**GENERAL NOTES**

1. **PROTECTION OF WORK:**
   - The Contract shall not extend beyond the work or any thing done by the Contractor, nor shall it extend beyond the work or any thing done by the Contractor, nor shall it extend beyond the work or any thing done by the Contractor.
   - The Contractor shall be liable for any damage caused by the work or any thing done by the Contractor.

2. **MEASURES SAFETY:**
   - In the event of any emergency, the Contractor shall be responsible for the safety of the work and the work done by the Contractor.
   - The Contractor shall be responsible for the safety of the work and the work done by the Contractor.

**WARNING:**

- The Contractor shall be responsible for the safety of the work and the work done by the Contractor.
- The Contractor shall be responsible for the safety of the work and the work done by the Contractor.

**SPECIAL NOTES**

1. **PROTECTION OF WORK:**
   - In the event of any emergency, the Contractor shall be responsible for the safety of the work and the work done by the Contractor.
   - The Contractor shall be responsible for the safety of the work and the work done by the Contractor.

2. **MEASURES SAFETY:**
   - In the event of any emergency, the Contractor shall be responsible for the safety of the work and the work done by the Contractor.
   - The Contractor shall be responsible for the safety of the work and the work done by the Contractor.

3. **WARNING:**
   - The Contractor shall be responsible for the safety of the work and the work done by the Contractor.
   - The Contractor shall be responsible for the safety of the work and the work done by the Contractor.

4. **SPECIAL NOTES:**
   - The Contractor shall be responsible for the safety of the work and the work done by the Contractor.
   - The Contractor shall be responsible for the safety of the work and the work done by the Contractor.
1. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CATEGORIZED AS INITIAL, INTERIM, AND FINAL MEASURES. INITIAL MEASURES SHALL BE IMPLEMENTED PRIOR TO CONSTRUCTION, AND MAY CONSIST OF COVERS FOR EXISTING TREE LINES, LEGACIES, AND OTHER COMPONENTS OF THE UPLAND COMPLEX. INTERIM MEASURES SHALL BE APPLIED TO AREAS THAT WILL BE DISTURBED AS CONSTRUCTION PROGRESSES. FINAL MEASURES SHALL BE APPLIED UPON COMPLETION OF CONSTRUCTION, AND MAY CONSIST OF A PERMANENT SOIL EROSION CONTROL SYSTEM.

2. ALL INITIAL SOIL EROSION AND SEDIMENT CONTROL PRACTICES ARE TO BE INSTALLED PRIOR TO CONSTRUCTION.

3. ALL INITIAL SOIL EROSION AND SEDIMENT CONTROL PRACTICES ARE TO BE INSTALLED PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL SERIALIZE ALL INITIAL SOIL EROSION AND SEDIMENT CONTROL PRACTICES WITHIN 48 HOURS OF THEIR INSTALLATION.

4. ANY CLEARING AREAS THAT WILL BE LEFT EXPOSED MORE THAN 30 DAYS AND NOT COVERED WITH SOD OR EROSION PROTECTION MEASURES MUST BE COVERED WITH SOD, EROSION CONTROL BLANKET, OR OTHER APPROVED METHODS WITHIN 7 DAYS OF THEIR INSTALLATION.

5. ALL CLEARING AREAS THAT WILL BE LEFT EXPOSED MORE THAN 30 DAYS AND NOT COVERED WITH SOD OR EROSION PROTECTION MEASURES MUST BE COVERED WITH SOD, EROSION CONTROL BLANKET, OR OTHER APPROVED METHODS WITHIN 7 DAYS OF THEIR INSTALLATION.

6. THE CONTRACTOR SHALL PERFORM PERIODIC INSPECTIONS OF ALL CLEARING AREAS AND REPORT ANY VIOLATIONS TO THE ENGINEER.

7. THE CONTRACTOR SHALL PERFORM PERIODIC INSPECTIONS OF ALL CLEARING AREAS AND REPORT ANY VIOLATIONS TO THE ENGINEER.

8. CONTRACTOR SHALL FENCE OFF AND PROTECT TREES/AREAS DESIGNATED BY OWNER.

9. THE LOCATION OF ANY STOCKPILES SHALL BE DESIGNATED BY THE OWNER PRIOR TO CONSTRUCTION. THIS AREA SHALL BE SEQUENCED BY TYPICAL RETENTION PRAIRIE DENSITIES AS SHOWN ON SHEET C-0.1 TO C-6.4.

10. A CRUSHED STONE, STABILIZED CONSTRUCTION ACCESS PAD WILL BE INSTALLED WHEREVER A CONSTRUCTION ACCESS ROAD INTERSECTS A PAVED ROADWAY. SAID ROAD CONSTRUCTION PAD WILL MEET THE REQUIREMENTS OF THE TEMPORARY CONSTRUCTION ENTRANCE PAD AS SPECIFIED IN SECTION 32 90 00.

11. CONTRACTOR SHALL FENCE OFF AND PROTECT TREES/AREAS DESIGNATED BY OWNER.

12. ALL DRAINAGE DITCHES ARE TO BE STABILIZED WITH EROSION CONTROL BLANKET; MINIMUM 3' FROM CONSTRUCTION. THIS AREA SHALL BE ENCLOSED BY SILT FENCE A REASONABLE DISTANCE FROM THE TOE OF SLOPE UNTIL SUCH TIME IT IS USED.

13. SLOPES STEEPER THAN 1 V:6H (16%) LOCATED WITHIN THE DAM BREACHING AREA ARE TO BE PROTECTED BYTemporary Erosion Control Blanket AND RETENTION PRAIRIE DENSITIES AS SHOWN ON SHEET C-0.1 TO C-6.4.

14. ALL WETLANDS NOT LOCATED WITHIN LIMITS OF DISTURBANCE SHALL BE PROTECTED FROM CONSTRUCTION ACTIVITIES, MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.

15. CONCRETE RUBBLE MAY BE SALVAGED AND USED FOR TEMPORARY EROSION CONTROL, BUT ALL MATERIALS MUST BE LEFT IN PLACE AND BOUNDARIES IDENTIFIED WITH ХоRNETEES.

16. FINAL SOIL EROSION MEASURES, PLANTINGS & SEEDMIX FOR ALL SLOPES, WETLANDS, OR DISTURBED LAND AREA SHALL BE COMPLETED WITHIN FIFTEEN (15) CALENDAR DAYS AFTER FINAL GRADING OR FINAL EARTH CHANGE HAD BEEN COMPLETED.

17. AT COMPLETION OF CONSTRUCTION ACTIVITIES OR UPON REQUEST FOR REVIEW, CONTRACTOR SHALL SUBMIT INSPECTION LOG BOOK TO THE COUNTY, THE OWNER & THE ENGINEER.

18. CONTRACTOR SHALL FENCE OFF AND PROTECT TREES/AREAS DESIGNATED BY OWNER.

19. CONTRACTOR SHALL READJUST AND COORDINATE THEIR EROSION CONTROL SYSTEMS TO REDUCE AND CONTROL THE AMOUNT OF EROSION DUE TO CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL REPORT ANY ADDITIONAL MEASURES REQUIRED BY THE ENGINEER.
INSPECTION AND MAINTENANCE:

SEDIMENT BARRIERS:
1. The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment on pavement. This may require periodic top dressing with additional stone or additional length as conditions demand. All sediment spilled, dropped, washed, or tracked onto roadways (public or private) or other impervious surfaces must be removed immediately.

2. Where accumulation of dust/erosion is inadequately cleaned or removed by conventional methods, a power broom or street sweeper will be required to clean paved or impervious surfaces. Access points to the work area shall be controlled.

SILT FENCE:
1. If the fence drifts from its installed location or becomes partially submerged, repair should be immediately undertaken.

2. Regularly remove any collected debris that impedes the function of the fence.

STABILIZED CONSTRUCTION ACCESS:
1. Erosion control blankets shall be installed per grade recommendations.

REFERENCES:
1. M.D.O.T. SOIL EROSION & SEDIMENTATION CONTROL MEASURES R-96-B
2. M.D.O.T. SOIL EROSION & SEDIMENTATION CONTROL MEASURES R-96-C
3. M.D.O.T. SOIL EROSION & SEDIMENTATION CONTROL MEASURES R-96-D

Please refer to the original plans for slopes and widths.
BREACHING - STAGE 1 PLAN (TOP CUT TO EL 646)

JS
TRN
BW
DD

D. DEVAUN 3/3/15 30% DESIGN REVIEW

REMOVE CONCRETE COREWALL TO ELEVATION 648

SIPHON OUTLET
ENERGY DISSIPATION
REFER TO SHEET B-3.3 FOR DETAILS

WSE = APPROX. 639.5'
AUGUST 2014 EXPECTED AT START OF DEWATERING

(4) 36" HDPE PIPES REFER TO SHEETS B-7.1 & B-7.4

DOWNSTREAM TAILWATER BERM TO ELEVATION 623' WITH OUTLET WEIR AT 620'
REFER TO SHEETS B-7.1 & B-7.4

LEGEND
RIP RAP
PROPOSED CONTOUR
GB
GRADE BREAK LINE
TEMPORARY RIVER CHANNEL
BOTTOM OF BANK
EXISTING MAJOR CONTOUR LINE
EXISTING MINOR CONTOUR LINE
6/3/15 60% DESIGN REVIEW
RIVER CHANNEL TOP OF BANK

NOTE: REFER TO RESTORATION SHEETS R-1.4 & R-2.4 FOR DETAILS PERTAINING TO THE TEMPORARY RIVER CHANNEL. PROPOSED PROFILE AND CROSS SECTIONS ARE DETAILED IN THOSE PLAN SHEETS.

LIMITS OF DISTURBANCE

PUBLIC OBSERVATION AREA TO BE QUARANTINED FROM CONSTRUCTION EQUIPMENT AND ACTIVITY
CONSTRUCTION FENCING

CONSTRUCTION ACCESS

PUBLIC PARKING AREA

MATCHLINE B-2.2
BREACHING - STAGE 1 PLAN (CHANNEL AT CASS RD)

(4) 36" HDPE PIPES REFER TO SHEETS B-7.1 & B-7.4 FOR DETAILS

DOWNSTREAM TAILWATER BERM TO ELEVATION 623' WITH OUTLET WEIR AT 620' REFER TO SHEET B-7.1 & B-7.4 FOR DETAILS

LIMITS OF DISTURBANCE

LIMITS OF TEMPORARY CHANNEL EXCAVATION

LIMITS OF TEMPORARY PARKING AREA

LIMITS OF TEMPORARY CONSTRUCTION AREA

LIMITS OF TEMPORARY GRAVEL PAD

LIMITS OF TEMPORARY EQUIPMENT STAGING AREA

MATCHLINE B-2.1

MATCHLINE B-2.3

PUBLIC PARKING AREA

CONSTRUCTION ENTRANCE

CONSTRUCTION ACCESS

SIPHON OUTLET ENERGY DISSIPATION REFER TO SHEET B-3.3 FOR DETAILS

NOTE: REFER TO RESTORATION SHEETS R-1.4 & R-2.4 FOR DETAILS PERTAINING TO THE TEMPORARY RIVER CHANNEL. PROPOSED PROFILE AND CROSS SECTIONS ARE DETAIL IN THESE SHEETS.
NOTE:
REFER TO RESTORATION SHEETS R-1.4 & R-2.4 FOR DETAILS PERTAINING TO THE TEMPORARY RIVER CHANNEL. PROPOSED PROFILE AND CROSS SECTIONS ARE DETAILED IN THOSE PLAN SHEETS.
GENERAL: slopes, channel, and other features of the siphon system include the following:

- A river gage will be placed upstream of the impoundment so that inflows can be observed and tracked.
- A flow gage or pressure gage (or approved equal) shall be used at the siphon outlet to monitor siphon flows.
- Contractor shall survey water surface elevations at the dam every 12 hours to track dewatering rate.

INFORMATION:

- Solids handling pumps
- Pump connection with HDPE pipe
- Pumping pad

SIPHON OUTLET STRUCTURE INCLUDING:

- Knife gate valves
- Outlet pipe
- Energy dissipation structure

SIPHON INLET CONSISTING OF:

- Intake screen
- Skid
- Pipe inlet
- Mooring buoy

PUMP CONNECTION INCLUDING:

- Intake screens (typ)
- Intake pipe inlet
- Existing concrete core wall cut down to elevation 646' as needed
- Intake screen
- Mooring buoy
- Existing concrete core wall

SIPON SYSTEM PLAN

SIPhon SYSTEM PROFILE
REFER TO SHEETS B-8.1 - B-8.3 FOR AUXILIARY SPILLWAY AND STILLING BASIN DETAILS

EXISTING CORE WALL
CONSTRUCTION ACCESS
ARTICULATED BLOCK
AUXILIARY SPILLWAY
STILLING BASIN
GRADING
LIMITS OF DREDGED CHANNEL
LIMITS OF AUXILIARY SPILLWAY GRADING
LIMITS OF SPILLWAY GRADING
AUXILIARY SPILLWAY
STILLING BASIN
BERM EL 621
AUXILIARY SPILLWAY
STILLING BASIN
OUTLET WEIR EL 617
TAILWATER BERM EL 623
(4) 36" HDPE PIPES EL 615

EXISTING TOP OF CORE WALL EL 658
CORE WALL TOP CUT OF DAM
INITIAL EXCAVATION
POSSIBLE INTERIM SPILLWAY TO EL 630
AUXILIARY SPILLWAY CUT TO EL 623
EL 615 AUXILIARY SPILLWAY STILLING BASIN

WSE = APPROX. 627' - 623'
8/21/15 90% DESIGN REVIEW
10/23/15 100% DESIGN REVIEW
6/3/15 60% DESIGN REVIEW

LEGEND
EXISTING MAJOR RIP RAP
CONSTRUCTION ACCESS
ARTICULATED BLOCK
PROPOSED CONTOUR LINE
CONTOUR LINE
EXISTING MINOR CONTOUR LINE
ANTICIPATED WATER SURFACE
CULVERTS
WSE = WATER SURFACE ELEVATION

0 0 25' 50'
0 12.5' 25'
0 25' 50'
0 12.5' 25'

HORIZONTAL
VERTICAL

EXECUTIVE-TYP/ SHEET 4.2
WATER RESOURCES PROGRAM
BOARDSMAN DAM REMOVAL
BOARDMAN - 3% SLOPE PROFILE

DRAFT
URS 10-09-13
AHP 10-09-13
7/2/13
13653160

This is not a State of Washington drawing. The State of Washington does not guarantee the accuracy of this information.
This is not a State of Washington drawing. The State of Washington does not guarantee the accuracy of this information.
NOTE: CONSTRUCTION OF THE CONCRETE CORE WALL SHALL NOT HAVE MORE THAN 20 FEET OF UNSUPPORTED HEIGHT DURING CONSTRUCTION. THE CORE WALL SHALL BE SUPPORTED AT ITS TOP AND BOTTOM TO ENSURE STABILITY.DURING EXCAVATION. 

STAGE 5 RIVER CHANNEL EXCAVATION PROFILE 
SECTION B-B (REFER TO B-5.1 FOR PLAN VIEW)
REFER TO SHEET R-3.3 FOR CROSS SECTION DETAILS OF
TYPICAL RESTORED RIVER CHANNEL AND SHEET R-4.4 FOR
THE PROFILE OF THE RESTORED RIVER THROUGH THE DAM
EMBANKMENT.
NOT TO SCALE

TYPICAL SNAKE HIBERNACULUM

NOTE: UNSTABLE SLOPE REMEDIATION (AS DIRECTED BY FIELD ENGINEER)
NOT TO SCALE

NOTE: LOCATIONS TO BE DETERMINED IN THE FIELD DURING CONSTRUCTION.

NOTE: ALTERNATE ITEM TO BE ADDED TO PROJECT BY OWNER AND ENGINEER. LOCATIONS TO BE DETERMINED IN THE FIELD DURING CONSTRUCTION.

NOT TO SCALE

TYPICAL SOIL EROSION CONTROL W/ COIR LOGS FOR STEEP SLOPES

NOTE: LOCATIONS TO BE DETERMINED IN THE FIELD DURING CONSTRUCTION.

GRAVEL PARKING AREA
NOT TO SCALE
CASS ROAD BRIDGE RIPRAP DETAILS

NOTES:
CASS ROAD BRIDGE TO BE CONSTRUCTED BY SEPARATE CONTRACTOR IN SUMMER 2016. AT THAT TIME RIPRAP WILL BE PLACED TO AN ELEVATION OF 618', THE LIMITS OF EXCAVATION UNDER THAT PROJECT. AFTER TEMPORARY RIVER CHANNEL HAS BEEN CONSTRUCTED AND EXCAVATION IS COMPLETE, THE REMAINING RIPRAP REQUIRED FOR ABUTMENT PROTECTION SHALL BE PLACED ACCORDING TO THESE DETAILS.

RIPRAP HEADER DETAILS

TOP OF RIPRAP MUST BE AT OR BELOW EXISTING STREAMBED/ELEVATION.

AN APPROPRIATE METHOD OF WATER DIVERSION FOR PLACING RIPRAP SHALL BE PROPOSED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER. IF WATER IS SHALLOW LESS THAN TWO FEET, TEMPORARY CONCRETE BARRIERS MAY BE USED TO DIVERT FLOW.

THE RIPRAP SCHEME SHOWN IS A MINIMUM REQUIREMENT FOR SECURITY.
AUXILIARY SPILLWAY STILLING BASIN ENTRANCE DETAIL

SCALE 1" = 2'

NOTES:
1. RIPRAP AT TOE OF GRADE BREAK BELOW ARTICULATED CONCRETE BLOCKS TO BE COVERED ENTIRELY WITH GROUT AND SMOOTH FINISHED.
2. RIPRAP ON SIDESLOPES TO BE GROUTED TO FULL DEPTH COVERED ENTIRELY WITH GROUT AND SMOOTH FINISHED.
3. TOP OF ROCK RIPRAP DOWNSTREAM OF BAFFLES TO BE GROUTED TO FULL DEPTH TO EL. 615.0.
4. GROUT RIPRAP ON SIDESLOPES A MINIMUM OF 2.5-FEET DOWNSTREAM OF GROUTED BASIN JERSEY BARRIER BAFFLES.
AUXILIARY SPILLWAY STILLING BASIN TAILWATER CONTROL BERM OVERFLOW SECTION

TYPICAL GROUTED RIPRAP SECTION ON TAILWATER CONTROL BERM LETDOWN

NOTES:
1. THE CREST OF THE TAILWATER CONTROL BERM SHALL BE LEVEL WITH THE SURFACE OF THE RIDGE, AND DOES NOT NEED TO BE ARMORED.
2. ALL RIPRAP THAT IS NOT TO BE GROUTED SHALL BE PLACED ON A SLOPE VARYING FROM 1:1 TO 1:2 3. ALL RIPRAP THAT IS NOT TO BE ARMORED SHALL BE PLACED ON A SLOPE VARYING FROM 1:1 TO 1:2 4. GROUT RIPRAP ON SIDESLOPES OF CHANNEL GRADE INDICATING維護FOR TYPICAL 5. ALL RIPRAP THAT IS NOT TO BE GROUTED SHALL BE PLACED ON A SLOPE VARYING FROM 1:1 TO 1:2
LOCATION AND CLEARANCE TO VOLTAGE POWER LINES IN AND NEAR CONSTRUCTION AREA.

WARNING!!! TRANSMISSION TOWERS.

NOTICE: EXCAVATION QUANTITIES ARE APPROXIMATE. VOLUME DISTRIBUTION MAY VARY BASED ON EXISTING DAM END EMBANKMENT, EXISTING ROAD, EXISTING CHANNEL ALIGNMENT, EXISTING 5 FT CONTOURS (FROM AERIAL IMAGERY), TEMPORARY ACCESS ROUTE, EXISTING PROPERTY BOUNDARIES.

EARTHWORK QUANTITIES
CHANNEL & FLOODPLAIN

CHANNEL ALIGNMENT MAPPING - HORIZONTAL CONTROL
BASED MICHIGAN STATE PLANE, CENTRAL ZONE, INTERNATION 1983 FOOT

<table>
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<th>SECTION</th>
<th>NORTHINGS</th>
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<tr>
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<td>594</td>
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<td>STA 40</td>
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</tbody>
</table>

REDUCED TO PRINT 8/4/15 90% DESIGN M. BURKE 6/2/15 60% DESIGN
NOTE:

1. EARTHWORK QUANTITIES ARE APPROXIMATE. DISTRIBUTION OF EARTHWORK VOLUME MAY DIFFER FROM ESTIMATES.

LOCATION AND CLEARANCE TO OVERHEAD TRANSMISSION LINES AND POLES (SURVEYED). CONTRACTOR TO VERIFY TRANSMISSION TOWERS.

LEGEND

EXISTING ROAD

EXISTING DAM EMBANKMENT

EXISTING AUXILLARY OUTLET CHANNEL.

EXISTING RAILWAY EDGE OF NEW FLOODPLAIN.

LIMITS OF DISTURBANCE

OVERHEAD TRANSMISSION LINES AND POLES (SURVEYED) TO BE REMOVED AND SALVAGED (REMOVAL EXTENT TO BE VERIFIED AT TIME OF CONSTRUCTION) FOR RE-USE BY OTHERS.

SEE DETAIL:

SEDIMENT TRAP, TEMPORARY SPOIL AREA NUMBER, TYP.

SEQUENCING & IMOUNDMENT SEDIMENT MANAGEMENT PLAN

REMOVED AND SALVAGED (REMOVAL EXTENT TO BE VERIFIED AT TIME OF CONSTRUCTION). SEE DETAIL:

SEDIMENT TRAP, TEMPORARY SPOIL AREA NUMBER, TYP.

LOCATION AND CLEARANCE TO OVERHEAD TRANSMISSION TOWERS (FROM AERIAL IMAGERY) AND POWER LINES IN AND NEAR CONSTRUCTION AREA.

NOTES:

1. EARTHWORK QUANTITIES ARE APPROXIMATE. DISTRIBUTION OF EARTHWORK VOLUME MAY DIFFER FROM ESTIMATES.

LOCATION AND CLEARANCE TO OVERHEAD TRANSMISSION LINES AND POLES (SURVEYED). CONTRACTOR TO VERIFY TRANSMISSION TOWERS.

LEGEND

EXISTING ROAD

EXISTING DAM EMBANKMENT

EXISTING AUXILLARY OUTLET CHANNEL.

EXISTING RAILWAY EDGE OF NEW FLOODPLAIN.

LIMITS OF DISTURBANCE

OVERHEAD TRANSMISSION LINES AND POLES (SURVEYED) TO BE REMOVED AND SALVAGED (REMOVAL EXTENT TO BE VERIFIED AT TIME OF CONSTRUCTION) FOR RE-USE BY OTHERS.

SEE DETAIL:

SEDIMENT TRAP, TEMPORARY SPOIL AREA NUMBER, TYP.

SEQUENCING & IMOUNDMENT SEDIMENT MANAGEMENT PLAN

REMOVED AND SALVAGED (REMOVAL EXTENT TO BE VERIFIED AT TIME OF CONSTRUCTION). SEE DETAIL:

SEDIMENT TRAP, TEMPORARY SPOIL AREA NUMBER, TYP.

LOCATION AND CLEARANCE TO OVERHEAD TRANSMISSION TOWERS (FROM AERIAL IMAGERY) AND POWER LINES IN AND NEAR CONSTRUCTION AREA.

NOTES:

1. EARTHWORK QUANTITIES ARE APPROXIMATE. DISTRIBUTION OF EARTHWORK VOLUME MAY DIFFER FROM ESTIMATES.

LOCATION AND CLEARANCE TO OVERHEAD TRANSMISSION LINES AND POLES (SURVEYED). CONTRACTOR TO VERIFY TRANSMISSION TOWERS.

LEGEND

EXISTING ROAD

EXISTING DAM EMBANKMENT

EXISTING AUXILLARY OUTLET CHANNEL.

EXISTING RAILWAY EDGE OF NEW FLOODPLAIN.

LIMITS OF DISTURBANCE

OVERHEAD TRANSMISSION LINES AND POLES (SURVEYED) TO BE REMOVED AND SALVAGED (REMOVAL EXTENT TO BE VERIFIED AT TIME OF CONSTRUCTION) FOR RE-USE BY OTHERS.

SEE DETAIL:

SEDIMENT TRAP, TEMPORARY SPOIL AREA NUMBER, TYP.

SEQUENCING & IMOUNDMENT SEDIMENT MANAGEMENT PLAN

REMOVED AND SALVAGED (REMOVAL EXTENT TO BE VERIFIED AT TIME OF CONSTRUCTION). SEE DETAIL:

SEDIMENT TRAP, TEMPORARY SPOIL AREA NUMBER, TYP.

LOCATION AND CLEARANCE TO OVERHEAD TRANSMISSION TOWERS (FROM AERIAL IMAGERY) AND POWER LINES IN AND NEAR CONSTRUCTION AREA.
NOTES:

1. DESIGN TOPOGRAPHIC CHANNEL PROFILES ARE TO SHOW EXISTING MAJOR 5 FT CONTOUR AS SHOWN ON SHEET R-1.2.

2. ONE SET OF CHROMATIC CHANNEL PROFILES TO SHOW SPOIL AREAS LINES AND GRADES BEFORE DRAWDOWN. THE SPOIL AREAS WILL BE APPLIED AT 5 FT INTERVALS WITH THE ASSISTANCE OF THE ENGINEER FOLLOWING DRAWDOWN.

3. TEMPORARY ACCESS ROUTE TO BE CONSTRUCTED WITH THE ASSISTANCE OF THE ENGINEER. SEE DETAIL:

4. SPOIL AREA LIMITS OF DISTURBANCE TO BE APPLIED TO MATCH EXISTING GRADE FROM FLOODPLAIN TO MATCH TEMPORARY ACCESS ROUTE.

5. SPOIL AREAS LINES AND GRADES SHOW GENERAL DESIGN EXTENTS AND SHAPE OF GRADING. THIS IS A FIELD SET ITEM, TO BE CONSTRUCTED WITH THE ASSISTANCE OF THE ENGINEER. APPEARANCE AT THE END OF CONSTRUCTION.

6. LARGE WOOD EXISTING CHANNEL ALIGNMENT.

7. CHANNEL GRADING SHOW GENERAL DESIGN AND CLEARANCE WARNING!!! VOLTAGE POWER LINES IN TO LINES, POWER POLES, CONTRACTOR TO VERIFY AND TRANSMISSION AND TRANSMISSION AND TOWERS (FROM AERIAL IMAGERY) AND POLES (SURVEYED).

8. 0.37% AVERAGE SLOPE.

9. CONSTRUCTED WITH ASSISTANCE OF THE ENGINEER. SEE DETAIL:

10. LONGITUDINAL PROFILE STA. 256+40 - 228+00
NOTES:
1. DESIGN TOPOGRAPHY, CHANNEL PROFILE AND CHANNEL GRADING SHOW GENERAL DESIGN INTENT, AND WILL BE ADAPTED DURING CONSTRUCTION WITH THE ASSISTANCE OF THE ENGINEER BASED ON PRE-DAM FEATURES AND TOPOGRAPHY THAT ARE REVEALED DURING DRAWDOWN OF THE IMPOUNDMENT AND EXCAVATION OF ACCUMULATED SEDIMENT.
2. DETAILED GRADING OF THE LOW FLOW CHANNEL IS NOT REFLECTED IN THE DESIGN CONTOURS. THIS IS A FIELD SET ITEM, TO BE CONSTRUCTED WITH THE ASSISTANCE OF THE ENGINEER.
3. SPOIL AREAS LINES AND GRADES SHOW GENERAL EXTENTS AND SHAPE OF GRADING. FINISH GRADING OF SPOIL AREAS TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO RESULT IN A NATURAL LANDFORM APPEARANCE AT THE END OF CONSTRUCTION.
CHANNEL, SEE EXISTING DAM EMBANKMENT

ELEV: 615.9
NORTHING 505693.6
EASTING 19358182.9

CONSTRUCTED CHANNEL
EASTING 19358093.8
NORTHING 505997.6

CONSTRUCTIONS

NOTES:
1. DESIGN TOPOGRAPHY, CHANNEL PROFILE AND TYPICAL SECTION AND DETAIL: SEE TYPICAL SECTION AND DETAIL: R-3.1

3. SPOIL AREAS LINES AND GRADES SHOW GENERAL EXTENTS AND SHAPE OF GRADING. THIS IS A FIELD SET ITEM, TO BE CONSTRUCTED TO PRESERVE VARIABLE SIDE-SLOPES AND SURFACE AS APPEARANCE AT THE END OF CONSTRUCTION.

ENGINEER BASED ON PRE-DAM FEATURES AND NEEDED TO RESULT IN A NATURAL LANDFORM. FINISH GRADING OF SPOIL AREAS TO ADD TO CASS ROAD FINISH GRADE.

CHANNEL GRADING SHOW GENERAL DESIGN TOPOGRAPHY THAT ARE REVEALED DURING CONSTRUCTION WITH THE ASSISTANCE OF THE ENGINEER.

DETAILED GRADING OF THE LOW FLOW CHANNEL IS NOT REFLECTED IN THE DESIGN CONTOURS.

CHANNEL WIDTH: 47.4 FT.
MATCH EXISTING BANK HEIGHT: 2.9 FT.

START: 170+00
ELEV: 600
CHANNEL WIDTH: 48 FT.
BANK HEIGHT: 3 FT.

SEE SHEET B-6.1 SHEET R-1.3 SHEET EXTENTS STATION 176+00 SEE DETAIL:

180+00
CONSTRUCTION AREA.

LIMITS OF DISTURBANCE

ENGINEER TO VERIFY LOCATION AND CLEARANCE TO LINES, POWER POLES, AND TRANSMISSION TOWERS (FROM AERIAL IMAGERY)

SALVAGE FOOTBRIDGE FOR USE BY OTHERS

CHANNEL BED MATERIAL

TRANSPORTERS PROVIDE TO BE MAINTAINED TO PRESERVE FABRIC ENCAPSULATED SOIL (FES) LIFTS OVERHEAD TRANSMISSION LINES AND GROUND BREAK.

NOTE:

SCALE IN FEET

LONGITUDINAL PROFILE STA. 180+00 - 153+00

SCALE IN FEET
COARSE SUBSTRATE - BOULDERS, COBBLES AND GRAVEL PLACED TO AUGMENT PRE-DAM TOPOGRAPHY, LIMITS AND EXTENTS TO BE CONFIRMED AT TIME OF CONSTRUCTION.

10-20 FT GEOMETRY TO BE CONFIRMED FOLLOWING DRAWDOWN AND EXCAVATION OF ACCUMULATED SEDIMENT.

1-3 FT CHANNEL BOULDERS AND SUBSTRATE TO BE CONSTRUCTED WITH THE ASSISTANCE OF THE ENGINEER.

TYPICAL SECTION CASCADE / STEP-POOL GRADING NOT TO SCALE

WARNING!!! MULTIPLE HIGH VOLTAGE POWER LINES IN AND NEAR CONSTRUCTION AREA. CONTRACTOR TO VERIFY LOCATION AND CLEARANCE TO LINES, POWER POLES, AND TRANSMISSION TOWERS.

EXISTING MAJOR (5 FT) CONTOUR
EXISTING MINOR (1 FT) CONTOUR
FINISH 1 FT CONTOUR
ALIGNMENT
LIMITS OF DISTURBANCE
ALLUVIAL FAN
CASCADE / STEP-POOL
FABRIC ENCAPSULATED SOIL (FES) LIFTS
SILT FENCE
TEMPORARY ACCESS ROUTE
CHANNEL BED MATERIAL
OVERHEAD TRANSMISSION LINES (FROM AERIAL IMAGERY)

FLOW
SUPPLEMENTAL CASCADE / STEP-POOL CONSTRUCTION LIMITS, LINES AND GRADES TO BE CONFIRMED FOLLOWING DRAWDOWN AND EXCAVATION OF ACCUMULATED SEDIMENT.
STA:0+19
ELEV:652.4

STA:0+14
ELEV:653.5

STA:0+26
ELEV:652.7

STA:0+35

STA:0+43

STA:0+56
ELEV:638.2

STA:0+56
ELEV:640.1

STA:0+56
ELEV:639.4

STA:0+72
ELEV:645.0

STA:0+76
ELEV:641.5

STA:1+02
ELEV:640.3

STA:1+02
ELEV:638.7

STA:1+02
ELEV:639.4

STA:1+02
ELEV:637.5

STA. 236+00
STA. 239+40
STA. 242+00
STA. 245+00
STA. 255+17

SCALE = X AXIS - 1" = 20' Y AXIS - 1" = 20'

STA:1+24
ELEV:642.5

STA:1+48
ELEV:635.3

STA:1+48
ELEV:638.7

STA:1+48
ELEV:637.6

STA:1+54
ELEV:636.6

STA:1+59
ELEV:647.7

STA:1+59
ELEV:650.1

STA:1+72
STA:1+74
STA:1+76

2. DETAILED GRADING OF THE LOW FLOW CHANNEL IS NOT PRE-DAM TOPOGRAPHY, DESIGN GRADING AND CHANNEL WALL FROM STATION 221+00 TO 243+00. DO NOT DISTURB ITEM, TO BE CONSTRUCTED WITH THE ASSISTANCE OF THE GRADING SHOW GENERAL DESIGN INTENT, AND WILL BE ADAPTED DURING CONSTRUCTION WITH THE ASSISTANCE OF THE ENGINEER BASED ON PRE-DAM FEATURES AND TOPOGRAPHY THAT ARE REVEALED DURING DRAWDOWN OF EXCAVATE ACCUMULATED SEDIMENT ALONG VALLEY ALIGNMENT TO BE CONFIRMED BY ENGINEER AT THE TIME OF CONSTRUCTION AS DETERMINED BY THE ENGINEER.

BASELINE ALIGNMENT AT CENTER OF CHANNEL, TYP.

FINISH SPOIL GRADE
FINISH GRADE
EXISTING GRADE

CP,BL,SJ
MB
NOTES:
1. DESIGN TOPOGRAPHY, CHANNEL PROFILE AND CHANNEL GRADING SHOW GENERAL DESIGN INTENT, AND WILL BE BASED ON PRE-DAM FEATURES AND ENGINEER ALIGNMENT AT CENTER OF CHANNEL, TYP. OF THE ENGINEER BASED ON PRE-DAM FEATURES AND TOPOGRAPHY THAT ARE REVEALED DURING DRAWDOWN OF IMPOUNDMENT AND EXCAVATION OF ACCUMULATED SEDIMENT. 

BASELINE ALIGNMENT AT CENTER OF CHANNEL, TYP.

SCALE IN FEET

SCALE = X AXIS - 1" = 20' Y AXIS - 1" = 20'

PRE-DAM TOPOGRAPHY, DESIGN GRADING AND CHANNEL WALL FROM STATION 221+00 TO 243+00. DO NOT DISTURB EXCAVATE ACCUMULATED SEDIMENT ALONG VALLEY ALIGNMENT TO BE CONFIRMED BY ENGINEER.

STA:0+37
ELEV:638.6

STA:0+38
ELEV:627.8

STA:1+01
ELEV:624.8

STA:1+02
ELEV:631.6

STA:1+49
ELEV:626.4

STA:1+48
ELEV:633.1

STA:1+54
ELEV:629.9

STA:1+49
ELEV:624.8

STA:1+48
ELEV:633.1

STA:1+62
ELEV:638.6

STA:1+55
ELEV:629.4

STA:1+56
ELEV:634.4

STA:1+76
ELEV:628.3

STA:1+95
ELEV:627.8

STA:1+93
ELEV:638.4

STA:1+70
ELEV:641.5

STA:1+69
ELEV:636.7

STA:1+76
ELEV:629.4

STA:2+04
ELEV:638.4

STA:2+22
ELEV:636.5

STA:0+18
ELEV:638.7

STA:0+35
ELEV:639.9

STA:0+45
ELEV:638.9

STA:0+56
ELEV:632.6

STA:0+55
ELEV:627.1

STA:0+68
ELEV:639.5

STA:0+75
ELEV:628.8

STA:0+96
ELEV:629.9

STA:1+02
ELEV:633.1

STA:1+01
ELEV:625.8

STA:1+29
ELEV:631.1

STA:1+48
ELEV:631.6

STA:1+55
ELEV:629.4

STA:1+56
ELEV:634.4

STA:1+76
ELEV:629.4

STA:1+93
ELEV:638.4

ELEV:640.3

STA:1+95
ELEV:627.8

STA:1+93
ELEV:638.4

ELEV:635.9

STA:1+49
ELEV:626.4

STA:1+48
ELEV:624.8

STA:1+65
ELEV:641.5

STA:2+04
ELEV:638.4

ELEV:641.4

R-2.2
NOTES:
1. DESIGN TOPOGRAPHY, CHANNEL PROFILE AND CHANNEL GRADING SHOW GENERAL DESIGN INTENT, AND WILL BE ADAPTED DURING CONSTRUCTION WITH THE ASSISTANCE OF THE ENGINEER BASED ON PRE-DAM FEATURES AND TOPOGRAPHY THAT ARE REVEALED DURING DRAWDOWN OF THE IMPOUNDMENT AND EXCAVATION OF ACCUMULATED SEDIMENT.
2. DETAILED GRADING OF THE LOW FLOW CHANNEL IS NOT REFLECTED IN THE DESIGN CONTOURS. THIS IS A FIELD SET ITEM, TO BE CONSTRUCTED WITH THE ASSISTANCE OF THE ENGINEER.

SEE SHEET B-6.1 FOR DAM EMBANKMENT GRADING AND TIE INTO EXISTING.
NOTES:
1. DESIGN TOPOGRAPHY, CHANNEL PROFILE AND CHANNEL SPOIL AREAS LINES AND GRADES SHOW GENERAL EXTENTS TO RESULT IN A NATURAL LANDFORM APPEARANCE AT THE END OF CONSTRUCTION.
2. DETAILED GRADING OF THE LOW FLOW CHANNEL IS NOT TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO ADD VARIABLE SIDE-SLOPES AND SURFACE AS NEEDED TO AD..
RIGGING LOG PILES IN THE TEST RECORD. LIMIT COMPRESSIVE LOADING OF THE TRACKS ON THE INSTALLED DEPTH.

MANUFACTURER'S RECOMMENDATIONS.

RIGGING FOR PILE TESTING SHALL CONFORM TO THE TENSION SCALE PILES SHALL BE MINIMUM 10 IN. DIAMETER AT SCALED END. DIAMETER OF LOG AT EQUIPMENT. INSTALLATION BY EXCAVATION OR HAMMERING WILL NOT BE ALLOWED.

UP TO 10% OF PRODUCTION PILINGS SHALL BE PROOF TESTED. IF RESULTS MAX LIFT OFFSET TABLE. PULL OUT RESISTANCE READING SHALL BE COMPARED AGAINST EXCAVATOR DISTRIBUTE THE WEIGHT OVER A LARGER AREA.

REQUIRED TO GENERATE DESIRED LOADING WITH DISTANCE FROM PILE NOTED EXCAVATOR CONDUCTING PULL OUT LOADING SHALL BE POSITIONED NO CLOSER THAN EMBEDMENT DEPTH OF PILE, IF POSSIBLE. IF A CLOSER EMBEDMENT DEPTHS MAY INCLUDE 6 FT, 8 FT, 10 FT, AND 12 FT.

AS A GUIDELINE, TEST PROOF TESTS SHALL BE MADE AT UP TO FOUR EMBEDMENT DEPTHS FOR EACH PILE TEST SHALL HAVE UPWARD LOAD GRADUALLY INCREASED AND AS THAT CAUSES THE PILE TO MOVE VERTICALLY APPROXIMATELY 1 INCH. THEN DRIVE THE PILE TO A NEW DEPTH TO VARY MORE THAN 50% THEN IT SHOULD BE ANTICIPATED THAT UP TO 25% OF ADDITIONAL COST.

EMBEDMENT DEPTH AND MAXIMUM FORCE REQUIRED TO MOVE THE PILE EMBEDMENT DEPTHS SPECIFIED IN THESE DRAWINGS CONSTRUCTED DRIVEN PILE EMBEDMENT DEPTH STRAIGHT WITH DISTANCE FROM PILE NOTED EXCAVATOR ONTO LOGS LAID ON THE GROUND TO OUTSIDE OF THE CHANNEL AND FLOODPLAIN CORRIDOR.

EXCAVATED SCOUR POOL MATERIAL EXCAVATED FROM POOLS, IF COARSE (GRAVEL, COBBLES, AND BOULDERS), WILL BE PLACED ACROSS THE CHANNEL TO FORM BARS OR DOWNSTREAM TO AUGMENT CHANNEL GRADING NOTES:

MATERIAL EXCAVATED FROM POOL WILL BE USED TO BUILD A LATERAL BAR ADJACENT TO THE POOL

NOTES:

1. LARGE WOOD LAYERS (MIN. 4 FT) TO BE PLACED AT THE END OF THE CHANNEL ALONG THE BANK WHERE THE BASE PROTECTIVE BARS OR SHAPE OUTSIDE OF THE CHANNEL. SET LOGS PARALLEL TO CHANNEL AT OR BEHIND BANK TOP. LOG LAYERS

2. CABLE ALL LOGS, USE 3 CLAMPS AT EACH FASTENING LOCATION ON SIDE OF LIVE LOAD CLAMP SADDLES TO BE PLACED IN THE TWO-FOOT RADIUS ALONG CHANNEL CENTERLINE, AS END OF RADIUS ALONG CHANNEL CENTERLINE, AS

3. LAKE WOOD LAYERS (MIN. 4 FT) TO BE PLACED AT THE CENTER LINE OF THE CHANNEL ALONG THE BANK WHERE THE BASE PROTECTIVE BARS OR SHAPE OUTSIDE OF THE CHANNEL. SET LOGS PARALLEL TO CHANNEL AT OR BEHIND BANK TOP. LOG LAYERS

4. CONSTRUCTED DRIVEN PILE EMBEDMENT DEPTH SPECIFIED IN THESE DRAWINGS IS NOT REFLECTED IN THE DESIGN CONTOURS. THIS IS A FIELD SETTLEMENT CONSTRUCTED BY EXCAVATION OF THE NATIVE MATERIAL OR BACKFILL.

5. DETAILED GRADING OF THE CHANNEL IS NOT REFLECTED IN THE DESIGN CONTOURS. THIS IS A FIELD SETTLEMENT CONSTRUCTED BY EXCAVATION OF THE NATIVE MATERIAL OR BACKFILL. EXCEPT WHERE SPECIFIED IN THESE DRAWINGS, ALL NATURAL MATERIALS ARE TO BE LEFT IN PLACE.

6. NATURAL MATERIALS (SLASH, LOG, SINCE) SHALL BE SALVAGED GRAVEL AND SAGE. SET LOGS PARALLEL TO CHANNEL AT OR BEHIND BANK TOP. LOG LAYERS

7. CHANNEL RESTORATION TYPICALS

8. EXCAVATED SCOUR POOL

9. EXCAVATED SCOUR POOL

10. EXCAVATED SCOUR POOL

11. EXCAVATED SCOUR POOL

12. EXCAVATED SCOUR POOL

13. EXCAVATED SCOUR POOL

14. EXCAVATED SCOUR POOL

15. EXCAVATED SCOUR POOL

16. EXCAVATED SCOUR POOL
NOTES:

D2 = 5' STD. (SINGLE PANEL FOR WATER DEPTHS 5' OR LESS).

D1 = 5' STD. (ADDITIONAL PANEL FOR WATER DEPTHS > 5').

CURTAIN TO REACH BOTTOM UP TO DEPTHS OF 10 FEET. TWO (2) PANELS TO BE USED FOR DEPTHS GREATER THAN 10 FEET UNLESS OTHERWISE SPECIFIED IN THE
CONSTRUCTION PLANS OR AS DIRECTED BY THE ENGINEER.

BOARDMAN RIVER
ACTIVE FLOW
ISOLATED AREA
55-61 FT WIDTH
MIN. 3' WATER DEPTH
APPROX. 120' LENGTH

PROPOSED CHANNEL
TOP OF BANK
TOE OF BANK

PLACE SAND-FILLED BULK BAGS, AS NECESSARY, TO BACKWATER EXISTING POOL

SAND BAGS PLACED TO MEET BANK GRADE

BARRIER OPTIONS: JERSEY, SUPERSACK, TURBIDITY CURTAIN

BULKBAG COFFERDAM HEIGHT AND WIDTH WILL VARY WITH CHANNEL CONDITIONS.

BOARDMAN RIVER BED: NO EXCAVATION BELOW PRE-DAM RIVER BED WITHOUT ENGINEER APPROVAL.

BARRELS - JERSEY, SUPERSACK, TURBIDITY CURTAIN OR APPROVED EQUAL
WRAPPED AROUND BARRIER SAND BAG TO WEIGHT EDGE OF FABRIC

TYPICAL SEDIMENT TRAP CROSS-SECTION
NOT TO SCALE

TYPICAL SEDIMENT TRAP CREST PROFILE
NOT TO SCALE

TYPICAL PLAN - SEDIMENT EXCLUSION BARRIER

TYPICAL PLAN - SEDIMENT BARRIER CURTAIN PROFILE DETAIL
NOT TO SCALE

TYPICAL SEDIMENT BARRIER CROSS-SECTION
NOT TO SCALE

TYPICAL PLAN - SEDIMENT EXCLUSION BARRIER

TYPICAL PLAN - SEDIMENT BARRIER CROSS-SECTION
NOT TO SCALE

TYPICAL SEDIMENT TRAP CREST PROFILE
NOT TO SCALE

SAND BAG TO WEIGHT EDGE OF FABRIC
GENERAL NOTES ON SECURING COIR FABRIC

1. Place a row of construction forms along desired channel alignment for first FES lift.

2. Outer fabric ends shall be joined by lapping the upstream piece of fabric over the downstream direction, as long as the fabric is overlapped in that direction.


4. Apply native seed mix to inner fabric along vertical edge of the back edge of the outer fabric layer, parallel to the forms.

5. Apply native seed mix to inner fabric along vertical edge of the bank.
GENERAL NOTES

EARTHWORK

Earthwork quantities are computed by the average end area method based upon ground survey information.

PAVEMENT AND HMA SURFACE REMOVAL QUANTITIES

Pavement and HMA Surface removal as shown on the plans will be at the discretion of the Engineer. If in his/her judgment, areas of pavement and HMA surface removal are needed, the Engineer shall order the Contractor to remove the pavement and HMA surfaces. The Contractor shall remove the pavement and HMA surfaces prior to performing the work in any affected area. The Contractor is required to remove all pavement and HMA surfaces from the Plans. The Contractor shall remove all pavement and HMA surfaces removed from the Plans at a minimum of 1 business day prior to excavating, excluding weekends and holidays.

TURF ESTABLISHMENT

The Contractor shall be responsible for the establishment of all turf areas as shown on the plans. The Contractor shall plant and irrigate the turf areas to ensure proper establishment. The Contractor shall be responsible for the proper care and maintenance of all turf areas.

SIGNALS

When attaching signs to supports, tighten the nut, not the bolt head. Signs that have wrinkled or twisted sheeting may be rejected. Sign layouts shall be according to the current edition of "Standard Highway Signs" manual or as detailed in plans. Legend shall be determined by the Engineer. All signs shall be installed, removed and/or salvaged according to the current edition of "Michigan Manual on Uniform Traffic Control Devices for Streets and Highways". Signs shall be installed in the center of the control zone.

GUARDRAIL REMOVAL

Guards will be removed at the discretion of the Engineer. In the event that the guardrail has been constructed at the earthen dam embankment, the Contractor shall not be responsible for its removal.

INTERSTATE 196 / 131 REMOVAL

Equipment and materials removed shall be returned to the same point on the widened existing alignment. Placement of all materials will be at the discretion of the Engineer. Class B aggregate base material provided and other waste material) shall be removed by the Engineer.

BASES

POLICE / MICHIGAN STATE HIGHWAY PATROL

The soil boring logs and/or pavement cores represent point information. No inference should be made that subsurface or subsurface water are not present. Signification and design shall be determined by the Engineer.

AGENCIES / OWNERS / UTILITIES

The existing utilities listed below and shown on these plans represent the best information available as obtained on our surveys. Where utilities are not shown on these plans, the Contractor shall dig and locate such utilities. The Contractor shall not be responsible for any damages or delays incurred as a result of such unlocated utilities.

INDIANA BAT

The Indiana bat is a threatened species of bat with special concern and federal candidate species that warrants special consideration. In the event that this species is discovered within the construction zone, immediately move personnel away from the bat and contact Richard Wolinski, MDOT Ecologist, at (517) 335-6124. Failure to do so will result in penalties up to and including termination of the construction contract and loss of federal funding for the project.

VENOMOUS SNAKE

Any venomous snake encountered should be seen as a special concern. In the event that a snake is discovered within the construction zone, immediately move personnel away from the snake and contact Richard Wolinski, MDOT Ecologist, at (517) 335-6124. Failure to do so will result in penalties up to and including termination of the construction contract and loss of federal funding for the project.

CONSUMERS ENERGY     ELECTRICAL

The work is being performed on or near Consumers Energy owned electrical facilities. Any work performed on or near such facilities including excavation, demolition, including vegetation around such facilities shall be done in a manner to prevent damage to these electrical facilities.

AVINO

All work shall be performed in accordance with the current edition of Michigan Department of Transportation (MDOT) “Standard Specifications For Highway Construction.” The work shall be performed in accordance with the project specific notes.

REFERENCES

The references are only intended to be general reference and not to be held as a contract document. The references shall be considered a general guideline for the Contractor and not a contract document.

SPECIAL CONSIDERATION

The Contractor shall be responsible for the establishment of all turf areas as shown on the plans. The Contractor shall plant and irrigate the turf areas to ensure proper establishment. The Contractor shall be responsible for the proper care and maintenance of all turf areas.

GUARDRAIL REMOVAL

Guards will be removed at the discretion of the Engineer. In the event that the guardrail has been constructed at the earthen dam embankment, the Contractor shall not be responsible for its removal.
1. The contractor shall comply with Grand Traverse County rules & regulations for soil erosion control & submit a schedule of soil erosion activities to the local enforcing agency prior to any earth change.

2. The contractor shall inspect all temporary & permanent erosion control measures weekly & immediately (within 24 hours) after a significant rainfall event. All measures requiring maintenance, repair, or replacement shall be corrected immediately at no additional cost to the owner.

3. Permanent soil erosion control measures, plantings, and mulching for all slopes, channels, ditches, or distributed land area shall be completed within five (5) calendar days after final grading or final earth change has been completed.

4. All subgrade slopes shall be tracked perpendicular to the slope to aid in erosion control of silted areas.

5. Where seasonal limitations or construction delays prevent scheduled installation of permanent control facilities, approved temporary measures shall be maintained until replaced by permanent facilities.

6. The location of any stockpiles shall be designated by the owner prior to construction. This area shall be enclosed by silt fence a reasonable distance from the toe of slope until such time it is used.

7. At completion of construction activities or upon request for review, submit inspection log book to the county, the owner, & the professional.

8. Street sweeping and dust control shall be the contractor's responsibility.

9. All drainage ditches are to be stabilized with erosion control blanket, ditches steeper than 3% are to be sodded.

10. Slopes steeper than 6% shall be stabilized with erosion control blankets.

11. Concrete rubble may be salvaged and used for temporary erosion control, but all waste shall be placed flush and exposed at off-site.

Erosion control notes:

1. Silt fence shall be inspected and repaired immediately following any significant rainfall (equal to or greater than 0.5 inches/24 hours) and daily during prolonged rainfall. Otherwise, inspection shall be weekly, at a minimum.

2. Silt fence shall be extended from the upstream face of the embankment; if it is required a 60-inch depth of the silt fence.

3. Silt fence shall be inspected daily for signs of deterioration and sediment material.

Inspection and maintenance:

Legend:

- Existing contour line
- Proposed roadway
- Property boundary
- Permanent erosion control
- Proposed erosion control
- Temporary erosion control
- Existing roadway
- Prior to erosion control
- Existing tree line
- Prohibited tree clearing limits
- Existing fence
- Existing guardrail
TURF ESTABLISHMENT, PERFORMANCE
EMBANKMENT, CIP (TYP)
AGGREGATE BASE, 8 INCH
EMBANKMENT, CIP (TYP)

EX 6" AGG
GRADE TO THIS LINE
PAID FOR AS
EXCAVATION, EARTH

EX 10" AGG BASE
EX GROUND (TYP)

EX GUARDRAIL
OR EX CONC BARRIER

PROP PLAN GRADE & CROWN PT
CROWN POINT

EX HMA
VARIES 7"-11"

EX 6" AGG
AGGREGATE BASE,
8 INCH

C - 4.1
CASS ROAD - TYPICAL CROSS SECTION
CM
TRN
TB
DD
D. DEVAUN 3/3/15 30% DESIGN REVIEW

6/3/15 60% DESIGN REVIEW
8/21/15 90% DESIGN REVIEW
10/23/15
100% DESIGN REVIEW
LIST OF MATERIAL

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<th>ITEM</th>
<th>QUANTITIES</th>
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<td>Cable Pole, T.S. Dismant</td>
<td>2 Ea</td>
</tr>
<tr>
<td>2</td>
<td>Span Wire, Rem</td>
<td>2 Ea</td>
</tr>
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<td>3</td>
<td>T.S. Span Wire Mtd. Rem</td>
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<td>4</td>
<td>Junction Box, Rem</td>
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<tr>
<td>5</td>
<td>Wood Pole, Rem</td>
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NOTES:

S - 1.1 INTAKE RETAINING WALL REMOVALS (1 OF 3)

D. DEVAUN 3/3/15 30% DESIGN REVIEW
6/3/15 60% DESIGN REVIEW
8/21/15 90% DESIGN REVIEW
10/23/15 100% DESIGN REVIEW
Know what's below. Call before you dig.
1. CONTRACTOR TO COORDINATE WITH OWNER AND THIRD PARTY OWNER OF POWERHOUSE EQUIPMENT FOR THE REMOVAL OF THE EQUIPMENT LOCATED WITHIN THE BUILDING. SEE SPECIFICATION 02 41 16 FOR ADDITIONAL DETAILS AND REQUIREMENTS.

2. THE CONTRACTOR SHALL USE EVERY PRECAUTION TO PROTECT THE REMAINING THIRD PARTY DAM EQUIPMENT FROM DAMAGE DURING DEMOLITION OF THE DAM STRUCTURE. ANY DAMAGE CAUSED BY THE CONTRACTOR SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, REPAIRED OR REPLACED IN A PROMPT MANNER AS DIRECTED BY THE ENGINEER.

NOTE:

10/23/15 100% DESIGN REVIEW
1. Contractor to coordinate with owner and third party owner of powerhouse equipment for the removal of the equipment located within the building. See specification 02 41 16 for additional details and requirements.

2. The contractor shall use every precaution to protect the remaining third party dam equipment from damage during demolition of the dam structure. Any damage caused by the contractor shall be the responsibility of the contractor, repaired or replaced at its own expense as directed by the engineer.

NOTE: 10/23/15 100% DESIGN REVIEW
Know what's below.
Call before you dig.
NOTE:

S - 6.4

TS
TRN
DB
DD
D. DEVUN 3/3/15 30% DESIGN REVIEW
6/3/15 60% DESIGN REVIEW
8/21/15 90% DESIGN REVIEW
10/23/15 100% DESIGN REVIEW

SITE REMOVAL LEGEND

Call before you dig.

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