Town of Colma February 14, 2024

Colma Creek Trash Capture Hydrologic/ Hydraulic Design Criteria

Project Description: The Colma Creek Trash Capture Project (Project) will install a set of offline trash capture screens (baskets) in the Colma Creek Bypass Concrete Channel, immediately upstream of the confluence with the old Colma Creek Channel. The work will be completed in a parcel of land owned by OneShoreline. The current design concept design utilizes baskets produced by StormTrap or approved equal. A diversion wall will be needed across the channel to divert low flows into the device.

Trash Capture Design Criteria: The screens must be sized to handle the 1-year, 1-hour storm as required under the Municipal Permit for Stormwater (MRP 3.0). In addition, the baskets must be sized for a maximum velocity of 10 fps thru the screens.

Colma Creek Bypass Channel Design Criteria: The existing channel was sized to accommodate the 50-year, 6-hour storm with freeboard.

Trash Capture Project Design Criteria:

The Project will determine the required design storms at the Project Location. The trash screens and diversion Impacts to channel hydraulics will be reviewed and a preliminary

Design Storm	**Design Criteria**	**Improvements To Accommodate Design Criteria**
1-Year, 1-Hour Storm	Trash Screens to accommodate storm; maximum velocity thru screens shall not exceed 10-fps; adequate freeboard to be maintained	Mandatory
1-Year, 1-Hour Storm w/ Climate Change	Trash Screens to accommodate storm; maximum velocity thru screens shall not exceed 10-fps; adequate freeboard to be maintained	Mandatory
50-Year, 6-Hour Storm	High-flow channel widening or other improvements to be provided so that adequate freeboard is maintained in channel and there are no adverse impacts upstream (upstream water surface to be maintained at pre-design levels	Mandatory
50-Year, 6- Hour Storm w/ Climate Change	High-flow channel widening or other improvements to be provided so that adequate freeboard is maintained in channel and there are no adverse impacts upstream	Highly Desirable, Accommodate to Extent Practical
100-Year, 6-Hour Storm*	Improvements at Project location in channel shall accommodate future channel improvements to contain 100-Year Storm in channel, while minimizing necessary reconstruction of Project improvements	Accommodate to Extent Practical
100-Year, 6-Hour Storm w/ Climate Change	Improvements at Project location in channel shall accommodate future channel improvements to contain 100-Year Storm in channel, while minimizing necessary reconstruction of Project improvements	Accommodate to Extent Practical

*This Scenario could probably be eliminated, as any future improvements to the channel to accommodate the 100-Year Storm would likely consider climate change.

Adjustments for flows due to climate change shall be determined by OneShoreline using previous studies od increases in rainfall intensity.

Freeboard requirements will be determined by OneShoreline.

The County of San Mateo has previously prepared the *Colma Creek Hydrology and Hydraulic Modeling Analysis* (Paradigm/ hnc, dated June 4, 2021). This model may be used a base for the required project hydraulic analysis, revised as needed to cover the above scenarios. OneShoreline, the County or the prior modeling consultants will provide a copy of the model to the project hydraulic consultant.