

The background is a solid teal color. It is decorated with numerous water droplets of various sizes. Some droplets are large and prominent, while others are small and subtle. They are scattered across the frame, with a higher concentration in the top-left and bottom-right corners. The droplets have a realistic appearance with highlights and shadows, giving them a three-dimensional look.

Lower Tulalip Creek Hatchery

Lower Tulalip Creek Hatchery Upgrade

Purposes:

- Improves juvenile salmon rearing and counting facilities **and enables releases while simultaneously rearing fish in large pond or raceway**
- Facilitates adult holding, crowding sorting, and spawning activities
- Provides water reuse and oxygen supplementation to ensure adequate flow during increasing summer droughts
- Treats hatchery effluent to ensure EPA compliance
- Provides returning adults a refuge from pinniped predation
- Treats adjacent road and parking lot runoff

Lower Tulalip Creek Hatchery Upgrade

Facility Components

- Juvenile rearing and adult holding pond and raceway
- w/associated crowders
- Spawning juvenile release and adult sorting raceway facility and associated equipment
- Water supply recirculation to upper and lower ponds
- Oxygen Generation
- Upper pond high water overflow and fish bypass
- Predator exclusion
- Tailrace and fish ladder structure
- Fish counter system
- Power upgrade
- Replace seal barrier and repair intertidal pool
- Adjacent road and parking lot runoff bioswale (required for permit)
- Fish waste and solids removal vacuum system and clarifier (required for permit)

Proposal Design

FLOW & FISH
SPLITTING
CHAMBER
(EXISTING)

INTERMEDIATE RACEWAY
AND FISH COUNTING BASIN

UPPER POND
OVERFLOW FLUME

POND AND
RACEWAYS

RACEWAY
CROWDERS

FLOW
DISTRIBUTION
HEADBOX

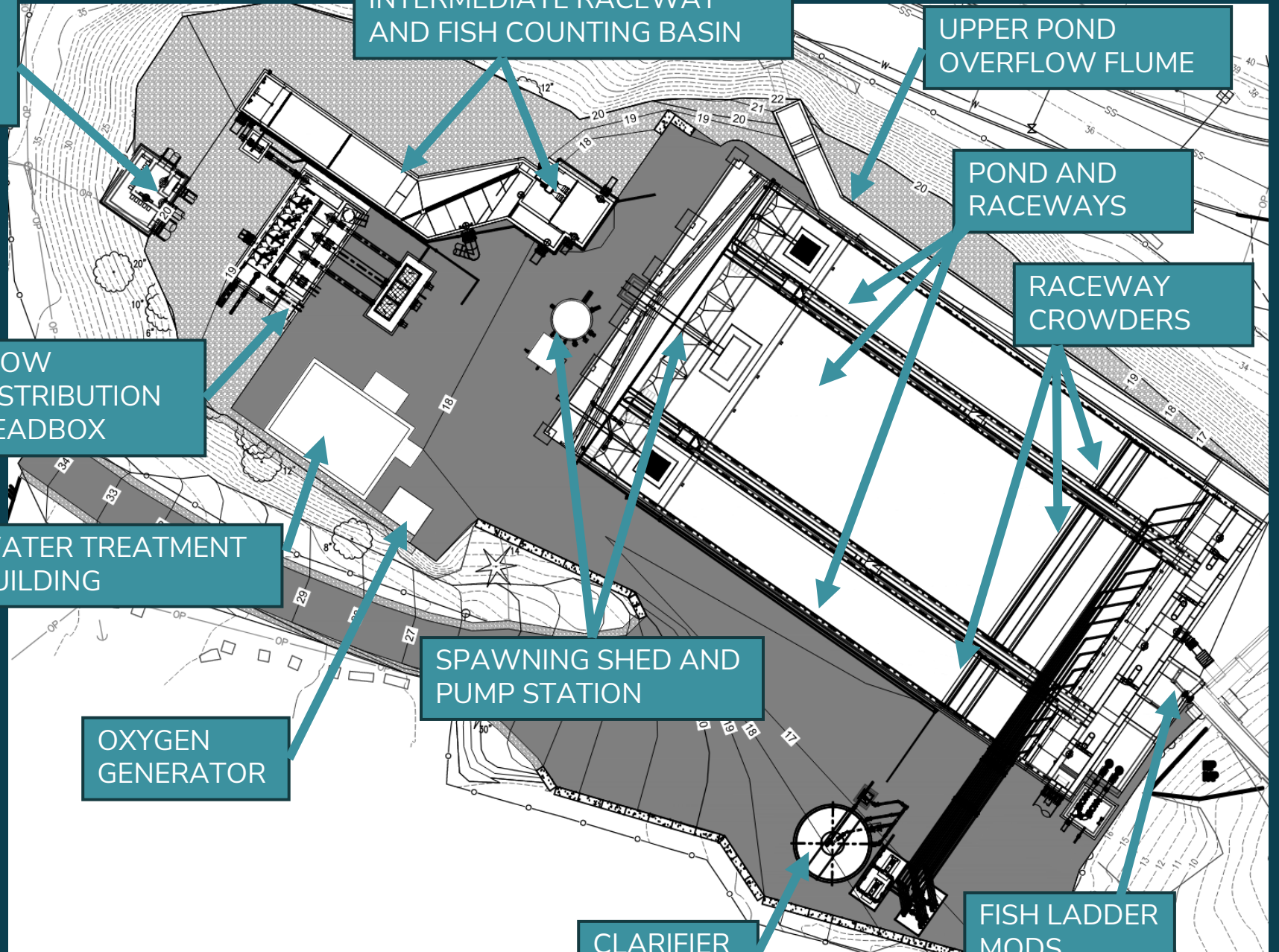
WATER TREATMENT
BUILDING

SPAWNING SHED AND
PUMP STATION

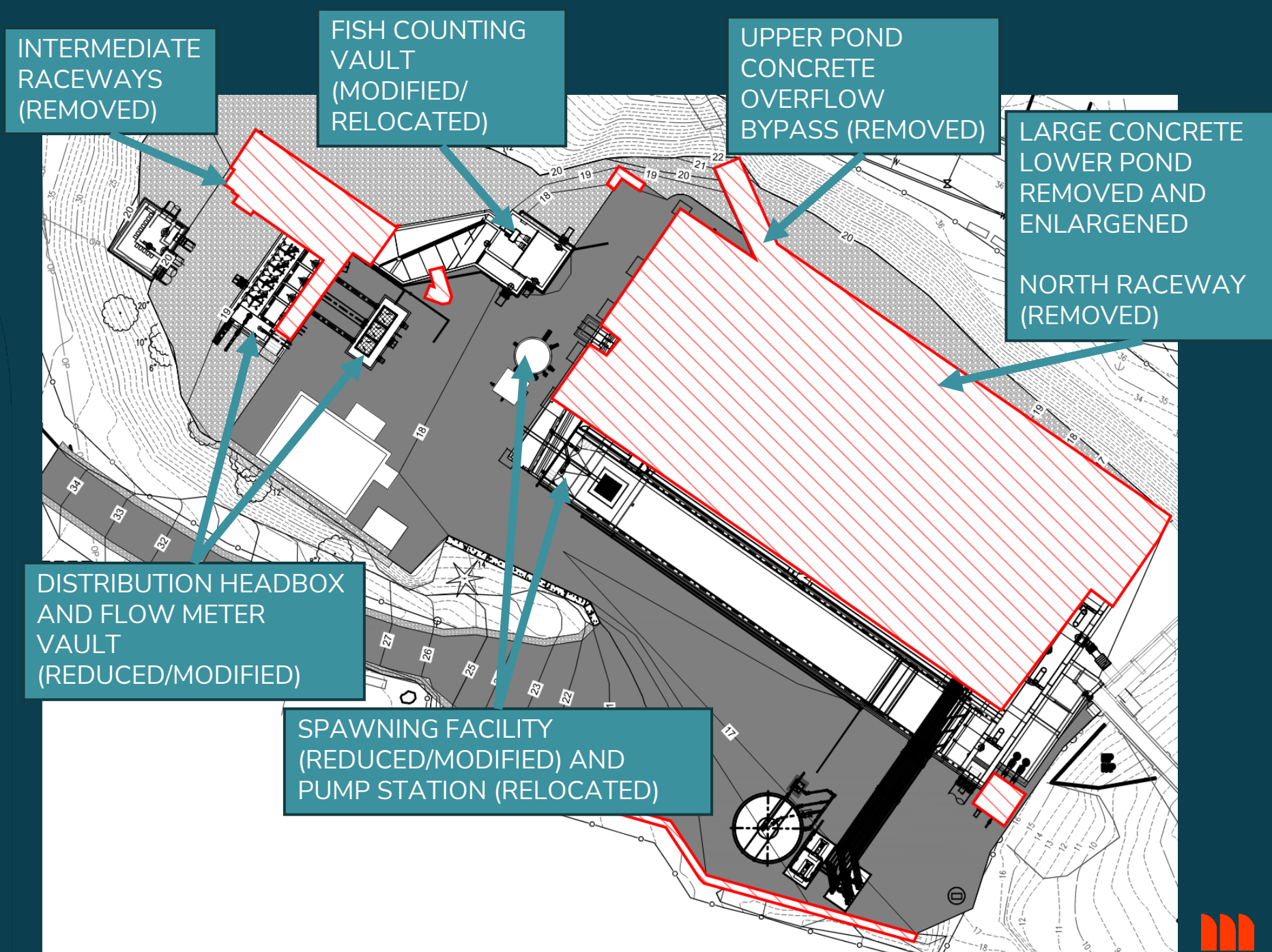
OXYGEN
GENERATOR

CLARIFIER

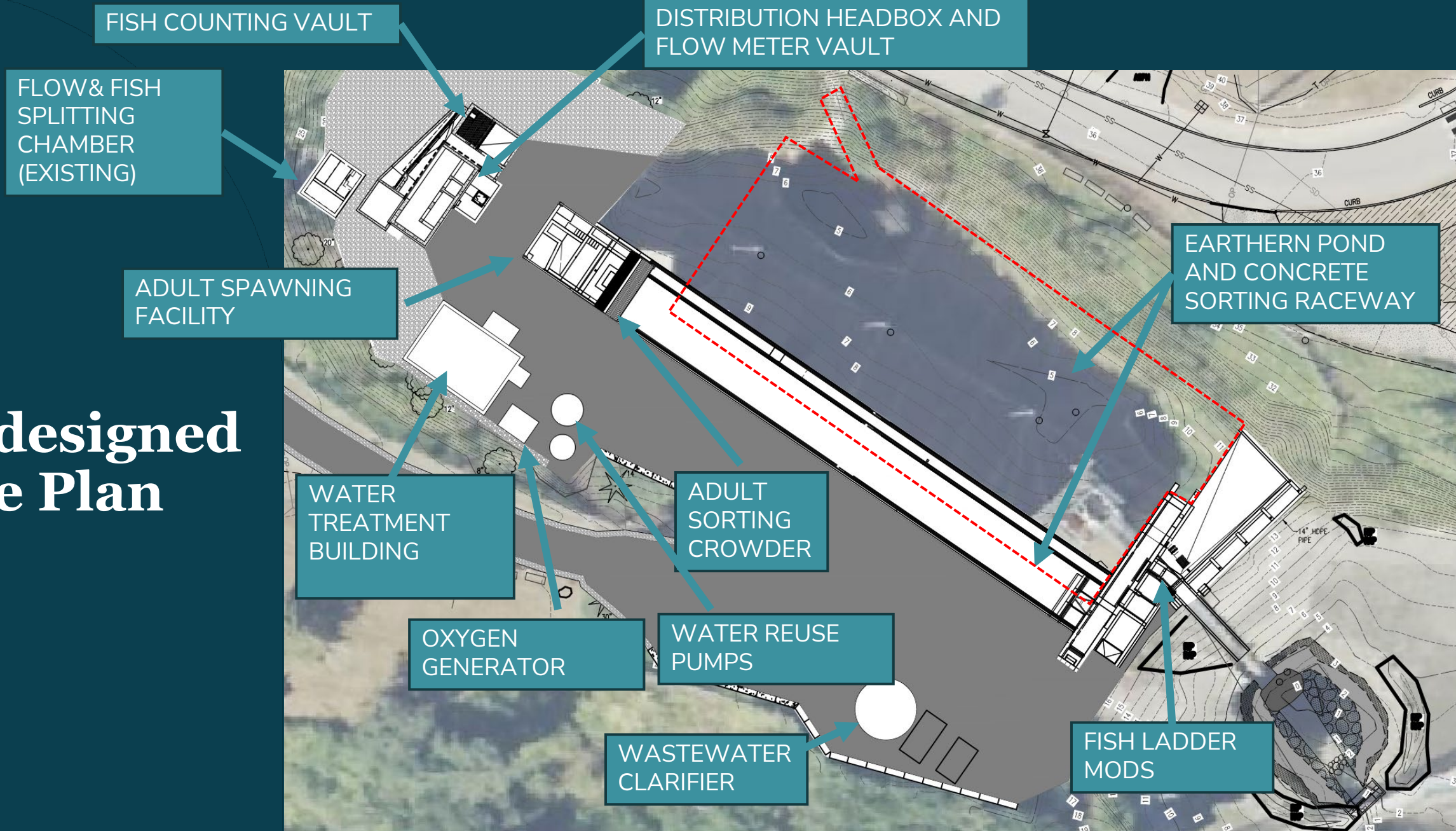
FISH LADDER
MODS

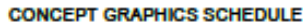


Proposed Design Changes Reducing Costs



Redesigned Site Plan

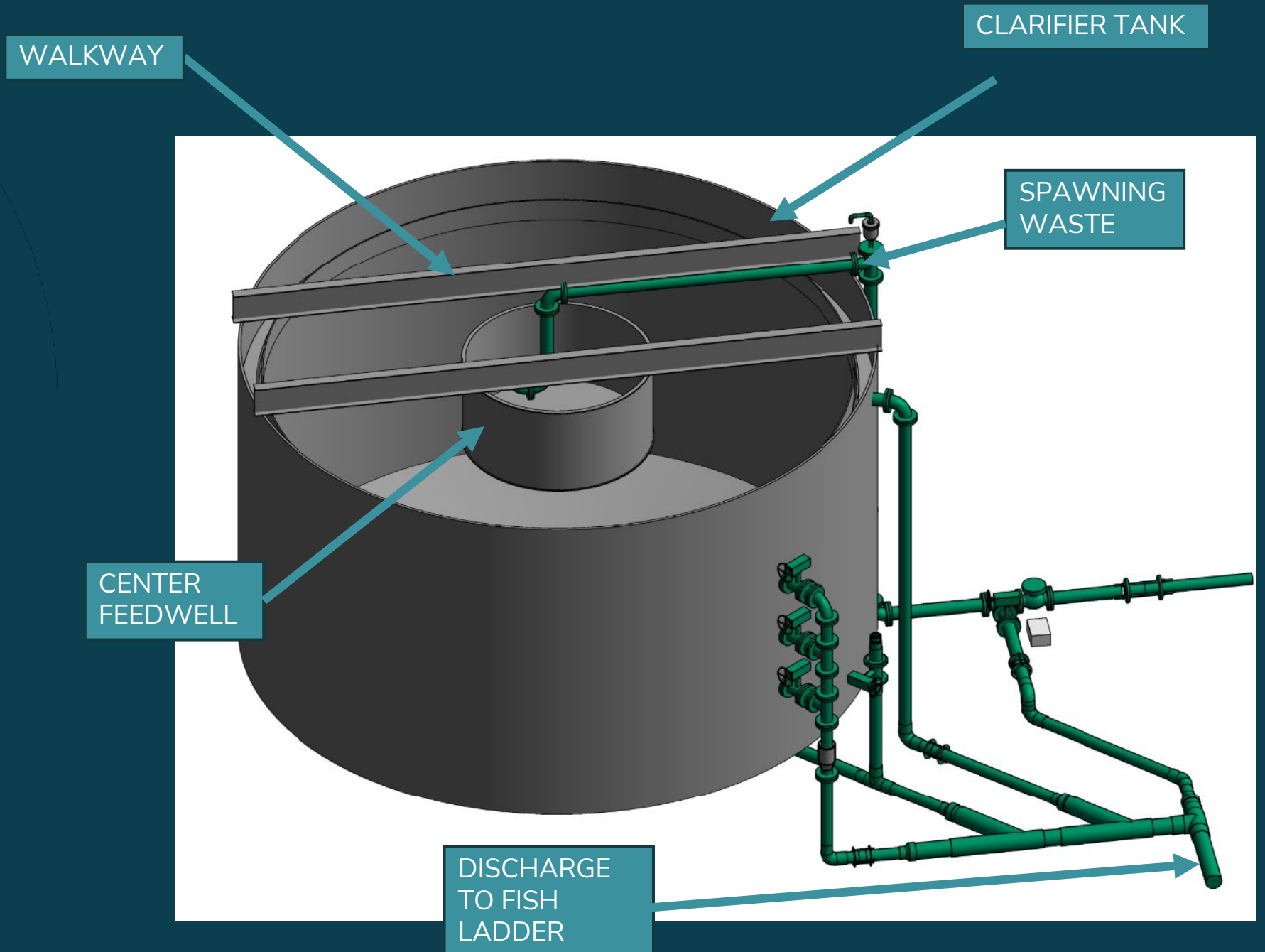




<u>SYMBOL</u>	<u>NOTES</u>	<u>QTY</u>
	2\"/>	136 SF
	6\"/>	262 SF
	CRUSHED ROCK SURFACE (5\"/>	1,924 SF
	ASPHALT PAVING	2,352 SF
	BIKESWALE BOTTOM AREA	2,501 SF

LIMIT OF WORK BOUNDARY: CONTRACTOR SHALL INSTALL A 4-TALL FENCE AT THE LIMIT OF WORK BOUNDARY. CONTRACTOR SHALL NOT DISTURB GROUND SURFACES OR STORE MATERIALS OUTSIDE OF THE LIMIT OF WORK FENCE.

Clarifier



Progress to date

- Geotechnical engineering study COMPLETED
- Design is fully-funded, we are waiting for direction from the BOD to finalize it
- USACE PERMIT COMPLETED
- \$14.3 million in funding SECURED

Existing Lower Tulalip Creek Pond (before construction)



Current Facility Design

