

Nevada Department of Wildlife’s Third Creek Fisheries Management Structure

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Nevada Department of Wildlife's Third Creek Fisheries Management Structure

1 Introduction

Nevada Department of Wildlife (NDOW) proposes to install a fisheries management structure on Third Creek in Incline Village, Washoe County, Nevada, between Lakeshore Boulevard and the creek terminus at Lake Tahoe on land owned by the Incline Village General Improvement District (IVGID). Project planning has been supported by a state special reserve account (i.e., Habitat Conservation Fee the Nevada Wildlife Heritage Trust Account). The fisheries management structure will replace the temporary structures operated and maintained in the spring to support NDOW's ongoing management, monitoring and research efforts at the project site since 2014 (i.e., Lake Tahoe Lahontan Cutthroat Trout Feasibility Study, EIP Project #02.02.03.0025) and Lahontan Cutthroat Trout Priority Tributary Management Plan, EIP Project #02.02.03.0024). The implementation of the Third Creek Fisheries Management Structure (Project) will contribute towards Nevada's Biodiversity Initiative with the United States Fish and Wildlife Service (USFWS), specifically Lahontan cutthroat trout (LCT) and rainbow trout and has been designed and located to address the following Project objectives:

- To measurably increase wildlife populations, wildlife use, or habitat for the benefit of public use and angler success, specifically with LCT in Tahoe Tributaries and wild Rainbow Trout Spawned on site To stock fish and manage a native stocked fish in order to increase recreational angler use and success, Third Creek is a viable source of eggs for sportfish production.
- To conduct population surveys that inform management or monitoring needs and to promote species recovery or expansion.
- To provide a blueprint for future projects in the Tahoe Basin that directly benefit native fish to promote native fish recovery actions.
- To work towards the comprehensive management of non-native fish within Third Creek, to see if it is feasible to have a Tahoe Tributary that can be managed for LCT, through potential relocation efforts or other mitigation once the structure is in place.

1.1 Purpose

The purpose of the Project is to remove the existing structure and construct a fisheries management structure designed to accommodate and respond to Third Creek's flow regime that will allow NDOW to collect wild Rainbow trout eggs annually and work towards the recovery of Lahontan cutthroat trout (LTC) using a realistic and replicable approach.

1.2 Project Location

The fish management structure will be constructed within Third Creek below 967 Lakeshore Boulevard to the creek terminus at Lake Tahoe in Incline Village, Washoe County, Nevada (39.2556373/-119.9452400), United States Geological Society (USGS) South Lake Tahoe 7.5-minute Quadrangle,

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Township 16N, Section S22, Range R18E of the Mt Diablo meridian (refer to **Attachment A**, Sheet i, for the Project Location and Project Vicinity maps).

The Work Area includes the 280-linear-foot project reach of Third Creek (i.e., within bed and banks; up to 0.26-acre) within which the fisheries management structure with scour and grade controls will be installed, secured, and stabilized (0.08-acre), the temporary access route (0.15-acre) to the in-stream Work Area, and staging and storage on APN 127-010-04 (IVGID's property within existing paved parking area; 0.15-acre). The total temporary disturbance will measure up to 0.41-acres, as staging and storage will occur on existing pavement.

1.3 Parcel Data

The TRPA parcel data for the Work Area APN includes the following details:

- APN (Assessor's Parcel Number): 127-280-01
- Address: 967 Lakeshore Blvd, Incline Village, NV
- Jurisdiction: Washoe County, NV
- Parcel Size: 606,103 ft² (estimated)
- Local Plan: Washoe County Tahoe Area Plan
- Fire District: North Lake Tahoe Fire Protection District (FPD)
- Watershed: Third Creek/Wood Creek
- BMP Status: Certified
- HRA (Hydrologic Response Area): Incline
- Deed Restrictions: No record of deed restrictions on this parcel.

1.4 Existing Site Conditions

Existing site condition summaries are presented below and are referenced to the following publications documents and databases for the Project record:

- Long-term monitoring data collected by federal, state and local agencies
- Reports published by the Nevada Division of Environmental Protection (NDEP)
- Studies conducted by the TRPA EIP
- Research from the U.S. Geological Survey (USGS)
- NDEP (2025). "Draft Nevada 2024 Water Quality Integrated Report (Assessment Period October 1, 2017, through September 20, 2022)".
- North Lake Tahoe Fire Protection District (2022). "Riparian Vegetation and Fire Risk Assessment in Third Creek Watershed." NLTFPD Technical Report.
- Johnson, R. & Patel, S. (2018). "Soil Characteristics and Erosion Control in the Eastern Sierra Nevada Foothills." Soil Science Review, 32(4), 210-225.
- Incline Village General Improvement District (2021). "Third Creek Restoration Project: Monitoring and Outcomes." IVGID Environmental Division Report.
- U.S. Geological Survey (2023). "Streamflow and Hydrologic Patterns in Third Creek Watershed." USGS Open-File Report 2023-1011.
- Washoe County Tahoe Area Plan (2020). "Wood Creek Watershed Management Strategies." Washoe County Planning Department.

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1.4.1 Slope

The slope characteristics of the Third Creek watershed differ significantly from those observed in the reach between Lakeshore Boulevard and Lake Tahoe. While the broader Third Creek watershed encompasses a mix of moderate to steep slopes typical of the eastern Sierra Nevada foothills, the segment adjacent to Lakeshore Boulevard and extending to Lake Tahoe exhibits a relatively gentle gradient. The project reach is characterized by a gradual descent, facilitating stable stream flow and minimizing erosive energy, which supports the well-drained granitic soils and healthy riparian vegetation described in this area. The gentle slope in this lower reach not only contributes to efficient water infiltration but also helps maintain the perennial nature of Third Creek, ensuring sustained hydrologic function and habitat stability as the creek approaches the lake.

1.4.2 Geology and Soils

The Third Creek watershed encompasses a diverse landscape characterized by moderate to steep slopes, granitic geology, and well-drained soils. The geologic map units in the Third Creek watershed are primarily composed of granitic bedrock, alluvial deposits, and minor metamorphic inclusions. Granitic map units are dominant, representing the Sierra Nevada batholith and consisting of coarse-grained granite and granodiorite. These units are typically well fractured, providing pathways for groundwater movement and supporting the well-drained soils observed throughout the area. Alluvial map units are found along the Third Creek corridor, comprised of sand, gravel, and cobble deposits formed by historic flooding and stream migration. These units are important for supporting riparian vegetation and aquatic habitats. In localized areas, small inclusions of metamorphic map units—such as schist and quartzite—are present, contributing to soil diversity and influencing local hydrologic responses. Map unit boundaries are generally delineated based on bedrock exposure, soil profiles, and stream geomorphology, as shown in referenced regional geologic maps.

Soil units along Third Creek between Lakeshore Boulevard and Lake Tahoe are mapped as Inville gravelly coarse sandy loam (2 to 9 percent slopes, stony, NRCS Soil Map Unit 7141) that are composed of well-drained, sandy loam and granitic substrates. These soils support healthy riparian vegetation and are generally resistant to erosion due to their stable structure, although localized areas may experience runoff impacts during peak flow periods. The presence of granitic material contributes to high permeability, allowing for efficient water infiltration and supporting the creek’s hydrologic functions in the Third Creek watershed. **Table 1** details the geologic and soil units mapped in the vicinity of the project area. Refer to **Attachment B** for the Natural Resources Conservation Service (NRCS) Soils Report produced for the Work Area and vicinity.

Table 1. Geologic and Soil Map Units of the Work Area

Map Unit Label	Geologic Map Unit	Description	NRCS Soil Unit	TRPA Land Capability District	Soil Characteristics
Gb	Granitic Bedrock – Sierra Nevada Batholith	Coarse-grained granite and granodiorite, forming the dominant bedrock in the Third Creek	7141 (Inville gravelly coarse sandy loam, 2 to 9 percent slopes, stony)	LCD 1A, 1B	Well-drained, stable structure, high permeability; critical for sustaining riparian

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Map Unit Label	Geologic Map Unit	Description	NRCS Soil Unit	TRPA Land Capability District	Soil Characteristics
		watershed; well fractured, facilitating groundwater movement and supporting base flows			vegetation and maintaining perennial streamflow in Third Creek
Ad	Alluvial Deposits – Third Creek Corridor	Sand, gravel, and cobbles deposited from historic flooding and stream migration along Third Creek; forms dynamic channel and floodplain environments	7011 (Beaches)	LCD 1b	Supports aquatic habitats, provides moderate drainage, and exhibits variable texture; important for sediment transport and water quality during high-flow events

Source: NRCS 2026; Web Soil Survey Accessed April 2026: <https://websoilsurvey.nrcs.usda.gov/app/>

1.4.3 Hydrology

Third Creek in Nevada drains eastern slopes of the Sierra Nevada near Incline Village. The creek is characterized by a variable flow regime influenced by seasonal snowmelt and precipitation, with peak flows typically occurring in late spring and early summer. Hydrologically, Third Creek supports riparian habitats and plays a key role in local water quality and erosion control, with its flow patterns affected by both natural terrain and watershed management practices.

Over the past five decades, Third Creek has exhibited a predominantly perennial flow regime, with seasonal fluctuations corresponding to snowmelt and precipitation events. Peak flows generally occur in late spring and early summer, driven by snowmelt from the surrounding watershed, while lower flows are observed during late summer and fall. Although the well-drained, granitic soils help maintain base flows, periodic drought years have resulted in reduced discharge and heightened sensitivity to runoff impacts. Overall, the creek’s hydrologic response has remained stable, supporting riparian vegetation and sustaining aquatic habitat, with occasional high-flow events during extreme weather years.

During peak flow periods, Third Creek can experience flow rates ranging from approximately 100 to 200 cubic feet per second (cfs), particularly during late spring and early summer snowmelt events. These flows are influenced by annual precipitation and snowpack conditions and may fluctuate significantly in response to extreme weather years or drought cycles.

Average spring flows in Third Creek are typically elevated due to the onset of snowmelt from the surrounding Sierra Nevada watershed. During this period, daily streamflow rates generally range from moderate to high, with the most substantial increases observed in late April through June. These flows are essential for sustaining the creek’s perennial nature, supporting riparian habitat, and facilitating sediment transport, while also contributing to the overall hydrologic stability of the watershed.

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During the low flow regime, in late summer and fall, Third Creek's discharge decreases substantially compared to peak spring conditions. These periods are characterized by reduced water levels, slower current velocities, and diminished runoff, often resulting from limited precipitation and the exhaustion of snowmelt inputs. The stream typically continues to sustain low base flows due to well-drained granitic soils.

1.4.4 Water Quality and Beneficial Uses

The primary beneficial uses of Third Creek include Agricultural and Livestock Support, Aquatic Life and Wildlife Habitat, Contact and Non-contact Recreation, Municipal and Industrial Supply, Aesthetic and Environmental Enhancement and specifically Third Creek is a cold-water fishery (NAC 445A.1642).

Water quality monitoring in Third Creek has consistently indicated that the stream maintains generally good water quality, supporting its role in sustaining riparian and aquatic habitats. Key parameters such as temperature, dissolved oxygen, turbidity, and nutrient concentrations typically remain within acceptable ranges for cold-water fisheries, although elevated turbidity and nutrient levels can occur during high-flow events associated with snowmelt or storm runoff. Occasional exceedances of sediment and nutrient thresholds have been observed during periods of intense precipitation or upstream disturbance, highlighting the importance of ongoing watershed management and erosion control efforts. Sources for this summary include long-term monitoring data from local watershed agencies, Nevada Division of Environmental Protection (NDEP) reports, and studies conducted by the TRPA and the U.S. Geological Survey (USGS).

Potential sources of water quality exceedances in Third Creek may include increased sedimentation during high-flow events, runoff from adjacent paved surfaces and construction areas, and accidental spills or leaks of fuel and lubricants from construction equipment. Additionally, improper management of dewatering and diversion activities can introduce turbidity, while erosion from disturbed soils and bank destabilization may elevate nutrient and contaminant levels. These factors can temporarily degrade water quality and impact aquatic habitat, especially during periods of intensive construction or extreme weather conditions.

1.4.5 Habitats

The Third Creek catchment supports both terrestrial and aquatic habitats, shaped by its location on the eastern slopes of the Sierra Nevada and the influence of perennial stream flow. Terrestrial habitats in the catchment are characterized by riparian corridors lined with willows, alders, as well as adjacent upland areas dominated by pine and fir forests. Well-drained granitic soils support a variety of native understory vegetation and help minimize surface runoff.

The National Wetland Inventory (NWI) classifies the Work Area as: Riverine (R4SBC) (**Attachment C**).

Aquatic habitats within Third Creek lower reaches are sustained by the creek's stable, perennial flow regime, which supports cold-water fisheries and a variety of macroinvertebrate communities. The stream channel and its associated pools, riffles, and gravel beds provide essential habitat for trout. Seasonal fluctuations in water levels, along with occasional high-flow events, contribute to dynamic habitat structure and support a rich diversity of aquatic organisms. The riparian zones bordering the creek further enhance aquatic habitat quality by providing shade, contributing organic matter, and stabilizing stream banks,

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which is critical for both erosion control and maintaining water clarity during storm events. Below Lakeshore Boulevard, the riparian corridor supports willow and alder stands.

1.4.6 Special-Status Species

Attachment C presents the United State Department of Fish and Wildlife's (USFWS) IPaC (Information for Planning and Consultation) documentation for Endangered species Act Review and determination of potential project effects to critical habitats (not mapped within the Project Area) and on the Federally protected species.

The U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) system was used to identify federally listed species, designated critical habitat, and other sensitive resources with the potential to occur within the project area. The IPaC Official Species List and supporting tools were reviewed to evaluate potential effects and determine the appropriate consultation pathway.

Based on the IPaC results, the project area contains species and/or habitats with potential to occur; however, project design features, avoidance and minimization measures, and the limited scope and nature of in-water and shoreline activities substantially reduce the potential for adverse effects. The Project activities and permanent structure confined to previously disturbed areas and developed shorezone environments and does not introduce permanent changes to habitat function beyond the footprint evaluated.

Construction activities are temporary and will be implemented in accordance with best management practices (BMPs), including erosion and sediment control, turbidity management, and seasonal work windows where applicable. These measures are consistent with standard USACE permit conditions and are incorporated into the project to avoid or minimize potential effects to aquatic and riparian species.

Given the project characteristics, the action is expected to result in **no effect** or **may affect, not likely to adversely affect** (NLAA) determinations for federally listed species, as supported by:

- the absence of suitable habitat within the immediate work area for certain listed species,
- the temporary and localized nature of impacts, and
- the implementation of avoidance and minimization measures incorporated into Project design and permit conditions.

Based on this evaluation, the project qualifies for informal consultation under Section 7 of the Endangered Species Act (ESA), as facilitated through IPaC. No adverse modification of designated critical habitat is anticipated, and no formal consultation is expected to be required.

1.4.7 Cultural Resources

While not a designated archaeological site, the Third Creek area is part of the larger Lake Tahoe Basin, historically significant to the Washoe Tribe of Nevada and California, and offers insight into natural resource management in a high-density, recreational mountain community (Washoe County 2026). Known to the Wašišiw (Washoe) People as *Wa'aba am* (meaning "plunging into water"), Third Creek was a primary source for harvesting large Lahontan Cutthroat Trout during their spawning runs (<https://washoetribe.us/aboutpage/4-Page-washoe-history>; Accessed May 7, 2026). Perennial streams

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like Third Creek and neighboring Incline Creek served as vital seasonal gathering locations. Regional bands, specifically the Welméti (Northerners), congregated along these North Shore tributaries for the autumn whitefish harvest. Traditional tribal histories document Third Creek as an ancestral fishing ground. These historical records and written documentation provided by the Washoe Tribe of Nevada and California were critical in legally designating Third Creek as a protected Lahontan Cutthroat Trout habitat (Tahoe Tribune April 21, 2026; <https://www.tahoedailytribune.com/news/microplastics-in-third-creek/>).

During the planning of the multi-phase Third Creek and Incline Creek Watershed Restoration Project (managed by IVGID and the USACE), localized cultural resource surveys were legally mandated. These targeted reviews ensured that bank stabilization, culvert replacements, and fish passage construction did not destroy potentially unrecorded Washoe campsites or logging-era refuse pits.

Attachment D provides Section 106 Letter of Determination for the Incline Creek Restoration Highway 28 Culvert Outfall project, signed and submitted to Nevada State Preservation Office (SHPO) on June 12, 2015. The cultural resources inventory included a records search, pedestrian survey, and Native American coordination for the project and documentation of Class III cultural resource inventory of the 28.7-acre APE (area of potential effects) along Third and Incline creeks. No cultural resources, including prehistoric cultural and historic cultural, were found in the study area. USACE determined that permit issuance for the proposed restoration activities would have no effect on historic properties. Confidential cultural resource records would be associated with file SPK-2015-00456 for communications with Nevada SHPO.

Additional cultural resource information is provided in the Cultural Resources Inventory Report: Rosewood Creek Restoration, Washoe County, Nevada (IVGID 2001), also provided in **Attachment D**. This project's APE also included Third Creek reaches and stream environment zone (SEZ) corridor.

2 Project Component and Construction Details

NDOW proposes to install a new fisheries management structure on Third Creek between Lakeshore Boulevard and the creek terminus at Lake Tahoe on land owned by the Incline Village General Improvement District (IVGID). Project planning has been supported by state special reserve accounts (Habitat Conservation Fee the Nevada Wildlife Heritage Trust Account). The fisheries management structure will replace the temporary structures operated and maintained to support NDOW's ongoing management, monitoring, and research efforts at this reach since 2014 (i.e., Lake Tahoe Lahontan Cutthroat Trout Feasibility Study and Lahontan Cutthroat Trout Priority Tributary Management Plan). The Project will contribute towards Nevada's Biodiversity Initiative with the United States Fish and Wildlife Service (USFWS), specifically Lahontan cutthroat trout (LCT) and rainbow trout populations and has been designed and located to respond to existing channel morphology and flow regimes improving stability in the lotic systems and to address the project objectives recommended in the study and plan.

The fisheries management structure will be comprised of a concrete velocity barrier, weir with removable slide gate (fish collection pool, fish ladder, streambank revetment, grade controls boulders sited down-gradient), and erosion and scour protection measures (i.e., rip rap; boulders sited up-gradient).

Installation of NDOW's fisheries management structure will include the following activities:

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- Site preparation, including installation of construction fencing and turf protection mats along the access route.
- Mobilization of equipment and materials to the designated staging and storage area north of Lakeshore Boulevard.
- Establishment of temporary diversion structures with velocity controls to reroute stream flow and allow for dewatering of the work zone.
- Installation of water protection BMPs downstream of excavation and grading.
- Excavation and grading of the stream bed at the fisheries management structure location.
- Installation of the fisheries management structure components (Refer to **Attachment A**, Sheets P-1, P-2, D-3, D-4 for component details).
- Backfilling, compaction, and stabilization of disturbed soils and stream banks following installation.
- Removal of diversion and dewatering systems, followed by restoration of stream flow and site cleanup, and revegetation of disturbed uplands.
- Post-construction and long-term monitoring final site stabilization measures, riparian vegetation reestablishment and aquatic habitat function by NDOW biologists.

2.1 Approvals and Authorizations

Attachment J provides the Project permit applications for CWA Section 404 authorization, Section 401 certification and TRPA EIP Project review, along with an acknowledgement letter from North Tahoe Fire Protection District and the Memorandum of Understanding (MOU) between NDOW and IVGID for construction access, staging and storage in 2026 and operations and maintenance over the lifespan of the fisheries management structure.

2.2 Construction Schedule

Construction is anticipated to take place over an 8-week period between August 1, 2026, to October 15, 2026.

2.3 Construction Equipment and Materials

Construction activities will be conducted primarily from the stream bank, with limited in-water work performed only as needed for dewatering and fisheries management structure installation. The following equipment and materials will be utilized.

- Portable Pumps (2–3 units): Employed for stream flow diversion and contingency localized dewatering. Pumps will be placed on the bank, with intake hoses extending into the channel/water where needed.
- Turf Protection Mats (10–15 mats): Used along the temporary access route to protect existing turf areas and minimize surface disturbance.
- Silt Fencing and Linear Erosion Control: Installed as water quality protection BMPs; setup and maintenance performed from the bank.
- Construction Fencing (approx. 840 linear feet): For delineation of staging and storage areas and vegetation protection, installed from paved surfaces and the stream bank.
- Excavators (1–2 units): Used for streambed excavation, grading, and component installation. Access primarily from the stream bank, with potential for limited in-channel work where necessary.
- Rubber tire Loaders (1 unit): For material handling, backfilling, and site stabilization. Operated from the stream bank.
- ¾ Ton Work Trucks and Dump Trucks (1–2 units): Transporting personnel, small tools, materials, soil, rock, and debris to and from the site. Access from existing paved areas.

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- Concrete Truck (1 unit): Transport of ready-mix concrete to project site. Access from existing paved areas and stream bank.
- Hand Tools (multiple): Shovels, rakes, and compactors for detailed work, stabilization, and cleanup. Used both from the bank and within the work zone.

2.4 Construction Phasing and Activities

2.4.1 Mobilization and Site Preparation

- Mobilization – Upon issuance of notice to proceed, the contractor will mobilize equipment and materials for temporary BMP installations to the staging and storage area on APN 127-010-004.
- Staging and Storage Area Demarcation - With contractor mobilization in 2026, equipment and materials staging and storage, along with worker parking will occur within approximately 5,000 square feet of the northeast portion of IVGID's existing paved parking area just north of the project area at 958 Lakeshore Boulevard (Refer to **Attachment A, Sheet BMP-1**). The NDOW contractor's use area will be delineated with approximately 840 linear feet of construction fencing (Note that TRPA typically prefers black or dark green fencing as opposed to orange colored, but due to the visibility of the work area from Lakeshore Boulevard and the pedestrian use of the recreational areas in the vicinity, high visibility fencing may be preferred for public safety).
- Access Route Demarcation and Protection – The Third creek work area will be accessed via existing roadways and overland turf area, as shown on **Attachment A, Sheet iii**, the surface of which will be protected with turf protection mats (approximately 10-15 mats along the temporary access route; 400 square feet).
- Pre-project Conditions Documentation – Water Quality Constituent background level will be measured prior to ground disturbing activities. Pre-project work area conditions will be photo documented by NDOW biologists onsite for mobilization.
- Work Area Demarcation – The work area extent, as illustrated in **Attachment A, Sheet iii, BMP-1, and P-1**, will be delineated with project fencing during mobilization and site preparation.
- BMP and Resource Protection Measure (RPM) Installation - Temporary construction BMPs and water quality protections will be installed and implemented prior to ground disturbing activities and inspected, repaired and maintained throughout active construction. NDOW's construction contractor must ensure that disturbed areas are protected from sediment runoff and that water quality is maintained according to NDEP regulations throughout and following construction activities. Refer to Section 3.6 for details of measures.

2.4.2 Diversion and Contingency Dewatering

Dewatering, diversion and filtration (watering) activities as well as the re-introduction of flow into the channel are required to meet the permit requirements of NDEP and TRPA. The NDEP standards for tributaries in the Lake Tahoe Basin are reference the Nevada Administrative Code - Chapter 445A – NAC 445A.1915. The TRPA standards are specified in Chapter 60 – Water Quality Control and Best Management Practices of the TRPA Code of Ordinances. NDEP and TRPA require a surface water turbidity standard of 10 NTU, or baseline turbidity whichever is higher.

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In-channel work will avoid adverse effects to flow patterns and riparian vegetation along stream banks through capture and diversion of baseline flows that may be present during the construction period around the Work Area to maintain dry work conditions, while directing and maintaining flows downstream. Short-term impacts could include temporary disturbance or displacement of aquatic species in the project reach, while long-term effects will depend on the stability of fisheries management structure itself, which has been designed to accommodate Third Creek flow regimes - installing appropriate streambed materials and stabilizing streambanks through structural controls.

Due to soils present in the Work Area and vicinity, some groundwater seepage may be anticipated and localized dewatering may be necessary in addition to stream flow diversion.

2.4.2.1 Third Creek Temporary Diversion Plan

The contractor will be responsible for final design, installation, maintenance and removal of the dewatering and diversion system as required for completion of the work. The plan sheets provided as part of these contract documents show the proposed dewatering scenario (**Attachment A, Sheet DW-1**).

NDEP and TRPA require a surface water turbidity standard of 10 NTU, or baseline turbidity, whichever is higher. A baseline turbidity reading will be performed prior to construction by NDOW biological monitors. The higher of the 10 NTU or baseline turbidity reading will serve as the turbidity standard for this project, as determined by TRPA and NDEP prior to any dewatering, diversion and filtration (watering) activities for the Third Creek project reach commences.

2.4.2.2 Localized Dewatering Plan - Contingency

In the event that groundwater seepage or unexpected water accumulation occurs within the project area during construction, localized dewatering will be implemented using portable pumps and containment systems. Dewatering activities will be restricted to the immediate work zone and managed to prevent discharge of turbid or contaminated water into Third Creek or adjacent areas. Pumped water will be directed to sediment control BMPs before release, and operations will be monitored to ensure compliance with water quality standards. Should substantial seepage persist, Additional measures such as temporary barriers, sump pits, or increased pumping capacity may be employed to maintain dry work conditions and minimize disturbance to aquatic habitats, if dictated by site conditions.

2.4.3 Fisheries Management Structure Installation

Activities that must occur within the Third Creek channel will include (**Attachment A, Sheet DW-1, P-1**):

- Installation of temporary water protection BMPs and implementation of RPMs (during Site Preparation phase)
- Excavation and minor grading of the stream bed at the fisheries management structure location.
- Installation of the fisheries management structure components (Refer to **Attachment A** for component details):
 - Concrete Velocity Barrier
 - Fisher Ladder with Baffle/Weir Protections and wall-mounted frame and removable stop logs for fish ladder bypass
 - Erosion and Scour Protection Riprap and Boulders
 - Boulder Grade Controls
 - Stream Bank Revetment

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- Stream Bed Mix.
- Backfilling, compaction, and stabilization of disturbed soils and stream banks following installation.

2.5 Resource Protection Measures and Best Management Practices

The contractor must implement, maintain, and ensure the effectiveness of temporary erosion and sediment control, water quality protection measures, and any additional project conditions issued through water quality certification with NDEP and project-specific conditions of the TRPA EIP project permit throughout project construction. Before starting work, the contractor must contact TRPA for a pre-grading inspection of installed facilities. The BMP Plan is illustrated in **Attachment A, Sheet BMP-1**, with details provided on **Sheets D-1 and D-2**.

Protection measures and BMPs (i.e., Resource Protection Measures or RPMs) designed to avoid and minimize adverse effects on environmental resources during construction will include, but not be limited to, the following:

RPM- 1 Scheduling and Coordination: Project implementation will occur in fall months during period of lowest anticipated flows. Construction hours shall be weekdays between 8:00 AM and 6:30 PM unless prior approval is received from NDOW and TRPA. The contractor shall determine the type, location, size, and/or depth of existing utilities within the work area before commencing work. The contractor shall contact NDOW, and Underground Service Alert at (800) 642-2444 at least 48 hours prior to any construction. Elevations shown on the engineering plans (**Attachment A**) for concrete fish structures, banks, thalwegs, and grade controls are based on the provided topographic data. The contractor must verify surface elevations in the field and notify NDOW and the engineer of any discrepancies that could impact facility operation before construction and installation. If elevations are incorrect, NDOW and the engineer should be contacted for necessary adjustments prior to installation.

RPM-2 Materials Management/Staging and Storage (Attachment A, Sheet BMP-1): Materials management for the fisheries management project will be carefully coordinated to ensure both environmental protection and efficient workflow. Upon contractor mobilization in 2026, equipment and materials will be staged and stored within a designated 5,000 square foot area in the northeast portion of IVGID's existing paved parking, situated just north of the project site and Lakeshore Boulevard. This area will be clearly marked with construction fencing to secure materials and delineate access boundaries. High visibility fencing (approximately 260 linear feet) may be used for public safety due to the proximity to pedestrian and recreational areas. A gravel bag check dam will be installed lakeside of the staging and storage area to address runoff should surface flows concentrate.

During construction, materials such as erosion control devices, wood concrete form boards, salvaged stream bed material, structural backfill, riprap, boulders, and pumps/water handling equipment will be delivered and stored in this secured staging area. Temporary turf protection mats will be deployed along the overland access route to minimize disturbance and protect the existing turf areas.

Materials will be handled in accordance with manufacturer's specifications and handling instructions, ensuring proper installation and maintenance of temporary and permanent erosion and sediment control measures. Good housekeeping will be maintained throughout the project to prevent spills, contamination, and unnecessary waste, ensuring that materials are used efficiently and that storage sites remain orderly and environmentally responsible.

Construction materials must be secured to prevent them from rolling, washing, or blowing off the site. After construction, all waste and debris will be cleaned up and disposed of appropriately off-site.

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RPM-3 Spill Prevention and Response: In accordance with NDEP guidelines, spill control and clean-up activities will be implemented throughout the construction process. Contractors will maintain spill kits at the staging area and at key locations onsite, ensuring rapid response capability for any accidental releases of petroleum products or hazardous materials. Personnel will be trained in spill response procedures prior to commencement of equipment use on-site, including immediate containment, reporting, and proper disposal of contaminated materials. Spills must be promptly cleaned up using absorbent materials, and contaminated soil or waste removed and disposed immediately at approved facilities. Incident documentation and notification to NDEP will be completed as required to ensure compliance and minimize environmental impacts.

The discharge of petroleum products, construction waste and litter (including sawdust), or earthen materials to the surface waters of the Lake Tahoe Basin (including Third Creek) is prohibited. Surplus construction waste materials shall be removed from the project and deposited only at approved points of disposal.

RPM-4 Minimize Ground Disturbance and Preserve Existing Uplands: To protect riparian and upland vegetation during construction, access routes have been carefully planned and sited to avoid unnecessary disturbance, and existing native plants will be flagged or fenced off to prevent accidental damage when necessary. Haul trucks and equipment will stay on the designated access route.

- Temporary turf protection mats and high visibility fencing will be placed along the construction access paths and near sensitive vegetation zones, ensuring that root systems and soil structure remain intact. In addition, disturbed vegetated areas will be promptly stabilized and revegetated with native plant species following completion of work to promote rapid recovery and prevent erosion.
- Construction limits shown on the plans delineate boundaries for the contractor's operations. Construction limit fencing will be erected along these boundaries prior to commencement of construction. Within the construction limits, existing vegetation will be protected to the extent feasible. Existing trees will be protected unless shown on the plans to be removed. Excavation equipment will be limited to the work area as defined in the plans to minimize site disturbance.
- No trees or wetland vegetation will be removed unless they are shown and noted to be removed on the plans, or as directly specified on-site by NDOW staff. Individual trees and shrubs that may conflict with grading will be trimmed to the extent necessary, while preserving the stem/trunk and sufficient canopy for regrowth. No grading shall take place within the dripline of trees to be retained unless otherwise approved.

RPM-5 Control and Suppress Dust: NDOW's contractor will perform preventative dust control measures to suppress dust in conformance with state, county and local ordinances. The Lake Tahoe Air Basin is designated as a nonattainment area for state ambient air quality standards, particularly for 24-hour PM10 (particulate matter) and ozone, largely driven by vehicular traffic and wood smoke. Effective measures include minimization of track on and track off, street sweeping, water applications, and preservation of existing effective ground cover. Vehicles must stay below 15 mph on exposed surfaces during construction. Do not track soil or construction materials off the site, including the staging and storage area ingress/egress where street sweeping shall occur to address visible incident of track out.

RPM-6 Installation of Temporary and Permanent Erosion and Sediment Control Measures: Temporary stormwater control measures must comply with the TRPA Stormwater Management Program and adhere to the guidelines outlined in the TRPA "Best Management Practices Handbook." Project components such as erosion and scour protection riprap, removable weir, concrete velocity barrier and

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fish ladder, erosion and scour boulders, and boulder grade controls will function together as a permanent BMP structure designed to reflect Third Creek channel's geomorphology and respond to current and anticipated flow regimes. The fisheries management structure will continue to be operated, inspected, and maintained by NDOW biologists over the long term.

Prior to and throughout the construction period of August 1, 2026, through October 15, 2026, temporary BMPs will be installed and maintained in proper functioning condition and good housekeeping and erosion and sediment control measures will be employed:

- a) Install construction boundary or security fencing at 958 Lakeshore Drive to separate the staging and storage area. The CONSTRUCTION LIMITS shown on the plans define the general perimeter for contractor activities. Erect construction limit fencing along these boundaries before beginning construction. Inside the grading limits, preserve existing vegetation as much as possible.
- b) Prior to commencement of earth disturbing activities, temporary silt barriers shall be installed on the downhill side of the area of disturbance or as shown on these plans. This fence shall be kept in place and maintained until the disturbed area is permanently stabilized.
- c) Minimize ground disturbance by carefully planning access routes and preserving existing vegetation, including flagging or fencing native plants.
- d) Lay turf protection mats along the designated access path to the work zone (approximately 250-linear-feet) and demarcate with approximately 720-linear-feet of construction fencing. Install fiber rolls (approximately 250-linear-feet) along down-slope of access route.
- e) Maintain and inspect temporary BMPs throughout the construction period to ensure proper functioning and compliance with TRPA and NDEP standards.
- f) Loose soil mounds or surfaces must be properly covered to prevent wind or water erosion, either when construction is inactive or as required by TRPA.
- g) Implement dust control measures such as water applications, street sweeping, and limiting vehicle speeds on exposed surfaces to below 15 MPH.
- h) Excavated material should be temporarily stored upslope from the excavation sites whenever feasible. Storing material in undisturbed stream environment zones or wet areas is strictly prohibited. Material from excavation that is not within foundations, retaining walls, or other TRPA-approved methods must be removed from the parcel and disposed of at a TRPA-approved site.
- i) Promptly stabilize and revegetate disturbed areas with native species after construction to prevent erosion and promote rapid recovery. Stabilize or replant all disturbed soil per plans and specifications within the first construction season, before winterization or project closeout.
- j) Install permanent erosion and sediment control measures, including riprap, concrete fish management structure scour boulders, and grade controls, to maintain water quality and channel stability of the long term (i.e., install permanent fisheries management structure).
- k) Conduct regular maintenance and inspections of installation of permanent BMP structures by qualified personnel to ensure long-term effectiveness.
- l) Establish contingency plans for flow diversion and dewatering to manage discharges during in-water work.
- m) Monitor water quality during construction to detect and respond to potential impacts on aquatic habitats and cold-water fisheries.
- n) Disturbed and exposed soil areas must be stabilized and/or replanted in accordance with the plans and specifications during the initial construction season, and prior to winterization or project closeout.

RPM-7 Flow Diversion and Contingency Dewatering: Diversion equipment and activities to control or manage discharges will include the use of temporary cofferdams, bypass pumps, sediment traps and energy dissipator (**Attachment A**, Sheets DW-1, DW-2). A Cofferdam installed upstream and downstream of the work area will isolate the construction zone and prevent water from entering the site. Bypass pump and pipe will be used to redirect streamflow around the disturbed area, maintaining

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downstream flows and minimizing water quality impacts during construction. Diversion activities will be monitored and maintained throughout construction to ensure their effectiveness and compliance with regulatory requirements. Refer to Section 2.4.2 for additional details.

RPM-8 Water Quality Monitoring: For project activities requiring NDEP 401 Water Quality Certification, implement water quality monitoring protocols will be conducted, as specified by NDEP. This includes pre-construction sampling to determine background concentrations, regular sampling of field turbidity and pH upstream and downstream of the work area during construction and Stop Work issuance and corrective actions should turbidity be elevated beyond background measured pre-project. Document monitoring results and promptly report exceedances or violations to NDEP as required. Maintain detailed records of monitoring activities and corrective actions taken to ensure compliance with certification conditions. Refer to **Attachment F** for the draft construction monitoring plan that will respond to forthcoming Section 404 authorization, 401 certification, and TRPA EIP project permit conditions, if needed.

RPM-9 Biological Resource Protections: Construction activities affecting jurisdictional waters must comply with NDEP regulations, including obtaining a 401 Water Quality Certification for projects that may result in discharge to state waters. Contractors are required to implement, install, and maintain protection measures to minimize impacts on both terrestrial and aquatic species, such as controlling erosion, sedimentation, and pollutant runoff, and preserving sensitive habitats and native vegetation from disturbance. Water quality monitoring must be conducted as specified by NDEP to protect aquatic organisms, with any exceedances or violations reported immediately. Contractors must also document corrective actions taken to safeguard species and ensure compliance with certification conditions (refer to RPM-8).

- a) NDOW policies mandate that in-water work be scheduled to avoid critical spawning and migration periods for cold-water fisheries and other sensitive aquatic species. NDOW also requires the installation of fish passage structures, such as fish ladders or grade controls, to maintain connectivity and minimize impacts on aquatic habitats. Construction activities will implement measures to protect riparian vegetation and prevent disturbance to wildlife. NDOW biologists contributed to mitigation strategies during protect planning to address potential permanent impacts to aquatic resources through project design.
- b) NDOW biologists will conduct pre- and post-construction surveys to assess habitat conditions and fish populations to assess project success criteria.
- c) NDOW biologists will conduct pre-construction surveys for special status species ahead of contractor mobilization.
- d) NDOW biologists will conduct fish relocations per state procedures prior to in-water activities within Third Creek channel.

RPM-10 Cultural and Tribal Cultural Resource Protections: Although no listed cultural resources or eligible for listing have been documented within the Work Area during previous cultural resource inventories, nor have been discovered during previous restoration and fisheries management activities conducted in lower reaches of Third Creek, For compliance with applicable state and federal regulations to protect historic and archaeological sites during construction activities, NDOW's contractor will ensure that any ground-disturbing work does not adversely affect cultural resources. If previously unidentified artifacts or sites are discovered. NDOW's contractor is required to halt work and notify authorities (NDOW Project Manager, Washoe Tribe of Nevada and California, Nevada State Historic Preservation Office [SHPO], Washoe County Coroner, as appropriate), per state contract specifications. Documentation and reporting of any cultural and tribal cultural resources are essential to maintain regulatory compliance and safeguard Nevada's heritage.

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RPM-11 Traffic Control: The contractor is required to provide, install, and maintain signs, barricades, delineators, lights, flag personnel, and other equipment essential for managing traffic, including pedestrians and cyclists—within the construction zone, ensuring public safety. All actions must comply with these plans, the Orange Book, and the current edition of the Federal Highway Administration (FHWA) Manual on Uniform Traffic Control Devices (MUTCD). Refer to **Attachment A**, Sheet iii, for details on Traffic Control.

2.6 Final Site Stabilization / Restoration

NDOW's contractor will be responsible for restoring utilized or damaged roadways to their original condition. Barren areas and sites disturbed by construction must be revegetated in accordance with the TRPA Handbook of Best Management Practices. The application of wood mulch may be used to facilitate successful vegetative establishment.

In addition to TRPA requirements, restoration and revegetation activities must comply with the standards set forth by NDEP, including proper soil stabilization, approved seed mixes, and erosion control measures as specified in the applicable NDEP guidelines.

Extensive revegetation is not anticipated to be necessary. Staging and storage will occur within a portion of IVGID's existing paved parking lot, the temporary overland access route to the work area will be covered by turf protection plates to minimize disturbance to existing turf and forbs, and due to the nature of the project, bank stabilization will primarily be engineered with growth of riparian vegetation trimmed when necessary for project installation and natural recruitment occurring within the stabilized bed and bank over the long-term.

3 Potential Permanent and Temporary Impacts - Jurisdictional Waters

Project construction will create up to 0.35-acres of temporary disturbance, with up to 0.28-acres of the total disturbance occurring within the bed and bank of Third Creek to install the permanent fisheries management structure.

adherence to RPMs described in Section 2.3 and diversion of creek flows to maintain dry work conditions will minimize risk to downstream beneficial uses and water quality during construction. **Table 2** presents the temporary and permanent impacts that will result within waters of the US/waters of the state from construction of the Project.

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Table 2. Potential Project Impacts to Waters of the US/State – Temporary and Permanent

Impact Type	Area (Acres)	Length of Stream Channel (Linear-Feet)	Volume (Cubic Yards)	Material	Attachment A Plan Sheet	Notes
Temporary Fill	0.10	Field fitting to be a sub-set of temporary disturbance length (280-linear-feet)	40	Discharge Dissipator (washed gravel; 0.5 CY) Temporary Sediment Dams (washed gravel; 20 CY) Temporary Cofferdam (washed gravel; 20 CY)	DW-1, DW-2	Washed gravel only, sands will not be used
Temporary Disturbance	0.26	280 (Third Creek project reach diversion length)	~100	Removal of Existing Management Structure/Materials Salvaged Streambed materials	DW-1, DW-2	Diversion system – up to 280-linear-feet, average reach width of top of bank is 40-feet
Temporary Totals	0.26	280	140			
Permanent Fill (Fisheries Management Structure)	0.02	25	130	Fish Ladder with four 4-inch thick Removable Stop Logs/Removable Weir Baffles, and Revetment (metal, reinforced concrete) Velocity Barrier (reinforced concrete, structural fill)	P-1, P-2, P-3, P-4	Fisheries Management Structure with Fisher Ladder is 752-square-foot, comprising 25-linear-feet of channel, up to 70 CY structural fill to supplement 100 CY of salvage stream bed materials, 50 CY reinforced concrete
Permanent Discharge (Stream Bed Materials)	0.06	65	300	Streambed Components: <ul style="list-style-type: none"> Structural Base (3-12-inch diameter; up to 80 CY) Erosion and Scour Protection/Grade Control Boulders (12-36-diameter; up to 150 CY) Engineered Cobble Materials (up to 70 CY) 	P-1, P-2, P-3, D-4	Design indicates up to 300 CY of new stream bed materials to supplement 100 CY of salvaged stream bed materials to establish and control longitudinal grade and profile, provide for erosion and scour protection
Permanent Totals	0.08	85	430			

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3.1 Temporary Impacts

- Up to 0.35-acre total disturbance
- Up to 0.26-acre temporary disturbance within waters of the U.S. and state (based on the average width of reach at top of bank, 40-feet)
- Up to 280-linear-feet of Third Creek (diversion system length)
- Up to 100 cubic yards of stream bed materials will be salvaged and reused to supplement engineered streambed components
- Up to 0.1-acre and 40 cubic yards of temporary fill (i.e. sediment dams, coffer dam, and discharge dissipator for temporary diversion system).

3.2 Permanent Impacts

- 0.08-acre (fisheries management structure footprint and stream bed components)
- 85-linear-feet reach of Third Creek
- 370 cubic yards of new permanent fill (i.e., fisheries management structure and streambed components).

3.3 Compensatory Mitigation

Compensatory mitigation is not proposed for the Project because impacts to waters of the U.S. and waters of the State have been avoided and minimized to the maximum extent practicable through project design, construction methods, and implementation of comprehensive RPMs and water quality protection BMPs. The Project is limited to a small, defined disturbance footprint within an existing previously disturbed and managed channel reach, and all temporary impacts associated with construction will be fully restored following completion of work, including removal of diversion structures and stabilization of disturbed areas. Permanent features, including the fisheries management structure, are designed to improve long-term stream stability, maintain hydraulic continuity, and enhance aquatic habitat and fish passage, resulting in a net functional uplift compared to existing temporary facilities. The Project does not result in a loss of aquatic resource area or function that would warrant compensatory mitigation, consistent with the Clean Water Act Section 404(b)(1) Guidelines sequencing requirement (avoidance and minimization) and applicable USACE and NDEP expectations for restoration-oriented projects.

Additionally, the Project implements two TRPA EIP projects: Lake Tahoe Lahontan Cutthroat Trout Feasibility Study, EIP Project #02.02.03.0025, and Lahontan Cutthroat Trout Priority Tributary Management Plan, EIP Project #02.02.03.0024. TRPA's EIP fisheries goals focus on preserving, restoring, and enhancing both stream and lake habitats. The overarching mission is to improve aquatic habitats essential for the growth, reproduction, and perpetuation of existing and threatened fish resources in the Lake Tahoe Basin. Specific to LCT, TRPA supports state and federal multi-agency efforts to reintroduce and recover self-sustaining populations of this native species in Lake Tahoe.

4 Post-Project Commitments

NDOW will conduct pre- and post-construction surveys to assess fish populations and habitat conditions (grant deliverables) and when post-project funding is released NDOW will finalize the operations and maintenance plan under development with IVGID that includes:

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- 1) Hiring and retaining seasonal staffing to manage salmonid spawning runs.
- 2) Implementing the Comprehensive Tributary Management Plan for reestablishment of native Lahontan Cutthroat Trout that works toward the ultimate recovery and delisting of the species.
- 3) Managing Rainbow Trout broodstock to allow for harvest of eggs for statewide program.
- 4) Implementing the Annual Monitoring Plan of the State of Nevada Sportfish Restoration Program in conformance with the Wildlife and Sportfish Restoration Grant with annual reporting of results.
- 5) Use of findings to develop adaptive future management strategies to assist in the reestablishment and recovery of LTC in the Lake Tahoe Basin.
- 6) Submit of Final Project Report documenting a summary of outcomes, methodologies, and recommendations for future fisheries management (grant deliverable).

4.1 Operations and Maintenance

Standard operations and maintenance (O&M) actions for NDOW will continue to be informed by routine inspections of structures, removal of debris or sediment buildup, repair or replacement of damaged components, and on-going monitoring of habitat conditions. These actions are designed to ensure the continued functionality of the fisheries management structure, maintenance of water quality and beneficial uses of Third Creek, and support of aquatic habitat restoration throughout the post-project period.

NDOW is negotiating the maintenance agreement with IVGID for the operations and management of the fisheries management structure for up to 20 years, the project's anticipated life span.

4.2 Post-construction Monitoring and Reporting

NDOW implements a comprehensive fisheries monitoring and assessment program to support adaptive management, species recovery, and regulatory compliance for aquatic resources for the state. The program is conducted by NDOW's Fisheries Division, which is responsible for managing fish populations, water quality, and aquatic habitat conditions across Nevada's streams, rivers, lakes, and reservoirs.

NDOW's monitoring program integrates field-based biological surveys, population tracking, and habitat assessments to evaluate the status and trends of both native and sport fish populations. Core monitoring activities include native fish surveys, sport fish surveys, spawning assessments, and habitat and water quality evaluations, which are used to inform management decisions and project performance ([Fisheries | Nevada Department of Wildlife](#); Accessible at: https://ndow.galaxydigital.com/agency/detail/?agency_id=162048).

Monitoring methods commonly include capture, measurement, and tagging of fish (e.g., use of PIT tags or similar identification tools), allowing NDOW biologists to track individual fish movement, survival, and population size over time. Data collection typically includes metrics such as fish length, weight, condition factors, and spawning characteristics, as well as temporal and spatial distribution patterns.

For LCT and other managed fisheries, NDOW's monitoring program is designed to evaluate population dynamics, reproductive success, and habitat use, including assessment of spawning runs and tributary utilization. These monitoring efforts support species recovery objectives, including reestablishment of self-sustaining populations and improvement of habitat connectivity.

Monitoring data is used to:

- Assess population status and trends (abundance, distribution, survival)

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- Evaluate effectiveness of management actions (e.g., habitat restoration, fish passage, stocking)
- Inform adaptive management decisions, including operational adjustments to fisheries management structures
- Support regulatory compliance and reporting requirements associated with federal and state permits.

Overall, NDOW's fisheries monitoring program provides long-term, data-driven evaluation of aquatic habitat and fish population performance, ensuring that management actions—such as the proposed fisheries management structure—achieve intended outcomes for fish passage, habitat function, and species recovery while maintaining compliance with agency objectives and regulatory requirements.

Upland areas that incur ground disturbance will be revegetated in accordance with the TRPA BMP Handbook and with high elevation native species seed mix.

4.3 Education and Outreach

Following project construction and in fulfillment of funding commitments, NDOW, in cooperation with IVGID, will develop outreach materials and educational signage to raise public awareness about the project and fisheries management and assist with organizing events for local schools, community organizations, and volunteers to promote engagement with the Project over the long-term operations.

5 TRPA Findings for EIP Projects

Table 3 responds to the required findings for EIP project approvals and supports the TRPA IEC in **Attachment I**. The TRPA file number is EIPC2026-0005.

The Project demonstrates conformance with EIP requirements by fulfilling several key criteria. It aligns with the program goals through restoration of aquatic habitat and enhancement of water quality, in accordance with TRPA Regional Plan Threshold Standards. The Project complies with TRPA ordinances, regulations, and policies, including implementation of BMPs for stormwater treatment and pollutant reduction. Furthermore, it delivers a net environmental benefit by replacing temporary facilities with permanent structures that reduce sediment mobilization, improve channel stability, and enhance aquatic habitat functions. Necessary permits and approvals will be obtained prior to implementation, ensuring full compliance with water quality and environmental protection standards.

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Table 3. EIP Project Findings – NDOW Fisheries Management Structure

TRPA Finding	Applicant Response
The project must be consistent with the Environmental Improvement Program (EIP) goals and objectives.	The project is consistent with EIP goals and objectives because it implements actions to restore aquatic habitat and improve water quality conditions consistent with TRPA Regional Plan Threshold Standards and the resource protection framework of Code Chapters 60–68. The project improves channel stability and reduces sediment delivery, supporting water quality threshold attainment for Lake Tahoe clarity.
It should comply with all TRPA ordinances, regulations, and policies.	The project will comply with Chapter 60 (Water Quality Control), including Section 60.4 (Surface Water Quality Standards) and Section 60.5 (Water Quality Protection During Construction) through implementation of temporary and permanent BMPs, turbidity control (≤ 10 NTU or background), and compliance with the TRPA BMP Handbook and Stormwater Management Program requirements for stormwater treatment, infiltration, and pollutant reduction.
The project must demonstrate a net environmental benefit or improvement.	The project provides a net environmental benefit consistent with Section 60.1 (Water Quality Management Goals) and 60.4 standards, by replacing temporary structures with a permanent facility that reduces sediment mobilization, improves channel stability, and enhances aquatic habitat function, thereby improving water quality conditions relative to existing conditions.
All necessary permits and approvals must be obtained prior to implementation.	The project will obtain all required approvals, including TRPA EIP approval, USACE authorization, and NDEP 401 Certification, consistent with Chapter 3 (Environmental Documentation), Section 3.7 (Required Findings), ensuring compliance with all applicable water quality and environmental protection standards prior to construction.
The project should not result in significant adverse impacts to water quality, air quality, scenic resources, or wildlife habitat.	The project will not degrade water quality, consistent with Section 60.4 (Surface Water Quality Standards) and 60.5 (Construction Controls), because it incorporates BMPs, work area isolation, flow diversion, erosion and sediment controls, and turbidity monitoring limited to ≤ 10 NTU or background. Temporary impacts will be short-term and fully mitigated through stabilization and revegetation, and long-term conditions will improve channel function and reduce sediment transport.
Post-project monitoring and reporting requirements must be established and followed.	Post-project monitoring will be implemented consistent with Section 60.6 (Inspection and Maintenance of BMPs) and the TRPA BMP Handbook, including evaluation of water quality controls, project performance, and aquatic habitat conditions to verify effectiveness and compliance with Chapter 60 standards.
Operations and maintenance plans must be in place to ensure long-term effectiveness.	NDOW will implement long-term operations and maintenance consistent with Section 60.6 (BMP Maintenance Requirements), including inspection, maintenance, and repair of structural and BMP elements to ensure continued water quality protection and erosion control.
The project must include public outreach or education components where applicable.	Public outreach will include educational signage and materials describing the project's role in protecting water quality and restoring aquatic habitat, consistent with TRPA EIP program objectives and IEC public involvement requirements under Chapter 3 environmental review procedures.

The proposed fisheries management structure is consistent with the TRPA Regional Plan and Code of Ordinances, including Chapter 60 (Water Quality Control) and Chapter 3 (Environmental Documentation), because it incorporates comprehensive design features and construction practices that protect and improve water quality. The Project has been designed to meet Section 60.4 surface water quality standards and Section 60.5 construction-phase water quality protection requirements through implementation of temporary and permanent best management practices, flow diversion and work area

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isolation, and turbidity monitoring limited to ≤10 NTU or background conditions, whichever is greater. All temporary disturbances will be stabilized and restored, and permanent project features—including grade controls, erosion protection, and fish passage components—will result in improved channel stability, reduced sediment transport, and enhanced aquatic habitat function. Consistent with Section 60.1 water quality management goals and Section 60.6 BMP inspection and maintenance requirements, the Project includes long-term operations, maintenance, and monitoring by NDOW to ensure continued effectiveness of water quality controls and support adaptive management. Based on these findings, the Project will not degrade water quality and will provide a net environmental benefit consistent with EIP objectives and TRPA threshold standards. The following attachments are specific to the submittal of a complete TRPA EIP Project application, per the EIP project checklist:

- **Attachment F**, TRPA Project Impact Analysis (May 2026)
- **Attachment G**, TRPA Active Transportation Plan (May 2026)
- **Attachment H**, TRPA Initial Environmental Checklist (IEC).

6 USACE Authorization

The Project complies with the applicable USACE Sacramento District Regional General Permit 16 (RGP 16) general and regional conditions because it avoids and minimizes impacts to waters of the United States through a limited disturbance footprint, use of temporary diversion and dewatering to maintain existing flow conditions, and implementation of comprehensive BMPs and resource protection measures to control erosion, sedimentation, and potential pollutant discharge. The project will not interfere with navigation, adversely affect aquatic organism passage, impair spawning or nesting resources, impact water supply intakes, or affect Protected or designated resources, including Essential Fish Habitat, Wild and Scenic Rivers, or cultural and tribal resources, with compliance ensured through timing restrictions, design features, and Section 106 procedures. No permanent impoundment is proposed (management structure conveys flows and includes a fish ladder structure), floodplain capacity will be maintained, and all temporary fills will be removed with final site stabilization. Clean, suitable materials will be used, and construction activities will be confined to defined access and staging areas to avoid effects to adjacent properties. The project includes adherence to all applicable federal, state, and local regulations, including issuance of a Section 401 WQC from NDEP, submittal of a complete PCN via the Regulatory Request System, and incorporation of any regional or case-specific USACE conditions. Long-term compliance is ensured through NDOW-led operations, maintenance, and monitoring programs, including post-construction habitat and fisheries evaluation, thereby meeting RGP 16 requirements for avoidance, minimization, and sustained protection of aquatic resources in the Lake Tahoe Basin.

Table 4 presents the project findings for conformance with general and regional conditions for Clean Water Act (CWA) Section 404 authorization, as referenced in the pre-construction notification (form ENG 4345) submitted via the Regulatory Registration System (RRS) portal, concurrently with the request for Section 401 WQC from NDEP.

Table 4. Regional Permit 16, Aquatic Habitat Restoration and Enhancement Activities, General and Regional Conditions

Category	Condition Number & Name	Finding
General Condition	1. Navigation	The project complies because the activity occurs within a tributary reach and will not interfere with navigation or public access in waters of the U.S. beyond the construction period.
General Condition	2. Aquatic Life Movements	The project complies because design elements (fish ladder, grade controls, and channel stabilization) maintain aquatic organism passage

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Category	Condition Number & Name	Finding
		following construction; temporary impacts are minimized through work area isolation.
General Condition	3. Spawning Areas	The project complies because in-water work will occur outside spawning periods and channel design supports long-term spawning habitat stability.
General Condition	4. Migratory Bird Breeding Areas	The project complies because construction will occur outside nesting periods or will incorporate preconstruction surveys and avoidance measures.
General Condition	5. Shellfish Beds	The project complies because no shellfish beds occur within the freshwater project area.
General Condition	6. Suitable Material	The project complies because all fill and structural materials will be clean, non-toxic, and suitable for aquatic use.
General Condition	7. Water Supply Intakes	The project complies because no water supply intakes are present within or adjacent to the project reach.
General Condition	8. Adverse Effects from Impoundments	The project complies because no impoundments are proposed; temporary diversions are non-impounding and will be removed.
General Condition	9. Management of Water Flows	The project complies because flow continuity will be maintained through temporary diversion and localized dewatering measures.
General Condition	10. Fills Within 100-Year Floodplains	The project complies because design maintains flood conveyance capacity and does not increase flood risk.
General Condition	11. Equipment	The project complies because equipment will operate from designated areas with spill prevention, containment, and maintenance protocols implemented.
General Condition	12. Soil Erosion and Sediment Controls	The project complies because temporary and permanent BMPs will be implemented to prevent erosion and sediment discharge.
General Condition	13. Removal of Temporary Fills	The project complies because all temporary fills and diversion materials will be removed and disturbed areas stabilized.
General Condition	14. Proper Maintenance	The project complies because NDOW will implement long-term operation and maintenance, including inspection, repair, and monitoring.
General Condition	15. Single and Complete Project	The project complies because it constitutes a single and complete project with independent utility.
General Condition	16. Wild and Scenic Rivers	The project complies because it is not located within a designated Wild and Scenic River.
General Condition	17. Tribal Rights	The project complies because no impairment of tribal rights will occur.
General Condition	18. Historic Properties	The project complies because Section 106 requirements will be met and inadvertent discovery procedures will be implemented.
General Condition	19. Designated Critical Resource Waters	The project complies because construction will adhere to Lake Tahoe Basin turbidity limits (≤ 10 NTU or background) and water quality controls.
General Condition	20. Mitigation	The project complies because impacts are avoided and minimized through design, BMPs, and limited disturbance footprint; additional mitigation will be provided if required by USACE.
General Condition	21. Water Quality	The project complies because a Section 401 Water Quality Certification will be obtained and turbidity, BMP, and monitoring requirements will be implemented.

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CWA Section 404 Authorization, 401 Certification, and TRPA EIP Project Review**

Category	Condition Number & Name	Finding
General Condition	22. Coastal Zone Management	Not applicable because the project is not located within a Coastal Zone Management area.
General Condition	23. Regional and Case-by-Case Conditions	The project complies because all Sacramento District and project-specific conditions will be incorporated into construction and implementation.
General Condition	24. Use of Multiple Nationwide Permits	The project complies because authorization is requested solely under RGP 16.
General Condition	25. Transfer of Permit Verifications	The project complies because any transfer will follow USACE procedures and notification requirements.
General Condition	26. Compliance with Laws	The project complies because it will adhere to all applicable federal, state, and local regulations.
General Condition	27. Pre-Construction Notification	The project complies because a complete PCN, including ENG Form 4345 and supporting documentation, has been submitted through the RRS.
General Condition	28. Permit Expiration	The project complies because construction will occur within a single authorized construction window and permit validity period.
General Condition	29. Activities Affecting Structures/Property	The project complies because staging and access will occur within existing paved areas and avoid impacts to adjacent structures.
General Condition	30. Essential Fish Habitat	The project complies because design avoids adverse effects and improves fish habitat and passage conditions.
General Condition	31. Safety	The project complies because traffic control, site security, and safety measures will be implemented.
General Condition	32. Environmental Justice	The project complies because it does not result in disproportionately high or adverse effects to minority or low-income populations.
Regional Condition (Nevada)	State Water Quality Certification	The project complies because Section 401 certification will be obtained from NDEP prior to work in waters of the U.S.
Regional Condition (Nevada)	Wildlife Habitat Protection	The project complies because RPMs and BMPs will be implemented to avoid and minimize impacts on aquatic and riparian habitats.
Regional Condition (Nevada)	Public Outreach	The project complies because post-construction outreach and signage will be implemented in coordination with IVGID.
Regional Condition (Nevada)	Operations & Maintenance	The project complies because NDOW will implement long-term O&M including inspection, repair, and adaptive management.
Regional Condition (Nevada)	Post-Project Monitoring	The project complies because monitoring includes turbidity monitoring, pre- and post-construction surveys, and long-term habitat and fisheries evaluation.

Key compliance points from **Table 4**:

- No interference or resource conflict
 - No impact on navigation, water supply intakes, shellfish beds, Wild & Scenic Rivers, or EFH.
 - No impairment of tribal rights or historic properties (Section 106 compliance in place).

**Detailed Project Description
for
CWA Section 404 Authorization, 401 Certification, and TRPA EIP Project Review**

- Aquatic resource protection
 - Maintains aquatic organism passage and avoids impacts to spawning areas.
 - Protects water quality through BMPs, erosion control, and turbidity management.
 - Avoids adverse impacts during construction via timing restrictions (e.g., nesting/spawning periods).
- Hydrology and floodplain compliance
 - Maintains pre-project flows using diversion and dewatering.
 - Does not increase flood risk or alter floodplain capacity.
 - No permanent impoundment to flows; temporary controls are removed post-construction.
- Construction controls
 - Implements spill prevention, equipment controls, and confined access/staging.
 - Uses clean, suitable fill materials only.
 - Removes temporary fills and BMPs and stabilizes the site.

7 NDEP Water Quality Certification

The NDEP conditions for water quality certification coupled with authorization under RGP 16 require strict adherence to state water quality standards. These conditions mandate the implementation of RPMs and water quality best management practices (BMPs) to minimize environmental impacts. Project proponents must submit documentation demonstrating compliance with these standards. Additional requirements may include periodic monitoring, reporting, and corrective actions if water quality standards are not met. NDEP also requires coordination with relevant agencies to ensure comprehensive environmental protection throughout phases of the Project.

Table 5 responses to the conditions of the Section 401 WQC for NDEP certification.

Table 5. NDEP 401 Water Quality Certification (WQC) Conditions

Condition	Requirement	Compliance / Actions
Adherence to State Water Quality Standards	Discharges shall comply with Nevada water quality standards and shall not cause exceedance of beneficial uses or criteria. (NAC 445A.121–445A.223)	Compliance will be achieved through implementation of erosion and sediment controls, turbidity limitations, and active monitoring; see RPM-6 (Erosion and Sediment Controls), RPM-7 (Flow Diversion and Dewatering), and RPM-8 (Water Quality Monitoring).
Implementation of BMPs	BMPs shall be implemented and maintained to prevent or minimize pollutant discharge to waters of the State. (NAC 445A.226, NAC 445A.228)	Temporary and permanent BMPs (erosion control, stabilization, material management, dust suppression) will be installed prior to disturbance, maintained during construction, and incorporated into final stabilization; see RPM-6, RPM-2 (Materials Management/Staging), and RPM-5 (Dust Control).
Monitoring and Reporting	Monitoring shall be conducted to verify compliance with water quality standards; reporting shall be completed as required. (NAC 445A.229, NAC 445A.243)	Turbidity shall not exceed 10 NTU above background or baseline, whichever is higher. Monitoring will occur upstream and downstream during in-water work, with results documented and reported; see RPM-8 (Water Quality Monitoring).
Inspection Requirements	BMPs and control measures shall be inspected and	Inspections will be conducted routinely and following precipitation or discharge events; deficiencies will be

**Detailed Project Description
for
CWA Section 404 Authorization, 401 Certification, and TRPA EIP Project Review**

Condition	Requirement	Compliance / Actions
	maintained to ensure effectiveness. (NAC 445A.228, NAC 445A.231)	corrected promptly; see RPM-6 (Inspection and Maintenance of Controls).
Stormwater / Sediment Control (SWPPP-Equivalent)	Activities disturbing soil shall include measures to prevent sediment and pollutant discharge to waters of the State. (NAC 445A.226; NRS 445A.465)	The project BMP Plan functions as a SWPPP-equivalent, including erosion controls, access protection, and stabilization measures; see RPM-6 (Erosion and Sediment Controls) and RPM-4 (Minimize Ground Disturbance).
Spill Prevention and Response	Discharges of petroleum products, hazardous materials, and construction waste to waters of the State are prohibited. (NAC 445A.223; NAC 445A.424)	Spill kits will be maintained onsite; personnel trained; spills contained, cleaned, documented, and reported in accordance with NDEP requirements; see RPM-3 (Spill Prevention and Response).
Control of Discharges	Discharges shall be controlled and minimized to prevent degradation of water quality, including turbidity increases. (NAC 445A.221, NAC 445A.227)	Flow diversion, dewatering, and filtration measures will maintain dry work conditions and ensure compliance with ≤10 NTU or background turbidity standard; see RPM-7 (Flow Diversion and Dewatering) and RPM-6 (Water Quality BMPs).
Corrective Actions	Immediate corrective actions shall be implemented for exceedances of water quality standards or BMP failures. (NAC 445A.229, NAC 445A.231)	If turbidity or other parameters exceed standards, Stop Work will be implemented and corrective actions applied until compliance is restored; see RPM-8 (Monitoring and Corrective Actions).
Permit Integration and Enforceability	All WQC conditions shall be incorporated into the federal permit and are enforceable under Nevada water quality regulations. (NAC 445A.243; NRS 445A.695)	WQC conditions, TRPA EIP conditions, water quality protection BMPs and RPMs will be incorporated into USACE authorization and contract documents and enforced throughout construction.
Other Permits and Agency Coordination	Compliance with all required federal, state, and local permits and agency coordination is required. (NRS 445A.520; NAC 445A.263)	The project will obtain and comply with all authorizations (USACE, NDEP, TRPA) and coordinate with agencies throughout implementation; see RPM-1 (Scheduling and Coordination) and Section X, Approvals and Authorizations.

Detailed Project Description
for
CWA Section 404 Authorization, 401 Certification, and TRPA EIP Project Review

Attachment A Engineering Plan Set, Site Maps (May 2026)

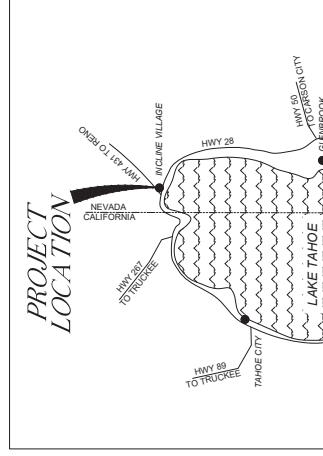
Electronic File Submitted Concurrently – Att_A_Engineering_Drawings_90%.pdf

(11X17 Tabloid Field Set, Fixed Scale)

NEVADA DEPARTMENT OF WILDLIFE THIRD CREEK FISHERIES MANAGEMENT STRUCTURE 90% PLANS - NOT FOR CONSTRUCTION MAY 2026



PROJECT LOCATION MAP
NTS



VICINITY MAP
NTS

PROJECT LOCATION: Incline Village, NV
 CLIENT AGENCY: Nevada Department of Wildlife (NDOW)
 DESIGN CONSULTANT: Stantec
 ENGINEER OF RECORD: Jason Dukes, P.E.

APPROVED BY: JASON DUKES, P.E.
 ENGINEER OF RECORD
 STANTEC
 STATE OF NEVADA NO. 022908

DATE

* CALL BEFORE YOU DIG *
 CONTACT UNDERGROUND SERVICE ALERT (USA)
 PRIOR TO ANY CONSTRUCTION WORK

APPROVED BY: BOB LIGHHOUSE, P.E.
 SUPERVISING PROFESSIONAL ENGINEER - NDOW

DATE

Stantec
 5350 Koval Lane, Ste 100
 Reno, NV 89511
 Tel: +1 775.850.0777
 www.stantec.com

Revision	By	App'd	YYYYMMDD

Permit/Scale
**90% PLANS
 NOT FOR
 CONSTRUCTION**

Client/Project
 NEVADA DEPARTMENT
 OF WILDLIFE
 THIRD CREEK FISHERIES
 MANAGEMENT
 STRUCTURE
 INCLINE VILLAGE NEVADA

Project No.: 185706712

Scale: 1" = 100'

Sheet: 1 of 16

Drawing No. _____

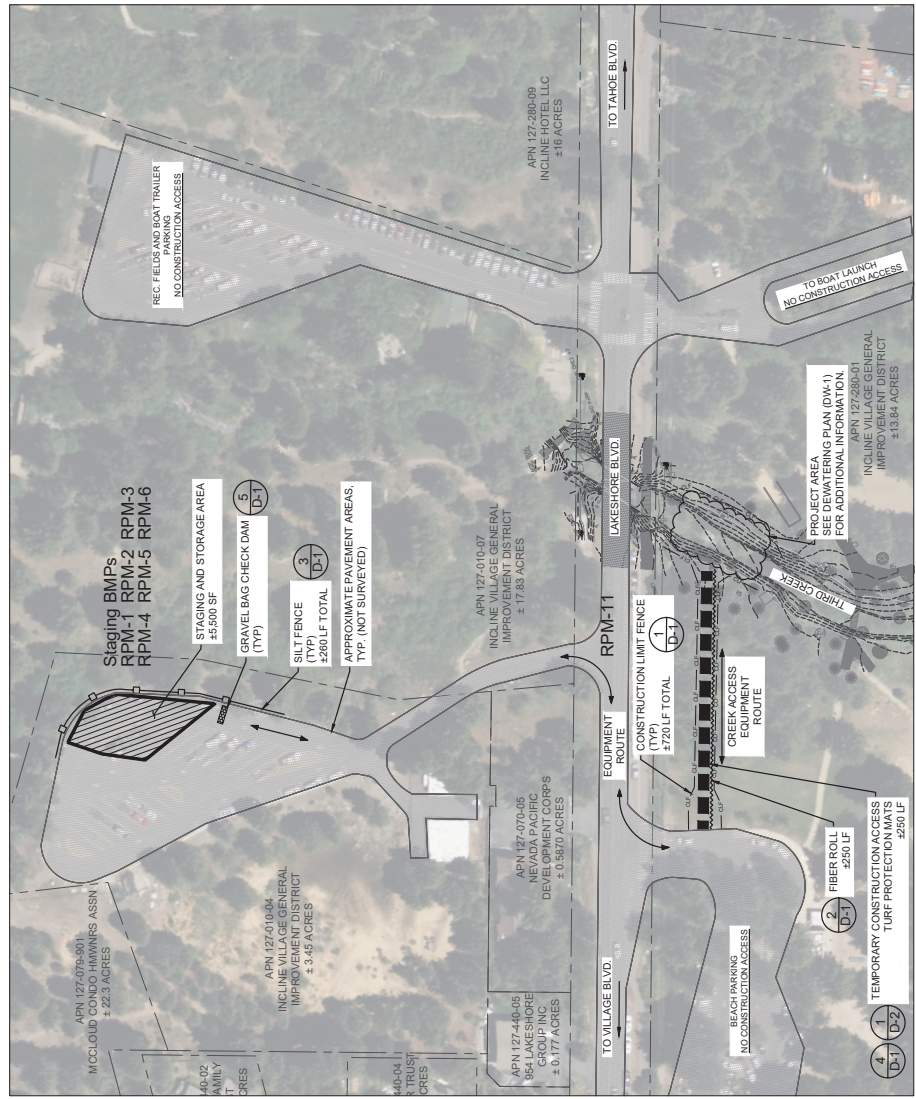
Revision	By	App'd	Y/M/D

Issued	By	App'd	Y/M/D

Permit/Seal
**90% PLANS
 NOT FOR
 CONSTRUCTION**

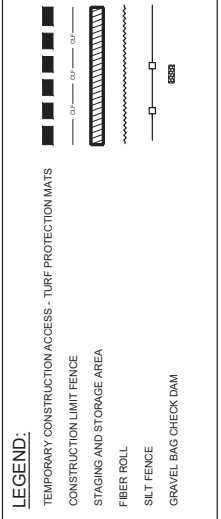
Client/Project
 NEVADA DEPARTMENT
 OF WILDLIFE
 MANAGEMENT
 THIRD CREEK FISHERIES
 STRUCTURE
 INCLINE VILLAGE, NEVADA

Title
BMP SHEET
 Revision/0
 Drawing No.
BMP-1
 Sheet: 4 of 16



**STAGING, STORAGE, AND ACCESS
 PLAN VIEW**
 HORIZONTAL SCALE: 1" = 60'

- BPM NOTES:**
1. HAUL TRUCKS SHALL STAY ON DESIGNATED HAUL ROADS. EXACT LOCATION AND LIMITS OF TEMPORARY ACCESS ROAD SHALL BE DETERMINED IN THE FIELD AND APPROVED BY THE OWNER.
 3. PROTECT VEGETATION AND CHANNEL CONDITIONS UPSTREAM/DOWNSTREAM OF PROJECT AREA TO REHABILITATE ALL UTILIZED/DAMAGED ROADWAYS TO PRE-EXISTING CONDITIONS.
 4. THE CONTRACTOR SHALL BE REQUIRED TO PERFORM PREVENTIVE DUST CONTROL MEASURES TO ENSURE THAT DUST RESULTING FROM THE CONSTRUCTION OF THIS PROJECT SHALL BE WITHIN THE PERMISSIBLE CONFORMANCE WITH STATE, COUNTY, AND LOCAL ORDINANCES. SEE SPECIAL PROVISIONS REGARDING SWEEPING, DUST CONTROL AND TRACKING REQUIREMENTS.
 6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING ALL MEASURES TO PREVENT EROSION AND SEDIMENTATION. ALL BEST MANAGEMENT PRACTICES (BMPs) SHALL BE IN ACCORDANCE WITH THE TRPA "HANDBOOK OF BEST MEASURES PRACTICES" AND THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP). THE CONTRACTOR SHALL CONTACT TRPA PRIOR TO THE COMMENCEMENT OF WORK FOR A PRE-GRADING INSPECTION OF THE INSTALLED BMPs. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND PERFORMANCE OF THE TEMPORARY EROSION CONTROL MEASURES THROUGHOUT THE DURATION OF THE PROJECT.
 7. GRADING LIMITS SHOWN ON THE PLANS DELINEATE BOUNDARIES FOR THE PROJECT. ALL EXISTING TREES TO BE REMOVED SHALL BE IDENTIFIED AND ERECTED ALONG THESE BOUNDARIES PRIOR TO COMMENCEMENT OF CONSTRUCTION. WITHIN THE CONSTRUCTION LIMITS, EXISTING VEGETATION SHALL BE PROTECTED TO THE EXTENT FEASIBLE. ALL EXISTING TREES SHALL BE PROTECTED UNLESS SHOWN ON THE PLANS TO BE REMOVED.
 8. ALL EXISTING TREES TO BE REMOVED SHALL BE IDENTIFIED AND ERECTED ALONG THESE BOUNDARIES PRIOR TO COMMENCEMENT OF CONSTRUCTION. WITHIN THE CONSTRUCTION LIMITS, EXISTING VEGETATION SHALL BE PROTECTED TO THE EXTENT FEASIBLE. ALL EXISTING TREES SHALL BE PROTECTED UNLESS SHOWN ON THE PLANS TO BE REMOVED.
 9. NO TREES OR WETLAND VEGETATION SHALL BE REMOVED UNLESS THEY ARE SHOWN AND NOTED TO BE REMOVED ON THE PLANS. GRAS DIRECTLY SPECIFIED TO BE REMOVED SHALL BE TRIMMED. NO GRADING SHALL TAKE PLACE WITHIN THE DRIP LINE OF TREES NOT TO BE REMOVED UNLESS OTHERWISE APPROVED.
 10. ALL BARRIEN AREAS AND AREAS DISTURBED BY CONSTRUCTION SHALL BE RESTORED TO ORIGINAL OR BETTER CONDITION. ALL BEST MANAGEMENT PRACTICES, APPLICATION OF MULCH/MAY ENHANCE VEGETATIVE ESTABLISHMENT.
 11. EXCAVATION EQUIPMENT SHALL BE LIMITED TO THE WORK AREA AS DEFINED IN THE PLANS TO MINIMIZE SITE DISTURBANCE. CONSTRUCTION WASTE AND LITTER (INCLUDING SAWDUST) OR EARTHEN MATERIALS TO THE SURFACE WATERS OF THE LAKE (TAHOE BASIN INCLUDING THIRD CREEK) IS PROHIBITED. ALL SURPLUS CONSTRUCTION WASTE MATERIALS SHALL BE REMOVED FROM THE PROJECT AND DEPOSITED ONLY AT APPROVED POINTS OF DISPOSAL.
 13. THE PROJECT AREA IS UNDER THE JURISDICTION OF THE TAHOE REGIONAL PLANNING AGENCY, NEVADA DEPARTMENT OF ENVIRONMENTAL PROTECTION, WASHOE COUNTY, AND IVIGD. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE APPLICABLE AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEWATERING THE PROJECT AREA PRIOR TO ANY CONSTRUCTION OPERATION REQUIRING DEWATERING.
 15. PRIOR TO COMMENCEMENT OF EARTH DISTURBING ACTIVITIES, TEMPORARY SILT BARRIERS SHALL BE INSTALLED ON THE DOWNHILL SIDE OF THE AREA OF DISTURBANCE OR AS SHOWN ON THESE PLANS. THESE BARRIERS SHALL BE KEPT IN PLACE AND MAINTAINED UNTIL THE DISTURBED AREA IS PERMANENTLY STABILIZED.
 16. CONSTRUCTION MATERIALS SHALL BE SECURED TO PREVENT THEM FROM ROLLING, WASHING, OR BLOWING OFF THE PROJECT SITE. REHABILITATION AND RESTORATION OF ALL CONSTRUCTION WASTE AND DEBRIS.



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Issued	By	App'd	Y/M/D	Revision	By	App'd	Y/M/D

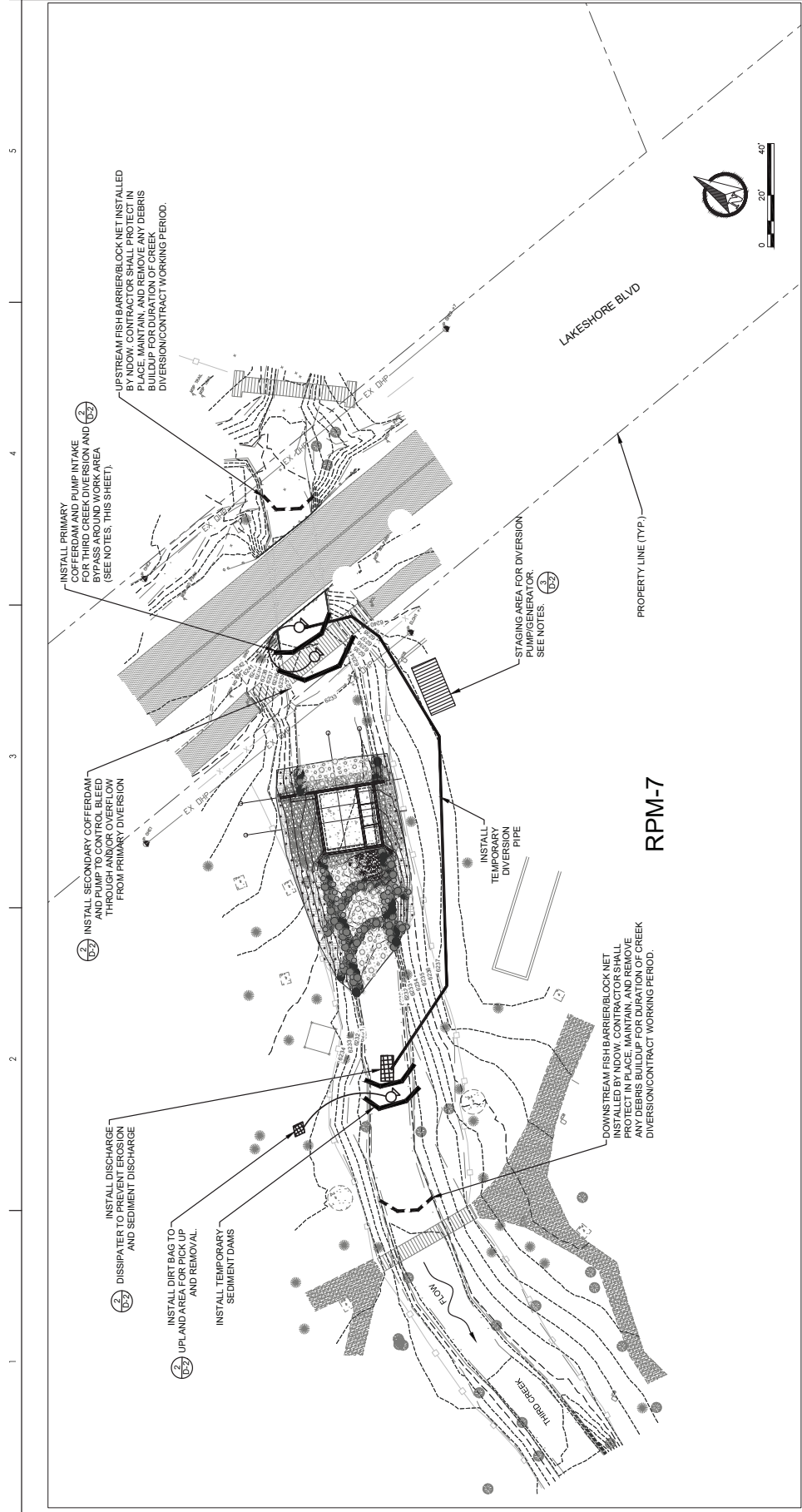
Permit/Seal

90% PLANS
 NOT FOR
 CONSTRUCTION

Client/Project
 NEVADA DEPARTMENT
 OF WILDLIFE
 MANAGEMENT
 THIRD CREEK FISHERIES
 STRUCTURE
 INCLINE VILLAGE, NEVADA

Title
 DEWATERING PLAN

Revision/0 Sheet: 5 of 16
 Drawing No.
DW-1



**DEWATERING
 PLAN VIEW
 HORIZONTAL SCALE: 1" = 20'**

LEGEND:

- TEMPORARY DIVERSION PIPE
- DISCHARGE DISSIPATER
- TEMPORARY DIVERSION DAM
- FISH SCREEN BARRIER
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR

NOTES:

- THIS PLAN SHEET IS A GENERAL SCHEMATIC FOR BIDDING PURPOSES ONLY. CONTRACTOR SHALL CONFORM TO CONTRACT DOCUMENTS AND PROJECT PERMITS FOR WORKING IN NEVADA.
- CONTRACTOR MUST SUBMIT A DETAILED DEWATERING/DIVERSION PLAN AND EQUIPMENT LIST. REFERENCE DRAFT SWPPP AND DEWATERING PLAN (CONTRACT DOCS) FOR ADDITIONAL INFORMATION AND HISTORICAL CREEK FLOWS, AND PROJECT REQUIREMENTS.
- LOCATION OF PIPE DISCHARGE OUTLETS AND DIRT BAGS MAY BE DIRECTED IN FIELD BY NDOW.
- CONTRACTOR SHALL BE RESPONSIBLE FOR MONITORING WEATHER AND SOIL MOISTURE PERIODS OF INCLEMENT WEATHER FOR USE DURING HIGH FLOW EVENTS. MOBILIZATION AND PAYMENT SHALL ONLY BE UPON AUTHORIZATION BY ENGINEER.

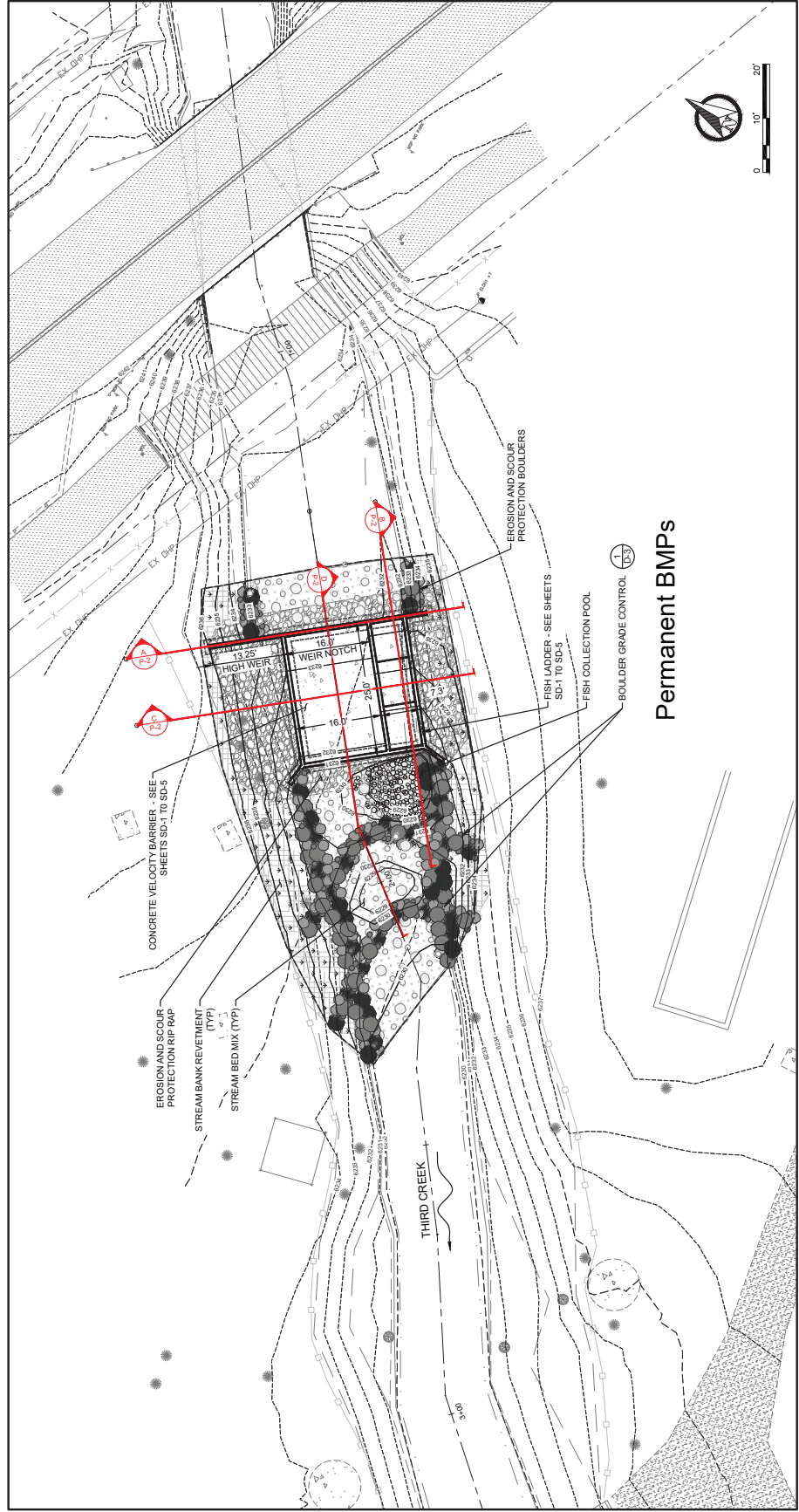
DEWATERING PUMP STAGING AREA FOR DIVERSION PUMP/GENERATOR

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 PRIOR TO ANY CONSTRUCTION WORK

Revision	By	App'd	YYYYMMDD

Permit/Seal
**90% PLANS
 NOT FOR
 CONSTRUCTION**

Client/Project: NEVADA DEPARTMENT OF WILDLIFE
 THIRD CREEK FISHERIES MANAGEMENT STRUCTURE
 INCLUDE VILLAGE, NEVADA
 Project No.: 185706712
 As Issued Date: 05/20/2020
 Scale: 1" = 10'
 Title: PLAN LAYOUT
 Revision: 06/16
 Drawing No.: P-1

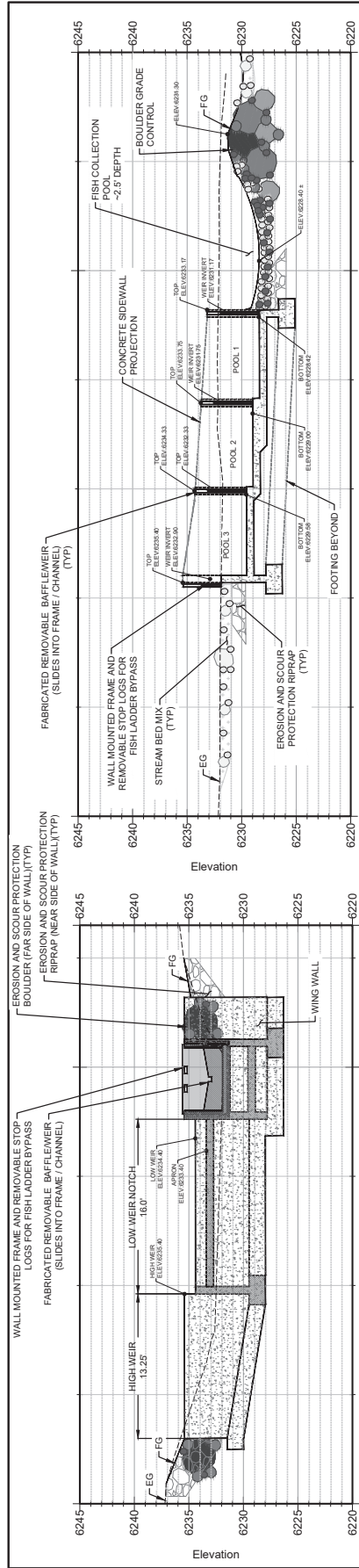


**VELOCITY BARRIER AND FISH LADDER
 PLAN VIEW
 HORIZONTAL SCALE: 1" = 10'**

LEGEND:

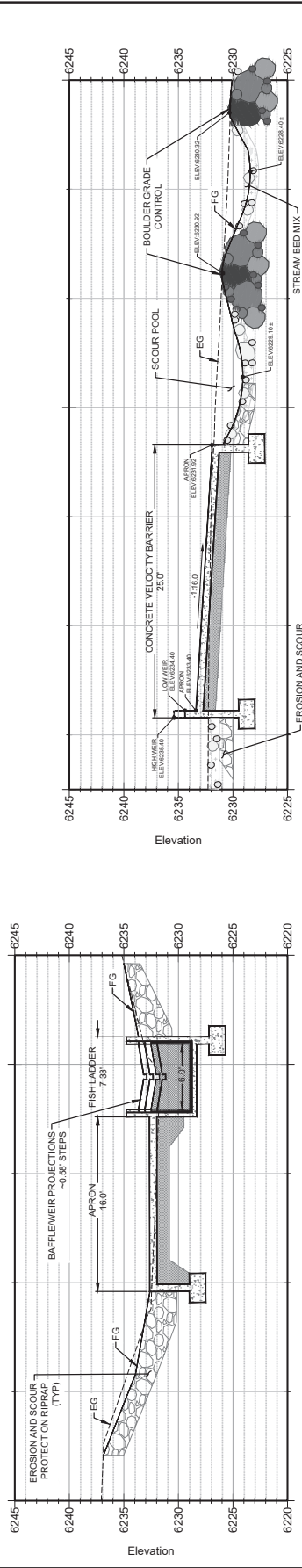
---	EXISTING CONTOUR (MAJOR)	---	PROPOSED CONTOUR (MAJOR)
- - -	EXISTING CONTOUR (MINOR)	- - -	PROPOSED CONTOUR (MINOR)
---	EXISTING WOOD FENCE	---	EXISTING ASPHALT PAVEMENT
---	EXISTING FENCE	---	EXISTING DIRT TRAIL
---	EXISTING ASPHALT PAVEMENT	●	EXISTING TREE
---	EXISTING DIRT TRAIL	---	EXISTING OVERHEAD POWER
---	EXISTING TREE	---	EX-OHP

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**WEIR SECTION
 SECTION A**

**FISH LADDER PROFILE
 SECTION B**



**VELOCITY BARRIER SECTION
 SECTION C**

**VELOCITY BARRIER PROFILE
 SECTION D**

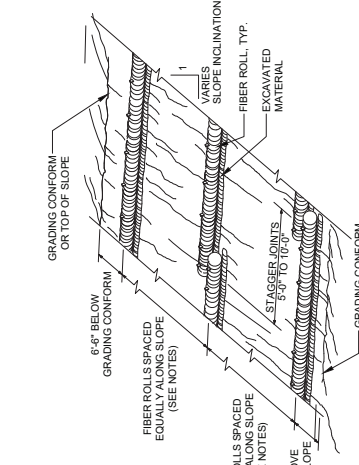
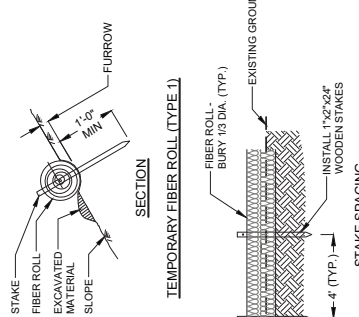
**VELOCITY BARRIER AND FISH LADDER
 SECTION VIEWS
 HORIZONTAL SCALE: 1" = 5'
 VERTICAL SCALE: 1" = 5'**

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Revision	By	App'd	Y/M/D

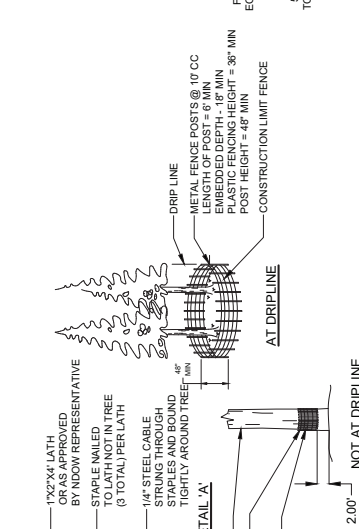
Permit/Spec: **90% PLANS NOT FOR CONSTRUCTION**

Project No.: 185709272
Scale: 1" = 20'
Date: 08/16/2018
Drawn: J. GARDNER
Checked: J. GARDNER
Title: **BMP DETAILS**
Revision: 8 of 16
Drawing No.: **D-1**



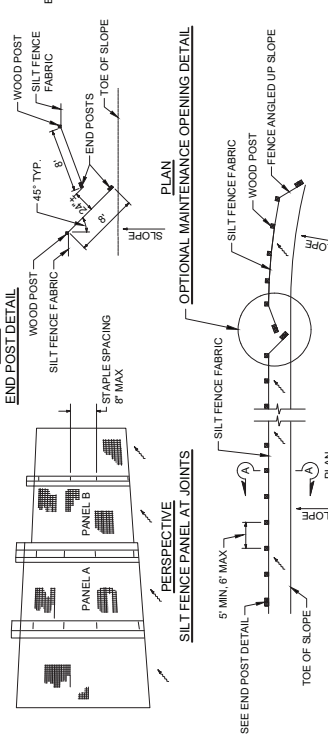
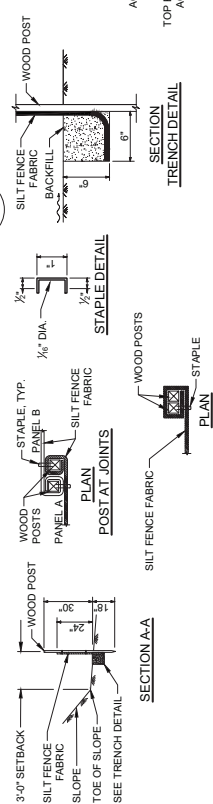
- NOTES:**
- TEMPORARY FIBER ROLL SPACING VARIES DEPENDING UPON SLOPE INCLINATION.
 - FIBER ROLLS SHALL BE COMPLETELY MADE OF BIO-DEGRADABLE MATERIAL.
 - PLACE GRAVEL BAGS OVER FIBER ROLL WHEN STAKES CANNOT BE USED DUE TO BEDROCK.
 - UPON DEMOBILIZATION FIBER ROLLS SHALL BE REMOVED FROM SITE. STRAW FROM FIBER ROLLS NOT TO BE SPREAD IN PLACE AS MULCHING MATERIAL.

TEMPORARY FIBER ROLL (TYPE 1)
NTS

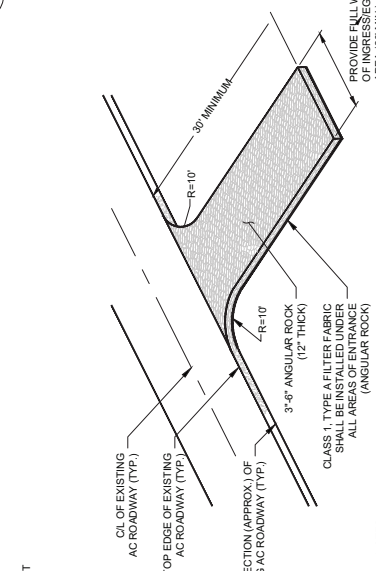


- NOTES:**
- CLF AND TREE PROTECTION FENCE SHALL BE A MINIMUM OF 48" HIGH. FOR TREES WITH DRIP LINES THAT OVERHANG THE CONSTRUCTION AREAS, THE LOCATION OF THE TREE PROTECTION FENCE SHALL BE ADJUSTED TO BE AT THE DRIP LINE.
 - THE DETAIL SHOWN IS FOR TREE PROTECTION MATERIAL AND SPACING SHOWN ALSO APPLIES TO CLF.
 - LEAVE 12" SPACING BETWEEN CONSTRUCTION LIMIT FENCE AND GROUND.

CONSTRUCTION LIMIT FENCE
NTS



TEMPORARY SILT FENCE
NTS



- NOTES:**
- A STABILIZED CONSTRUCTION INGRESS AND EGRESS IS REQUIRED AT ALL ENTRANCE/EGRESS FROM PAVED TO NON-PAVED AREAS. ALL AREAS SHALL BE PROPERLY GRAGED TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.
 - THE ENTRANCE SHALL BE CONSTRUCTED ON LEVEL GROUND.
 - PERIODIC TOP DRESSING WITH ADDITIONAL STONE SHALL BE PROVIDED TO ENSURE THE ENTRANCE REMAINS OPEN AND FUNCTIONING PROPERLY.
 - THE ENTRANCE SHALL BE INSPECTED WEEKLY AND AFTER EACH RAINFALL. SEE SWPPP.
 - ROCK MATERIAL SHALL BE ADDED WHEN SURFACE Voids ARE NOT VISIBLE.
 - ALL SEDIMENT DEPOSITS ON PAVED ROADWAYS SHALL BE REMOVED IMMEDIATELY.
 - ALL MATERIALS SHALL BE REMOVED AT COMPLETION OF CONSTRUCTION.

GRAVEL BAG CHECK DAM
NTS

STABILIZED TEMPORARY CONSTRUCTION ENTRANCE
NTS

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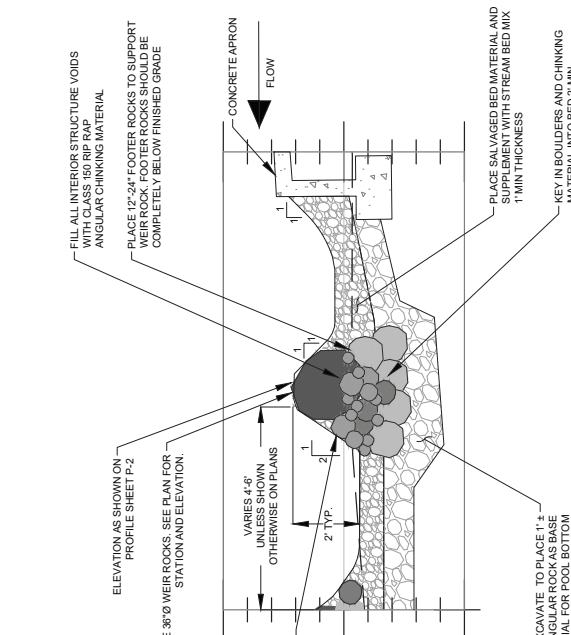
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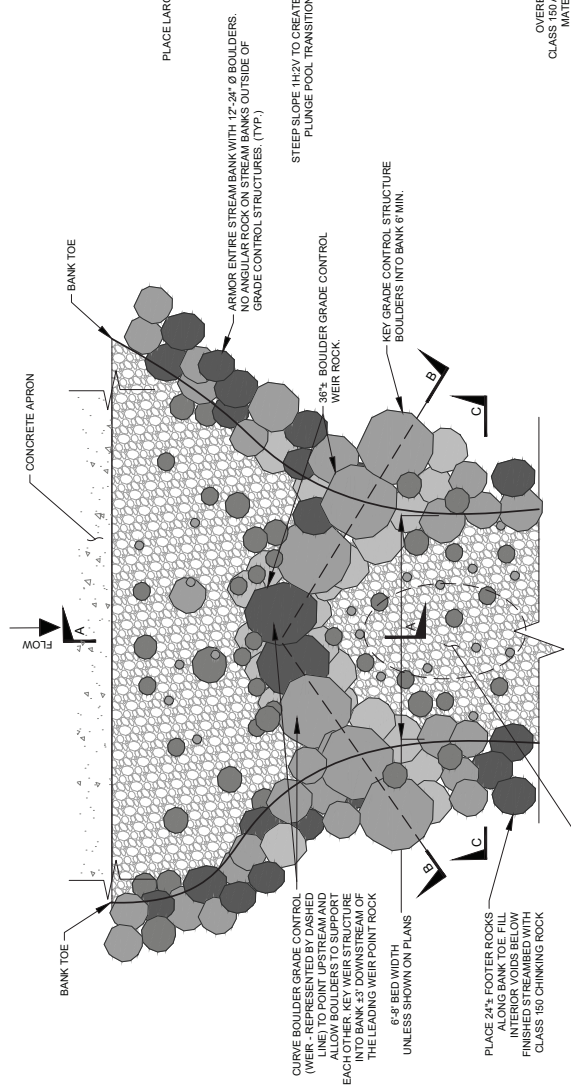
Permit/Seal
**90% PLANS
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CONSTRUCTION**

Client/Project
NEVADA DEPARTMENT
OF WILDLIFE
MANAGEMENT
THIRD CREEK FISHERIES
STRUCTURE
INCLUDE VILLAGE NEVADA

Title
**BOULDER GRADE
CONTROL DETAILS**
Drawing No. 10 of 16
D-3

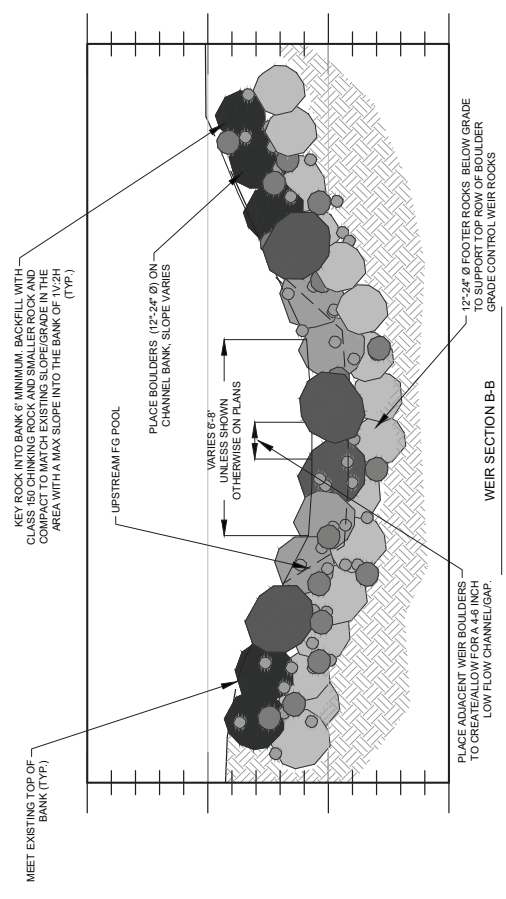


PROFILE SECTION A-A

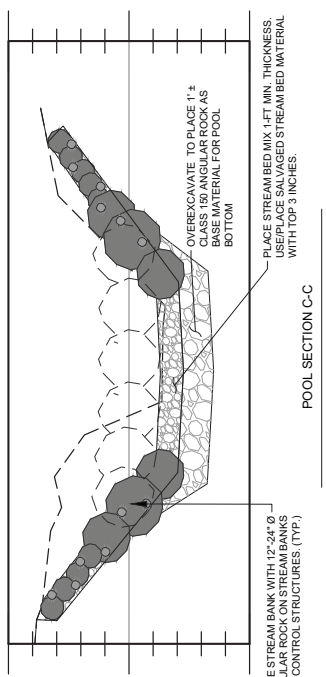


PLAN

- NOTES:
1. LARGE BOULDERS (36" Ø) PLACED TO FORM "V" IN GRADE CONTROL STRUCTURE SHALL BE PLACED (VERTICAL/ELEVATION) STARTING AT 4' OF CHANNEL.
 2. THE ELEVATION OF THE LARGE "WEIR" BOULDERS SHALL INCREASE GOING AWAY FROM THE CHANNEL Y, AND INTO THE EMBANKMENT.
 3. STRUCTURE SHALL BE PLACED TO MATCH EXISTING STREAM BED GRADATION, APPROXIMATELY:
 4. SEE PLAN FOR STATIONS AND ELEVATIONS.
 5. STREAM BED MIX (IMPORTED ROCK) TO MATCH EXISTING STREAM BED GRADATION, APPROXIMATELY:
40% 3" TO 5" (BY WEIGHT) GRAVEL
40% 5" TO 8" (BY WEIGHT) COBBLE
30% 8" TO 12" (BY WEIGHT) COBBLE



WEIR SECTION B-B



POOL SECTION C-C

BOULDER GRADE CONTROL

1
D-3

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PRIOR TO ANY CONSTRUCTION WORK

Revision	By	App'd	Y/M/D

Permit/Spec
**90% PLANS
 NOT FOR
 CONSTRUCTION**

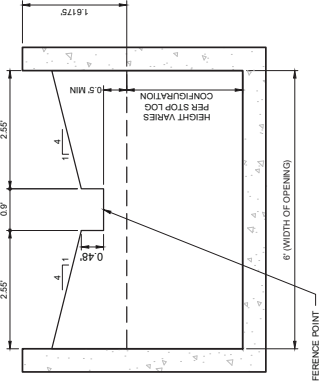
Client/Project
 NEVADA DEPARTMENT
 OF WILDLIFE
 THIRD CREEK FISHERIES
 MANAGEMENT
 STRUCTURE
 INCLUDE VILLAGE NEVADA

Project No.: 185706712
 Scale: 3/8" = 1'-0"
 Date: 08/01/20
 Drawn: JMM
 Check: JMM
 Title: STRUCTURE PLAN

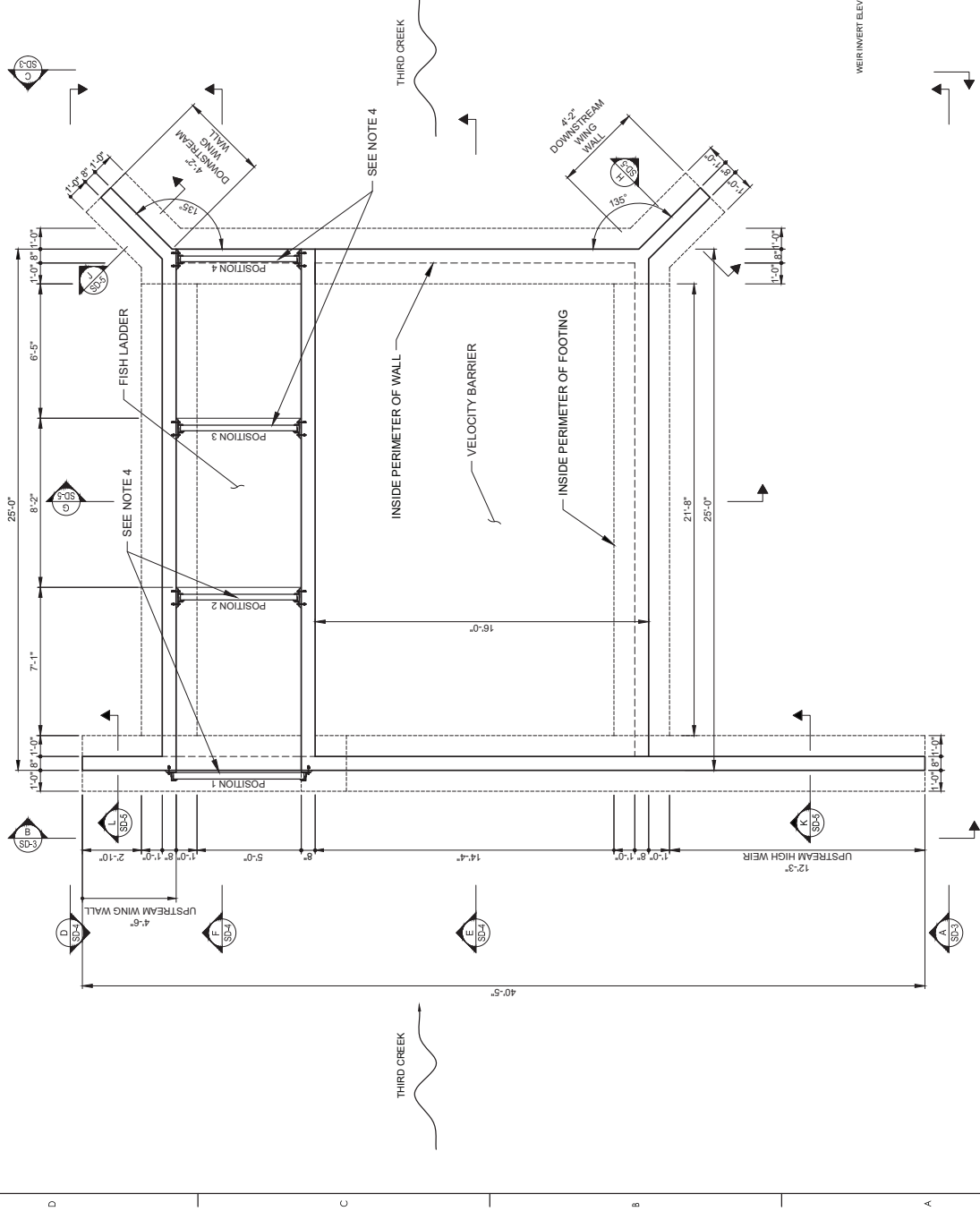
Revision: 0 Sheet: 13 of 16
 Drawing No. **SD-2**

- NOTES:**
- CONTRACTOR SHALL VERIFY EXISTING SITE CONDITION AND DIMENSIONS WITH DRAWINGS PRIOR TO ORDERING MATERIALS AND START OF CONSTRUCTION. DISCREPANCIES SHALL BE REPORTED IMMEDIATELY TO OWNER'S REPRESENTATIVE OR ENGINEER FOR FURTHER INSTRUCTION PRIOR TO PROCEEDING WITH CONSTRUCTION. THIS DRAWING IS NOT ALLOWED WITHOUT THE APPROVAL FROM THE ENGINEER.
 - FOR GENERAL NOTES SEE DRAWING SD-1.
 - SEE CIVIL DRAWINGS FOR EROSION AND SCOUR PROTECTION DETAILS AROUND THE STRUCTURE.
 - COORDINATE REMOVABLE STOP LOG GATE AND WEIR ATTACHMENT DETAILS WITH THE CIVIL DRAWINGS. THE CONTRACTOR SHALL VERIFY THE ENGINEER SHALL SIZE ANCHOR BOLTS ONCE REMOVABLE SLIDE GATE VENDOR DRAWINGS ARE AVAILABLE.
 - WATER CONTROL GATES SHALL BE WHIPPS, WATER CONTROL GATES (MODEL 1000) OR SLIDE GATES (MODEL 1000) - WALL MOUNTED OPTION AT (1-UPSTREAM WALL FACE POSITIONS), - CHANNEL MOUNTED AT (2, 3, 4- FISH LADDER POSITIONS).
 - CONTRACTOR SHALL COORDINATE AND SCHEDULE REINFORCING STEEL INSPECTIONS PRIOR TO CONCRETE PLACEMENTS. REINFORCING SHALL INCLUDE CHECKS FOR EPOXY COATING DAMAGE. ANY DAMAGE MUST BE REPAIRED WITH APPROVED EPOXY PATCHING PRIOR TO CONCRETE PLACEMENTS. CONTRACTOR SHOULD AVOID DRAGGING EPOXY COATED BARS ACROSS FORMS AND GROUND.

POSITION	STOP LOGS	BAFFLE/WEIR I.E.
1	1- 6" STOP LOG 2- 18" STOP LOG	1- (20'-24") CUSTOM BAFFLE/WEIR I.E. 6232.80
2	1- 6" STOP LOG 1- 12" STOP LOG	1- (20'-24") CUSTOM BAFFLE/WEIR I.E. 6232.33
3	2- 6" STOP LOG 1- 12" STOP LOG	1- (20'-24") CUSTOM BAFFLE/WEIR I.E. 6231.75
4	3- 18" STOP LOG	1- (20'-24") CUSTOM BAFFLE/WEIR I.E. 6231.17



CUSTOM BAFFLE / WEIR
 SCALE NTS



1
SD-2

VELOCITY BARRIER AND FISH LADDER STRUCTURAL PLAN
 SCALE: 3/8" = 1'-0"

*** CALL BEFORE YOU DIG ***
 CONTACT UNDERGROUND SERVICE ALERT (USA)
 PRIOR TO ANY CONSTRUCTION WORK



3590 KENNEDY BLVD, SUITE 100
 RICHMOND, BC V6X 4A6
 TEL: 1 778 850 0777
 WWW.STANTEC.COM

STANTEC
 CONSULTANT

PROJECT No.: 1852706712
 SHEET No.: 15 OF 16
 DRAWING No.: SD-4

PERMITTED
 90% PLANS
 NOT FOR
 CONSTRUCTION

NEVADA DEPARTMENT
 OF WILDLIFE
 MANAGEMENT
 THIRD CREEK FISHERIES
 STRUCTURE
 INCLUDE VILLAGE NEVADA

STRUCTURE SECTIONS
 SHEET 1

Revision: 01

DATE: 08/14/2024

BY: JMM/ALG

CHECK: JMM/ALG

DATE: 08/14/2024

SCALE: 3/8" = 1'-0"

PROJECT No.: 1852706712

PROJECT No.: 1852706712

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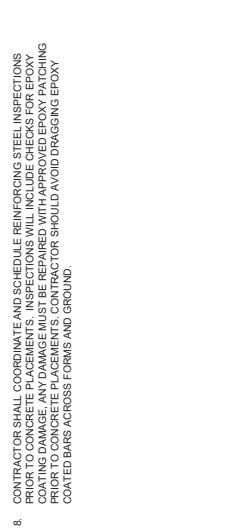
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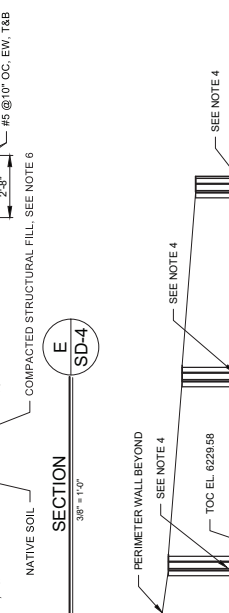
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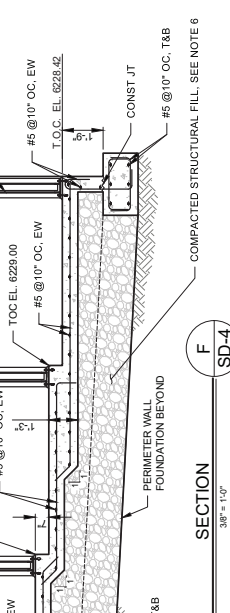
- NOTES:
- CONTRACTOR SHALL VERIFY EXISTING SITE CONDITION AND DIMENSIONS WITH DRAWINGS AND FIELD SURVEY. DISCREPANCIES SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER. NO FIELD CORRECTIONS SHALL BE MADE WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER. THE WORK SHALL BE PROTECTED FROM THE DRAWING IS NOT ALLOWED WITHOUT THE APPROVAL FROM THE ENGINEER.
 - FOR GENERAL NOTES SEE DRAWING SD-1.
 - SEE CIVIL DRAWINGS FOR EROSION AND SCOUR PROTECTION DETAILS AROUND THE STRUCTURE.
 - COORDINATE REMOVABLE STOP LOG GATE AND WEIR ATTACHMENT DETAILS (SEE SHEET D-4) TO CONCRETE STRUCTURE WITH VENDORS DRAWINGS. ENGINEER SHALL SIZE ANCHOR BOLTS ONCE REMOVABLE WEIR VENDOR DRAWINGS ARE AVAILABLE.
 - STRIP FOOTINGS CAN BE FOUNDED ON MEDIUM DENSE TO DENSE NATIVE GRANULAR SOILS OF PROPERLY COMPACTED GRANULAR FILL PLACED OVER UNDISTURBED NATURAL MATERIAL. INSPECTION AND APPROVAL OF SUBGRADE PREPARATION BY ENGINEER IS REQUIRED.
 - SEE GENERAL NOTES DRAWING SD-1 FOR COMPACTED STRUCTURAL FILL REQUIREMENTS.
 - THE MINIMUM CONCRETE COVER TO REINFORCING BARS SHALL BE PER DRAWING SD-1 TABLE 3 REQUIREMENTS.
 - CONTRACTOR SHALL COORDINATE AND SCHEDULE REINFORCING STEEL INSPECTIONS PRIOR TO CONCRETE PLACEMENTS. INSPECTIONS WILL INCLUDE CHECKS FOR EPOXY COATING DAMAGE. ANY DAMAGE MUST BE REPAIRED WITH APPROVED EPOXY PATCHING MATERIAL. THE CONTRACTOR SHOULD AVOID DRAGGING EPOXY COATED BARS ACROSS FORMS AND GROUND.



ELEVATION
 3/8" = 1'-0"



SECTION E
 3/8" = 1'-0"



SECTION F
 3/8" = 1'-0"

SD-4

VELOCITY BARRIER AND FISH LADDER STRUCTURAL SECTIONS

SD-4

* CALL BEFORE YOU DIG *
 CONTACT UNDERGROUND SERVICES ALERT (USA)
 PRIOR TO ANY CONSTRUCTION WORK

Revision	By	App'd	YYYY/MM/DD

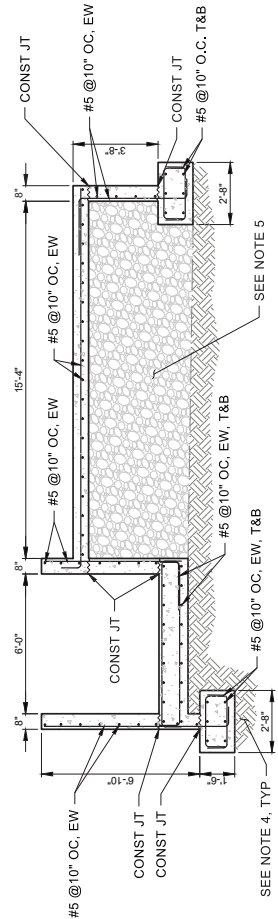
Permit/Spec
**90% PLANS
 NOT FOR
 CONSTRUCTION**

Client/Project
 NEVADA DEPARTMENT
 OF WILDLIFE
 MANAGEMENT
 THIRD CREEK FISHERIES
 STRUCTURE
 INCLINE VILLAGE, NEVADA

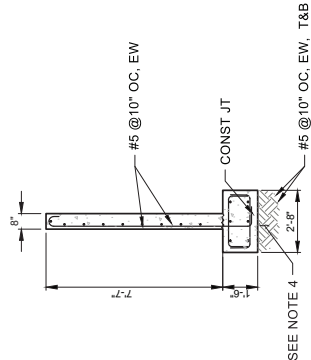
Project No.: 1852706712
 File Name: 1852706712.dwg
 Scale: 3/8" = 1'-0"
 Date: 08/08/2018
 User: JCH
 Title: STRUCTURE SECTIONS
 SHEET 2

Revision: 0 Sheet: 16 of 16
 Drawing No.: **SD-5**

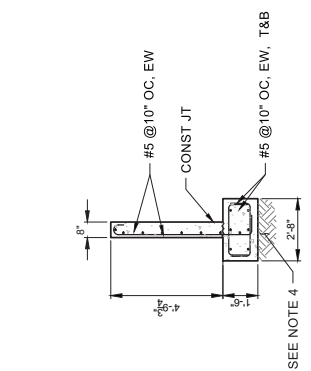
- NOTES:**
- CONTRACTOR SHALL VERIFY EXISTING SITE CONDITION AND DIMENSIONS WITH DRAWINGS PRIOR TO ORDERING MATERIALS AND START OF CONSTRUCTION. DISCREPANCIES SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER. ANY CHANGES TO THE DRAWINGS SHALL BE MADE BY INSTRUCTION PRIOR TO PROCEEDING WITH THE WORK. DEVIATION FROM THE DRAWING IS NOT ALLOWED WITHOUT THE APPROVAL FROM THE ENGINEER.
 - FOR GENERAL NOTES SEE DRAWING SD-1.
 - SEE CIVIL DRAWINGS FOR EROSION AND SCOUR PROTECTION DETAILS AROUND THE STRUCTURE.
 - STRIP FOOTINGS CAN BE FINISHED ON MEDIUM DENSITY TO DENSE NATIVE GRANULAR SOILS OF PROPERLY COMPACTED GRANULAR FILL PLACED OVER UNDISTURBED NATURAL MATERIAL. INSPECTION AND APPROVAL OF SUBGRADE PREPARATION BY ENGINEER IS REQUIRED.
 - SEE GENERAL NOTES DRAWING SD-1 FOR COMPACTED STRUCTURAL FILL REQUIREMENTS.
 - THE MINIMUM CONCRETE COVER TO REINFORCING BARS SHALL BE PER DRAWING SD-1 TABLE 3 REQUIREMENTS.
 - CONTRACTOR SHALL COORDINATE AND SCHEDULE REINFORCING STEEL INSPECTIONS PRIOR TO CONCRETE PLACEMENTS. INSPECTIONS WILL INCLUDE CHECKS FOR EPOXY COATING DAMAGE. ANY DAMAGE MUST BE REPAIRED WITH APPROVED EPOXY PATCHING. EPOXY PATCHING SHALL BE APPLIED TO ALL REINFORCING BARS AND COATED BARS ACROSS FORMS AND GROUND.



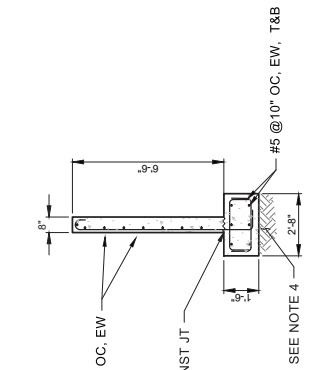
SECTION G
 3/8" = 1'-0"



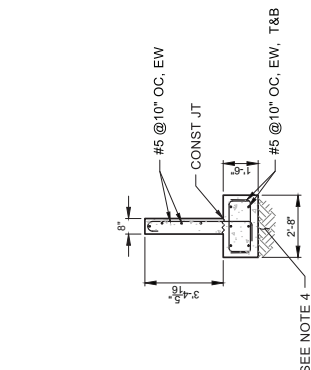
SECTION L
 3/8" = 1'-0"



SECTION K
 3/8" = 1'-0"



SECTION J
 3/8" = 1'-0"



SECTION H
 3/8" = 1'-0"

VELOCITY BARRIER AND FISH LADDER STRUCTURAL SECTIONS 1
 3/8" = 1'-0"

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 CONTRACT UNDERSTANDING: SEE ALERT USW
 1800.237.5800
 PRIOR TO ANY CONSTRUCTION WORK