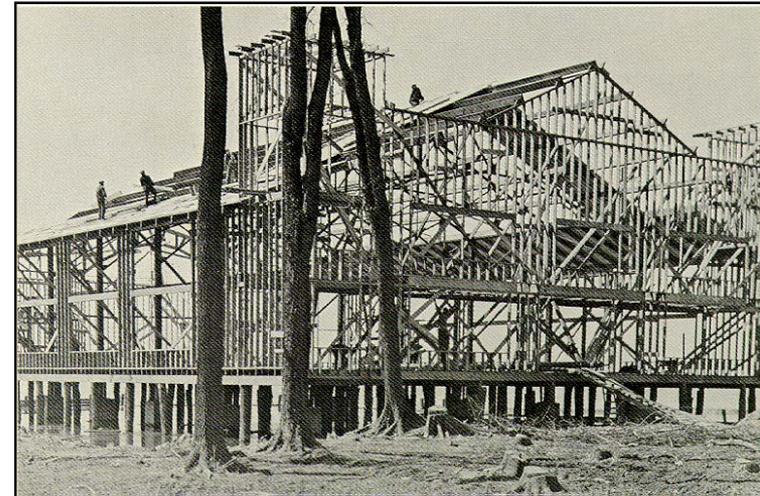


Stone Harbor Dredging Status Update and Path Forward

September 10, 2016

Who is Severson?

- Company roots go back to 1917 residential construction
- 1950's progressed into heavy civil construction
- Family owned
- First environmental project in 1979 (Love Canal)
- Performed over 2,000 projects with a combined value of \$3.5B
- Over 30 dredging project completed
- Dredge over 8.5 MCY
- 2.7 MCY was dredged mechanically
- Over 400 employees
- Work in ~20 to 30 different states per year



Year 1 Dredging Summary

- Phase II sampling was completed November 12, 2015 to characterize the effluent from dredged material dewatering process
- Mobilization began late November 2015
- Dredging began November 30, 2015
- Multiple permit modifications
- Dredging occurred for 30 days total (86 work days available at 6 days per week)
- Total pay dredge volume removed was 14,950 CY (~500 CY per work day)
- 50,804 tons of virgin sand brought to the site (2,137 truck trips one way)
- 73,891 tons of sediment amended with sand taken to Kinsley's landfill and Cape Mining (2,907 truck trips one way)



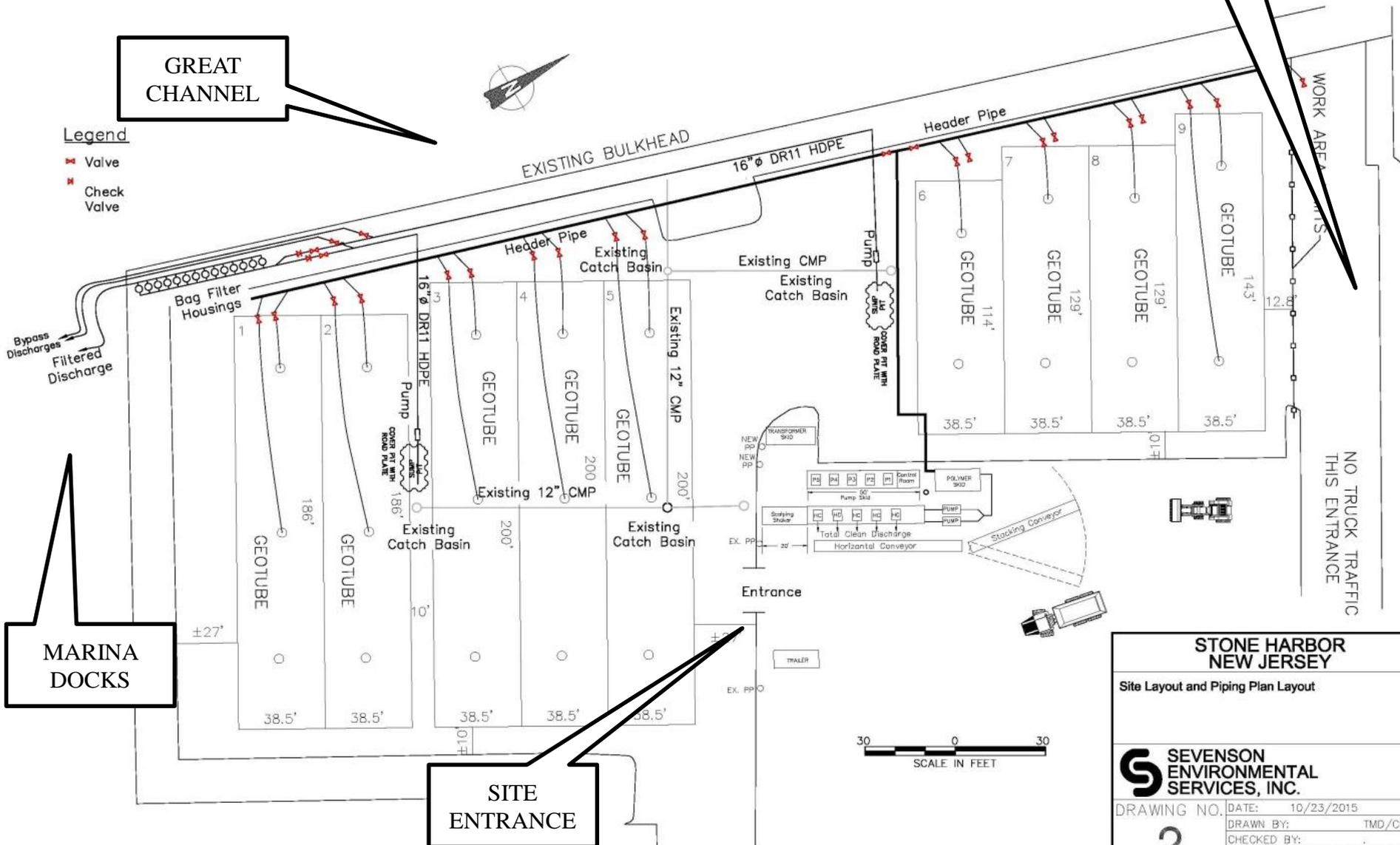
Year 1 Pad Layout

AVALAON/
STONE
HARBOR

GREAT
CHANNEL

Legend

-  Valve
-  Check Valve



MARINA
DOCKS

SITE
ENTRANCE

NO TRUCK TRAFFIC
THIS ENTRANCE



**STONE HARBOR
NEW JERSEY**

Site Layout and Piping Plan Layout

**SEVENSON
ENVIRONMENTAL
SERVICES, INC.**

DRAWING NO. **2**
 DATE: 10/23/2015
 DRAWN BY: TMD/CB
 CHECKED BY:
 CAD FILE: Bag Filter Pipe Dia.
 SCALE: AS SHOWN

Year 1 Equipment

14" HYDRAULIC
DREDGE



GEOTEXTILE
BAGS



14" HYDRAULIC
DREDGE



Year 1 Equipment



DESANDER



SUMP PIT
and PUMPS



BAG
FILTERS



MATERIAL
HANDLER
TO BLEND
SAND

Sevenson
SENEBOGEN
850

STOP

ON ST
MIDDLE ISLAND
CONTROL SIG



CLEAN SAND
and
EXCAVATORS
TO BLEND



MORE
EQUIPMNET TO
BLEND CLEAN
SAND

Year 2 - Why Do We Want to Switch to Mechanical Dredging?

- Hydraulic approach did not work
- Hydraulic approach would required long duration for sediment to dewater
- Not enough space to place all of the geotextile tubes on the pad
- Time constraints and limited time allowed on the Marina Parking Lot
- Blending amendment is easier because less water to remove from material when mechanical approach is used
- Materials easier to contain with mechanical approach because they will be in a drier state



Year 2 Approach – Permitting And Treatability

- Sampling plan developed with NJDEP approval
- NJDEP assisted with sample location selection lab tests required
- Severson subcontractor performed sample collection in July in each lagoon for treatability study and amending with portland cement
- Obtain permit modifications to allow mechanical dredging and amending dredge material with portland cement (NJDEP and USACE)
- Lab results provided to NJDEP early August



Core S-12, ASI ID #: 20160404, 0-2.0', 7/14/16

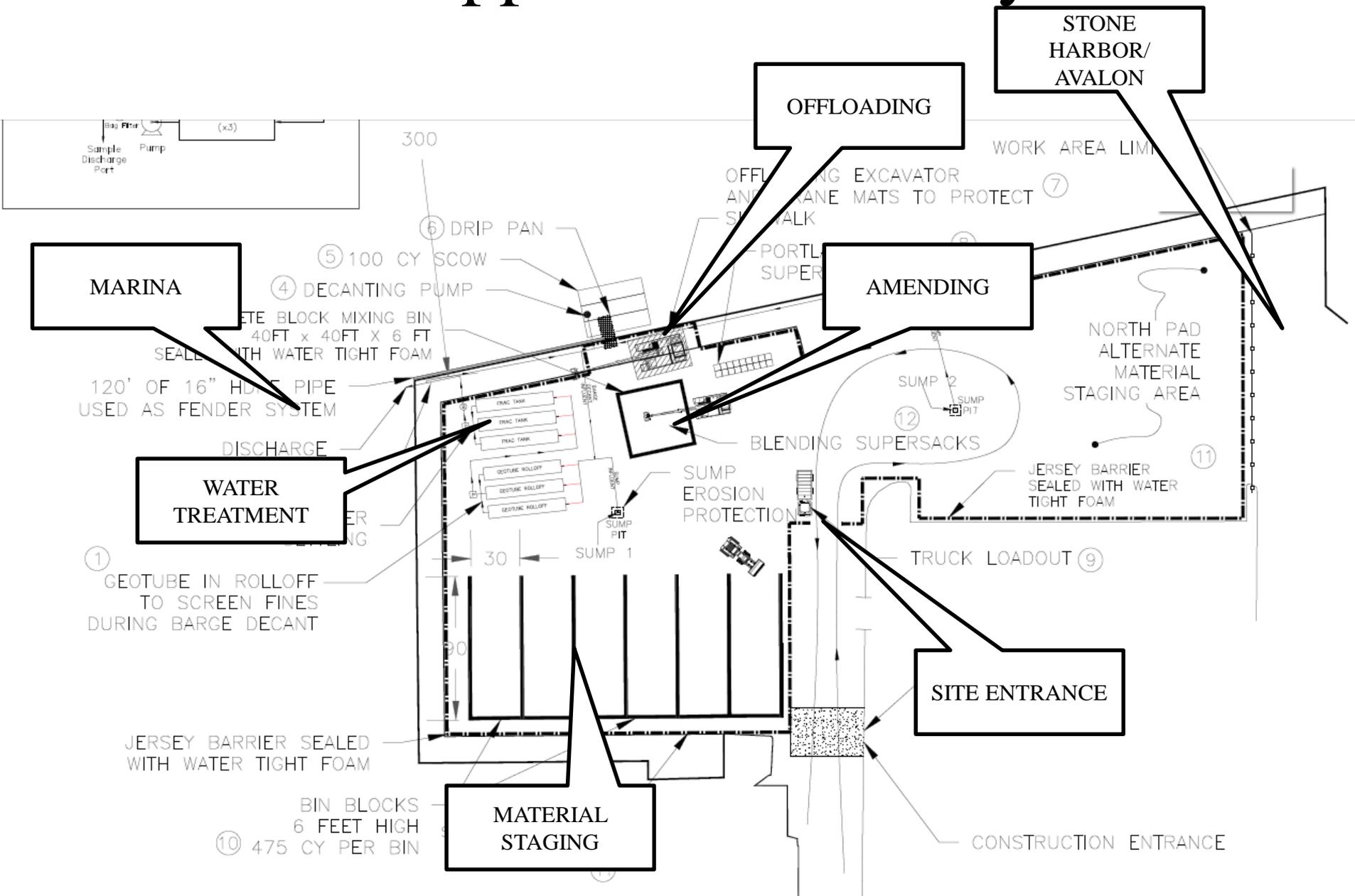


Year 2 Approach Equipment and Layout

- Change equipment approach to mechanical dredging and barge transport
- Mechanically offload the sediment from 100 CY scows onto the processing pad and amend with portland cement
- Stage materials in the bins until disposal
- Materials in bins most likely less than 24 hours
- Treat water as required by NJDEP permit
- Approx. 20,000 gallons for water treated per day rather than 2.7M gallons per day with the hydraulic option



Year 2 Approach – Pad Layout



Year 2 Approach – Pad Containment

- Entire area surrounded with Jersey barriers
- 1,500 LF of barrier x 2.6 feet tall
- Barrier sealed to parking lot
- Existing storm drains plugged



Year 2 Approach – Containment



Year 2 Approach – Flooding

- Seal parking lot off in one location



Year 2 Approach – Equipment



EXCVATOR ON
BARGE

Year 2 Approach – Equipment



100 CY Barge

Year 2 Approach – Equipment



TUGBOAT
MODIFIED TO FIT
UNDER BRIDGE

Year 2 Approach – Equipment



Year 2 Approach – Equipment



GEOTEXTILE
TUBE



FRAC TANKS

Year 2 Approach – Equipment



EXCAVATOR TO
UNLOAD BARGES
AT THE
BULKHEAD

2012/05/23

Year 2 Approach – Equipment



DRIP PAN for
OFFLOADING

Year 2 Approach – Equipment



MIXING BIN

Year 2 Approach – Equipment



SUPER SACKS of
PORTLAND
CEMENT

Year 2 Approach – Equipment

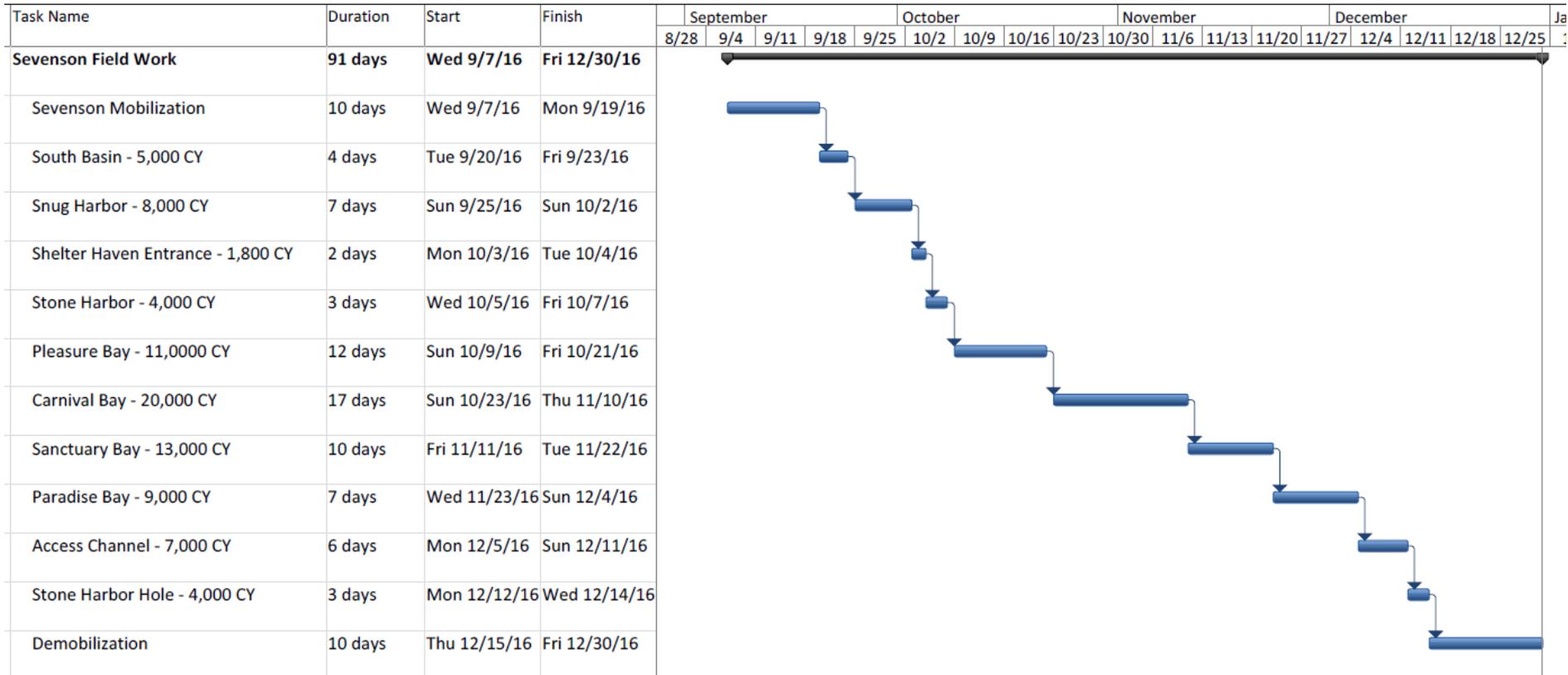


Year 2 Approach – Equipment



MATERIAL
LOADOUT for
DISPOSAL

Year 2 Volume and Schedule



Year 2 Residential Dredging

- South Basin – Late September
 - Snug Harbor – Early October
 - Stone Harbor – Early October
 - Pleasure Bay – Mid October
 - Carnival Bay – Early November
 - Sanctuary Bay – Later November
 - Paradise Bay – Early December
 - Access Channel – Mid December
 - Stone Harbor Hole - Mid December
-
- Contact Info for Residential Dredging
 - stoneharbor@sevenson.com
 - Phone 716-998-2086