PRIEST LAKE WATER MANAGEMENT PROJECT
OUTLET DAM IMPROVEMENTS

LOCATED MAP
NOT TO SCALE

OUTLET DAM IMPROVEMENTS
VICTORY MAP
NOT TO SCALE

OBLIQUE AERIAL PHOTO
NOT TO SCALE

DAM INFORMATION

Priest Lake Water Management Project
Outlet Dam Improvements

COVER SHEET / INDEX OF DRAWINGS

Priest Lake Water
Management Project
Outlet Dam Improvements

FOR BID
GENERAL NOTES

1. WORK DETAILED ON THE DRAWINGS AND APPROPRIATE ITEMS SPECIFIED IN THE SPECIFICATIONS CONSTITUTE THE CONTRACTOR'S SPECIFIED WORK. THE CONTRACTOR IS RESPONSIBLE FOR THE VERIFICATION OF THE CONTRACTOR'S SPECIFIED WORK AND THE COMPLETION OF ALL DRAWING WIPING, ADDITIONAL WORK AS REQUIRED TO PERFORM THE CONTRACTOR'S SPECIFIED WORK.

2. DRAWINGS TO BE READ IN CONJUNCTION WITH SPECIFICATIONS AND TO BE CONSTRUED IN A MANNER CONSISTENT WITH THE CONTRACTOR'S SPECIFIED WORK. THE CONTRACTOR SHALL PROVIDE THE RESPONSIBLE ENGINEER WITH A COMPLETE SET OF CONSTRUCTION DRAWINGS AND SPECIFICATIONS. THE CONTRACTOR SHALL ALSO PROVIDE A SET OF THE CONTRACTOR'S SPECIFIED WORK TO THE CONTRACTOR'S CONTRACTOR AS A COMPLETE SET OF MODIFICATIONS FOR ADDITIONAL WORK AS REQUIRED TO PERFORM THE CONTRACTOR'S SPECIFIED WORK, AND TO BE CONSTRUED IN A MANNER CONSISTENT WITH THE CONTRACTOR'S SPECIFIED WORK.

3. THE CONTRACTOR SHALL PROVIDE STATEMENT OF CONFIDENCE, TOGETHER WITH THE CONTRACTOR'S SPECIFIED WORK, TO THE CONTRACTOR'S CONTRACTOR AS A COMPLETE SET OF MODIFICATIONS FOR ADDITIONAL WORK AS REQUIRED TO PERFORM THE CONTRACTOR'S SPECIFIED WORK, AND TO BE CONSTRUED IN A MANNER CONSISTENT WITH THE CONTRACTOR'S SPECIFIED WORK.

4. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND UTILITIES WITHIN THE CONTRACTOR'S SPECIFIED WORK AND REPORT ALL SUCH CONDITIONS AND UTILITIES TO THE CONTRACTOR'S CONTRACTOR AS A COMPLETE SET OF MODIFICATIONS FOR ADDITIONAL WORK AS REQUIRED TO PERFORM THE CONTRACTOR'S SPECIFIED WORK, AND TO BE CONSTRUED IN A MANNER CONSISTENT WITH THE CONTRACTOR'S SPECIFIED WORK.

5. THE CONTRACTOR SHALL CONDUCT THEIR OPERATIONS IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL, STATE, AND FEDERAL CODES COVERING SUCH OPERATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE VERIFICATION OF THE LOCAL, STATE, AND FEDERAL CODES COVERING SUCH OPERATIONS AND THE CONTRACTOR SHALL PROVIDE THE RESPONSIBLE ENGINEER WITH A COMPLETE SET OF MODIFICATIONS FOR ADDITIONAL WORK AS REQUIRED TO PERFORM THE CONTRACTOR'S SPECIFIED WORK, AND TO BE CONSTRUED IN A MANNER CONSISTENT WITH THE CONTRACTOR'S SPECIFIED WORK.

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GENERAL NOTES - CONTD

CONCRETE NOTES

1. ALL STRUCTURAL CONCRETE WORK SHALL COMPLY WITH ACI 318-15 AND THE SPECIFICATIONS.

2. ALL REINFORCED CAST IN PLACE CONCRETE STRUCTURAL SHEET PILING SHALL COMPLY WITH THE REQUIREMENTS FOR STRUCTURAL CONCRETE "ACI 318-15, "AND "ACI DETAILING MANUAL" (ACI 349), EXCEPT AS MODIFIED BY THE CONTRACT DOCUMENTS AND GENERAL NOTES. REINFORCED CAST IN PLACE CONCRETE SHEET PILING STRUCTURAL SHEET PILING. REINFORCED CAST IN PLACE CONCRETE SHEET PILING STRUCTURAL SHEET PILING.

3. CONCRETE FOUNDATIONS SHALL MEET THE FOLLOWING MINIMUM REQUIREMENTS:

   a. PCI: SPCR 1/16" (MIN.)
   b. PCI: SPCR 1/16" (MIN.)

CONCRETE SHELLS SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTION E2030 CAST IN PLACE CONCRETE.

4. ALL REINFORCED CONCRETE SHELLS SHALL HAVE MINIMUM YIELD STRENGTH, 50,000 PSI AND SHALL BE NEW FORGER BITED CONCRETE SHELLS CONFORM TO ACI 318, GRADE 30, AND THE SPECIFICATIONS.

5. ALL DETAILING, BENEFITS AND SUPPORT OF REINFORCEMENT SHALL CONFORM TO THE STANDARD CASTING." 

6. CLEAR CONCRETE COVER OVER PRINCIPAL REINFORCEMENT SHALL BE 2" WHEN CONCRETE IS CAST AGAINST EXISTING STRUCTURAL CONCRETE OR 3" WHEN CAST AGAINST 3" OR OTHER LARGER REINFORCEMENT.

7. ALL STRUCTURAL CONCRETE MEMBERS SHALL BE CAST MONOLITHICALLY FOR THEIR FULL DEPTH, UNLESS OTHERWISE NEEDED.

8. ALL CONSTRUCTION JOINTS SHALL BE TAKEN WET AND SPLENDISHED WITH CEMENT GRASS JUST PRIOR TO PLACING NEW CONCRETE.

9. THE SPACING OF REINFORCING SHOWN ON THE CONTRACT DRAWINGS IS THE MAXIMUM PERMITTED. IT MAY BE REDUCED FOR CONSTRUCTION CONSIDERATIONS, BUT IS NOT TO BE EXCEEDED.

10. WHERE INDICATED ON THE PLAN, ALL STRUCTURAL CONCRETE MEMBERS SHALL BE REINFORCED TO THE DEPTH REQUIRED BY THE CONTRACT DOCUMENTS AND THE CONTRACTOR'S REPRESENTATIVE. BEFORE BEGINNING THE REINFORCING OPERATIONS, THE CONTRACTOR'S REPRESENTATIVE MUST INSPECT THE DRAWING TO ENSURE THAT THE REINFORCING MATERIALS ARE AVAILABLE AND SEQUENCE THE REMOVAL WORK TO THE OWNER'S REPRESENTATIVE FOR APPROVAL.

11. ALL EXPOSED EDGES OF CONCRETE BE REFORMED IN SUCH A MANNER AS NOT TO CAUSE DAMAGE TO EXISTING MEMBERS WHICH ARE TO REMAIN IN PLACE.

12. ALL FORMING HARDWARE SUCH AS TIES AND "THE ATs" THAT ARE TO REMAIN IN THE CONCRETE SHALL BE ELECTROPLATED OR MADE OF A NON-REMOVABLE PLASTIC MATERIAL TO PROTECT THEM FROM THE CONCRETE USED TO CAST.

13. THE DIAMETER OF THE DRILLED HOLE CORRECTION SHALL BE EMBRACE AS RECOMMENDED BY THE EPOXY MORTAR MANUFACTURER.

14. ALL CONCRETE ELEMENTS SHALL CONTAIN AN ENHANCEMENT ADVENTURE.

REINFORCING BAR EMBRACE/ LAP SPICE SCHEDULE

<table>
<thead>
<tr>
<th>BAR SIZE</th>
<th>EMBRACE TOP</th>
<th>LAP EMBRACE TOP</th>
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NOTES

1. TOP BARS ARE THOSE WHICH ARE ORIENTED HORIZONTALLY WITH THE FLANGED SIDES OF CONCRETE BEING THE BARE OF THE LINE.

2. SPICE BOTTOM BARS ARE SUPPORTS BARS

3. WHERE CONCRETE DEEPER THAN 3/4" USE AN EMBRACE/ LAP EMBRACE 6 X 6 X 1/2".

4. PROVIDE CONCRETE PROTECTION FOR THE EMBRACE/ LAP EMBRACE AS DESCRIBED IN CHAPTER 20.

5. EMBRACE/ LAP EMBRACE LENGTH SCHEDULE IS APPLICABLE TO ACI 318-15 OR EMBRACE/ LAP EMBRACE SCHEDULES.
NOTES

1. Topographic and bathymetry source, Mott MacDonald Data Collection, August-September 2018.
2. Horizontal datum navel, Idaho State Plane, West Zone
4. Aerial Source: Delphis, August 2018, UAV Aerial Photogrammetry.
Priest Lake Water Management Project
Outlet Dam Improvements

PHOTOS SHEET - EXISTING CONDITIONS 1

FOR BID

PH-1

376997  5  25
NOTE

1. FOR LOCATION OF GROUND PHOTOS 12, 13, AND 14, SEE DWG. C-1.
NOTES

1. Work activities shall occur within the defined limits of construction. Laydown and access area shown represent's general location available to contractor for storage of equipment, materials, and field offices. Limits of available laydown and access areas may vary and will be determined by owner's representative. Use of these areas shall be limited to storage of equipment and materials.

2. The contractor may use land creek lane for access to the site and laydown area but must take steps to minimize damage due to construction operations.

3. Contractors must not construct temporary staging or parking of any kind not allowed in the adjacent Kokanee Park or Hwy 57.

4. Contractor shall confine all remaining of equipment to the construction entrance pad area and submit a plan to be approved by the owner's representative.

5. Contractor shall not restrict access to Kokanee Park or Hwy 57 during construction. The contractor is responsible for ensuring access to Kokanee Park and Hwy 57 during construction.

6. During non-working hours, all construction equipment shall be stored in an area approved by the owner's representative.

7. All work areas shown are completely fenced conforming to OSH regulations. To the satisfaction of the owner's representative. To protect the public and prevent unauthorized entry. The cost of this work shall be included in the contractor's bid.

8. Contractor to verify availability of existing utilities and provide notice to owner to coordinate with existing utilities and operators.

9. The contractor shall ensure that all laydown and access areas including construction entrances to pre-existing conditions.

10. All portions of the laydown and access areas where traffic or loading compacts the native soil the contractor shall flow or till the area to a depth of 5 feet before being restored.

11. Any damage caused by the contractor to the existing facilities or paving shall be repaired to the satisfaction of the owner.

12. If necessary, the Idaho Transportation Department (ITD) at no additional cost to the owner shall be responsible for returning all laydown and access areas including construction entrances to pre-existing conditions.

13. All contractor shall not restrict access to Kokanee Park or Hwy 57.

14. This work shall be included in the contractor's bid.

LEGEND

- Property lines
- Ordinary high water (OHW)
- PDR Access Road
- Power line
- Power utility trench (verify in field)
- Sewer line (verify in field)
- Limits of construction
- Temporary fencing
- Silt fence
- Access gate
- Photo number (see Dwg. PH-2)
- Laydown and access area
- Temporary power and communications
- Light pole (verify in field)
- Existing swing gate
- Temporary construction entrance (30 ft wide and 60 ft long, see C-5)
- Provide new paved approach for dam construction is complete, see Dwg M-2

NOTES

1. Conduct utility locate for access road.
2. Develop construction easement protection plan and subtotal to owner for review.
3. Contractor shall place 24 inches or crushed gravel over the entire length of access road prior to mobilization.
4. Conduct pre-construction survey.
5. Implement and maintain protection measures.
6. Clear top and restore access corridor.
7. Contractor is responsible to improve and maintain the road for protection of utilities and restore to pre-project conditions at the end of construction.
8. See sheet C-5 for specifications for additional requirements.
DEWATERING PLAN 1
SK
FOR BID

LEGEND
- PROPERTY LINES
- ORDINARY HIGH WATER (OHW)
- ACCESS ROAD
- POWER LINE
- SEWER LINE (VERIFY IN FIELD)
- LIMITS OF CONSTRUCTION
- Silt Fence
- NEW ARMOR STONE
- NEW CONCRETE APRON
- TEMPORARY ACCESS ROAD
- ACCESS STRUCTURE SUPPORT
- TEMPORARY COFFERDAM
- APPROXIMATE OHW TO BE VERIFIED IN THE FIELD
- TEMPORARY COFFERDAM DESIGN, ALIGNED AND ELEVATED TO BE APPROVED BY THE OWNER'S REPRESENTATIVE IN ACCORDANCE WITH THE SPECIFICATIONS

DESIGNED FOR SEASONAL FLOW IN ACCORDANCE WITH THE SPECIFICATIONS
DEWATERING AND CONSTRUCTION PHASING NOTES

1. STREAM DIVERSION / DEWATERING

A. DIVERSION AND CARE OF WATER IS RECOMMENDED TO OCCUR IN THE FOLLOWING ORDER; HOWEVER, THE NUMBER OF PHASES SHALL BE DETERMINED BY THE CONTRACTOR.

1. CONTRACTOR SHALL PROVIDE STREAM DIVERSION AND CONTROL SETTLING BASIN AND PERFORM Dewatering FOR THE DURATION OF THE WORK IN PHASE 1 & 2 OF CONSTRUCTION.

2. CONTRACTOR SHALL DISCONTINUE PUMPING AND ALLOW THE COFFERDAM AREA TO FLOOD TO THE LEVEL OF THE ADJACENT POOL.

3. CONTRACTOR SHALL PROVIDE CLOTH AND SILT CURTAINS DURING ACCESS / STRUCTURE CONSTRUCTION.

4. CONTRACTOR SHALL PROVIDE CLOTH AND SILT CURTAINS DURING ACCESS / STRUCTURE CONSTRUCTION.

5. CONTRACTOR SHALL PROVIDE CLOTH AND SILT CURTAINS DURING ACCESS / STRUCTURE CONSTRUCTION.

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7. CONTRACTOR SHALL PROVIDE CLOTH AND SILT CURTAINS DURING ACCESS / STRUCTURE CONSTRUCTION.

8. CONTRACTOR SHALL PROVIDE CLOTH AND SILT CURTAINS DURING ACCESS / STRUCTURE CONSTRUCTION.

B. THE DIVERSION SYSTEM/TIMORARY COFFERDAM SHALL BE DESIGNED BY THE CONTRACTOR, SEE SPECIFICATIONS.

C. A TWO STAGE DEWATERING SYSTEM SHALL BE USED, SEE SPECIFICATIONS FOR WATER QUALITY REQUIREMENTS.

D. THE CONTRACTOR SHALL PROVIDE A COFFERDAM THAT WILL ALLOW FOR Dewatering AND CONSTRUCTION OF THE WORK WITHIN THE COFFERDAMS SHOWN IN THE PLAN. THE COFFERDAMS SHOWN ARE SCHEMATIC ONLY. ALL COFFERDAM DESIGNS, DETAILS, AND PLACEMENTS ARE THE RESPONSIBILITY OF THE CONTRACTOR. SEE SPECIFICATION FOR ADDITIONAL REQUIREMENTS.

E. THE CONTRACTOR SHALL HAVE A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF IDAHO PREPARE A SET OF COFFERDAM PLANS AND CALCULATIONS WHICH ARE TO BE SUBMITTED TO THE OWNERS REPRESENTATIVE FOR REVIEW AND APPROVAL. ALL PLANS AND CALCULATIONS SHALL BEAR THE SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER LICENSED IN THE STATE OF IDAHO PREPARING THE DOCUMENTS.

F. CONTRACTOR SHALL CONSTRUCT SEDIMENT TRAPS SO THEY ARE DRAWN BY GRAVITY FLOW OR MECHANICAL MEANS TO PREVENT TURBID WATER FROM ENTERING THE WORK. G. CONTRACTOR SHALL CONSTRUCT SEDIMENT TRAPS SO THEY ARE DRAWN BY GRAVITY FLOW OR MECHANICAL MEANS TO PREVENT TURBID WATER FROM ENTERING THE WORK. H. CONTRACTOR SHALL CONSTRUCT SEDIMENT TRAPS SO THEY ARE DRAWN BY GRAVITY FLOW OR MECHANICAL MEANS TO PREVENT TURBID WATER FROM ENTERING THE WORK. I. CONTRACTOR SHALL CONSTRUCT SEDIMENT TRAPS SO THEY ARE DRAWN BY GRAVITY FLOW OR MECHANICAL MEANS TO PREVENT TURBID WATER FROM ENTERING THE WORK.

J. CONTRACTOR SHALL CONSTRUCT A SPECIAL SEDIMENT TRAP BASIN TO PREVENT SEEPAGE AND BACKFILL WITH NATIVE STREAM GRAVEL.

K.合约商应设计临时的护埂系统，用于堵截水流。L.合约商应设计临时的护埂系统，用于堵截水流。M.合约商应设计临时的护埂系统，用于堵截水流。N.合约商应设计临时的护埂系统，用于堵截水流。O.合约商应设计临时的护埂系统，用于堵截水流。P.合约商应设计临时的护埂系统，用于堵截水流。Q.合约商应设计临时的护埂系统，用于堵截水流。R.合约商应设计临时的护埂系统，用于堵截水流。S.合约商应设计临时的护埂系统，用于堵截水流。T.合约商应设计临时的护埂系统，用于堵截水流。U.合约商应设计临时的护埂系统，用于堵截水流。V.合约商应设计临时的护埂系统，用于堵截水流。W.合约商应设计临时的护埂系统，用于堵截水流。X.合约商应设计临时的护埂系统，用于堵截水流。Y.合约商应设计临时的护埂系统，用于堵截水流。Z.合约商应设计临时的护埂系统，用于堵截水流。
1. Provide washdown area in accordance with ID standard drawings 212-4.

2. Drawing not to scale.

3. Temporary construction entrance in accordance with ID standard drawing 212-4.

4. See the general notes for temporary erosion control standard drawings 210-1.

5. Notes

6. Chain link fence detail

7. Silt fence detail

8. Silt fence lap detail

9. Silt fence spacing table

10. Construction Notes

11. Temporary Erosion & Sediment Control Details

12. Provide chain link fencing in accordance with the manufacturer’s instructions and specifications.

13. Dimensions shown are general guidelines.

14. Place sediment barriers to follow the slope contours. Metal posts or wood stakes may be used.

15. Ensure that runoff passes through the silt fence and not around the fence.

16. The need for temporary sediment control devices is determined by site design. Space silt fences in accordance with the silt fence spacing table.

17. Extend or join silt fence using silt fence lap with nested posts.

18. Remove sediment from the upstroke side of silt fences when accumulation has reached the effective height of the barrier.

19. Silt curtain shall be a maximum of 100 feet long for each section of curtain required. End sections shall terminate 10 feet beyond the limit of disturbance.

20. The silt curtain shall be placed as close to the work as possible without interfering with construction operations.

21. The silt curtain shall be removed by pulling toward the shore to minimize escape of sediments into the waterway.

22. The weighted anchoring system shall be a type that allows the curtain to conform to the contour of the bottom of the waterway.

23. Construction, disturbance, and laydown areas shown on plans are approximate and the contractor is responsible for the cost related to damages to the waterway at no additional cost to the owner if any of these areas are exceeded.

24. The contractor is responsible to ensure all areas of soil disturbance are stabilized during construction and whenever work is suspended on the project. Contractor shall seeded and reach these areas as requested by the owner’s representative at no additional cost to the owner.

25. Contractor shall not wash concrete trucks onto the bare ground. Directing into storm or sanitary systems including ditches, French drains, or adjacent properties. Excess concrete and wash water shall be collected in a wash basin and disposed of properly.

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NOTES

1. Tainter gate extension plates shall be continuous over the full width of the existing gates. The extensions shall be accurately fitted and bolt holes drilled in the shop for proper installation. (Field drilling of bolt holes in extension not allowed.) Bolt holes in existing tainter gate skin plates shall be field drilled using the strengthening component as a prepared template to ensure proper fitting of pieces. Contractor shall provide temporary lifting and shoring in order to prepare the extension shop drawings.

2. Contractor shall provide temporary lifting and shoring to support tainter gate during trunnion pin replacement. Contractor shall employ suitable equipment and methods so as not to damage or over stress any members in the tainter gates. All members in the tainter gate assembly shall be safely braced and firmly held in place until they can be respurred on the new trunnion pins.

3. The contractor shall prepare a set of detail plans and calculations for the structural lifting/shoring operations. The plans and calculations shall be stamped by an Idaho state license professional engineer. The plans shall include a detailed outline of the structural lifting/shoring procedure. The structural lifting system shall be designed in accordance with AASHTO LRFD specifications.

4. Structural lifting/shoring of tainter gates shall not be undertaken under any situation which would result in compromising its capacity, stability, or ability to operate.

5. Structural lifting/shoring of tainter gates shall only occur when corrosion is in place and in area that is dewatered. Structural lifting/shoring of tainter gates shall not be undertaken under any circumstance on gates that are still operational or in an area that is not dewatered outside the cofferdams.

6. The contractor's structural lifting and shoring plan shall include all details and design checks required to ensure the existing substructure remains stable.

7. The contractor shall provide temporary lifting/shoring to support tainter gates during trunnion pin replacement. The contractor shall employ suitable equipment and methods so as not to damage or over stress any members in the tainter gates. All members in the tainter gate assembly shall be safely braced and firmly held in place until they can be respurred on the new trunnion pins.

8. Contractor shall provide temporary lifting/shoring to support tainter gates during trunnion pin replacement. The contractor shall employ suitable equipment and methods so as not to damage or over stress any members in the tainter gate assembly. All members in the tainter gate assembly shall be safely braced and firmly held in place until they can be respurred on the new trunnion pins.

9. The contractor shall prepare a set of detail plans and calculations for the structural lifting/shoring operations. The plans and calculations shall be stamped by an Idaho state license professional engineer. The plans shall include a detailed outline of the structural lifting/shoring procedure. The structural lifting system shall be designed in accordance with AASHTO LRFD specifications.

10. Structural lifting/shoring of tainter gates shall not be undertaken under any situation which would result in compromising its capacity, stability, or ability to operate.

11. Structural lifting/shoring of tainter gates shall only occur when corrosion is in place and in area that is dewatered. Structural lifting/shoring of tainter gates shall not be undertaken under any circumstance on gates that are still operational or in an area that is not dewatered outside the cofferdams.

12. The contractor's structural lifting and shoring plan shall include all details and design checks required to ensure the existing substructure remains stable.

13. The contractor shall provide temporary lifting/shoring to support tainter gates during trunnion pin replacement. The contractor shall employ suitable equipment and methods so as not to damage or over stress any members in the tainter gate assembly. All members in the tainter gate assembly shall be safely braced and firmly held in place until they can be respurred on the new trunnion pins.

14. The contractor shall prepare a set of detail plans and calculations for the structural lifting/shoring operations. The plans and calculations shall be stamped by an Idaho state license professional engineer. The plans shall include a detailed outline of the structural lifting/shoring procedure. The structural lifting system shall be designed in accordance with AASHTO LRFD specifications.

15. Structural lifting/shoring of tainter gates shall not be undertaken under any situation which would result in compromising its capacity, stability, or ability to operate.

16. Structural lifting/shoring of tainter gates shall only occur when corrosion is in place and in area that is dewatered. Structural lifting/shoring of tainter gates shall not be undertaken under any circumstance on gates that are still operational or in an area that is not dewatered outside the cofferdams.

17. The contractor's structural lifting and shoring plan shall include all details and design checks required to ensure the existing substructure remains stable.

18. The contractor shall provide temporary lifting/shoring to support tainter gates during trunnion pin replacement. The contractor shall employ suitable equipment and methods so as not to damage or over stress any members in the tainter gate assembly. All members in the tainter gate assembly shall be safely braced and firmly held in place until they can be respurred on the new trunnion pins.

19. The contractor shall prepare a set of detail plans and calculations for the structural lifting/shoring operations. The plans and calculations shall be stamped by an Idaho state license professional engineer. The plans shall include a detailed outline of the structural lifting/shoring procedure. The structural lifting system shall be designed in accordance with AASHTO LRFD specifications.

20. Structural lifting/shoring of tainter gates shall not be undertaken under any situation which would result in compromising its capacity, stability, or ability to operate.

21. Structural lifting/shoring of tainter gates shall only occur when corrosion is in place and in area that is dewatered. Structural lifting/shoring of tainter gates shall not be undertaken under any circumstance on gates that are still operational or in an area that is not dewatered outside the cofferdams.

22. The contractor's structural lifting and shoring plan shall include all details and design checks required to ensure the existing substructure remains stable.

23. The contractor shall provide temporary lifting/shoring to support tainter gates during trunnion pin replacement. The contractor shall employ suitable equipment and methods so as not to damage or over stress any members in the tainter gate assembly. All members in the tainter gate assembly shall be safely braced and firmly held in place until they can be respurred on the new trunnion pins.

24. The contractor shall prepare a set of detail plans and calculations for the structural lifting/shoring operations. The plans and calculations shall be stamped by an Idaho state license professional engineer. The plans shall include a detailed outline of the structural lifting/shoring procedure. The structural lifting system shall be designed in accordance with AASHTO LRFD specifications.

25. Structural lifting/shoring of tainter gates shall not be undertaken under any situation which would result in compromising its capacity, stability, or ability to operate.

26. Structural lifting/shoring of tainter gates shall only occur when corrosion is in place and in area that is dewatered. Structural lifting/shoring of tainter gates shall not be undertaken under any circumstance on gates that are still operational or in an area that is not dewatered outside the cofferdams.

27. The contractor's structural lifting and shoring plan shall include all details and design checks required to ensure the existing substructure remains stable.
MISCELLANEOUS STEEL DETAILS

EXISTING UPSTREAM HAND RAIL REPLACEMENT DETAIL

EXISTING UPSTREAM RAILING

1. REMOVE AND REPLACE EXISTING 2" x 2" GALV. SQUARE HOLLOW TUBE RAIL DAMAGED BY LIGHTNING STRIKE - VERIFY SIZE IN FIELD

2. EXISTING 2" x 2" GALV. SQUARE HOLLOW TUBE RAIL - VERIFY SIZE IN THE FIELD

PROPOSED UPSTREAM HAND RAIL REPLACEMENT DETAIL

1. EXISTING 2" x 2" GALV. SQUARE HOLLOW TUBE RAIL TO REMAIN

2. HSS 2x2X GALVANIZED HOLLOW TUBE TOP RAIL REPLACEMENT - ADJUST RAIL SIZE TO MATCH EXISTING AS NEEDED

3. EX. CONCRETE KICK PLATE TO REMAIN

DETAILED SCALE 1" = 1/4"

TRUNNION PIN DETAIL

1. TRUNNION PIN DETAIL

2. CHAMFER .06" x 45° 2 PLCS

J-SEAL CORNER DETAIL

1. J-SEAL CORNER DETAIL

2. SHOP VULCANIZED JOINT

FOR BID

Priest Lake Water Management Project
Outlet Dam Improvements

MISCELLANEOUS STEEL DETAILS
NOTES:
1. CONTRACTOR SHALL PLACE CONCRETE APRON EXTENSION WITH APRON WALLS, UPSTAND, KEYWAY, AND FLOATING SLAB TO LIMITS IDENTIFIED. SEE DRAWINGS A-3 THRU A-5 FOR SECTIONS AND DETAILS.
2. CONTRACTOR SHALL PLACE ARMOR STONE DOWNSTREAM OF APRON EXTENSION EDGE TO LIMITS IDENTIFIED. SEE DRAWINGS A-2 FOR PLACEMENT DETAIL.
3. CONTRACTOR SHALL EXCAVATE, FLATTEN, AND PREPARE SUBGRADE BELOW THE APRON EXTENSION AND ARMOR STONE LIMITS AS INDICATED ON DRAWING A-2.
4. CONTRACTOR SHALL SEAL EXISTING CONTRACTION JOINTS AT THE 3 IDENTIFIED LOCATIONS ON THE PLAN. SEE DRAWING M-1 FOR DETAIL.
5. CONTRACTOR SHALL REPAIR DETERIORATED AREA OF CONCRETE ON PIER 6 AS INDICATED ON DRAWING P-1.
6. CONTRACTOR SHALL REPAIR EXPANSION JOINT BETWEEN EXISTING ABUTMENTS AND WING WALLS AT ALL 4 LOCATIONS FOR THE FULL HEIGHT OF THE WALL. SEE DRAWING M-1 FOR DETAIL.
7. CONTRACTOR TO LOCATE CONTRACTION JOINTS IN APRON EXTENSION TO MATCH EXISTING CONTRACTION JOINT LOCATION. SEE DRAWING A-5 FOR DETAIL.
8. CONTRACTOR TO REMOVE AND REPLACE EXISTING STREAM GAUGE ON THE NORTH ABUTMENT AND INSTALL A NEW STREAM GAUGE ON THE SOUTH ABUTMENT. SEE DRAWING M-1 FOR DETAIL.
9. CONTRACTOR TO LOCATE CONSTRUCTION JOINTS IN APRON EXTENSION AS INDICATED ON PLAN WITH CJ. SEE DRAWING A-5 FOR DETAIL.
3. Existing streambed material to be excavated to the top of bedding line. If excess material meets the requirements of armor stone or streambed fill material, contractor shall relocate and reset material to fill deeper voids below the top of bedding line or scour holes as directed by owner’s representative. Suitability of material determined by owner’s representative. If determined material is unacceptable, owner’s representative shall provide new material at no additional cost to owner.

4. Install Class C nonwoven geosynthetic fabric with moderate survivability between native subgrade and bedding stone for underground drainage/filtration per specification section 20332 armoring stone.

5. Place bedding stone directly beneath apron extension and armor rock to limits identified on plan and in section. Aggregates used shall be free of adverse contaminants and deleterious materials such as organic or construction materials. Contractor is responsible for estimating quantities of excavation and fill that may be needed for any additional costs associated with additional excavation on fill that may be needed during construction at no additional cost to the owner.

6. Place armor stone on bedding stone to top of proposed concrete upstand for limits identified. Armor stone material and gradation shall meet the requirements listed in specification section 20332 armor stone.

NOTES:
1. Existing streambed shown is not representative of actual grade. It is exaggerated to illustrate potential field conditions that could be encountered. The contractor is responsible for verifying these conditions in the field.

2. Existing streambed excavation depth provided as an approximate to facilitate contractors' bid. Spot elevations of existing streambed can be found on drawings C-2 & C-3 to provide the contractor a more comprehensive depiction of existing streambed elevation variations. Contractors are responsible for estimating quantities of excavation and fill that may be needed for any additional costs associated with additional excavation on fill that may be needed during construction at no additional cost to the owner.

3. Form and full undermining with lean concrete or as directed by the owner’s representative.

4. Existing concrete apron.

5. Maximum limits of excavation.


7. Subgrade graded to a flat firm condition. Voids shall be filled with compacted structural fill or as directed by owner’s representative.


10. Drain pipe cap.

APRON REINFORCING PLAN

POUR 5 AND 6 SHOWN. POUR 4 SIMILAR TO POUR 5 AND POURS 1, 2, 3, 7 AND 8 SIMILAR TO POUR 6

POUR 5
POUR 6

1 21

EXIST.  NORTH ABUTMENT DOWNSTREAM RINGWALL

EXIST.  SOUTH ABUTMENT DOWNSTREAM RINGWALL

EXIST.  NORTH ABUTMENT END WALL

EXIST.  SOUTH ABUTMENT END WALL

EXIST.  NORTH ABUTMENT END WALL

EXIST. APRON

APRON WALL

APRON WALL

CONSTRUCTION JOINT

CONSTRUCTION JOINT

APRON EXTENSION

1 21

#4 GREASED DOWELS @ 18" (16" LONG)

#6 DOWELS @ 12" (36" LONG)

#6 DOWELS @ 12" (36" LONG)

1'-0"

2'-0"

3'-0"

4'-0"

5'-0"

6'-0"

12" FLOATING SLAB

UPSTAND BACK EDGE

1'-6"

7'-3"

UPSTAND

1'-0"

2'-0"

3'-0"

4'-0"

5'-0"

6'-0"

12" FLOATING SLAB

UPSTAND BACK EDGE

#6 DOWELS @ 12" (36" LONG)

#6 DOWELS @ 12" (36" LONG)

#6 DOWELS @ 12" (36" LONG)

1'-0"

2'-0"

3'-0"

4'-0"

5'-0"

6'-0"

12" FLOATING SLAB

UPSTAND BACK EDGE

1'-6"

7'-3"

CONTRACTION JOINT

EXISTING CONTROL JOINT

EXIST.  NORTH ABUTMENT END WALL

EXIST.  SOUTH ABUTMENT END WALL

EXIST. NORTH ABUTMENT

EXIST. PIER 1

EXIST. PIER 2

EXIST. SOUTH ABUTMENT

EXIST.  NORTH ABUTMENT END WALL

EXIST.  SOUTH ABUTMENT END WALL

EXIST.  NORTH ABUTMENT END WALL

EXIST. APRON

APRON WALL

APRON WALL

CONSTRUCTION JOINT

CONSTRUCTION JOINT

APRON EXTENSION

1 21

#4 GREASED DOWELS @ 18" (16" LONG)

#6 DOWELS @ 12" (36" LONG)

#6 DOWELS @ 12" (36" LONG)

1'-0"

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5'-0"

6'-0"

12" FLOATING SLAB

UPSTAND BACK EDGE

1'-6"

7'-3"

CONTRACTION JOINT

EXISTING CONTROL JOINT

EXIST.  NORTH ABUTMENT END WALL

EXIST.  SOUTH ABUTMENT END WALL

EXIST. NORTH ABUTMENT

EXIST. PIER 1

EXIST. PIER 2

EXIST. SOUTH ABUTMENT

EXIST.  NORTH ABUTMENT END WALL

EXIST. APRON

APRON WALL

APRON WALL

CONSTRUCTION JOINT

CONSTRUCTION JOINT

APRON EXTENSION

1 21

#4 GREASED DOWELS @ 18" (16" LONG)

#6 DOWELS @ 12" (36" LONG)

#6 DOWELS @ 12" (36" LONG)

1'-0"

2'-0"

3'-0"

4'-0"

5'-0"

6'-0"
1. **NOTES**

1. **REMOVAL OF STRUCTURAL CONCRETE SHALL BE A MINIMUM OF 4" OR TO SOUND CONCRETE.** IF POOR CONDITION CONCRETE EXTENDS BEYOND THE 6" REMOVAL LIMIT, THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE BEFORE REMOVING ADDITIONAL CONCRETE TO REACH SOUND CONCRETE.

2. **CONTRACTOR TO MAINTAIN AND PROTECT EXISTING REINFORCEMENT.**

3. **SAW CUT HORIZONTALLY THE EXISTING WALL AS DIMENSIONED ON THE EXISTING ELEVATION THIS SHEET. SAW CUT LINE SHALL BE CUT LEVEL AND PARALLEL WITH EXISTING PIER PROFILE.**

4. **REMOVE THE LOOSE AND UNSOUND CONCRETE ON THE PIER FACE WITHIN THE LIMITS IDENTIFIED IN ELEVATION.**

5. **MECHANICALLY PREPARE CONCRETE SURFACE TO ENSURE BONDING OF REPAIR MATERIAL.**

6. **PREPARE AND APPLY BONDING AGENT TO ROUGHENED CONCRETE SURFACE WITHIN LIMITS OF PARTIAL DEPTH REPAIR IDENTIFIED ON WALL ELEVATIONS IN ACCORDANCE WITH THE BONDING AGENTS MANUFACTURER RECOMMENDED SPECIFICATIONS.**

7. **FORM AND POUR REPAIR CONCRETE WITHIN THE LIMITS OF THE PARTIAL DEPTH REPAIR IDENTIFIED IN ELEVATION.**

**EXISTING ELEVATION - PIER 6**

**PROPOSED ELEVATION - PIER 8**

- **EXISTING CONCRETE PIER**
- **EXISTING Tainter Gate Assembly**
- **EXISTING CONCRETE APRON**
- **EXISTING REINFORCEMENT TO REMAIN - SEE NOTE 2**
- **EXISTING REINFORCEMENT CLEANED AND MAINTAINED IN PLACE**
- **APPLICATION of BONDING and ANTI-CORROSION AGENT TO SUBSTRATE - SEE NOTE 4**
- **EXISTING REINFORCEMENT EXPOSED AND DAMAGED DURING CONCRETE REMOVAL**
- **NEW #5 REINFORCEMENT DRILLED AND GROUTED INTO EXISTING CONCRETE MIN. OF 30" BELOW ANY NEW OR EXISTING CONSTRUCTION JOINT**

**EXISTING REPAIR DETAIL - 1**

- **REINF. EXPOSED, NO DAMAGE**
- **NOT TO SCALE**

**EXISTING REPAIR DETAIL - 2**

- **REINF. EXPOSED AND DAMAGED**
- **NOT TO SCALE**

**CONCRETE REPAIR DETAIL - 1**

- **REINF. EXPOSED, NO DAMAGE**
- **NOT TO SCALE**

**CONCRETE REPAIR DETAIL - 2**

- **REINF. EXPOSED AND DAMAGED**
- **NOT TO SCALE**

**NOTES**

1. **REMOVAL OF STRUCTURAL CONCRETE SHALL BE A MINIMUM OF 4" OR TO SOUND CONCRETE.** IF POOR CONDITION CONCRETE EXTENDS BEYOND THE 6" REMOVAL LIMIT, THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE BEFORE REMOVING ADDITIONAL CONCRETE TO REACH SOUND CONCRETE.

2. **CONTRACTOR TO MAINTAIN AND PROTECT EXISTING REINFORCEMENT.**

3. **SAW CUT HORIZONTALLY THE EXISTING WALL AS DIMENSIONED ON THE EXISTING ELEVATION THIS SHEET. SAW CUT LINE SHALL BE CUT LEVEL AND PARALLEL WITH EXISTING PIER PROFILE.**

4. **REMOVE THE LOOSE AND UNSOUND CONCRETE ON THE PIER FACE WITHIN THE LIMITS IDENTIFIED IN ELEVATION.**

5. **MECHANICALLY PREPARE CONCRETE SURFACE TO ENSURE BONDING OF REPAIR MATERIAL.**

6. **PREPARE AND APPLY BONDING AGENT TO ROUGHENED CONCRETE SURFACE WITHIN LIMITS OF PARTIAL DEPTH REPAIR IDENTIFIED ON WALL ELEVATIONS IN ACCORDANCE WITH THE BONDING AGENTS MANUFACTURER RECOMMENDED SPECIFICATIONS.**

7. **FORM AND POUR REPAIR CONCRETE WITHIN THE LIMITS OF THE PARTIAL DEPTH REPAIR IDENTIFIED IN ELEVATION.**
EXPANSION JOINT REPAIR PROCEDURE

1. REMOVE EXISTING JOINT SEAL OR MASTIC TO A MINIMUM DEPTH OF 2".
2. INSTALL BACKER ROD AND JOINT SEAL AS PER MANUFACTURERS RECOMMENDATIONS.
4. PERFORM SEALING ON BOTH THE DOWNSTREAM EXPANSION JOINT (SHOWN) AND THE UPSTREAM WINGWALL EXPANSION JOINT (NOT SHOWN).
5. INSTALL PROPOSED HYDROPHYLIC SEALER. USE SIKA HYDROTITE OR APPROVED EQUAL AS PER MANUFACTURERS RECOMMENDATION.

STREAM GAUGE NOTES

1. STREAM GAUGE SHALL BE CONSTRUCTED OF A DURABLE FIBERGLASS COMPOSITE TO ENSURE IT WILL NOT BE DAMAGED DUE TO IMPACT, ROT OR RUST.
2. CONTRACTOR SHALL ATTACH GAUGE TO UPSTREAM FACE WITH STAINLESS STEEL ANCHORS.
3. STREAM GAUGE SHALL BE COATED WITH A NON-GLARE COATING.
1. **Construction Approach** in accordance with ITS standard plans.
2. Coordinate grades with adjacent existing approaches and roadways.
3. Provide granular subbase and aggregate base course on compacted subgrade in accordance with ITS specification sections 301 and 303, respectively.
4. Provide HMA road mix pavement in accordance with ITS specification section 406.

**Notes**

- **Time:** 6/25/20
- **For Bid:** 

**Multiple Figures**

1. **Approach Plan**
2. **Typical Section**