Permit Fees _____
Filing Fee _____
TOTAL _____

Application # _____
Date Submitted _____
Date Approved _____

# ~ ~ Town of Calais Zoning Permit Application ~ ~

**3120 Pekin Brook Road, East Calais, VT 05650**

**Applicant** Curtis Pond Association **Property Owner** _____

**Address** c/o Colleen Bloom **Property Address** 86 Worcester Rd Calais VT
PO Box 162 Calais VT 05648

**Phone (H)** _____ **(W)** 802-272-6441 **Tax Parcel ID No.** 120-037-10404

**E-Mail Address** _____ **Acreage** .52

**Feet of Road Frontage** 322

**A. Proposed Development - construction, addition, etc.** - *attach narrative page if necessar*

| *Include footprint and dimensions of proposed construction* |
|---|
| See attached written description and design plans |
| |

**B. Proposed Change of Use, Conditional Use, or Right of Way**

| |
|---|
| NA |
| |

**C. Minor Subdivision - see Article 6 - especially 6.2 (c State permit #**

| *Include acreage and road frontage for each lot* |
|---|
| NA |
| |

***CHECK BELOW FOR OTHER NECESSARY PERMITS OR FORMS***
***Application is not complete without approved Curb Cut***

| | Permit No. | Approval Date |
|---|---|---|
| Curb Cut Permit - from Selectboard | | |
| **State Septic Permits required prior to construction** | | |

***WARNING: State permits may be required for this project. Call 802-476-0195 for wastewater specialist; 802- 476-0190 for environmental specialist before beginning project.***

| | | | |
|---|---|---|---|
| Conditional Use | X | Change of Use | |
| Variance | | Right of Way | |

**D. *CHECK YOUR ZONING DISTRICT AND OVERLAY DISTRICT***

| ***ZONING DISTRICT*** | |
|---|---|
| *Village* | |
| Rural Residential | |
| Resource Recreational | |
| Shoreland | X |

| **OVERLAY DISTRICT** | |
|---|---|
| None | |
| Floodplain | X |
| Upland | |
| Design Control District | |

**E.**

| **Present Building(s)** | **length** | **width** | **neigh t** | **barm s** | **baths** | **use(s)** |
|---|---|---|---|---|---|---|
| | | | | | | |
| | | | | | | |
| | | | | | | |

Application#_____

## F. SITE SKETCH

Please use the space below or your own space to sketch your property.
You are expected to provide the following information.

- [X] property lines and lengths
- [X] existing and/or proposed structures - including footprint and dimensions
- [NA] existing and/or proposed waste disposal
- [NA] existing and/or proposed water supply
- [X] existing and/or proposed rights-of-way
- [X] existing and/or proposed driveway
- [X] distance from structures/driveway to public road
- [X] distance from structures/waste disposal to any streams, ponds, and wetlands
- [X] distance from structures/waste disposal to property lines
- [NA] existing and/or proposed parking
- [NA] power lines

Application #_____

## G. Permission to Enter Property & Applicant Certification Signatures

Signing of this application authorizes the Zoning Administrator to enter onto the premises for the purpose of verifying information presented.

The undersigned hereby certifies that the information submitted in this application regarding the property is true, accurate and complete and that I (we) have full authority to request approval for the proposed use of the property and any proposed structures. I (we) understand that any permit will be issued in reliance on the above representations and will be automatically void if any are untrue or incorrect.
***The permit is also void if the development under this permit is not begun within 18 months of the approved permit.***

***THIS APPLICATION MUST BE SIGNED BY ALL OWNERS OF THE PROPERTY***

Signature of owner(s) of property:_____Date:_____

_____Date:_____

Signatures of applicant(s) other than property owner:

_____Date:_____

_____Date:_____

***NOTE: Failure to develop your property in accordance with your application and any conditions of this permit may result in an enforcement action and may affect your ability to sell or transfer clear title to your property.***

**Please return completed form to:**

Zoning Administrator
3120 Pekin Brook Road
East Calais, VT 05650

Permit Fee _____ Application #_____
Filing Fee _____ Date Submitted_____

## ADMINISTRATIVE OFFICER ACTIONS

Owner_____ Applicant:_____
Zoning District:_____ Overlay:_____

**Application must be referred to DRB for approval of:**

| | | |
|---|---|---|
| Date: _____ | ☐ | Conditional Use Approval |
| Date: _____ | ☐ | Variance Approval |
| Date: _____ | ☐ | Subdivision Approval |
| Date: _____ | ☐ | Right-of-Way Approval |
| Date: _____ | ☐ | Design Review District Approval |
| Date: _____ | ☐ | Change of Use Approval |

Administrative Officer_____ Date:_____

**DEVELOPMENT REVIEW BOARD ACTION**

| | | |
|---|---|---|
| Approval Date:_____ | **Conditional Use** | Denial Date:_____ |
| Approval Date:_____ | **Variance** | Denial Date:_____ |
| Approval Date:_____ | **Subdivision** | Denial Date:_____ |
| Approval Date:_____ | **Right-of-Way** | Denial Date:_____ |
| Approval Date:_____ | **Design Review Dist.** | Denial Date:_____ |
| Approval Date:_____ | **Change of Use** | Denial Date:_____ |

**FINAL ADMINISTRATIVE OFFICER ACTION ON ZONING PERMIT # _____**

***APPROVED:***
***Date:_____ Administrative Officer Signature_____***

***_____ with conditions*** ***_____ without conditions***

***DENIED:***
***Date:_____ Administrative Officer Signature_____***
***Reason for denial:_____***
_____

RECORDED:_____ _____ _____
Date Time Town Clerk

Town of Calais, VT
Curtis Pond Dam Improvements
**Update Construction Documents and Permitting**

**Project Objective:** Prepare "bid-ready" construction documents and submit associated permit applications for the rehabilitation of the Curtis Pond Dam.

**Existing Dam Status:** The existing dam is deteriorating and does not meet minimum dam safety standards, including spillway hydraulic capacity and subject to overtopping and potential failure. Prior hydrologic and hydraulic analyses indicate the dam is subject to overtopping by storm events at and in excess of the 50-year return frequency. The dam has a Significant hazard classification and based on VT Dam Safety guidelines, should be able to pass a 1,000-year storm frequency and meet applicable stability criteria.

**Project Description:** The project consists of constructing a new concrete wall along the upstream face of the existing, 120-ft long, 11-ft high stone dam. The new concrete wall will have footings anchored into the underlying bedrock with post tensioned rock anchors. The new wall will be designed to remain stable during design loading conditions, such as the IDF hydrostatic event, ice and seismic loading events. A new low-level drain will be added for safety. In addition, the VT Dam Safety Program has indicated a requirement to provide overtopping protection of the existing dam.

The existing dam is to remain in place, and would require reconstruction if it were to fail in a future storm event. While the new concrete wall will be designed to remain stable during the loading conditions, the existing dam, in the event if its failure, would be reconstructed in its current location. The objective is to retain a stable mass on the downstream face of the new wall to provide positive spillway conveyance and prevent erosive discharge directly to the foundation of the new concrete wall.

A temporary cofferdam will be installed just upstream of the existing dam to hold the pond in place during construction. The pond water level upstream of the temporary cofferdam may be temporarily lowered by up to several feet during construction. The final design will be based on direction from the CPA/Town and regulatory officials.

**Water Level:** The control section of the new concrete wall will be set at the same elevation as the existing dam spillway, which currently controls the pond water level. Therefore, the rehabilitated dam is not expected to cause any significant water level change from existing conditions.

REQUEST FOR CONDITIONAL USE
in FLOOD HAZARD OVERLAY DISTRICT

TO: Development Review Board Date: December 19, 2022

FROM: (Applicant Name and Address): Town of Calais (& Curtis Pond Association)
3120 Pekin Brook Rd East Calais VT, 05650

1. ) Does a registered professional engineer certify that the proposed development will not result in any increase in flood levels during the occurrence of the base flood? Yes

2.) Is the development designed to (a) minimize flood damage to the proposed development and to public facilities and utilities; and (b) to provide adequate drainage to reduce exposure to flood hazards.
Yes

3.) Are the proposed structures: (a) designed (or modified) and adequately anchored to prevent flotation, collapse, or lateral movement of the structure during the occurrence of the base flood,
(b) constructed with materials resistant to flood damage,
(c) constructed by methods and practices that minimize flood damage,
(d) constructed with electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.
Yes

4.) Will the flood carrying capacity within any altered or relocated portion of a watercourse be maintained?
Yes

5.) Are new and replacement water supply and sanitary sewage systems designed to minimize or eliminate the infiltration of flood waters into the systems and discharges from the systems into flood waters? NA

6.) Are on-site waste disposal systems located to avoid impairment to them or contamination from them during flooding? Wastewater disposal systems shall not be located in the floodway area. NA

7.) Are new, substantially damaged, substantially improved, and replacement manufactured homes elevated on properly compacted fill such that the top of the fill (the pad) under the entire manufactured home is at least one (1) foot above the base flood elevation; this must be documented, in as-built condition, with a FEMA Elevation Certificate. NA

8.) Is the lowest floor, including basement, of all new buildings at least one (1) foot above the base flood elevation; this must be documented, in as-built condition, with a FEMA Elevation Certificate.
NA

9.) Are existing buildings to be substantially improved for residential purposes modified or elevated to meet the requirements of Subsection (9). NA

10.) Do existing buildings to be substantially improved for nonresidential purposes either (a) meet the requirements of Subsection 9, or (b) are designed to be watertight below the base flood elevation with walls substantially impermeable and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. A permit for a building proposed to be flood proofed shall not be issued until a registered professional engineer or architect has reviewed the structural design, specifications, and plans, and has certified that the design and proposed methods of construction are in accordance with accepted standards of practice for meeting the provisions of this subsection.

NA

11.) Are fully enclosed areas that are above grade below the lowest floor, below BFE and subject to flooding NA

a) used solely for parking vehicles, storage, or building access

b) designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters – (see 5.4 (D) (11) for required standards).

12.) Does placement of recreational vehicles within this flood hazard overlay area meet the specifications of 5.4 (D) 12? NA

**The Development Review Board may require additional site maps, time schedules for completion of development, or other information as outlined in Article 5 Section 3 of Calais Land Use and Zoning Regulations.**

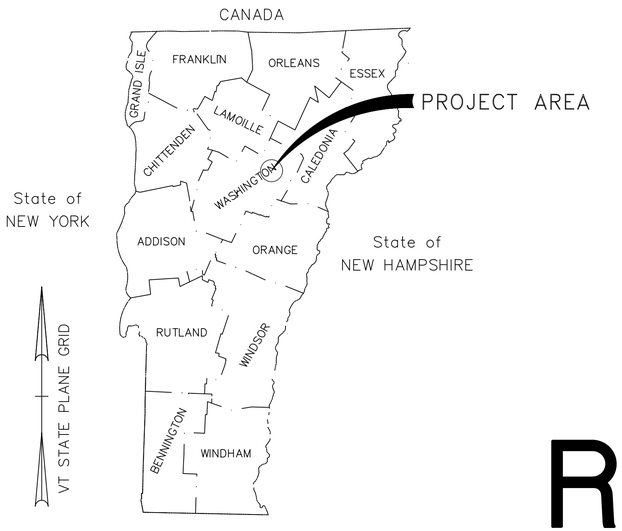
Please provide certification of notification of abutting landowners as listed in the above-mentioned Permit Application.

**NOTE: Failure to develop your property in accordance with your application and any conditions of this permit may affect your future ability to sell or transfer clear title to your property.**

Signed: _____Date_____

Signed: _____Date_____

Signed: _____Date_____

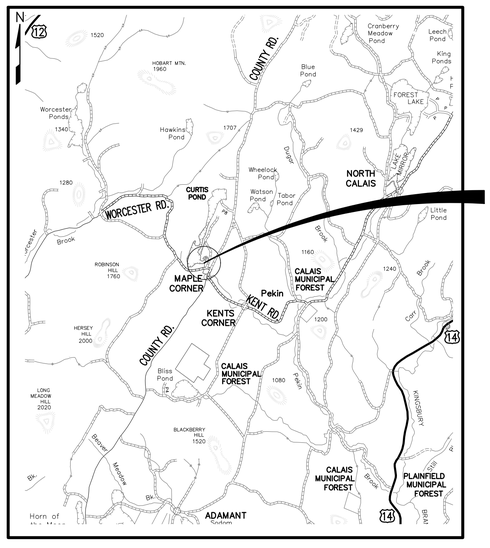



LOCATION MAP
NOT TO SCALE

# TOWN OF CALAIS
# EAST CALAIS, VERMONT

# CURTIS POND DAM REHABILITATION PROJECT

## DRAFT FINAL DESIGN (90%)
## DECEMBER 16, 2022




PROJECT AREA

LOCATION PLAN
SCALE: 1"=1 MILE±

DuBois & King inc.

engineering
planning
management
development

LIST OF DRAWINGS

| TITLE | SHEET NO. |
|---|---|
| TITLE SHEET | C1 |
| GENERAL NOTES | C2 |
| EXISTING CONDITIONS AND BASELINE LAYOUT | C3 |
| EXISTING CONDITIONS | C4 |
| NEW CONDITIONS SITE PLAN | C5 |
| NEW CONDITIONS ELEVATION VIEW | C6 |
| NEW CONCRETE WALL CUTOFF TYPICAL SECTIONS I | C7 |
| NEW CONCRETE WALL CUTOFF TYPICAL SECTIONS II | C8 |
| BASELINE TYPICAL SECTIONS | C9 |
| CONCRETE DETAILS | C10 |
| CIVIL DETAILS AND EPSC DETAILS | C11 |
| WETLAND IMPACT PLAN | C12 |
| LOCATION OF EXISTING LESSER BUR-REED | C13 |

C1

**FINAL DESIGN**
**NOT FOR CONSTRUCTION**

## GENERAL PROJECT NOTES:

1. THE PURPOSE OF THIS PROJECT IS TO REHABILITATE COMPONENTS OF THE CURTIS POND DAM AND INSTALL A NEW CONCRETE CUTOFF WALL ALONG THE UPSTREAM FACE OF THE DAM.
2. THE PROJECT OWNER IS THE TOWN OF CALAIS, VERMONT. AN OWNER'S REPRESENTATIVE WILL BE APPOINTED PRIOR TO CONSTRUCTION TO REPRESENT THE OWNER DURING THE PROJECT.
3. TOPOGRAPHY SHOWN ON THE PLANS IS BASED ON FIELD SURVEY COMPLETED BY THE VERMONT DEPT. OF ENVIRONMENTAL CONSERVATION, FACILITIES ENGINEERING DIVISION IN MAY 2003.
4. WRITTEN DIMENSIONS HAVE PRECEDENCE OVER SCALED DIMENSIONS. IN CASE OF CONFLICT BETWEEN THIS PLAN SET AND ANY OTHER DRAWING AND/OR SPECIFICATION, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY FOR CLARIFICATION.
5. THE CONTRACTOR SHALL BE FAMILIAR WITH THE EXISTING CONDITIONS OF THE SITE AND SURROUNDINGS PRIOR TO BIDDING ON OR PERFORMING THE WORK.
6. THE CONTRACTOR SHALL BID AND PERFORM THE WORK FROM A COMPLETE SET OF PLANS AND SPECIFICATION, AND SHALL NOTIFY THE OWNER'S REPRESENTATIVE OF ANY CONFLICTS WITHIN THE CONSTRUCTION DOCUMENTS.
7. THE CONTRACTOR IS RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION AND FOR CONDITIONS AT THE SITE. THESE PLANS, PREPARED BY DUBOIS & KING DO NOT EXTEND TO OR INCLUDE SYSTEMS PERTAINING TO THE SAFETY OF THE CONSTRUCTION CONTRACTOR OR THEIR EMPLOYEES, AGENTS OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE SEAL OF THE SURVEYOR OR ENGINEER HERE ON DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEMS THAT MAY NOW OR HEREAFTER BE INCORPORATED INTO THESE PLANS. THE CONSTRUCTION CONTRACTOR SHALL PREPARE OR OBTAIN THE APPROPRIATE SAFETY SYSTEMS, WHICH MAY BE REQUIRED BY THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) AND/OR LOCAL REGULATIONS.
8. THE CONTRACTOR SHALL BID AND PERFORM THE WORK IN ACCORDANCE WITH ALL LOCAL, STATE, AND NATIONAL CODES, SPECIFICATIONS, REGULATIONS, STANDARDS, AND DETAILS.
9. SUBMIT SHOP DRAWINGS AND PRODUCT LITERATURE (MANUFACTURER'S LITERATURE, CUT SHEETS, APPLICATION PROCEDURES, ETC.) FOR ALL PRODUCTS FOR USE IN THE PROJECT, FOR APPROVAL BY THE ENGINEER.
10. A SET OF CONSTRUCTION PLANS AND TECHNICAL SPECIFICATIONS SHALL BE ON SITE AND IN GOOD CONDITION AT ALL TIMES DURING CONSTRUCTION ACTIVITIES.
11. NO DEVIATION OR DEPARTURE FROM THE DESIGN INTENT PRESENTED IN THE CONTRACT DOCUMENTS (PLANS AND SPECIFICATIONS) WILL BE ALLOWED UNLESS AUTHORIZED BY DUBOIS & KING, INC. (D&K) AND APPROVED BY THE VTDEC DAM SAFETY SECTION. D&K CONTACT PERSON FOR NOTIFICATION IS SHAWN R. PATENAUDE, P.E. 888-718-3376.

## CONSTRUCTION NOTES

1. LOCATE STAGING AREAS AWAY FROM SENSITIVE AREAS INCLUDING WETLANDS AND STREAM BUFFERS.
2. CONTRACTOR SHALL LAY OUT THE CONSTRUCTION BASELINES AND STAKE OUT LIMITS OF PROPOSED WORK PRIOR TO CONSTRUCTION.
3. THE CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY SHORING, WATER DIVERSION, AND DEWATERING REQUIREMENTS NEEDED FOR THE PROJECT.
4. ALL WORK SHALL TAKE PLACE IN THE DRY. THE CONTRACTOR SHALL DEWATER ALL WORK AREAS PRIOR TO DISTURBANCE. WATER REMOVED FROM WORK AREAS SHALL BE DISCHARGED TO A FILTER BAG LOCATED GREATER THAN 100 FEET FROM ANY FLOWING NON-TURBID WATER.
5. SHOULD A FILTER BAG BE USED TO CONTROL SEDIMENT, A REPLACEMENT FILTER BAG SHALL BE ONSITE AT ALL TIMES. THE FILTER BAGS SHALL BE REMOVED FROM THE SITE ONCE USED.
6. ANY EXCESS MATERIAL SHALL BE DISPOSED OF OFFSITE AT NO ADDITIONAL COST UNLESS OTHERWISE APPROVED IN ADVANCE BY THE VT DEC.

## MEETINGS, SUBMITTALS, AND REQUIRED INSPECTIONS

1. THE CONTRACTOR SHALL PARTICIPATE IN AN ON-SITE PRE-CONSTRUCTION CONFERENCE.
2. THE CONTRACTOR SHALL SUBMIT A CONTROL OF WATER PLAN TO THE ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION. AT A MINIMUM THE CONTRACTOR'S CONTROL OF WATER PLAN SHALL CONFORM TO SPECIFICATION SECTION 2401-DEWATERING AND FOLLOW THE GUIDANCE IN THE CONTROL OF WATER NOTES ON THIS SHEET.
3. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER MATERIAL SLIPS FOR ALL MATERIALS AND ITEMS USED ON THE PROJECT PER THE SPECIFICATIONS SECTION 1300-SUBMITTALS.
4. THE CONTRACTOR SHALL PROVIDE THE ENGINEER 48-HOUR PRIOR NOTICE, FOR ANY PLACEMENT OF CONCRETE AND EMBANKMENT FILL.
5. THE ENGINEER WILL BE REQUIRED TO OBSERVE AND APPROVE CRITICAL ASPECTS OF THE CONSTRUCTION PRIOR TO EXECUTION. THESE CRITICAL ITEMS WILL BE DISCUSSED AT THE PRE-CONSTRUCTION CONFERENCE. FAILURE OF THE CONTRACTOR TO PROVIDE THE ENGINEER WITH A MINIMUM OF 48-HOUR NOTICE MAY RESULT IN DELAYS OF THE PROJECT.

## PERMITS

1. THE FOLLOWING PERMITS ARE BEING SECURED FOR THIS PROJECT:
   PERMIT TO CONSTRUCT OR ALTER A DAM - VTDEC.
2. THE CONTRACTOR IS RESPONSIBLE FOR BEING FAMILIAR WITH THE REQUIREMENTS OF THE PERMITS PRIOR TO BIDDING, AND FOR COMPLYING WITH THEM DURING CONSTRUCTION.
3. A COPY OF THE PERMITS SHALL BE ONSITE DURING ALL CONSTRUCTION ACTIVITIES.

## UTILITIES

1. THE LOCATION OF UTILITIES SHOWN ON THESE PLANS, IF ANY, IS APPROXIMATE, AND DUBOIS & KING MAKES NO CLAIM TO ITS ACCURACY OR COMPLETENESS.
2. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING AND DETERMINING THE LOCATION, SIZE, AND ELEVATION OF ALL UTILITIES PRIOR TO THE START OF CONSTRUCTION.
3. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING AND DETERMINING ALL UTILITIES (ABOVE AND BELOW GROUND) WITHIN THE PROJECT LIMITS, AND TO TAKE THE NECESSARY PRECAUTIONS TO PROTECT UTILITIES DURING CONSTRUCTION. CONTACT DIG-SAFE AT 1-800-DIG-SAFE (WWW.DIGSAFE.COM).
4. THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES FOUND INTERFERING WITH THE PROPOSED CONSTRUCTION, AND APPROPRIATE REMEDIAL ACTION BE SHALL BE DETERMINED AND AGREED UPON BEFORE PROCEEDING WITH THE WORK.

## RESTORATION OF SURFACES

1. THE CONTRACTOR MUST APPLY A COURSE OF CRUSHED GRAVEL TO THE CONSTRUCTION ACCESS DRIVES AND STAGING AREAS AS DIRECTED BY THE ENGINEER TO PREVENT RUTTING, EROSION, AND TRACKING OF MATERIAL OFFSITE. AT THE COMPLETION OF WORK, THE CONTRACTOR MUST REMOVE THE GRAVEL AND RE-GRADE, SEED, AND MULCH THE DISTURBED AREA.
2. AT THE COMPLETION OF WORK, THE CONTRACTOR MUST RESTORE ACCESS ROADS AND STAGING AREAS TO PRE-CONSTRUCTION CONDITION. RESTORATION MAY INCLUDE PLACEMENT OF GRAVEL ON EXISTING DRIVES AND / OR APPLICATION OF TOPSOIL, GRASS SEED, FERTILIZER, AND MULCH TO AFFECTED GRASSED AREAS.

## PROPOSED CONSTRUCTION SEQUENCE

1. PREPARE STAGING AREA AND STABILIZE ACCESS DAM SITE.
2. INSTALL SILT FENCE AND EROSION CONTROL MEASURES AT DAM SITE.
3. ESTABLISH CONTROL OF WATER MEASURES AND BEGIN LOWERING WATER LEVEL IN CURTIS POND DAM. DRAWDOWN SHALL NOT PROGRESS FASTER THAN 6 INCHES PER ANY 24 HOUR PERIOD.
4. CLEAR TREES AND SHRUBS FROM THE DAM EMBANKMENT AND WITHIN THE IDENTIFIED WORK AREA.
5. CONSTRUCT THE DESIGN ON THESE PLANS.
6. PLACE TOP SOIL, SEED AND MULCH. SEE SPECIFICATIONS SECTION 02483.
7. CONDUCT FINAL INSPECTION WITH VT DEC AND ENGINEER.
8. INITIATE REFILLING OF THE WORK AREA. WHEN THE WORK AREA IS FILLED, REMOVE THE TEMPORARY COFFERDAM.
9. BEGIN RESTORING CURTIS POND TO THE DESIGN WATER LEVEL BY PARTIALLY CLOSING THE LOW LEVEL VALVE.

## MATERIAL NOTES

1. THE CONTRACTOR SHALL HAVE A SET OF THE TECHNICAL SPECIFICATION ON SITE DURING ALL CONSTRUCTION ACTIVITIES.
2. ALL MATERIALS USED ON THIS PROJECT SHALL CONFORM TO THE SPECIFICATIONS. FOR ANY DISCREPANCY BETWEEN THE PLANS AND MATERIAL SPECIFICATIONS, THE TECHNICAL SPECIFICATIONS SHALL TAKE PRECEDENCE OVER NOTES CONTAINED ON THESE PLANS.
3. ALL EARTHEN MATERIAL USED ON SITE SHALL BE PLACE AND COMPACTED IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS. NEW EARTHEN MATERIAL SHALL BE CONSISTENT WITH ON-SITE MATERIAL. THE CONTRACTOR SHALL RECEIVE PRIOR APPROVAL FROM THE ENGINEER BEFORE IMPORTING NEW EARTHEN MATERIAL TO THE SITE.

## CONCRETE NOTES

1. NO BACKFILL SHALL BE PLACED AGAINST ANY NEWLY PLACED CONCRETE UNTIL THE ENGINEER HAS APPROVED THE WORK AND SHALL NOT OCCUR PRIOR TO SEVEN (7) DAYS AFTER BEING POURED OR ACHIEVES 85% OF THE SPECIFIED COMPRESSIVE STRENGTH HAS BEEN REACHED.
2. THE CONTRACTOR, AT THE EXPENSE OF THE CONTRACTOR, SHALL REPAIR ANY DAMAGE TO NEWLY PLACED CONCRETE.
3. WHERE THE CONCRETE IS TO BE PLACED BY PUMPING, THE CONTRACTOR SHALL NOTIFY THE ENGINEER A MINIMUM OF ONE WEEK PRIOR TO PLACEMENT FOR REVIEW OF PROCEDURES TO BE USED. THE CONTRACTOR SHALL OBTAIN AND REVIEW ACI 304 - PLACING CONCRETE BY PUMPING METHODS. PROVISION FOR BACK-UP PUMPING EQUIPMENT SHALL BE MADE BY THE CONTRACTOR.
4. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1-1/2 INCH BY 1-1/2 INCH, UNLESS OTHERWISE NOTED.
5. JOINTS AND SCORE MARKS IN CONCRETE SHALL BE CONSTRUCTED AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
6. THE CONTRACTOR SHALL NOTIFY THE ENGINEER A MINIMUM OF 24 HOURS IN ADVANCE OF ALL CONCRETE OPERATIONS.
7. FOOTINGS SHALL BE PLACED ON CLEAN, SOUND BEDROCK. THE CONTRACTOR SHALL REMOVE ALL DELETERIOUS MATERIAL, DUST AND PARTICLES FROM THE BEDROCK SURFACE PRIOR TO CASTING CONCRETE.
8. IF THE EXISTING TOP OF BEDROCK IS LOCATED ABOVE THE BOTTOM OF FOOTING TWO (2) FEET OR LESS, THE BEDROCK MAY BE EXCAVATED DOWN TO THE INDICATED BOTTOM OF FOOTING OR THE BOTTOM OF FOOTING ELEVATION MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER. ALL OVER BREAKAGE BELOW THE BOTTOM OF FOOTING SHALL BE REPLACED WITH CONCRETE, CLASS C.
9. IF THE EXISTING TOP OF BEDROCK IS ABOVE THE BOTTOM OF FOOTING BY MORE THAN TWO (2) FEET, THE FOOTING ELEVATION MAY BE RAISED ACCORDINGLY. BEFORE ANY ADJUSTMENT IS MADE IN THE FOOTING ELEVATION, THE ENGINEER SHALL BE NOTIFIED FOR APPROVAL OF THE ADJUSTMENT.
10. IF THE TOP OF EXISTING BEDROCK IS TWO (2) FEET OR LESS BELOW THE BOTTOM OF FOOTING ELEVATION, THE FOOTING SHALL BE PLACED TO THE TOP OF COMPETENT BEDROCK AS SHOWN USING CONCRETE, CLASS C.
11. IF THE TOP OF EXISTING BEDROCK IS GREATER THAN TWO (2) FEET BELOW THE BOTTOM OF THE FOOTING, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND PREPARE AND SUBMIT A PROFILE OF THE BEDROCK SURFACE IN THE VICINITY OF THE FOOTING. THE CONTRACTOR SHALL NOT PERFORM ANY FURTHER WORK ON THE SUBSTRUCTURE UNTIL NOTIFIED IN WRITING BY THE ENGINEER.
12. ALL CONCRETE WORK SHALL COMPLY WITH THE LATEST ACI SPECIFICATIONS (ACI-350).
13. ALL CAST-IN-PLACE CONCRETE, INCLUDING THE CUT-OFF WALL, SPILLWAY TRAINING WALLS, AND SPILLWAY SLAB SHALL BE CLASS A (4,000 PSI) CAST-IN-PLACE CONCRETE. SEE SPECIFICATIONS SECTION 03300.
14. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60.
15. CONTRACTOR SHALL SUBMIT REINFORCING SHOP DRAWINGS FOR REVIEW BY THE ENGINEER.
16. HOT WEATHER CONCRETE PLACEMENT SHALL BE IN ACCORDANCE WITH ACI 305R.
17. COLD WEATHER CONCRETE PLACEMENT SHALL BE IN ACCORDANCE WITH ACI 306R.
18. PVC WATER STOPS SHALL BE GREENSTREAK, DUMBBELL TYPE, STYLE NO. 705, 724, OR APPROVED EQUAL.
19. HYDROPHILIC WATER STOPS SHALL BE VOLCLAY, WATERSTOP-RX, TYPE RX-101, GREENSTREAK NO. 594 SWELL STOP, OR APPROVED EQUAL.
20. PROVIDE CONSTRUCTION JOINTS AT ALL LOCATIONS OF DISCONTINUOUS CONCRETE PLACEMENT.

## EROSION CONTROL NOTES

1. TEMPORARY EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) MEASURES ARE REQUIRED THROUGHOUT THE ENTIRE CONSTRUCTION PERIOD.
2. ALL EPSC ACTIVITIES SHALL CONFORM TO THE VT DEC LOW RISK SITE HANDBOOK FOR EROSION PREVENTION AND SEDIMENT CONTROL, 2006.
3. ALL EARTHWORK AND GRADING PERFORMED BETWEEN OCTOBER 15 AND APRIL 15 SHALL CONFORM TO APPROVED WINTER CONSTRUCTION PRACTICES, AS PRESENTED IN THE VT DEC LOW RISK SITE HANDBOOK FOR EROSION PREVENTION AND SEDIMENT CONTROL.
4. THE CONTRACTOR SHALL BE AWARE OF ALL DISCHARGE INTO THE OUTLET CHANNEL. SHOULD THERE BE VISUALLY DISCOLORED DISCHARGE ENTERING THE OUTLET CHANNEL THE CONTRACTOR SHALL DETERMINE THE SOURCE OF THE DISCOLORED DISCHARGE. IF THE CAUSE OF THE DISCOLORED DISCHARGE IS FROM CONSTRUCTION ACTIVITIES ALL OPERATIONS MUST CEASE UNTIL THE DISCHARGE IS NO LONGER DISCOLORED. ALTERNATIVE MEANS OF CONSTRUCTION SHALL BE ADMINISTERED AS TO AVOID ADDITIONAL RELEASE OF DISCOLORED DISCHARGE INTO THE OUTLET CHANNEL.
5. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL INSTALL SILT FENCING AND EROSION CONTROL DEVICES AS SHOWN ON THESE PLANS. EROSION CONTROLS SHALL BE LOGICALLY PHASED WITH CONSTRUCTION ACTIVITIES AND AS DIRECTED BY THE ENGINEER OR OWNERS REPRESENTATIVE.
6. THE EROSION CONTROLS SHALL BE INSPECTED DAILY PRIOR TO INITIATION OF THE DAY'S ACTIVITIES. MAINTENANCE SHALL TAKE PLACE AT THAT TIME.
7. THE CONTRACTOR SHALL TOPSOIL, SEED AND MULCH THE DISTURBED AREAS WITHIN 7 DAYS OF INITIAL DISTURBANCE. AFTER THIS TIME, ANY DISTURBANCE IN THE AREA MUST BE STABILIZED AT THE END OF EACH WORKDAY. ALL AREAS OF DISTURBANCE MUST HAVE PERMANENT STABILIZATION WITHIN 48 HOURS OF REACHING FINAL GRADE. THE FOLLOWING EXCEPTIONS MAY APPLY:
   A) STABILIZATION IS NOT REQUIRED IF THE EARTHWORK IS TO CONTINUE IN THE AREA WITHIN THE NEXT 24 HOURS AND THERE IS NO PRECIPITATION FORECAST FOR THAT SAME PERIOD OF TIME.
   B) STABILIZATION IS NOT REQUIRED IF THE EARTHWORK IS OCCURRING WITHIN A SELF-CONTAINED EXCAVATION, WITH A DEPTH OF 2 FEET OR GREATER AND NO OUTLET.
8. ALL SLOPES AND DISTURBED AREAS SHALL BE GRADED SMOOTH AND FREE OF POCKETS WITH SUFFICIENT SLOPE TO ENSURE DRAINAGE.
9. ALL SLOPES GREATER THAN 1V:2H SHALL BE TREATED WITH BIODEGRADABLE EROSION CONTROL BLANKET, TYPE S150BN AS MANUFACTURED BY NORTH AMERICAN GREEN OR APPROVED EQUAL. THE BLANKET SHALL BE STAPLED WITH BIODEGRADABLE STAPLES, OVERLAPPED, AND SHINGLED CORRECTLY RELATIVE TO WATER FLOW, AND INSTALLED IN GENERAL ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND SPECIFICATIONS.
10. PERMANENT STABILIZATION SHALL BE CONDUCTED ACCORDING TO THE TECHNICAL SPECIFICATIONS SECTION 02483.
11. REMOVAL OF EPSC MEASURES SHALL ONLY BE DONE FOLLOWING THE APPROVAL OF THE ENGINEER ALL DISTURBANCES CAUSED BY THE REMOVAL SHALL BE REPAIRED IMMEDIATELY.

## CONTROL OF WATER NOTES

GENERAL REQUIREMENTS

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL OF WATER THROUGHOUT THE DURATION OF THE PROJECT. ANY CHANGES TO THE CONTROL OF WATER PROCEDURE AS OUTLINED HEREIN WILL BE SUBJECT TO APPROVAL OF THE ENGINEER AND THE VERMONT AGENCY OF NATURAL RESOURCES (VANR). OBTAINING THE APPROVAL FOR ANY CHANGES TO THE PROCEDURES FROM VANR SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. THE NORMAL WATER SURFACE ELEVATION IS 1001.0 FEET, AS CONTROLLED BY THE CREST OF THE SPILLWAY SLAB. THE POND MAY BE PARTIALLY LOWERED THROUGHOUT THE CONSTRUCTION PERIOD.
3. AN UPSTREAM TEMPORARY COFFERDAM AND OUTLET CONTROL SYSTEM WILL BE REQUIRED TO CONTROL THE WATER IN THE POND AT A LOWERED ELEVATION WITHOUT FULLY DEWATERING CURTIS POND WHILE MAINTAINING A DRY CONDITION IN THE WORK AREA. THE UPSTREAM TEMPORARY COFFERDAM WILL BE A CONCRETE BLOCK OR INFLATABLE COFFERDAM SYSTEM, OR APPROVED EQUAL. SEE SHEET C8 FOR A SCHEMATIC OF A PROPOSED COFFERDAM LOCATION.
4. A DOWNSTREAM STONE OR SANDBAG COFFERDAM WITH A WATER DIVERSION STRUCTURE, BY-PASS PUMPING OR SIMILAR METHOD WILL PROVIDE ADEQUATE PROTECTION AGAINST TURBID WATER DISCHARGE FROM THE WORK AREA INTO THE DOWNSTREAM RECEIVING CHANNEL. SUMP PUMPING WILL BE REQUIRED TO ADEQUATELY CONTROL THE GROUNDWATER WITHIN ANY AND ALL EXCAVATIONS TO ONE (1) FOOT BELOW BOTTOM OF PROPOSED FOUNDATIONS.
5. THE CONTRACTOR SHALL NOT REGULATE DOWNSTREAM FLOWS NOR ALTER THE NATURAL FLOW REGIME EXCEPT WHEN NECESSARY FOR MAINTENANCE, INSPECTION, CONSTRUCTION, OR PROJECT SAFETY. DURING PERIODS WHEN DOWNSTREAM FLOW REGULATION IS NECESSARY, INCLUDING THE REFILLING OF THE POND, MINIMUM DOWNSTREAM CONSERVATION FLOWS, AS NOTED IN THE FOLLOWING TABLE, SHALL BE RELEASED UNLESS INFLOW IS LESS THAN THE SEASONAL CONSERVATION FLOW.

| ANNUAL PERIOD | MINIMUM DISCHARGE, CFS | MINIMUM DISCHARGE, GPM |
|---|---|---|
| JUNE 1 TO SEPTEMBER 30 | 0.69 | 310 |
| OCTOBER 1 TO MARCH 31 | 1.38 | 620 |
| APRIL 1 TO MAY 31 | 5.52 | 2,478 |

NOTE: FLOWS NOTED CORRESPOND TO A 1.38 SQUARE MILE (883 ACRES) DRAINAGE AREA.

6. WHEN INFLOW INTO THE POND IS LESS THAN THE SEASONAL CONSERVATION FLOW, UP TO 10 PERCENT OF THE INSTANTANEOUS INFLOW MAY BE USED TO REFILL THE POND WHILE DISCHARGING THE REMAINDER DOWNSTREAM. UNDER NO CIRCUMSTANCES SHALL DOWNSTREAM FLOWS BE INTERRUPTED.
7. DOWNSTREAM FLOWS SHALL BE MAINTAINED AT ALL TIMES. DURING THE INSTALLATION OF THE COFFERDAMS, BYPASS FLOWS SHALL BE ACHIEVED WITH THE USE OF PUMPS. UPON INSTALLATION OF THE COFFERDAMS AND DEWATERING OF THE WORK AREA, MINIMUM STREAM FLOWS WILL BE MAINTAINED. PUMPS CAPABLE OF MEETING MINIMUM STREAM FLOWS SHALL BE ON SITE AT ALL TIMES DURING CONSTRUCTION TO BE USED IN CASE OF EMERGENCY. DURING PERIODS WHEN THE CONTRACTOR IS USING PUMPS TO MAINTAIN MINIMUM FLOWS, BACKUP SYSTEMS SHALL BE ONSITE IN CASE OF FAILURE OF ANY ONE PUMP.

INSTALLATION OF CONTROL OF WATER MEASURES

8. UPON AUTHORIZATION TO PROCEED WITH THE PROJECT, THE CONTRACTOR SHALL INSTALL THE BY-PASS PUMPS TO MAINTAIN MINIMUM FLOWS WHILE THE COFFERDAMS ARE BEING INSTALLED. THE PUMP AND OUTLET SHALL BE INSTALLED IN LOCATIONS THAT WILL NOT REQUIRE BEING MOVED DURING ITS USE. THIS PUMPING EQUIPMENT SHALL REMAIN IN PLACE THROUGHOUT THE CONSTRUCTION ACTIVITY, BEING AVAILABLE FOR USE ON SHORT NOTICE IN THE EVENT OF A SIGNIFICANT STORM OR UNEXPECTED EVENT.
9. BOTH OF THE TEMPORARY COFFERDAMS SHALL BE INSTALLED IN THE WET UPON COMPLETION OF THE PUMP INSTALLATION AND THE DOWNSTREAM FLOWS ARE ESTABLISHED.
10. ONCE THE INSTALLATION OF THE COFFERDAMS AND BY-PASS PIPE IS COMPLETE, THE CONTRACTOR SHALL BEGIN TO DEWATER THE ISOLATED WORK AREA. THE CONTRACTOR SHALL USE PUMPING TO DEWATER THE WORK AREA. THE DEWATERING PUMPS SHALL DISCHARGE TO AN APPROVED UPLAND AREA; HOWEVER ANY CLEAR WATER CAN BE CAREFULLY PUMPED OR SIPHONED DOWNSTREAM. ANY DIRECT DISCHARGE TO THE STREAM SHALL BE SUBJECT TO CONTINUOUS OBSERVATION TO MAKE SURE THAT IT REMAINS CLEAR. THE EQUIPMENT USED TO ACHIEVE THIS DEWATERING SHALL BE SEPARATE FROM THE EQUIPMENT USED TO MAINTAIN MINIMUM STREAM FLOWS.
11. UPON INSTALLATION OF THE CONTROL OF WATER MEASURES AND DEWATERING OF THE WORK AREA, THE CONTRACTOR SHALL REQUEST APPROVAL FROM THE ENGINEER AND VANR TO INITIATE CONSTRUCTION ACTIVITIES.

CONTROL OF WATER DURING CONSTRUCTION

12. DURING CONSTRUCTION, THE WORK AREA SHALL REMAIN DEWATERED BY MEANS OF PUMPING. THE DISCHARGE SHALL BE PUMPED DIRECTED TO AN APPROVED UPLAND AREA. THE CONTRACTOR IS ENCOURAGED TO PUMP DIRECTLY INTO FILTER BAGS TO FURTHER PREVENT TURBID WATER FROM REACHING THE DOWNSTREAM CHANNEL.
13. THE CONTRACTOR SHALL INSPECT THE COFFERDAMS AND BY-PASS EACH MORNING. MAINTENANCE SHALL TAKE PLACE PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITIES SCHEDULED FOR THAT DAY.

REFILLING REQUIREMENTS

14. UPON COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL RECEIVE WRITTEN AUTHORIZATION TO REFILL THE WORK AREA, ALLOWING THE WATER TO REACH THE INVERT OF THE NEW OUTLET GATE VALVE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REFILLING OF THE WORK AREA AND SHALL PROVIDE PERSONNEL TO MONITOR THE OPERATION AS NEEDED ON A DAILY BASIS. THE CONTRACTOR SHALL CAREFULLY MONITOR ALL COMPONENTS OF THE DAM FOR SIGNS OF LEAKAGE OR DISTRESS AND REPORT ANY FINDINGS TO THE ENGINEER.
15. THE REFILLING OF THE POND TO ITS FULL LEVEL SHALL BE ACHIEVED BY CLOSING THE GATE VALVE INCREMENTALLY. AT A MINIMUM, DOWNSTREAM CONSERVATION FLOWS SHALL BE MAINTAINED, PURSUANT TO ITEM #6 ABOVE.
16. WHEN REFILLING, THE POND SHALL BE CAREFULLY MONITORED AND OUTFLOW ADJUSTMENTS MADE, TAKING SPECIAL CARE TO NOT FURTHER DRAWDOWN THE GREATER POND BY RELEASING FLOW AT A RATE GREATER THAN THE RATE OF FLOW INTO THE POND.
17. ONCE THE WATER SURFACE REACHES THE PRINCIPAL CREST THE VALVE CAN BE FULLY CLOSED AND REFILLING SHALL BE CONSIDERED COMPLETE.

ONGOING MAINTENANCE AND OPERATIONS

18. THESE PROCEDURES SHALL BE UTILIZED DURING ALL FUTURE OPERATIONS AND MAINTENANCE ACTIVITIES REQUIRING THE DRAWDOWN AND REFILLING OF THE POND, CONDUCTED BY THE OWNER.
19. DURING PERIODS WHEN THE CONTRACTOR AND/OR OWNER IS USING PUMPS TO MAINTAIN MINIMUM FLOWS, BACKUP SYSTEMS SHALL BE ONSITE IN CASE OF FAILURE OF ANY ONE PUMP.

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PROFESSIONAL SEAL

**NOT FOR CONSTRUCTION PRELIMINARY PLANS**

| NO. | DESCRIPTION | DATE | BY | CK'D |
|---|---|---|---|---|

TOWN OF CALAIS
3120 PEKIN BROOK ROAD
EAST CALAIS, VERMONT, 05650

JOHN BRABANT
VICE CHAIR
SELECT BOARD

CURTIS POND DAM REHABILITATION PROJECT

SHEET TITLE

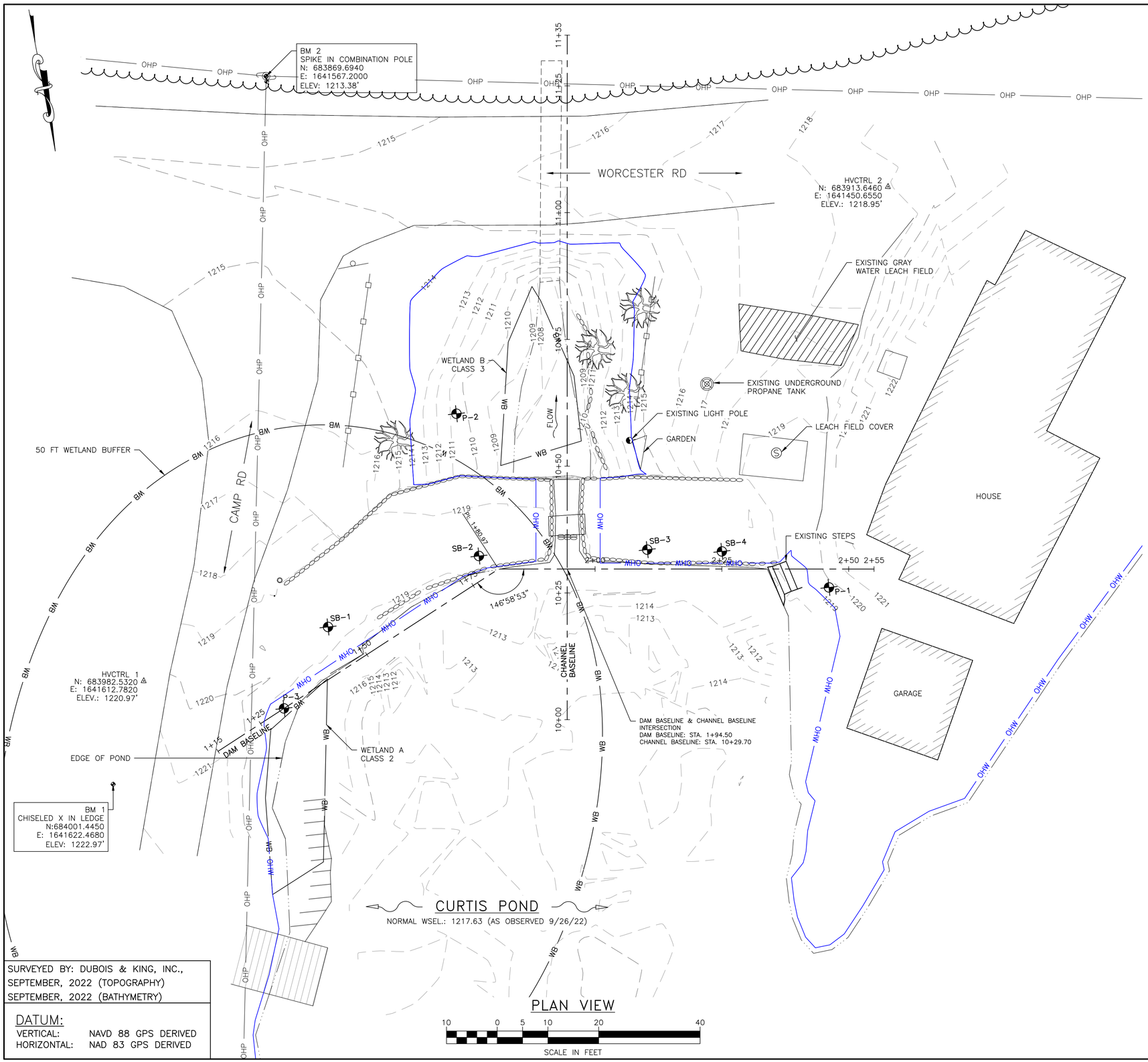
GENERAL NOTES

| DRAWN BY | DATE |
|---|---|
| HLP | DEC 16, 2022 |
| CHECKED BY | D&K PROJECT # |
| CWJ | 928190 |
| PROJ. ENG. | D&K ARCHIVE # |
| JWT | |

SHEET NUMBER

C2

SHEET 2 OF 13




SURVEYED BY: DUBOIS & KING, INC.,
SEPTEMBER, 2022 (TOPOGRAPHY)
SEPTEMBER, 2022 (BATHYMETRY)

DATUM:
VERTICAL: NAVD 88 GPS DERIVED
HORIZONTAL: NAD 83 GPS DERIVED

## LEGEND

EXISTING

- CONTOUR – 1 FT INTERVAL (101)
- CONTOUR – 5 FT INTERVAL (500)
- WATER LEVEL (O.H.W. or O.L.W.)
- BEDROCK OUTCROP
- SURVEY STATION (STA1)
- BURIED PROPANE TANK
- LIGHT POLE
- TREE LINE
- TREE (CONIFER) (10" PINE)
- TREE (DECIDUOUS) (18" MAPLE)
- DOCK
- BORING (SB-4)
- AUGER PROBE (P-1)
- DRY HYDRANT
- OVERHEAD POWER LINE (OHP)
- UTILITY POLE
- STONE WALL
- WOOD FENCE
- PROJECT DELINEATION FENCE (PDF)
- SEWER MANHOLE
- ORDINARY HIGH WATER (O.H.W) (OHW)
- LESSER BURR–REED (THREATENED SPECIES)
- TOP OF DAM SPOT ELEVATION (EL. 1111.1')

## NOTE:

1. TOPOGRAPHIC INFORMATION SHOWN IS BASED ON TOPOGRAPHIC AND BATHYMETRIC SURVEY COMPLETED BY DUBOIS & KING IN SEPTEMBER 2022.
2. ONLY THE IDENTIFIED BENCHMARKS (BM1 AND BM2) ARE TO BE USED FOR VERTICAL CONTROL.

PROJECT COORDINATE TABLE

| POINT | NORTHING | EASTING |
|---|---|---|
| BM 1 | 684001.45 | 1641622.47 |
| BM 2 | 683869.69 | 1641567.20 |
| HVCTRL 1 | 683982.53 | 1641612.78 |
| HVCTRL 2 | 683913.65 | 1641450.66 |
| DAM BASELINE | | |
| 1+25 | 683996.93 | 1641596.32 |
| 1+50 | 683987.38 | 1641573.22 |
| 1+81 | 683975.55 | 1641544.57 |
| 2+00 | 683976.22 | 1641526.18 |
| 2+50 | 683985.40 | 1641477.03 |
| 2+55 | 683986.32 | 1641472.12 |
| CHANNEL BASELINE | | |
| 10+00 | 684005.34 | 1641532.13 |
| 11+00 | 683907.04 | 1641513.78 |
| 11+35 | 683872.63 | 1641507.35 |

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EAST CALAIS, VERMONT, 05650

JOHN BRABANT
VICE CHAIR
SELECT BOARD

CURTIS POND DAM REHABILITATION PROJECT

SHEET TITLE

EXISTING CONDITIONS AND BASELINE LAYOUT

| DRAWN BY | DATE |
|---|---|
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| CWJ | 928190 |
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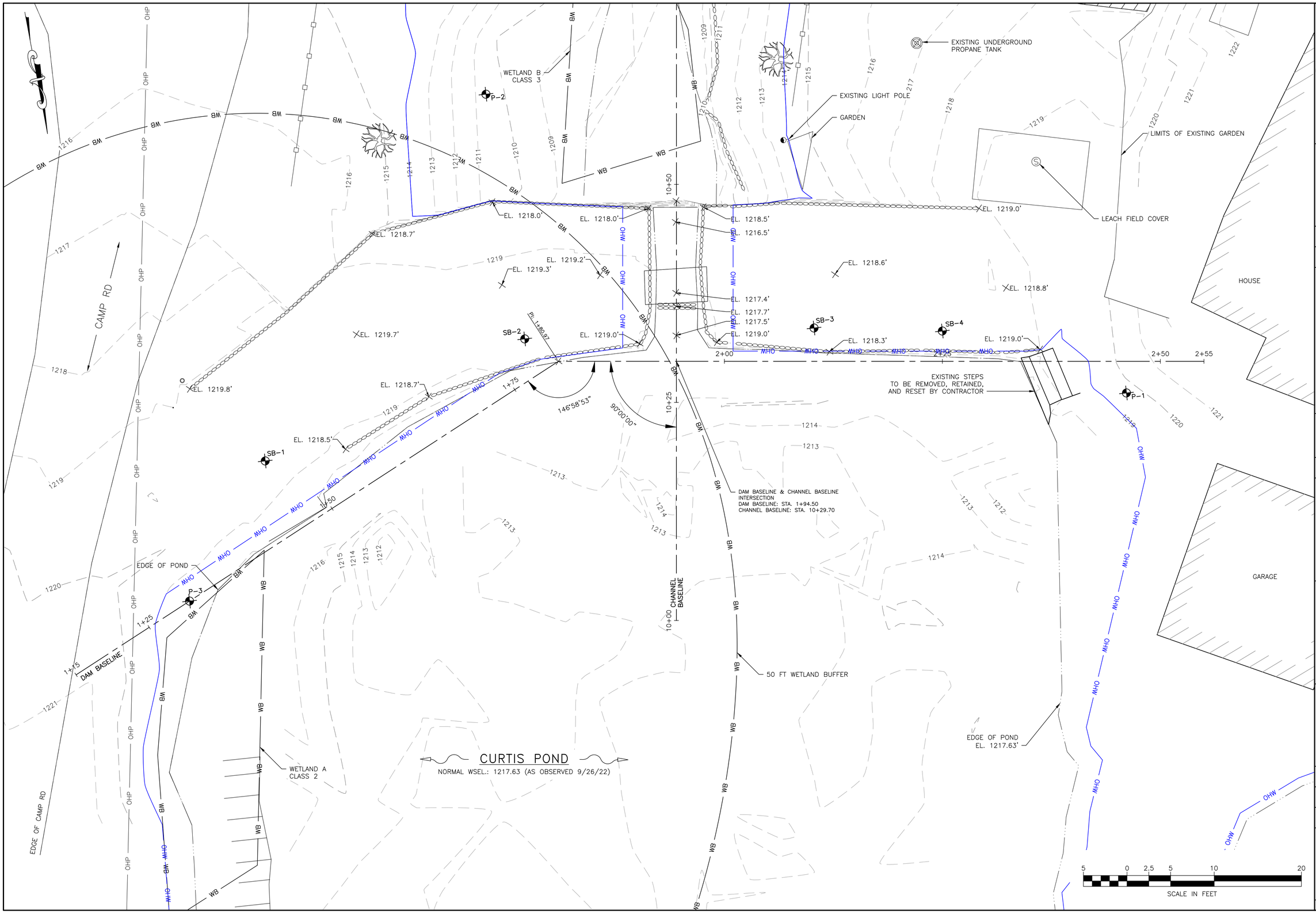
| JWT | |

SHEET NUMBER

C3

SHEET 3 OF 13

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CURTIS POND DAM
REHABILITATION
PROJECT

SHEET TITLE

EXISTING
CONDITIONS

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SHEET NUMBER

C4

SHEET 4 OF 13

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EXISTING UNDERGROUND PROPANE TANK (TO REMAIN UNDISTURBED)

EXISTING LIGHT POLE TO BE REMOVED AND REPLACED (PROPERTY OWNER TO BE NOTIFIED PRIOR TO REMOVAL)

WETLAND B CLASS 3

NEW LOW LEVEL DRAIN PIPE (SEE NOTES THIS SHEET)

FLOW

NEW CONCRETE SPILLWAY TRAINING WALLS

NEW 10.0 FT OVERFLOW SPILLWAY

CONTRACTOR SHALL NOT DISTURB DOWNSTREAM STONE FACE (TYP.)

CONTRACTOR SHALL NOT DISTURB DOWNSTREAM STONE FACE (TYP.)

STA. 2+51.75 BEGIN WALL

EP: 2+55.00

EXISTING STEPS TO BE RELOCATED, PER OWNER'S DIRECTION

NEW CONCRETE CUTOFF WALL, SEE SHEET 9 FOR DETAILS

PI: 1+80.97

147.0'

90.0°

CAMP RD

STA. 1+24.50 BEGIN WALL

BP: 1+15.00

1+15

DAM BASELINE

1+50.00

NEW LOW LEVEL PIPE, GATE VALVE WITH VALVE BOX

CHANNEL BASELINE

10+00

10+25

10+50

2+00

2+50.00

2+55

50 FT WETLAND BUFFER

EDGE OF POND

WETLAND A CLASS 2

TEMPORARY COFFER DAM

CURTIS POND

NORMAL WSEL.: 1217.63 (AS OBSERVED 9/26/22)

B C7

A C7

C C7

5 0 2.5 5 10 20

SCALE IN FEET


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SHEET TITLE

NEW CONDITIONS SITE PLAN

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SHEET NUMBER

C5

SHEET 5 OF 13

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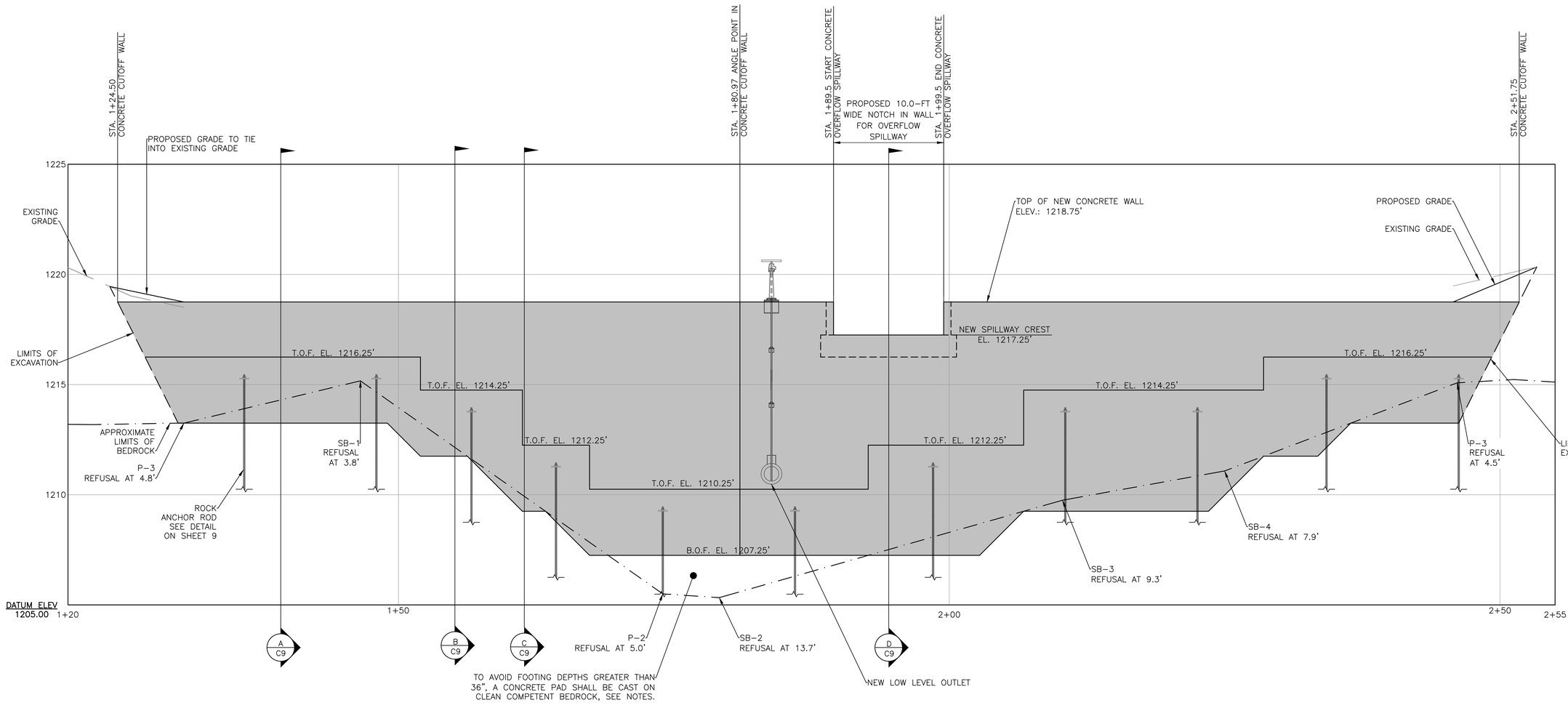


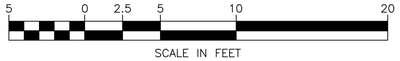


## NOTES:

1. BEDROCK FOUNDATION SHALL BE CLEANED AND INSPECTED BY ENGINEER PRIOR TO PLACEMENT OF NEW CONCRETE FOOTING.
2. LOCATION OF BEDROCK SHOWN ON THESE PLANS ARE BASED ON SOIL BORINGS AND ARE TO BE CONSIDERED APPROXIMATE.
3. SEE SHEET 9 FOR TYPICAL REINFORCING DETAILS AND ROCK ANCHOR DETAILS.

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SHEET TITLE

NEW CONDITIONS ELEVATION VIEW

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SHEET NUMBER

C6

SHEET 6 OF 13

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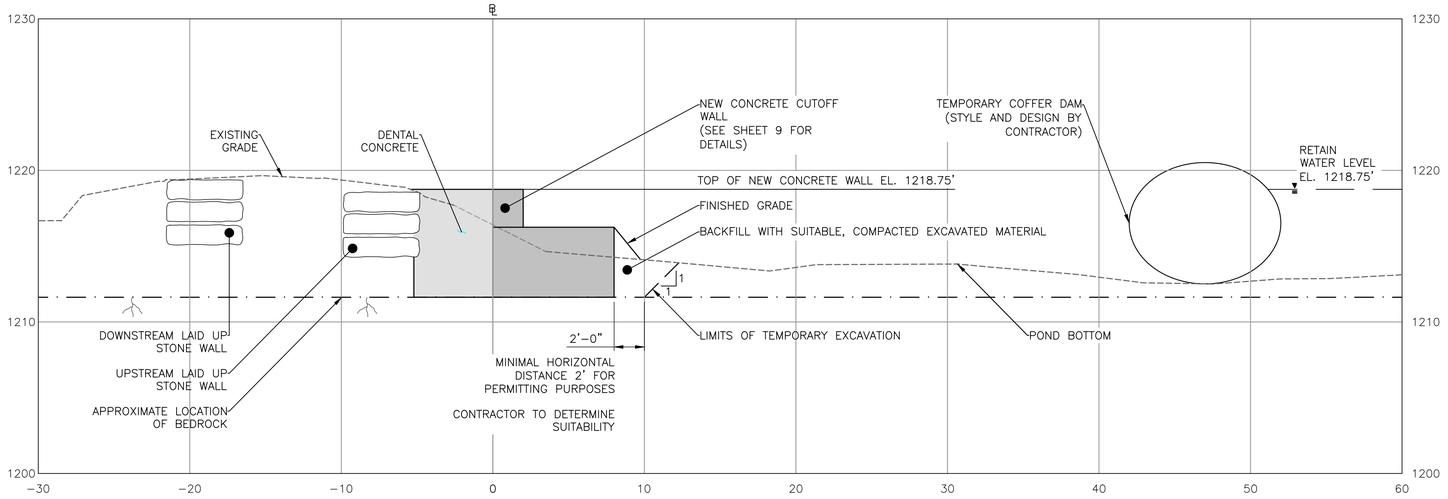
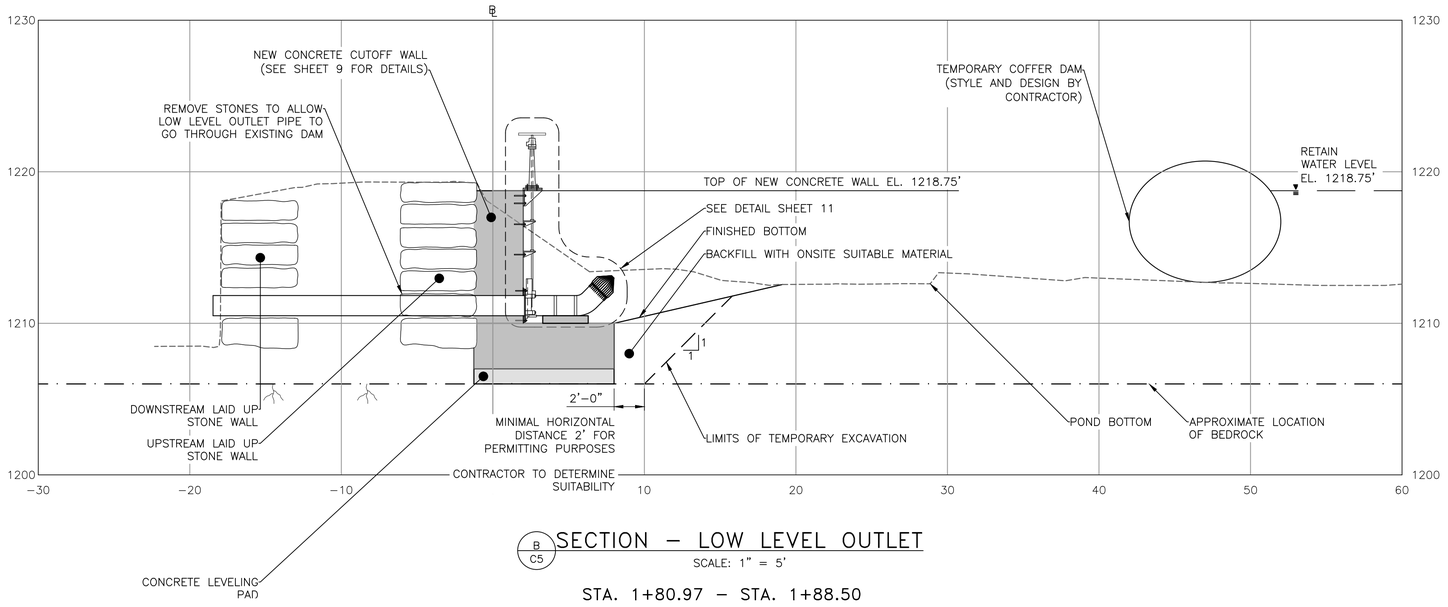



A / C5 SECTION − DAM LEFT

SCALE: 1" = 5'

STA. 1+24.50 − STA. 1+80.97




B / C5 SECTION − LOW LEVEL OUTLET

SCALE: 1" = 5'

STA. 1+80.97 − STA. 1+88.50

## DAM SECTION NOTES:

1. THE EXTENT OF THE STONEWALL ON THE UPSTREAM SIDE OF THE DAM IS UNKNOWN. THE CONTRACTOR SHALL COMPLETE AN INSPECTION OF THE DAM FOLLOWING DEWATERING AND VERIFY THE INFORMATION SHOWN WITHIN THESE PLANS WITH THE RESIDENT ENGINEER.

2. THE DESIGN INTENT IS TO INSTALL THE NEW CAST−IN−PLACE CONCRETE DAM AS CLOSE TO THE EXISTING DAM AS PRACTICABLE. THE SECTIONS DEPICT A VERTICAL FACE FOR NEW CONCRETE TO BE CAST TO, HOWEVER, EXCAVATION OF THE UPSTREAM FACE OF THE EXISTING DAM MAY BE REQUIRED TO INSTALL THE NEW CONCRETE DAM.

3. THE NEW LOW−LEVEL OUTLET IS INTENDED TO BE INSTALLED THROUGH THE EXISTING OPENING IN THE DAM. THE CONTRACTOR SHALL INSPECT AND COORDINATE WITH THE RESIDENT ENGINEER AFTER DEWATERING ON THE SUITABILITY OF THE OPENING PRIOR TO PURCHASING LOW−LEVEL OUTLET MATERIALS.

5 0 2.5 5 10 20

SCALE IN FEET

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EAST CALAIS, VERMONT, 05650

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CURTIS POND DAM REHABILITATION PROJECT

SHEET TITLE

NEW CONCRETE CUTOFF WALL TYPICAL SECTION

| DRAWN BY | DATE |
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SHEET NUMBER

C7

SHEET 7 OF 13

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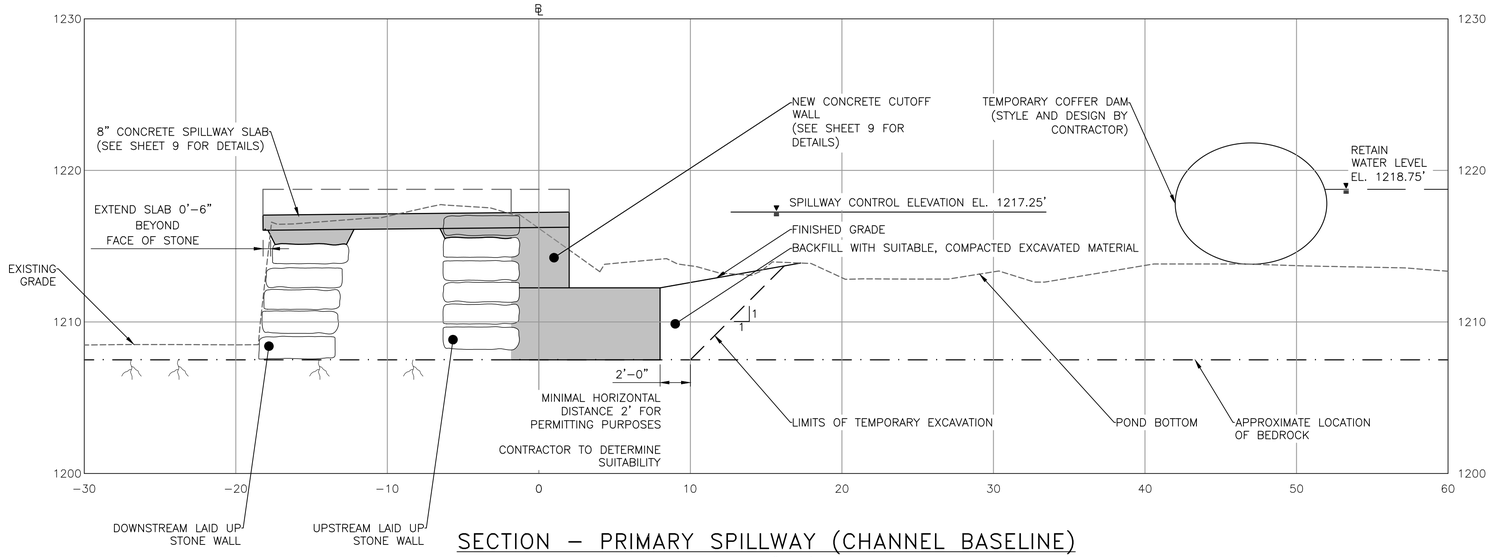
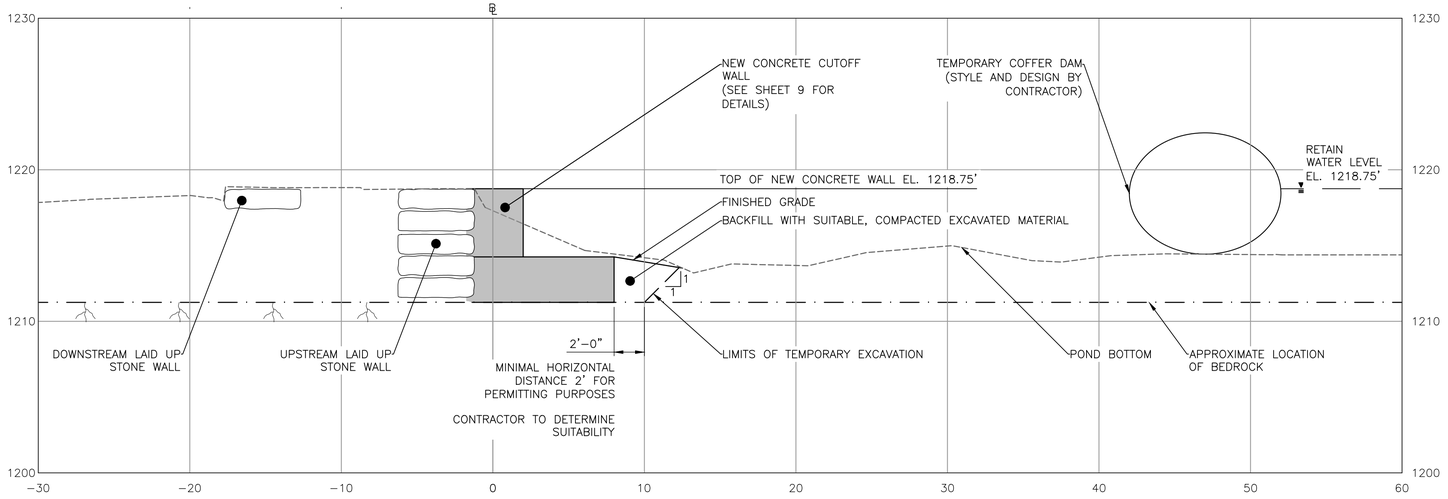



## SECTION – PRIMARY SPILLWAY (CHANNEL BASELINE)

SCALE: 1" = 5'

STA. 1+88.50 – STA. 2+00.50




## C/C5 SECTION – DAM RIGHT

SCALE: 1" = 5'

STA. 2+00.50 – STA. 2+51.75

5 0 2.5 5 10 20

SCALE IN FEET

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EAST CALAIS,
VERMONT, 05650

JOHN BRABANT
VICE CHAIR
SELECT BOARD

CURTIS POND DAM
REHABILITATION
PROJECT

SHEET TITLE

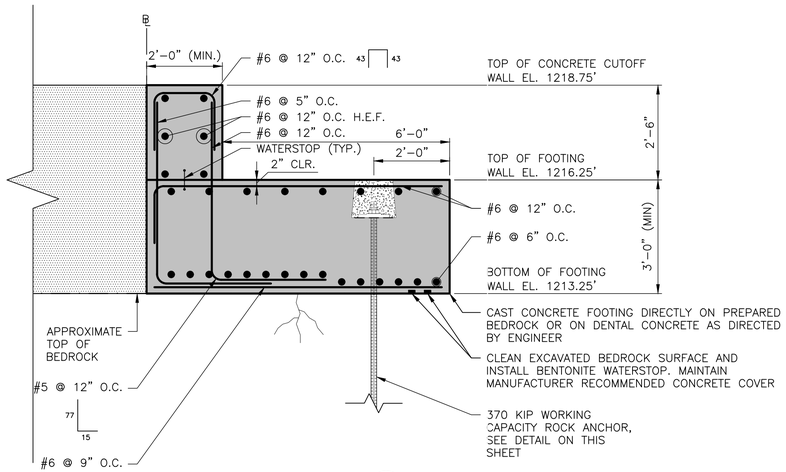
NEW CONCRETE
CUTOFF WALL
TYPICAL SECTION

| DRAWN BY | DATE |
|---|---|
| HLP | DEC 16, 2022 |
| CHECKED BY | D&K PROJECT # |
| CWJ | 928190 |
| PROJ. ENG. | D&K ARCHIVE # |
| JWT | |

SHEET NUMBER

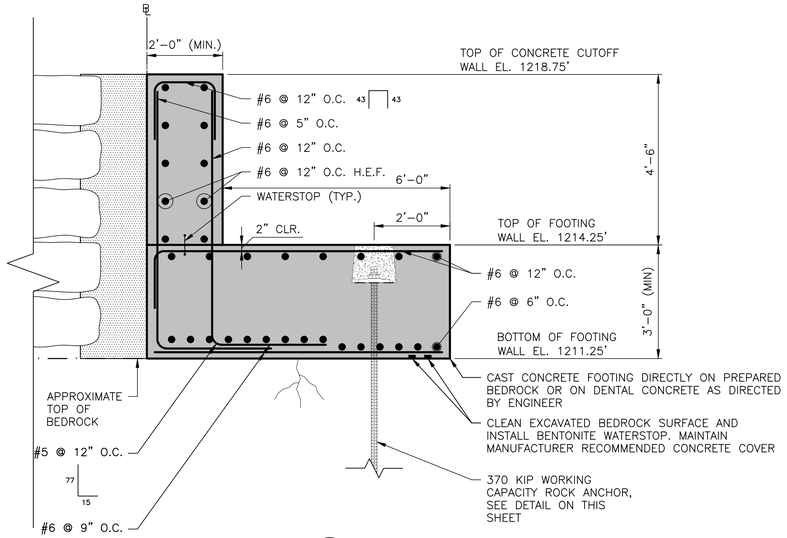
C8

SHEET 8 OF 13



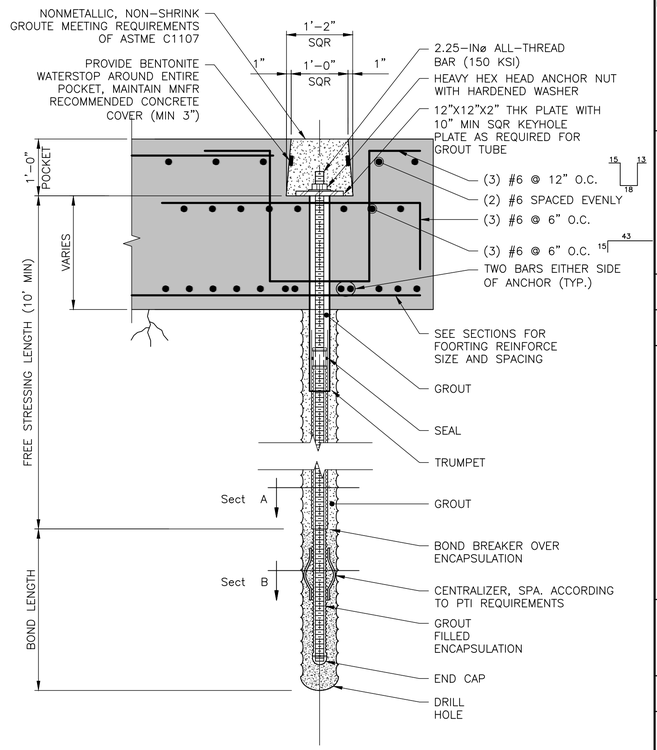

TYPICAL SECTION A (A / C5)

SCALE: 1/2" = 1'



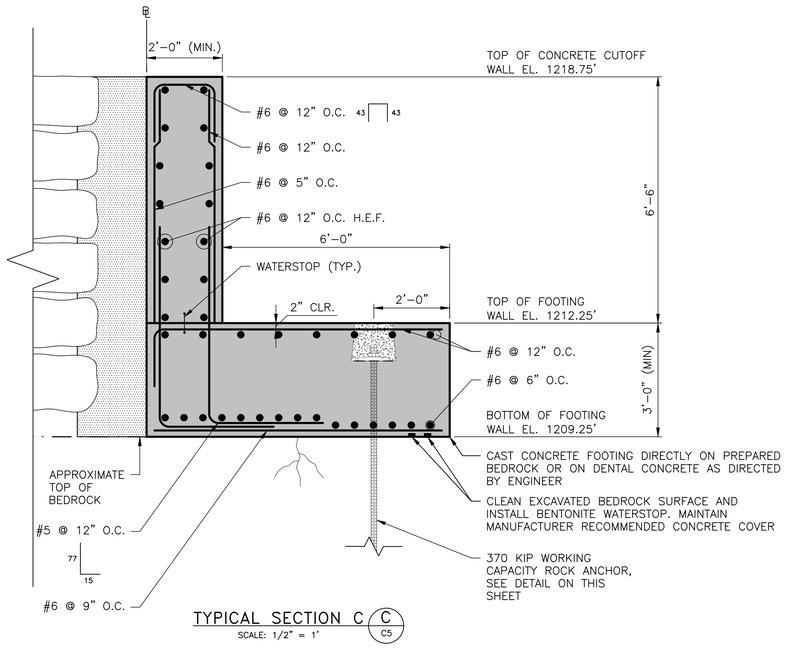

TYPICAL SECTION B (B / C5)

SCALE: 1/2" = 1'



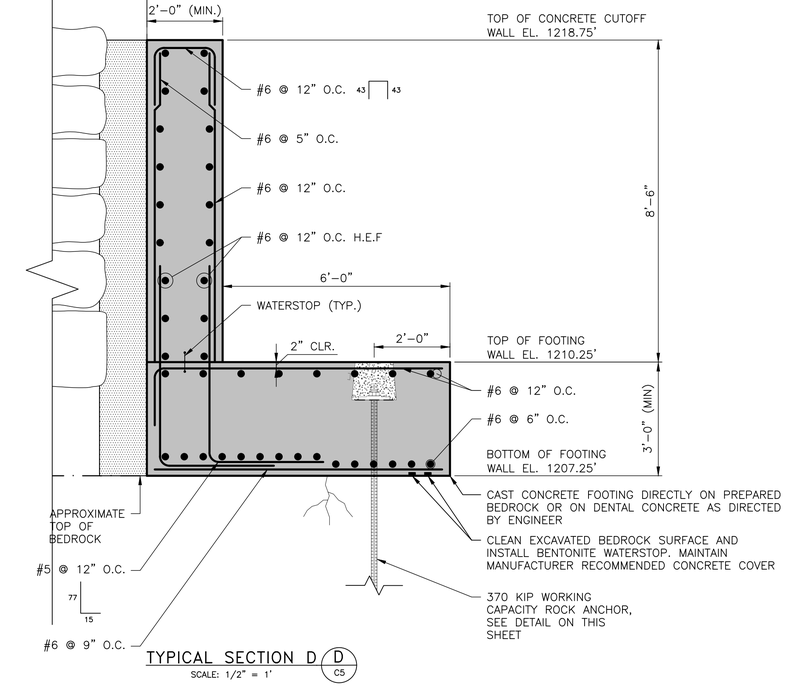

ROCK ANCHOR DETAIL

SCALE: 3/4" = 1'-0"



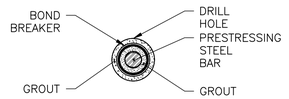

TYPICAL SECTION C (C / C5)

SCALE: 1/2" = 1'

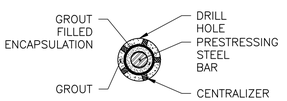



TYPICAL SECTION D (D / C5)

SCALE: 1/2" = 1'




Sect A




Sect B

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TOWN OF CALAIS
3120 PEKIN
BROOK ROAD
EAST CALAIS,
VERMONT, 05650

JOHN BRABANT
VICE CHAIR
SELECT BOARD

CURTIS POND DAM
REHABILITATION
PROJECT

SHEET TITLE

BASELINE TYPICAL
SECTIONS

| DRAWN BY | DATE |
|---|---|
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| CHECKED BY | D&K PROJECT # |
| CWJ | 928190 |
| PROJ. ENG. | D&K ARCHIVE # |
| JWT | |

SHEET NUMBER

C9

SHEET 9 OF 13

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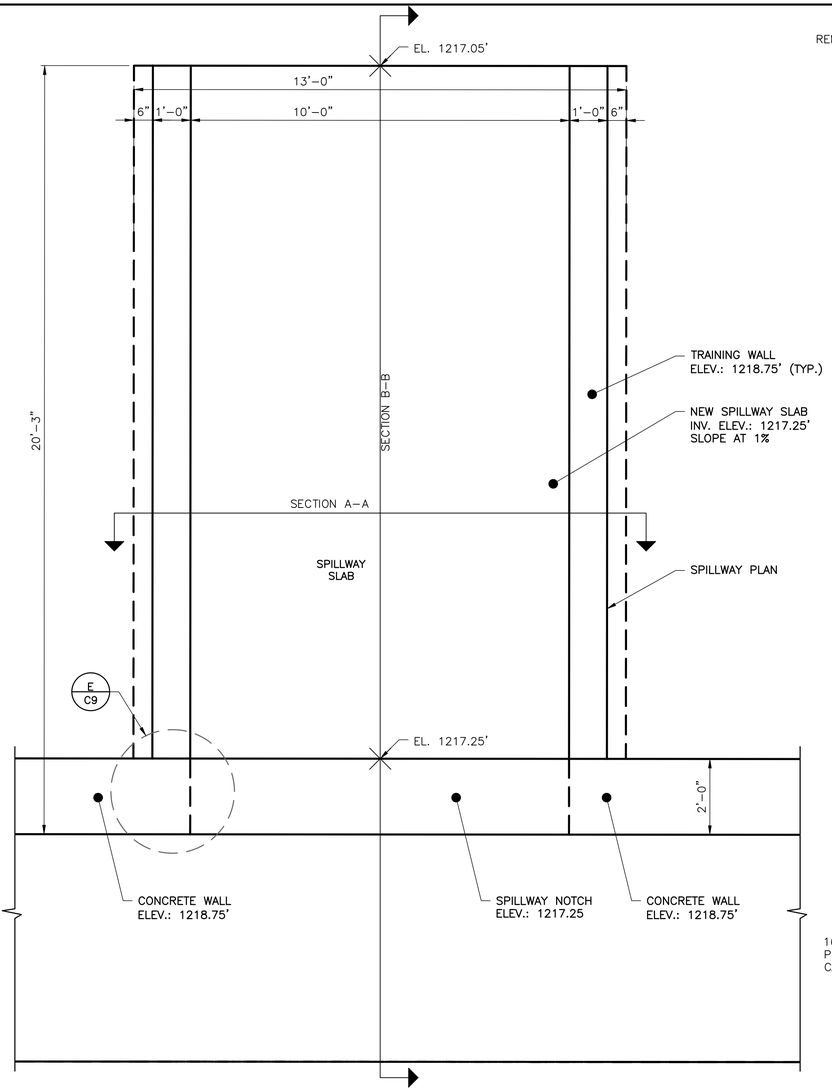
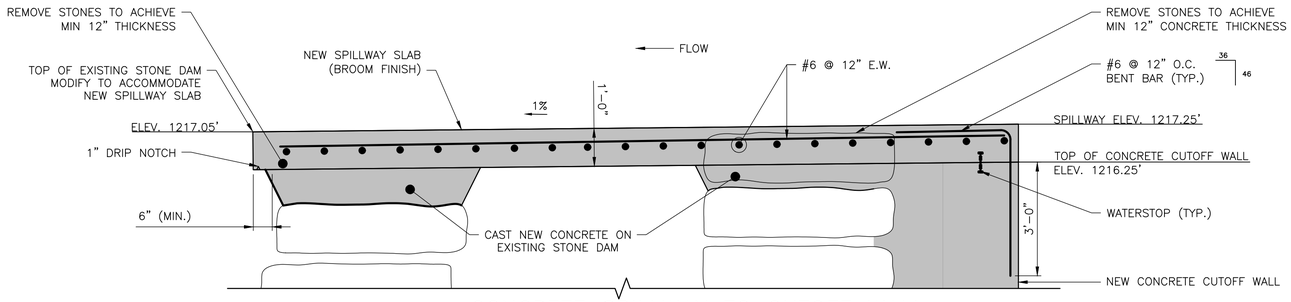


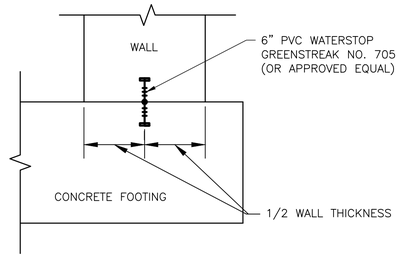

## SPILLWAY PLAN

SCALE: 1/2" = 1'



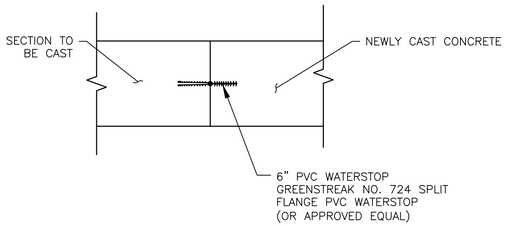

## CONCRETE SPILLWAY TO CUTOFF WALL CONNECTION DETAIL SECTION B-B

SCALE: 1/2" = 1'



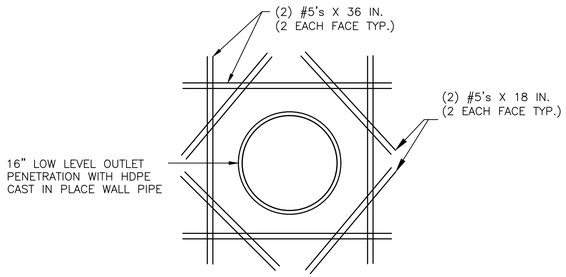

## HORIZONTAL CONSTRUCTION JOINT DETAIL

NOT TO SCALE



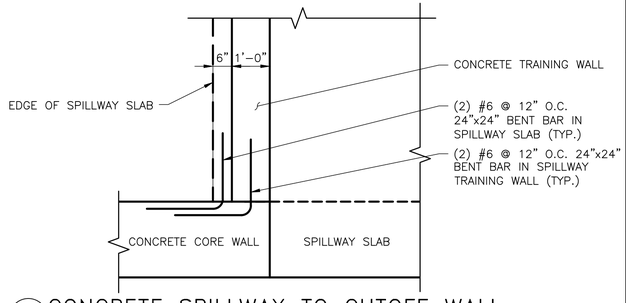

## VERTICAL CONSTRUCTION JOINT DETAIL

NOT TO SCALE



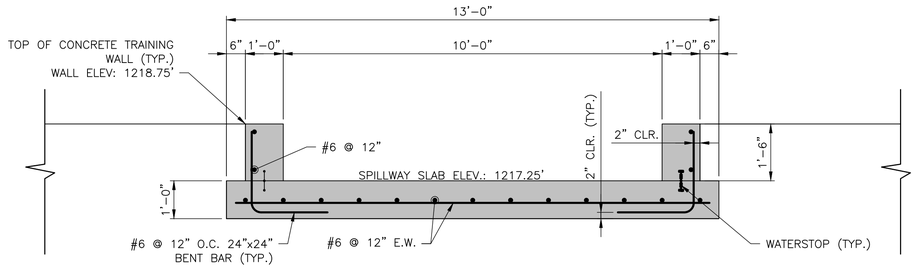

## ADDITIONAL REINFORCING AT WALL PENETRATION

NOT TO SCALE



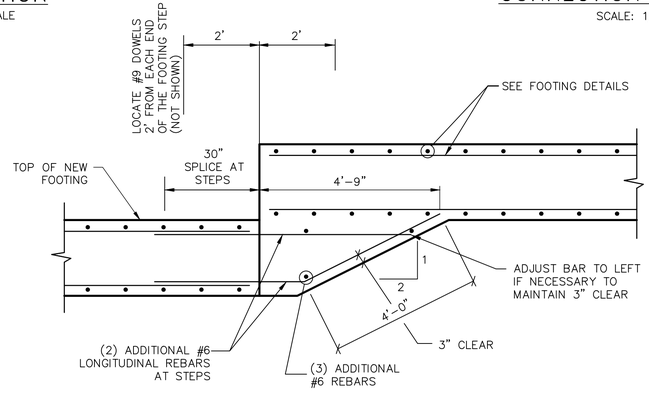

E
C9 CONCRETE SPILLWAY TO CUTOFF WALL CONNECTION DETAIL PLAN

SCALE: 1/2" = 1'




## CONCRETE SPILLWAY DETAIL SECTION A-A

SCALE: 1/2" = 1'




## STEP REINFORCING

SCALE: 1/2" = 1'

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JOHN BRABANT
VICE CHAIR
SELECT BOARD

CURTIS POND DAM
REHABILITATION
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SHEET TITLE

CONCRETE DETAILS

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| JWT | |

SHEET NUMBER

C10

SHEET 10 OF 13

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## CHECK DAM – TEMPORARY (STONE)

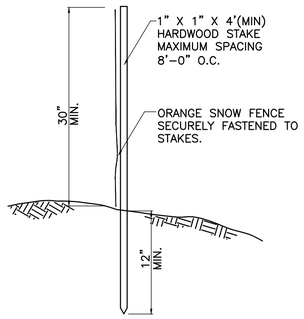
| STONE COFFER/CHECK DAM ITEM SUFFIXES | |
|---|---|
| SUFFIX (XX) | DITCH BOTTOM WIDTH |
| 01 | 0.0 TO 3.3vft |
| 02 | >v3.3 TO 6.6vft |
| 03 | >v6.6 TO 9.9vft |
| 04 | >v9.9vft |

| STONE COFFER/CHECK DAM PLACEMENT INTERVAL | |
|---|---|
| DITCH SLOPE | PLACEMENT INTERVAL ** |
| 1 % | 200 ft |
| 2 % | 100 ft |
| 3 % | 65 ft |
| 4 % | 50 ft |
| 5 % | 40 ft |
| 6 % | 35 ft |
| 8 % | 25 ft |
| 10 % | 20 ft |

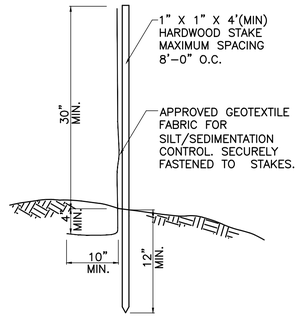
** BASED ON 2 ft TYPICAL HEIGHT

| CHECK DAM VOLUMES | |
|---|---|
| SIDE SLOPE | VOLUME (z) |
| 1:2 | 0.8 z u |
| 1:3 | 1.2 z u |
| 1:4 | 1.6 z u |
| 1:6 | 2.4 z u |

** BASED ON V SHAPED DITCH SECTION. FOR TRAPEZOIDAL DITCH, ADD 3 z/ft OF DITCH WIDTH




PROJECT DEMARCATION FENCE
NOT TO SCALE



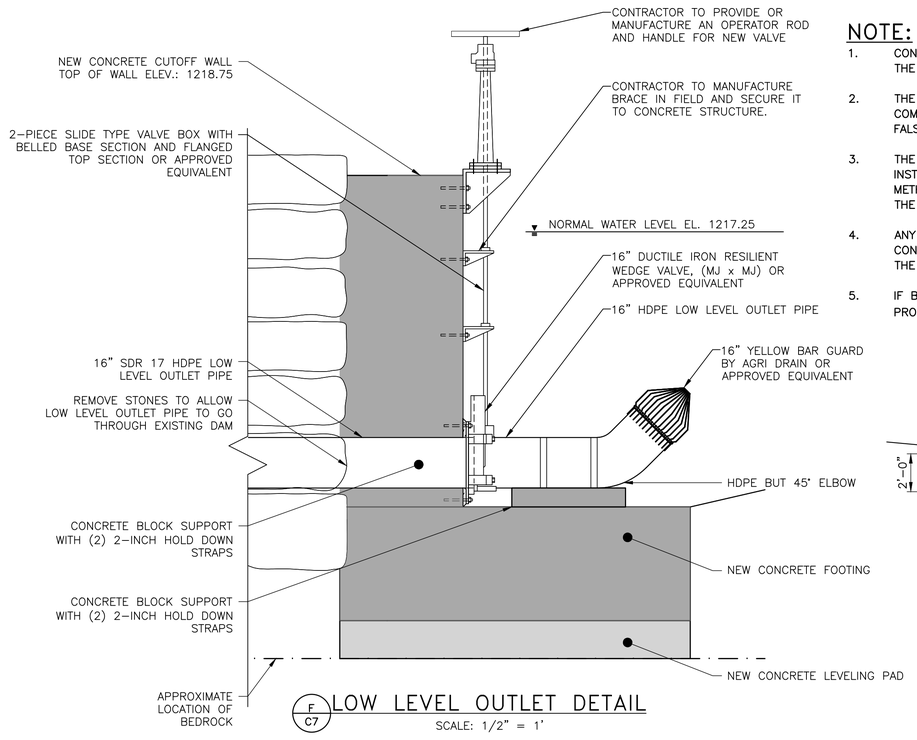

SILT FENCE
NOT TO SCALE

## COFFER/CHECK DAM NOTES:

1. THE PRIMARY PURPOSE OF A CHECK DAM IS TO REDUCE EROSION IN A CHANNEL BY REDUCING FLOW VELOCITY IN THE CHANNEL.
2. CHECK DAMS WILL CAPTURE SEDIMENT THAT FALLS OUT OF SUSPENSION BEHIND THE CHECK DAM DUE TO DECREASED VELOCITY.
3. CHECK DAMS ARE NOT INTENDED TO, AND WILL NOT FILTER SEDIMENT FROM TURBID WATER.
4. SLOPES EXCEEDING 10% SHALL INCLUDE A CHANNEL PROTECTIVE LINING.
5. DETAILS SHOWN SHALL BE USED FOR TEMPORARY INSTALLATION ONLY.
6. MAXIMUM DRAINAGE AREA TRIBUTARY TO STONE CHECK DAM SHALL BE 2.0 ac.
7. MEASURES SHALL BE INSPECTED EVERY SEVEN (7) CALENDAR DAYS, AFTER EACH RAINFALL OF 1/2" OR MORE WITHIN A 12 HOUR PERIOD, OR DAILY DURING PROLONGED RAINFALL. MEASURES SHALL BE CLEANED AND REPAIRED AS REQUIRED.
8. SEDIMENT SHALL BE REMOVED WHEN ACCUMULATION REACHES ONE–HALF OF THE MEASURE HEIGHT. SEDIMENT SHALL BE DISPOSED OF AS UNSUITABLE MATERIAL.
9. COURSE AGGREGATE FACING MATERIAL FOR THE STONE CHECK DAM SHALL MEET THE GRADATION REQUIREMENTS OF SIZE DESIGNATION 3/4" CRUSHED STONE. STONE FILLING CORE MATERIAL FOR THE STONE CHECK DAM SHALL MEET THE GRADATION REQUIREMENTS OF VTRANS STONE FILL, TYPE I. SEE SPECIFICATIONS SECTION 2260–EARTH DAM FOR MATERIAL GRADATIONS.

## EROSION CONTROL NOTES

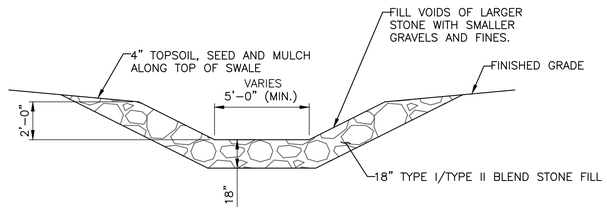
1. TEMPORARY EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) MEASURES ARE REQUIRED THROUGHOUT THE ENTIRE CONSTRUCTION PERIOD.
2. ALL EPSC ACTIVITIES SHALL CONFORM TO THE VT DEC LOW RISK SITE HANDBOOK FOR EROSION PREVENTION AND SEDIMENT CONTROL, 2006.
3. ALL EARTHWORK AND GRADING PERFORMED BETWEEN OCTOBER 15 AND APRIL 15 SHALL CONFORM TO APPROVED WINTER CONSTRUCTION PRACTICES, AS PRESENTED IN THE VT DEC LOW RISK SITE HANDBOOK FOR EROSION PREVENTION AND SEDIMENT CONTROL 2006.
4. THE CONTRACTOR SHALL BE AWARE OF ALL DISCHARGE INTO THE OUTLET CHANNEL. SHOULD THERE BE VISUALLY DISCOLORED DISCHARGE ENTERING THE OUTLET CHANNEL THE CONTRACTOR SHALL DETERMINE THE SOURCE. IF THE CAUSE IS FROM CONSTRUCTION ACTIVITIES ALL OPERATIONS MUST CEASE UNTIL THE DISCHARGE IS NO LONGER DISCOLORED. ALTERNATIVE MEANS OF CONSTRUCTION SHALL BE ADMINISTERED AS TO AVOID ADDITIONAL RELEASE OF DISCOLORED DISCHARGE INTO THE OUTLET CHANNEL.
5. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL INSTALL SILT FENCING AND EROSION CONTROL DEVICES AS SHOWN ON THESE PLANS. EROSION CONTROLS SHALL BE LOGICALLY PHASED WITH CONSTRUCTION ACTIVITIES AND AS DIRECTED BY THE ENGINEER OR OWNERS REPRESENTATIVE.
6. WATER REMOVED FROM WORK AREAS SHALL BE DISCHARGED TO A FILTER BAG LOCATED GREATER THAN 100 FEET FROM ANY FLOWING NON–TURBID WATER.
7. SHOULD A FILTER BAG BE USED TO CONTROL SEDIMENT, A REPLACEMENT FILTER BAG SHALL BE ON SITE AT ALL TIMES. THE FILTER BAGS SHALL BE REMOVED FROM THE SITE ONCE USED.
8. THE EROSION CONTROLS SHALL BE INSPECTED DAILY PRIOR TO INITIATION OF THE DAY'S ACTIVITIES. MAINTENANCE SHALL TAKE PLACE AT THAT TIME.
9. THE CONTRACTOR SHALL TOPSOIL, SEED AND MULCH THE DISTURBED AREAS WITHIN 7 DAYS OF INITIAL DISTURBANCE. AFTER THIS TIME, ANY DISTURBANCE IN THE AREA MUST BE STABILIZED AT THE END OF EACH WORKDAY. ALL AREAS OF DISTURBANCE MUST HAVE PERMANENT STABILIZATION WITHIN 48 HOURS OF REACHING FINAL GRADE. THE FOLLOWING EXCEPTIONS MAY APPLY:
   A) STABILIZATION IS NOT REQUIRED IF THE EARTHWORK IS TO CONTINUE IN THE AREA WITHIN THE NEXT 24 HOURS AND THERE IS NO PRECIPITATION FORECAST FOR THAT SAME PERIOD OF TIME.
   B) STABILIZATION IS NOT REQUIRED IF THE EARTHWORK IS OCCURRING WITHIN A SELF–CONTAINED EXCAVATION, WITH A DEPTH OF 2 FEET OR GREATER AND NO OUTLET.
10. ALL SLOPES AND DISTURBED AREAS SHALL BE GRADED SMOOTH AND FREE OF POCKETS WITH SUFFICIENT SLOPE TO ENSURE DRAINAGE.
11. ALL SLOPES GREATER THAN 1V:2H SHALL BE TREATED WITH BIODEGRADABLE EROSION CONTROL BLANKET, TYPE S150BN AS MANUFACTURED BY NORTH AMERICAN GREEN OR APPROVED EQUAL. THE BLANKET SHALL BE STAPLED WITH BIODEGRADABLE STAPLES, OVERLAPPED, AND SHINGLED CORRECTLY RELATIVE TO WATER FLOW, AND INSTALLED IN GENERAL ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND SPECIFICATIONS. ALL EROSION CONTROL PRODUCTS SHALL CONFORM TO SPECIFICATIONS SECTION 01575.
12. PERMANENT STABILIZATION SHALL BE CONDUCTED ACCORDING TO THE TECHNICAL SPECIFICATIONS SECTION 02483.
13. REMOVAL OF EPSC MEASURES SHALL ONLY BE DONE FOLLOWING THE APPROVAL OF THE ENGINEER. ALL DISTURBANCES CAUSED BY THE REMOVAL SHALL BE REPAIRED IMMEDIATELY.




F / C7 LOW LEVEL OUTLET DETAIL
SCALE: 1/2" = 1'

## NOTE:

1. CONTRACTOR SHALL MAINTAIN THE STABILITY OF THE STONEWALLS NOT TO BE REMOVED THROUGHOUT THE CONSTRUCTION OF THE REHABILITATION.
2. THE PORTIONS OF THE STONEWALLS TO BE REMOVED SHALL BE DONE IN A MANNER THAT DOES NOT COMPROMISE OR DESTABILIZE THE PORTIONS OF THE WALL THAT ARE TO REMAIN. TO DO SO FALSEWORK MAY BE REQUIRED TO PREVENT THE DESTABILIZATION OF THE STONEWALLS.
3. THE CONTRACTOR AND THE ENGINEER SHALL DISCUSS THE CONSTRUCTION OF THE WORK AND THE INSTABILITY OF EXISTING STONEWALLS. THE CONTRACTOR SHALL PROVIDE SPECIFIC MEANS AND METHODS TO THE ENGINEER THAT WILL RESULT IN MAINTAINING THE STABILITY OF THE WALLS DURING THE CONSTRUCTION OF THE REHABILITATION.
4. ANY DAMAGE TO THE STONEWALLS AS A RESULT OF THIS CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR. THE DAMAGED PORTIONS SHALL BE RETURNED TO A LIKE CONDITION AS PRIOR TO THE DAMAGE TO THE SATISFACTION OF THE ENGINEER.
5. IF BEDROCK IS FOUND TO BE DEEPER IN STILLING BASIN AREA THAN SHOWN ON CHANNEL BASELINE PROFILE, 18" OF TYPE I/TYPEII STONE FILL SHALL BE USED.




## NOTES:

1. RIPRAP TO BE TYPE I/TYPE II STONE FILL.
2. CONTRACTOR SHALL CHOKE ALL VOIDS IN SURFACE OF RIPRAP TO PROMOTE FLOW OF WATER ON TOP OF RATHER THAN THROUGH THE STONE.

STONE LINED SWALE DETAIL
NOT TO SCALE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JOHN BRABANT
VICE CHAIR
SELECT BOARD

CURTIS POND DAM REHABILITATION PROJECT

SHEET TITLE

CIVIL DETAILS AND EPSC DETAILS

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SHEET NUMBER

C11

SHEET 11 OF 13

| WETLAND AND BUFFER ZONE IMPACTS | | | |
|---|---|---|---|
| CATEGORIES | PERMANENT | TEMPORARY | TOTAL |
| WETLAND | 144.44 SF | 461.79 SF | 606.23 SF |
| WATERBODY | 1742.27 SF | 4528.42 SF | 6270.69 SF |
| IMPACT BELOW OHW | | | 6876.92 SF |
| | | | 1146.15 CY |

LEGEND:

- PERMANENT WETLAND FILL
- TEMPORARY WETLAND IMPACT
- PERMANENT IMPACTS BELOW OHW
- TEMPORARY IMPACTS TO BELOW OHW

WETLAND B
CLASS 3

NO FILL DOWNSTREAM OF OUTLET

EXISTING HOUSE

EXISTING GARAGE

TEMPORARY COFFER DAM

TEMPORARY MATTING TO BE INSTALLED DURING CONSTRUCTION

EDGE OF POND

WETLAND A
CLASS 2

AREA WITHIN FENCING SHALL NOT BE DISTURBED DURING CONSTRUCTION

50 FT WETLAND BUFFER

AREA WITHIN FENCING SHALL NOT BE DISTURBED DURING CONSTRUCTION

AREA TO BE FENCED OFF TO PREVENT MACHINERY FROM ENTERING

CURTIS POND
NORMAL WSEL.: 1217.63 (AS OBSERVED 9/26/22)

10 0 5 10 20 40
SCALE IN FEET


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EAST CALAIS, VERMONT, 05650

JOHN BRABANT
VICE CHAIR
SELECT BOARD

CURTIS POND DAM REHABILITATION PROJECT

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WETLAND IMPACT PLAN

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SHEET NUMBER

C12

SHEET 12 OF 14

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