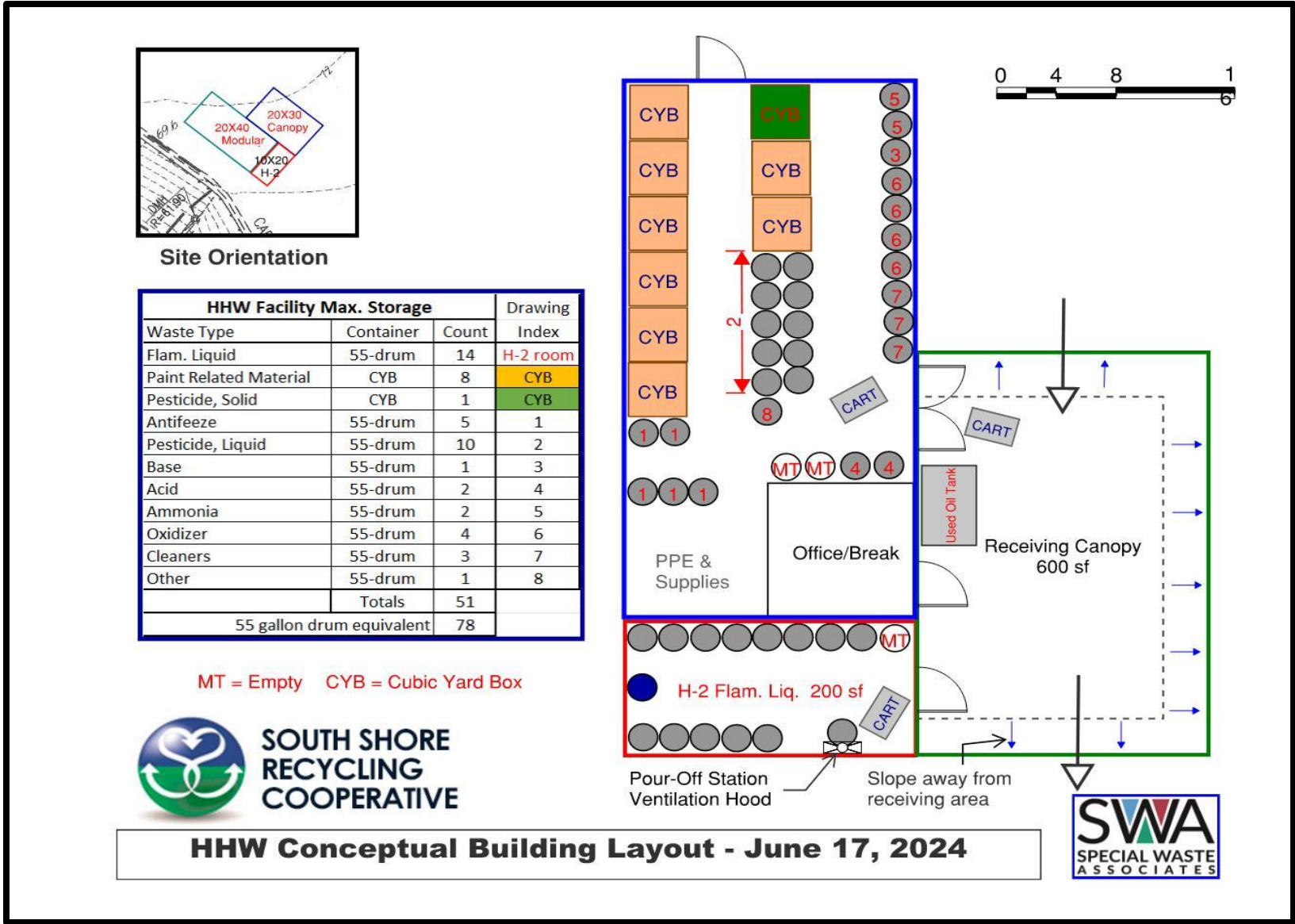


Figure 2 - Hanover T.S. HHW Conceptual Building Layout

