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NOTES:

1. Minimum depth of cover: 36`. Additional cover may be required for buoyancy control, river and stream scour, and bends.

2. Excavation:
   - Log the trench material as it is dug. Segregate ice rich material in a spoil pile separate from ditch spoil which is acceptable for backfill. In extreme cases of ice content, it may be necessary to haul in additional select material and/or to haul the ice rich spoil to an approved disposal site, such as an abandoned material site, could be considered.

3. Prior to final design:
   - Geotechnical logging of bore holes to determine ice content in the ditch profile and below the ditch bottom for an additional 10` or whatever depth was determined to affect pipeline settlement in the event of thawing below the pipeline.

4. Place and roach the remaining ditch spoil, including the ice rich spoil, over top of the roaching and allow it to thaw during summer season.

5. Place appropriate erosion control devices (ECDs) along the roach ditch line where ice rich spoil might flow into an existing drainage when it melts. Seed the roached spoil pile and any disturbed right-of-way. Inspect the ditch line in the summer/fall following winter construction and use low ground pressure equipment to dress up or re-shape the roached spoil over the ditch as needed. Re-seed and re-place ECDs if necessary. Repeat inspection annually for the first three seasons or as needed to maintain soil stability.

6. Placement of select, thaw stable fill for pipe bedding in any over-excavated sections to properly support and bed the pipe.

7. Placement of select, thaw stable bedding around the pipe to 6` above the pipe. Acceptable ditch spoil would be preferred.

8. Over-excavate 3 feet below target ditch depth where visible segregated ice (frozen ground classification Vd) is discovered in the ditch bottom. Backfill over-excavation with thaw-stable bedding. Place geocell, if so directed by the engineer, to span areas of over-excavation.

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**DONLIN GOLD PROJECT**

**APPLICANT:** Donlin Gold, LLC.

**4720 Business Park Blvd., Suite G-25**

**Anchorage, Alaska 99503**

**BURIED PIPE WITH OVER-EXCAVATION IN ICE RICH SOILS**

**TYPICAL SECTION**

**OWNER:**

**DATE:** October 2013

**P01C-SCIS-01 REV 1**

---

**PRELIMINARY NOT FOR CONSTRUCTION!**
BRIDGE DETAIL NOTES:

1. Design and maintain bridge to withstand and pass the highest anticipated flow that may occur while the bridge is in place. Culverts must be aligned to prevent bank erosion or streambed scour.

2. Inspect bridge elevation so bridge remains supported above high bank, and does not sink into bank. Additional support must be added on top of bank and under span if initial support starts to settle. All bridges must be anchored for stability.

3. Erosion and sedimentation control measures shall be inspected and maintained. Construct sediment barriers across the entire construction R.O.W. to prevent silt laden water and spoil from flowing back into waterbody. Silt fence or sandbags may be used interchangeably.

4. Bridge decks will be kept free of soil.

5. Equipment bridges will consist of one of the following: clean rock placed over flume pipes; prefabricated construction mats; or flex-float or other temporary bridging, such as Bailey bridges.

6. Remove equipment bridges and associated material as soon as possible. Restore and stabilize bed and banks to approximate pre-construction conditions.

7. Dispose of any rock as directed.
NOTES:

1. THIS TYPE OF BRIDGE IS GENERALLY USED ON NARROW, DEEP CROSSINGS.
2. BRIDGE IS ANCHORED AND/OR TIED OFF TO ANCHOR BLOCKS FOR STABILITY.
3. UTILIZE APPROACH FILLS OF CLEAN GRANULAR MATERIAL, SWAMP MATS, SKIDS OR OTHER SUITABLE MATERIALS TO AVOID CUTTING THE BANKS WHEREVER FEASIBLE. ENSURE ADEQUATE FLOORING, AS REQUIRED, ENSURE THAT FILL MATERIAL USED DOES NOT SPILL INTO WATERBODY.
4. CONSTRUCT SEDIMENT BARRIERS ACROSS THE ENTIRE CONSTRUCTION R.O.W. TO PREVENT SILT LADEN WATER AND SpoIL FROM FLOWING BACK INTO WATERBODY. BARRIERS MAY BE TEMPORARILY REMOVED TO ALLOW CONSTRUCTION ACTIVITIES.
5. RESTORE AND STABILIZE BED AND BANKS TO APPROXIMATE PRE-CONSTRUCTION CONDITIONS.
NOTES:
1. MARKERS SHALL BE PLACED DIRECTLY OVER THE PIPELINE WHEN THERE IS AT LEAST 1'-0" OF CLEARANCE BETWEEN THE TOP OF THE PIPE.
2. PIPE AND THE BOTTOM OF THE MARKER. MARKERS SHALL BE SLIGHTLY OFFSET IF THE CLEARANCE IS LESS THAN 1'-0".
MARKERS WILL BE OFFSET IF THE PIPELINE IS IN A ROADWAY.
NOTES:
1. CONTRACTOR TO ASSEMBLE SIGN AND MOUNT ON POST.
2. REFLECTIVE STRIPING SHOULD BE ADDED ON ALL SIDES OF POST.

DONLIN GOLD PROJECT
APPLICANT: Donlin Gold, LLC.
4720 Business Park Blvd., Suite C–25
Anchorage, Alaska 99503

TYPICAL
PIPELINE AERIAL MARKER

OWNED:

DATE: OCTOBER 2013 P01C–TWMK–03 REV 1

McKee P01C–TWMK–03 Wed, 16/Oct/13
PIPE CONNECTION DETAIL
(SEE NOTES 3, 4 & 5)

NOTES:
1. ALL WIRE SHALL BE INSULATED STRANDED COPPER #12 THIN AS SHOWN ABOVE.
2. TERMINAL BLOCK SHALL BE WIRED BY CONTRACTOR AS SHOWN IN TERMINAL DETAIL ABOVE.
3. ALL WIRE CONNECTIONS TO CARRIER PIPE SHALL BE MADE AS SHOWN IN DETAIL ABOVE. WIRE SHALL BE CONNECTED TO PIPE BY CADWELD PROCESS WITH COPPER HEAT SLEEVE.
4. CADWELD WIRE CONNECTIONS SHALL BE PRIMED WITH ROYSTON SPRAY PRIMER OR EQUAL AND ALLOWED TO DRY 3 TO 4 MINUTES OR UNTIL TACKY, AND COVERED WITH ROYSTON HANDY CAP OR EQUAL.
5. WIRE INSULATION SHALL BE PROTECTED FROM DAMAGE.
6. LAY WIRES ALONGSIDE PIPE, NOT OVER OR UNDER PIPE.
7. CATHODIC PROTECTION TEST STATION AND ALL OTHER MATERIALS SHALL BE FURNISHED BY CONTRACTOR.
8. INSTALL AT ALL LOCATIONS INDICATED ON ALIGNMENT SHEETS.

COTT FINK PROBE COUPON TEST STATION 3 FT. LENGTH

NOTE: WIRES TO BE TERMINATED WITH RING TERMINALS.

PIPERLINE WARNING SIGN

SEE TERMINAL DETAIL

CATHODIC PROTECTION TEST STATION

COUPON TO BE PLACED ALONGSIDE BOTTOM HALF OF PIPE

#12 WHITE WIRE (SPARE)

TAPE

FLOW

SEE CONN. DETAIL (TYP.)

2'-0"

3' - 6"

3'

24"

DONLIN GOLD PROJECT
APPLICANT: Donlin Gold, LLC.
4720 Business Park Blvd., Suite G-25
Anchorage, Alaska 99503

TYPICAL CATHODIC PROTECTION COUPON TEST STATION

OWNER:

DATE: OCTOBER 2013 P01C-TYTS-01 REV 1

M辫: P01C-TYTS-01 Wed, 16/Oct/13
**NOTES:**

1. All wire shall be insulated stranded copper #12 THHN as shown above.
2. Terminal block shall be wired by contractor as shown in Terminal Detail above.
3. All wire connections to carrier pipe shall be made as shown in detail above. Wire shall be connected to pipe by Cadweld process with copper heat sleeve.
4. Cadweld wire connections shall be primed with Royston spray primer or equal and allowed to dry 3 to 4 minutes or until tacky, and covered with Royston handy cap or equal.
5. Wire insulation shall be protected from damage.
6. Lay wires alongside pipe, not over or under pipe.
7. Cathodic protection test station and all other materials shall be furnished by contractor.
8. Install at all locations indicated on alignment sheets.
NOTES:
1. METHOD APPLIES TO CROSSING WHERE NO FLOWING WATER IS PRESENT AT THE TIME OF CROSSING.
2. CONTRACTOR WILL "MAINLINE THROUGH" THE CROSSING OR UP TO BOTH SIDES OF THE CROSSING, STRING, WELD, COAT, AND WEIGHT (IF NEEDED), USING THE MAINLINE CREW WITH THE PIPE SKIDDED OVER THE CROSSING.
3. CONSTRUCT SEDIMENT BARRIER ACROSS THE ENTIRE CONSTRUCTION ROW FOLLOWING CLEARING AND GRAVERING AND MAINTAIN UNTIL CONSTRUCTION OF THE CROSSING. EROSION CONTROL MEASURES SHALL BE REINSTALLED IMMEDIATELY FOLLOWING BACKFILLING OF TRENCH AND STABILIZATION OF BANKS.
4. TOPSOIL AND SOIL WILL NOT BE STOCKPILED IN THE CROSSING CHANNEL.
5. MAINTAIN STREAMFLOW THROUGHOUT CROSSING CONSTRUCTION.
6. BACKFILL WITH NATIVE MATERIAL.
7. RESTORE CROSSING CHANNEL TO APPROXIMATE PRE-CONSTRUCTION PROFILE AND SUBSTRATE.
8. RESTORE CROSSING BANKS TO APPROXIMATE ORIGINAL CONDITION AND STABILIZE, AS REQUIRED.
NOTES:
1. SCHEDULE CROSSING DURING LOW FLOW PERIOD IF POSSIBLE.
2. COMPLETE ALL IN-STREAM ACTIVITIES WITHIN 24 HOURS IF FEASIBLE.
3. NO REFUELING OF MOBILE EQUIPMENT WITHIN 200 FEET OF WATERBODY. REFUEL STATIONARY EQUIPMENT AS PER THE HAZARDOUS MATERIALS MANAGEMENT AND SPCC PLAN.
4. CONSTRUCT SEDIMENT BARRIERS ALONG THE SIDES OF STOCKPILES AND ACROSS THE ENTIRE CONSTRUCTION ROW TO PREVENT SILT LAIDEN WATER AND SPOIL FROM FLOWING BACK INTO WATERBODY. BARRIERS MAY BE TEMPORARILY REMOVED TO ALLOW CONSTRUCTION ACTIVITIES BUT MUST BE REPLACED BY THE END OF EACH WORK DAY.
5. IN-STREAM SPOIL TO BE STORED OUT OF THE STREAM CHANNEL AND WITHIN THE CONSTRUCTION ROW.
6. INSTALL SOFT PLUGS AT THE EDGE OF STREAM BANKS UNTIL JUST PRIOR TO PIPE INSTALLATION TO CONTROL WATER FLOW & TRENCH SLIDING, IF NEEDED.
7. MAINSTAY STREAM FLOW THROUGHOUT CROSSING CONSTRUCTION.
8. BACKFILL WITH NATIVE MATERIAL.
9. RESTORE WATERBODY CHANNEL TO APPROXIMATE PRE-CONSTRUCTION PROFILE AND SUBSTRATE.
10. RESTORE STREAM BANKS TO APPROXIMATE ORIGINAL CONDITION AND STABILIZE, AS REQUIRED.
11. ALL DIMENSIONS INDICATED SHALL BE DETERMINED BY ACTUAL CONSTRUCTION CONDITIONS.
12. FOLLOW REQUIREMENTS FROM THE ARMY CORPS OF ENGINEERS.
13. DRAWING REPRODUCED IS SUPERSHED BY WRITTEN STANDARD, SCOE OF WORK OR LINE LIST.

DONLIN GOLD PROJECT
APPLICANT: Donlin Gold, LLC.
4720 Business Park Blvd., Suite C-25
Anchorage, Alaska 99503

TYPICAL
FLOWING WATERBODY CROSSING OPEN-CUT

OWNER:

DATE: OCTOBER 2013  P01C-TYWC-02  REV 1
NOTES:
1. METHOD APPLIES TO WATERBODIES THAT ARE NOT STATE DESIGNATED FISHERIES WHERE FLUME CROSSINGS ARE NOT REQUIRED. IF TOPOGRAPHY PERMITS TEMPORARY EQUIPMENT BRIDGE INSTALLATION, THE CONTRACTOR SHALL TRENCH, STRING, WELD, COAT, WEIGH (IF NECESSARY). LOWER IN AND BACKFILL UTILIZING THE MAIN LINE CREW TRAVELING OVER THE BRIDGE, IF TOPOGRAPHY PROHIBITS INSTALLATION OF A TEMPORARY EQUIPMENT BRIDGE, CONTRACTOR SHALL TRENCH UP TO BOTH SIDES OF CROSSING, STRING, WELD, COAT AND WEIGHT (IF NECESSARY) USING THE MAINLINE CREW IN STREAM EXCAVATION, LOWER IN, AND BACKFILL WILL UTILIZE A CLAM OR HOES WORKING FROM THE BANKS.
2. SCHEDULE CROSSING DURING LOW FLOW PERIOD IF POSSIBLE.
3. CONSTRUCT SEDIMENT BARRIERS ALONG THE SIDES OF STOCKPILES AND ACROSS THE ENTIRE CONSTRUCTION R.O.W. TO PREVENT SILT LADEN WATER AND SPOIL FROM FLOWING BACK INTO WATERBODY.
4. IN-STREAM SPOIL TO BE STORED OUT OF THE STREAM CHANNEL.
5. INSTALL TEMPORARY (SOFT) PLUGS AT THE EDGE OF STREAM BANKS UNTIL JUST PRIOR TO PIPE INSTALLATION TO CONTROL WATER FLOW & TRENCH SLOUGHING.
6. TRENCH THROUGH WATERBODY USING MAINLINE EXCAVATION EQUIPMENT WHERE PRACTICAL.
7. MAINTAIN STREAM FLOW THROUGHOUT CROSSING CONSTRUCTION.
8. RESTORE WATERBODY CHANNEL TO APPROXIMATE PRE-CONSTRUCTION PROFILE AND SUBSTRATE.
9. RESTORE STREAM BANKS TO APPROPRIATE ORIGINAL CONDITION AND STABILIZE, AS REQUIRED.

DONLIN GOLD PROJECT
APPLICANT: Donlin Gold, LLC.
4720 Business Park Blvd., Suite G-25
Anchorage, Alaska 99503

TYPICAL
FLOWING WATERBODY CROSSING OPEN-CUT

OWNER:

DATE: OCTOBER 2013 P01C-TYWC-03 REV 1
NOTES:
1. THIS METHOD APPLIES TO SWALES, DRAINS, SMALL STREAMS OR CREEKS WITH LIMITED FLOW AT TIME OF CONSTRUCTION WHERE DOWNSTREAM SITATION MUST BE AVOIDED AND THE CROSSING WIDTH IS NOT PROHIBITIVE.
2. SCHEDULE CROSSING DURING LOW FLOW PERIOD IF POSSIBLE.
3. COMPLETE ALL IN-STREAM ACTIVITIES AS EXPEDITIOUSLY AS POSSIBLE.
4. INSTALL temporary VEHICLE CROSSING, IF REQUIRED.
5. IN-STREAM SPOIL TO BE STORED OUT OF THE STREAM CHANNEL AND WITHIN THE CONSTRUCTION R.O.W. UNLESS DEPICTED OTHERWISE IN THE SITE SPECIFIC CROSSING PLANS.
6. CONSTRUCT SEDIMENT BARRIERS TO PREVENT SILT LADEN WATER AND SPOIL FROM FLOWING INTO WATERBODY. CONSTRUCTED SEDIMENT BARRIERS SHALL EXTEND ALONG THE SIDES OF THE SPOIL AND TOPSOIL STOCKPILES AND ACROSS THE ENTIRE CONSTRUCTION R.O.W. BARRIERS MAY BE TEMPORARILY REMOVED TO ALLOW CONSTRUCTION ACTIVITY BUT MUST BE REPLACED BY THE END OF EACH WORK DAY.
7. CONSTRUCT UPSTREAM STRUCTURE (DAM) FOLLOWED BY DOWNSTREAM STRUCTURE (DIAM). WATER STRUCTURES (AQUA DAM, JERSEY BARRIERS, SAND BAGS, STEEL PLATE, POLYETHYLENE UNICS, ETC.) FINAL LOCATION WILL BE APPROVED BY THE COMPANY INSPECTOR.
8. SIZE PUMPS FOR DIVERSION OF ENTIRE STREAM FLOW. CONTRACTOR SHALL MAINTAIN 100% SPARE PUMPING CAPACITY ON SITE. PUMPS SHALL BE INSTALLED ON POLYETHYLENE BARRIERS FOR FUEL/OIL SPILL CONTAINMENT. PUMP INTAKES WILL BE SCREENED TO PREVENT ENTRAPMENT OF FISH. CONTRACTOR SHALL MONITOR PUMPS AND WATER STRUCTURES ON A 24 HOUR BASIS UNTIL THE CROSSING INSTALLATION IS COMPLETE. SHOULD LEAKAGE AT THE DAM STRUCTURES OCCUR, CONTRACTOR SHALL Dewater BETWEEN THE STRUCTURES THROUGH AN APPROPRIATE FILTER AND ONTO A WELL-VEGETATED UPLAND AREA.
9. LEAVE HARD PLUGS AT STREAM BANK EDGE UNTIL JUST PRIOR TO PIPE INSTALLATION.
10. COMPLETE CONSTRUCTION OF IN-STREAM PIPE SECTION. WEIGH PIPE AS NECESSARY PRIOR TO COMMENCEMENT OF IN-STREAM ACTIVITY.
11. TRENCH THROUGH WATERBODY AS EXPEDITIOUSLY AS PRACTICAL. INSTALL TEMPORARY (SOFT) PLUGS, IF NECESSARY, TO CONTROL WATER FLOW AND TRENCH SLOUGHING.
12. MAINTAIN STREAM FLOW THROUGHOUT CROSSING CONSTRUCTION.
13. LOWER IN PIPE, INSTALL TRENCH PLUG AND BACKFILL IMMEDIATELY.
14. RESTORE WATERBODY CHANNEL TO APPROXIMATE PRE-CONSTRUCTION PROFILE AND SUBSTRATE.
15. DEMANTLE DOWNSTREAM WATER STRUCTURE (DIAM) AND UPSTREAM WATER STRUCTURE (DAM) AFTER TRENCH BACKFILL.
16. RESTORE STREAM BANKS TO APPROXIMATE ORIGINAL CONDITION. STABILIZE WATERBODY BANKS AND INSTALL TEMPORARY BARRIERS.
NOTES:
1. NORMAL FLOW OF DRAINAGE NOT TO BE CHANGED FOLLOWING PIPELINE CONSTRUCTION OPERATIONS.
2. CONSTRUCT ALL CROSSINGS IN ACCORDANCE WITH ENVIRONMENTAL PERMIT REQUIREMENTS AND CONDITIONS.
3. PIPELINE TO BE INSTALLED BY OPEN-DITCH METHOD.

DONLIN GOLD PROJECT
APPLICANT: Donlin Gold, LLC.
4720 Business Park Blvd., Suite C-25
Anchorage, Alaska 99503

TYPICAL
SMALL CREEK CROSSING

DATE: OCTOBER 2013  P01C-TYWC-07  REV 1

Printed: P01C-TYWC-07 Wed, 16/Oct/13
NOTES:
1. REFERENCE DRAWING (DONLIN PIPELINE MLV GW) AND CONSTRUCTION SPECIFICATIONS FOR DETAILED CONSTRUCTION GUIDELINES.
2. LOCATION OF GATE TO BE FIELD DETERMINED.

DONLIN GOLD PROJECT
APPLICANT: Donlin Gold, LLC.
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Anchorage, Alaska 99503

TYPICAL
MLV FENCING

OWNER:

DATE: OCTOBER 2013  P01M-DTVA-01  REV 1

M: Baker P01M-DTVA-01 Wed, 16/Oct/13
## TYPICAL CONSTRUCTION STAKING
### COLOR CODE SYSTEM

### FLUORESCENT COLORS

- **ORANGE FLAGGING WITH ORANGE PAINT**
- **ORANGE AND BLUE FLAGGING WITH ORANGE PAINT**
- **PINK FLAGGING**
- **WHITE FLAGGING**
- **WHITE AND RED FLAGGING**
- **YELLOW FLAGGING ON CROSSED LATH**
- **BLUE FLAGGING**
- **GREEN FLAGGING**
- **RED FLAGGING**

### FEATURES

- **CENTERLINE STAKES**
- **PI STAKES**
- **SURVEY CONTROL POINTS**
- **STANDARD R.O.W. LIMIT STAKES**
- **T.U.A. LIMIT STAKES**
- **STAKES AT FOREIGN LINE CROSSING**
- **WETLANDS**
- **ENVIRONMENTALLY SENSITIVE AREAS & OTHER RESOURCE SITES**
- **ENVIRONMENTALLY SENSITIVE AREAS & OTHER RESOURCE SITES (DO NOT ENTER)**

### NOTES

1. STAKES USED TO LOCATE AND IDENTIFY BURIED FACILITIES SHALL BE CLEARLY MARKED WITH THE FOLLOWING INFORMATION:
   - PIPELINE/UTILITY OWNERS NAME, IF KNOWN.
   - PIPELINE/UTILITY IDENTIFICATION AND SIZE IF APPLICABLE AND KNOWN.
   - NOTE WHETHER IT IS THE APPROXIMATE CENTERLINE OF UTILITY.

---

**DONLIN GOLD PROJECT**

APPLICANT: Donlin Gold, LLC.
4720 Business Park Blvd., Suite G–25
Anchorage, Alaska 99503

---

**TYPICAL CONSTRUCTION STAKING COLOR CODE SYSTEM**

OWNER:

DATE: OCTOBER 2013  01V–TYCO–01  REV 1
NOTES:
1. An energy dissipator shall be utilized whenever water discharge velocities may cause erosion.
2. The design and effectiveness of the energy dissipator is the responsibility of the construction contractor.
3. Energy dissipators are utilized in conjunction with a swashback structure.
4. Geotext fabric or equivalent shall be placed underneath and around dissipator device to minimize erosion.

DONLIN GOLD PROJECT
APPLICANT: Donlin Gold, LLC.
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TYPICAL
SPASH PUP FOR TEST WATER DISCHARGE

OWNER:

DATE: OCTOBER 2013 P01W-TYEC-01 REV 1

Milbauer P01W-TYEC-01 Wed, 15/Oct/13
NOTES:

1. Silt fence could be utilized at:
   * The base of all slopes above wetlands and waterbodies.
   * The downslope right-of-way edge where any of the above-mentioned locations are adjacent to the right-of-way.
   * Between topsoil/spoil stockpiles and waterbodies or wetlands as needed.
   * Along ROW boundaries in wetland construction, as needed.
   * As directed by the company's representative.

2. The silt fence shall be constructed as follows:
   * Fabric used for the silt fence shall be a "standard strength" geotextile.
   * The height of the fence shall be done at posts and overlap with both ends secured to the post.

3. The silt fence shall be installed as specified by the manufacturer or as follows:
   * A trench, 6" wide and 6" deep, shall be excavated along the contour. The post shall be driven into the bottom of the trench on the downstream side of the filter fabric. The trench shall be back filled and compacted. Ensuring 6" of fence is buried within the trench.
   * In areas where the terrain is too rocky for trenching, a 6" ground flap with rock fill to hold it in place shall be used.

DONLIN GOLD PROJECT
APPLICANT: Donlin Gold, LLC.
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Anchorage, Alaska 99503

TYPICAL
SILT FENCE SEDIMENT BARRIER

OWNER:

DATE: OCTOBER 2013  P01W-TYEC-02  REV 1
NOTES:
1. INSTALL A Dewatering Geotextile Filter Bag as directed by the company to prevent the flow of heavily silt laden water into waterbodies or wetlands.
2. Discharge Site shall be well vegetated and the topography of the site such that water will flow away from any work areas. The area down slope from the dewatering device must be reasonably flat or stabilized by vegetation or other means to allow the filtered water to continue as sheet flow.
3. To attach the discharge hose, cut a corner of the bag, insert discharge hose, and secure the hose to the bag.
4. A Single filter bag should not be used for flows greater than 600 gallons per minute.
5. Replace filter bag before it is completely filled with sediment. Monitor discharge to avoid over pressurizing due to plugging, which may result in rupture.
6. Dispose of used filter bag and sediment at a site approved by the company.
1. HYDRAULICALLY APPLIED MULCH (HYDRO-MULCH) WITH TACKIFIER MAY BE USED IN LIMITED AREAS, IN LIEU OF MECHANICALLY ANCHORED STRAW MULCH, WHERE A MECHANICAL MULCH CRIMPER CANNOT BE SAFELY OR EFFECTIVELY OPERATED, SUCH AS SOME STEEP SLOPES OR ROCKY AREAS. LOCATIONS FOR THE USE OF HYDRO-MULCH AND TACKIFIER MUST BE APPROVED BY THE COMPANY INSPECTOR PRIOR TO APPLICATION.

2. APPLY HYDRO-MULCH AT THE RATE OF APPROXIMATELY 3000 POUNDS OF AIR-DRIED FIBER/ACRE AS NECESSARY TO PROVIDE AT LEAST 75 PERCENT GROUND COVER. APPLY THE TACKIFIER AT THE RATE RECOMMENDED BY THE MANUFACTURER. APPLY THE HYDRO-MULCH AND TACKIFIER TO PRODUCE A UNIFORM, AT-LEAST GROUND COVER.

3. THE HYDRAULICALLY APPLIED MULCH SHALL HAVE THE FOLLOWING PROPERTIES:
   - The mulch shall consist of air-dried, 100 percent virgin-wood fibers manufactured from whole wood chips.
   - Maximum moisture content of 12 percent (plus or minus 3 percent).
   - The mulch shall not be produced from recycled materials and shall not contain any growth or germination inhibiting factors.
   - The mulch shall be dyed to facilitate visual metering and even application.
   - The mulch shall be supplied in packages marked by the manufacturer to show the air-dry weight.

4. THE TACKIFIER SHALL CONSIST OF A BIODURABLE, ORGANIC, WATERSOLUBLE, NATURAL VEGETABLE GUM FORMULATION SUCH AS GLAR GUM. ASPHALT-BASED TACKIFIERS SHALL NOT BE USED.

5. APPLY HYDRO-MULCH AND TACKIFIER IMMEDIATELY FOLLOWING SEEDING.

6. AVOID FURTHER DISTURBANCE OF THE SLOPE SURFACE FOLLOWING APPLICATION OF HYDRO-MULCH AND TACKIFIER, WHERE DISTURBANCE OCCURS, RESEED IF NECESSARY, AND REAPPLY HYDRO-MULCH AND TACKIFIER.

7. DO NOT USE OR APPLY HYDRO-MULCH AND TACKIFIER WITHIN 100 FEET OF WATERBODIES OR WETLANDS.

DONLIN GOLD PROJECT
APPLICANT: Donlin Gold, LLC.
4720 Business Park Blvd., Suite C–25
Anchorage, Alaska 99503

TYPICAL HYDRO–MULCH AND TACKIFIER

OWNER:

DATE: OCTOBER 2013  P01W–T0EC–04  REV 1
NOTES:

APPLICATIONS AND LOCATIONS

1. HYDRO-MULCH WITH TACKIFIER SHALL BE USED AT LOCATIONS IDENTIFIED IN THE GEOTECHNICAL PLAN, RECLAMATION PLAN, AND/OR AS DIRECTED BY THE COMPANY TO PROTECT SOIL AGAINST EROSION.

2. THE CONTRACTOR SHALL BE REQUIRED TO USE EXTENSION HOSES TO REACH INACCESSIBLE AREAS, WHERE THE USE OF EXTENSION HOSES IS NOT SUFFICIENT TO REACH AREAS, EROSION CONTROL MATTING CAN BE SUBSTITUTED.

3. HYDRO-MULCH AND TACKIFIER SHALL BE APPLIED AT A RATE OF 3000 LBS/ACRE RESPECTIVELY, IN A SINGLE APPLICATION. HYDRO-MULCH AND TACKIFIER PRODUCE A MAT-LIKE COVERING ON THE GROUND.

4. WHEN DIRECTED BY THE COMPANY, TOPSOIL STOCKPILES SHALL BE EITHER WET WITH WATER OR TACKIFIER TO PROVIDE AN UNERODIBLE CRUST OR TO CONTROL WIND EROSION.

HYDRO-MULCH MATERIAL

5. THE HYDRO-MULCH MATERIAL SHALL CONSIST OF WOOD FIBERS MEETING THE FOLLOWING PHYSICAL AND CHEMICAL PROPERTIES:
   - MOISTURE CONTENT: 12% ± 3%
   - ORGANIC MATTER (OVEN-DRY BASIS): 99.2% ± 0.2%
   - ASH CONTENT: 0.7% ± 0.2%
   - WATER HOLDING CAPACITY: 100 GRAMS MINIMUM
   NOTE: WATER HOLDING CAPACITY — 1000 GRAMS OF OVEN-DRY MULCH SATURATED, DRAINED AND WEIGHTED.

6. THE HYDRO-MULCH MATERIAL SHALL MEET THE FOLLOWING ADDITIONAL REQUIREMENTS:
   - THE FIBERS SHALL NOT CONTAIN ANY GROWTH OR GERMINATION INHIBITING FACTORS.
   - THE FIBERS SHALL NOT BE PRODUCED FROM RECYCLED MATERIAL SUCH AS SAWDUST, PAPER, CARDBOARD, OR PULP AND PAPER PLANT RESIDUE.
   - THE FIBERS SHALL BE DRIED TO FACILITATE VISUAL METERING DURING APPLICATION.

7. HYDRO-MULCH SHALL BE SUPPLIED IN 50 POUND NET WEIGHT BAGS. EACH PACKAGE SHALL BE MARKED BY THE MANUFACTURER TO SHOW THE AIR-DRY WEIGHT CONTENT.

8. THE HYDRO-MULCH MATERIAL SHALL BE OF SUCH A CONSISTENCY THAT AFTER BEING COMBINED IN A SLURRY TANK WITH WATER AND APPROVED TACKIFIER, THE FIBERS IN THE MATERIAL SHALL BE UNFORMLY SUSPENDED TO FORM A HOMOGENEOUS SLURRY.

9. MULCH WHICH HAS BEEN DAMAGED BY MOISTURE OR OTHER MEANS SHALL NOT BE ACCEPTED.

10. IF REQUESTED, THE CONTRACTOR SHALL SUBMIT A MINIMUM 1-POUND BAG OF THE PRODUCT PROPOSED FOR USE ON THE PROJECT TO THE COMPANY FOR TESTING, OR A SIGNED STATEMENT CERTIFYING THE MATERIAL FURNISHED HAS BEEN LABORATORY AND FIELD-TESTED, AND MEETS REQUIREMENTS FOR ITS INTENDED USE. THE COMPANY MAY ACCEPT THE HYDRO-MULCH MATERIAL FOR USE BASED ON A CERTIFICATE OF COMPLIANCE.

TACKIFIER MATERIAL

11. TACKIFIER SHALL MEET THE FOLLOWING REQUIREMENTS:
   - BE OF A BIODEGRADABLE ORGANIC FORMULATION, CONSIST OF SPECIFICALLY BLENDED COMPATIBLE HYDROCOLLOIDS (SOLUBLE POLYSACCHARIDES, GAUR GUM OR FLAGINGE), STARCH-BASED TACKIFIERS ARE UNACCEPTABLE.
   - HAVE AN EQUILIBRIUM AIR-DRY MOISTURE CONTENT AT TIME OF MANUFACTURE OF 8% ± 2% WITH A MINIMUM WATER HOLDING CAPACITY OF 6.5 TIMES BY WEIGHT OF DRY MATERIAL BEING HYDRATED AND UNIFORMLY DISPERSING IN CIRCULATING WATER TO FORM A HOMOGENEOUS SLURRY AND REMAIN IN SUCH A STATE IN THE HYDRAULIC MIXING UNIT (USUALLY A HYDRO-MULCHER).

12. TACKIFIER SHALL BE SUPPLIED IN PACKAGES MARKED BY THE MANUFACTURER TO SHOW WEIGHT CONTENT. TACKIFIER WHICH HAS BEEN DAMAGED BY MOISTURE OR OTHER MEANS SHALL NOT BE ACCEPTED.
NOTE:
1. EROSION CONTROL MATING (BLANKETS) COULD BE USED AT THE BANKS OF ALL WATERBODIES AND ON STEEP SLOPES.
2. THE EROSION CONTROL MATING SHALL MAKE UNIFORM CONTACT WITH THE SOIL UNDERNEATH WITH NO BRIDGING OF HILLS
   OR GULLIES. JOINING MATS SHOULD OVERLAP.
3. MONITOR FOR WASHOUTS, STAPLE INTEGRITY OR MAT MOVEMENT PRIOR TO COMPLETION OF CONSTRUCTION. REPLACE OR
   REPAIR AS NECESSARY.
PLAN VIEW

SECTION A-A

POINTS A MUST BE HIGHER THAN POINT B

TYPICAL STAKING PATTERN
NOT TO SCALE

DONLIN GOLD PROJECT
APPLICANT: Donlin Gold, LLC.
4720 Business Park Blvd., Suite C-25
Anchorage, Alaska 99503

TYPICAL WATTLE BMP

OWNER:

DATE: OCTOBER 2013  P01W-TYEC-07  REV 1
PLAN VIEW

SECTION A—A

POINTER A MUST BE HIGHER THAN POINT B

ENTRENCH 3"

SEDIMENT REMOVAL SHALL BE PERFORMED CONTINUOUSLY FOR PROPER FUNCTION

STAKES INSERTED VERTICALLY AT 2" INTERVALS

WETLANDS OR FEATURE THAT NEEDS PROTECTION

ENTRENCH 3"

TYPICAL STAKING PATTERN
NOT TO SCALE

DONLIN GOLD PROJECT
APPLICANT: Donlin Gold, LLC.
4720 Business Park Blvd., Suite C–25
Anchorage, Alaska 99503

TYPICAL
WATTLE BMP ENTRENCHED
SECTION A–A

NOTES:
1. Soil containment berms are to be used where instream trench spoil could reenter the waterbody directly or indirectly and with simultaneous utilization of sediment barriers if required.
2. Material used for the containment berm should be kept to a height which remains stable during the construction period.
3. Care should be taken that the spoil pile does not overtop the containment berm.
4. The containment berm should be dismantled and the site restored to the original condition upon completion of the water crossing.
5. Care and attention must be taken to ensure spoil containment berms are maintained.
6. Full consideration for overall slope stability is required when selecting a spoil containment location.

DONLIN GOLD PROJECT
APPLICANT: Donlin Gold, LLC.
4720 Business Park Blvd., Suite G–25
Anchorage, Alaska 99503

TYPICAL
TEMPORARY SOIL CONTAINMENT BERM

OWNER:

DATE: October 2013  PO1W–TYEC–09  REV 1
SLOPE BREAKER NOTES:

1. SLOPE BREAKERS SHALL BE CONSTRUCTED OF NATIVE SOIL AND INSTALLED AT LOCATIONS AS SHOWN ON THE CONSTRUCTION DRAWINGS, OR AS REQUIRED.
2. SLOPE BREAKER SHALL BE ORIENTED AS SHOWN OR OTHER PATTERN AS REQUIRED.
3. SLOPE BREAKERS SHALL BE CONSTRUCTED AT A 2–8% GRADIENT ACROSS THE SLOPE.
5. THE OUTLET OF THE SLOPE BREAKER MUST FREELY DISCHARGE ALL RUNOFF OFF THE DISTURBED R.O.W. INTO A STABLE, WELL VEGETATED AREA OR INTO AN ENERGY DISIPATOR.
6. WHEN SLOPE BREAKERS EXTEND BEYOND THE EDGE OF THE CONSTRUCTION R.O.W. TO DIRECT RUNOFF INTO STABLE, WELL VEGETATED AREAS, THESE LOCATIONS MUST BE APPROVED.
FLOW ENERGY DISSIPATOR NOTES:

1. The outlet shall contain an energy dissipator if the company determines existing vegetation is not sufficiently stable to prevent erosion. The energy dissipator shall be constructed as follows:

- Outlet end of dissipator should be lower than slope breaker end.
- Silt fence, straw bale or rock dissipators should be keyed into the end of the slope breaker.
- Provide enough area inside "L" to capture and hold sediment.

DONLIN GOLD PROJECT
APPLICANT: Donlin Gold, LLC.
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TYPICAL SLOPE BREAKER WITH LONGITUDINAL CROSS SLOPES (SHT. 2 OF 3)

OWNER:

DATE: OCTOBER 2013 P01W-TYEC-11 REV 1

MBarber P01W-TYEC-11 Wed, 23/Oct/13
TYPICAL SLOPE BREAKER WITH LONGITUDINAL CROSS SLOPES (SHT. 3 OF 3)
ACTIVE CONSTRUCTION RIGHT OF WAY
NOT TO SCALE

DONLIN GOLD PROJECT
APPLICANT: Donlin Gold, LLC.
4720 Business Park Blvd., Suite G-25
Anchorage, Alaska 99503

TYPICAL
SIDE SLOPE SECTION - TWO TONED
SHEET 1 OF 2

OWNER:

DATE: OCTOBER 2013 P01W-TYRW-01 REV 1
CROSS SECTION

NOTES:
1. MINI-TRENCH BREAKERS SHALL BE INSTALLED AT EDGE OF EACH TEMPORARY (TONKA) WETLAND.
2. OPEN WEAVE HEMP OR JUTE SACKS SHALL BE FILLED WITH A MINIMUM OF 50% OF SAND OR SUBSOIL.
3. BREAKER CONFIGURATION MAY BE CHANGED TO INCLUDE KEYING AS DETERMINED BY COMPANY ENGINEER.

DONLIN GOLD PROJECT
APPLICANT: Donlin Gold, LLC.
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Anchorage, Alaska 99503

TYPICAL MINI-TRENCH BREAKER

DATE: OCTOBER 2013  P01W–TYTR–01  REV 1
NOTES:

1. TRENCH BREAKERS SHALL BE INSTALLED:
   - ON SLOPES ALONG THE TRENCH LINE WHERE THE NATURAL DRAINAGE PATTERN, PROFILE, AND TYPE OF BACKFILL MATERIAL MAY RESULT IN LOSS OF BACKFILL MATERIAL OR ALTERATION OF THE NATURAL PATTERN
   - AT THE BASE OF SLOPES ADJACENT TO WATERBODIES AND WETLANDS
   - WHERE NEEDED TO AVOID DRAINING A WETLAND

2. OPEN WEAVE HEMP OR JUTE SACKS SHALL BE FILLED WITH A MINIMUM OF 55 lbs IN A MIXTURE OF SAND & SUBSOIL.

3. BREAKER SPACING AND CONFIGURATION, INCLUDING THE NEED TO KEY THE BREAKER INTO THE UNDISTURBED SOIL AT THE SIDES AND BOTTOM OF THE TRENCH, MAY CHANGE AS DETERMINED BY COMPANY ENGINEER.
PROTECTIVE COATING APPLICATION

1. Cover all below grade piping with tape wrap or hand applied 2–3 part extending from yard coating to a point 1 foot above the grade line.
2. Tape wrap will be applied with a 1/2 width lap over primed surface.
3. All coating to be applied as per manufacturer’s recommendation.
4. Aboveground piping to be painted per coating specification.
**DETAIL A – TYPICAL THERMITE WELDING PROCEDURE**

1. REMOVE 4" x 4" AREA OF COATING AT 12 O’CLOCK POSITION ON PIPE. CLEAN SURFACE TO SHINY METAL WITH A FILE. FORM A CROSS HATCHED ANCHOR PATTERN.
2. SECURE WIRE AROUND PIPE. STRIP WIRE INSULATION BACK 2" FOR NO. 10 AWG WIRE AND SMALLER, SLIP ON COPPER SLEEVE AND CRIMP.
3. PLACE METAL RETAINER DISK FLAT IN MOLD. DUMP (DO NOT POUR) POWDER ONTO DISK AND CLOSE MOLD LID. MAKE SURE ALL FINE STARTING POWDER IS IN THE MOLD. IF ANY CLINGS TO BOTTOM OF CARTRIDGE, SQUEEZE OUT INTO MOLD AND BREAK UP FINE. CHARGE TO BE RESTRICTED TO THE CONTENTS OF ONE CA. 15 CARTRIDGE. CADDY CONNECTION MOLD # A1A-46 SHALL BE USED.
4. REPLACE EMPTY CARTRIDGE IN THE BOX SEEN END UP TO KEEP REMAINING CARTRIDGES UPRIGHT.
5. LAY WIRE ON BRIGHT PIPE SURFACE USING SPRING LOADED CHAIN CLAMP TO HOLD CRUCIBLE TIGHT. REMOVE HAND COMPLETELY AWAY FROM TOOL.
6. USE EYE PROTECTION. STANDING ON OPPOSITE SIDE OF CRUCIBLE FROM TOUCH HOLE. IGNITE POWDER WITH SPARK FROM FLINT GUN. USE CARE. POWDER WILL FLASH.
7. WHEN WELD HAS SET, REMOVE MOLD AND TEST THERMITE WELD CONNECTION BY RAPPING SHARPLY WITH HAMMER. IN THE EVENT THERE IS ANY INDICATION THAT A COMPLETE WELD HAS NOT BEEN ACHIEVED, THE WELD SHALL BE REMOVED AND ATTEMPTED A MINIMUM DISTANCE OF 24" AWAY.
8. REMOVE SLAG FROM WELD AREA WITH SLAG HAMMER AND WIRE BRUSH.
9. COAT CONNECTION AS PER DETAIL B.

**DETAIL B – TYPICAL THERMITE WELD COATING**

1. SPECIFIC COATING PRODUCTS SHALL BE AS PER THE CONTRACT DOCUMENT AND APPLIED IN ACCORDANCE WITH MANUFACTURER’S INSTRUCTIONS.
2. APPLY ROYSTON, HANDCAP WITH ROYSTON NO. 247 PRIMER TO THE THERMITE WELD AREA.
3. CAP SHALL BE PROPERLY POSITIONED OVER THE THERMITE WELD. WELD AND CAP SHALL BE SECURELY HELD IN PLACE BY TIGHTENING CABLE – TIE AROUND THE PIPE.
4. THE COMPLETED THERMITE WELD AND ANY ASSOCIATED BARE STEEL SHALL BE COATED USING A THREE STEP PROCEDURE: A. ANY BARE STEEL SHALL BE PRIMED. B. MOLDABLE SEALANT SHALL BE APPLIED OVER THE PRIMED AREA AND OVERLAPPING ORIGINAL COATING A MINIMUM OF 3 INCHES. C. FULL CIRCUMFERENTIAL WRAPS OF SHEAR RESISTANT GROUNDED POLYETHYLENE TAPE SHALL BE APPLIED TO THE ENTIRE AREA OVERLAPPING THE ORIGINAL COATING A MINIMUM OF 6 INCHES.
5. SPECIFIC COATING PRODUCTS SHALL BE AS PER THE CONTRACT DOCUMENT AND APPLIED IN ACCORDANCE WITH MANUFACTURER’S INSTRUCTIONS. COATING DAMAGE SHALL BE PREPARED USING THE PATCHING PROCEDURE & MATERIAL AS SPECIFIED UNDER COATING SPECIFICATIONS.
6. ALL MATERIAL, EXCEPT TEST LEAD WIRE, TO BE FURNISHED BY CONTRACTOR.

**DONLIN GOLD PROJECT**

APPLICANT: Donlin Gold, LLC.
4720 Business Park Blvd., Suite G-25
Anchorage, Alaska 99503

**TYPICAL THERMITE WELD CONNECTOR**

OWNER:

DATE: OCTOBER 2013  P01X-TYWL-01  REV 1
NOTE:
This is a typical site setup. There are various configurations used depending upon site restrictions. Field modifications to suit site.

DONLIN GOLD PROJECT
APPLICANT: Donlin Gold, LLC.
4720 Business Park Blvd., Suite G-25
Anchorage, Alaska 99503

TYPICAL HDD ENTRY SITE EQUIPMENT LAYOUT

OWNER:

DATE: OCTOBER 2013 P040-SPHD-01 REV 1

M. Baker P040-SPHD-01 Wed, 16/Oct/13
ROPE INSTALLATION

1. ROPE SPACING SHOULD BE A MAXIMUM OF 6.0 FEET FROM THE PIPE ENDS.
2. THE INTERVALS BETWEEN RINGS SHOULD BE BETWEEN 10.0 FEET AND 20.0 FEET WITH A MINIMUM OF SIX LOOPS SPACED OVER A STANDARD TRIPLE RANDOM LENGTH (60 FEET).
3. THE INTERVALS MUST BE ADJUSTED TO INSURE THERE IS NO PIPE TO PIPE CONTACT. ROPE ENDS SHALL BE FUSED WITH A BLOW TORCH PRIOR TO SLIPPING THE LOOP OVER THE PIPE.

NOTES:

1. THE USE OF ALTERNATE METHODS FOR STOCKPIPING PIPE AND/OR THE USE OF ALTERNATE MATERIALS FOR PREVENTING PIPE TO PIPE CONTACT SHALL REQUIRE WRITTEN APPROVAL OF THE COMPANY.
2. PIPE SHALL BE STOCKPILED AND SECURED (AS NECESSARY) TO PRECLUDE MOVEMENT OF PIPE.
3. ALL MATERIALS SHALL BE FURNISHED BY THE CONTRACTOR.

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DANLIN GOLD PROJECT
APPLICANT: Danlin Gold, LLC.
4720 Business Park Blvd., Suite G-25
Anchorage, Alaska 99503

TYPICAL
TEMPORARY PIPE STOCK PILES

OWNER:

DATE: OCTOBER 2013 P04W-TYPT-02 REV 1
NOTES:

1. REFER TO CROSS SECTION DETAILS (A) & (B).
2. ICE SURFACE TO BE CLEARED OF SNOW 30-50" EACH SIDE OF ROAD CENTERLINE TO
   AUGMENT ICE THICKENING.
3. CLEAN SNOW FOR FILL MAY BE ACCUMULATED FROM NATURAL OPEN AREAS NEAR
   CROSSING SITE AND ICE SURFACE.
4. TO THE EXTENT POSSIBLE, CROSSING TO BE ORIENTED PERPENDICULAR TO ACTIVE
   CHANNEL.
5. WATER FOR BUILDING ICE TO BE TAKEN FROM STREAM AT CROSSING LOCATION.
6. SNOW BERMS TO BE SHAPED FOR PASSAGE OF SNOWMACHINES AND SIGNS TO PLACE
   WARNING OF CROSSING.
7. SNOW BERMS TO DEFINE CROSSING SITE AND AID IN CONTAINING WATER DURING
   FLOODING TO BUILD ICE.
8. CROSSINGS SHALL BE DEVELOPED IN ACCORDANCE WITH STATE OF ALASKA
   FOREST RESOURCES AND PRACTICES REGULATIONS AS THEY ADDRESS WINTER
   ROADS/TRAILS AND STREAM CROSSINGS.

DONLIN GOLD PROJECT
APPLICANT: Donlin Gold, LLC.
4720 Business Park Blvd., Suite G-25
Anchorage, Alaska 99503

WINTER ROAD
TYPICAL STREAM CROSSING PLAN

OWNER:

DATE: OCTOBER 2013 P07C-TYSCW-01 REV 1

MStaker P07C-TYSCW-01 Thu, 31/Oct/13
NOTES:

BEFORE DEVELOPMENT, ALL CROSSING LOCATIONS SHALL BE TESTED FOR ICE THICKNESS, WATER DEPTH AND EXTENT OF GROUNDED ICE. CLEAN SNOW FOR RAMP CONSTRUCTION MAY BE GATHERED FROM OPEN AREAS ADJACENT TO THE CROSSING SITE AND TRAIL. CROSSINGS SHALL BE DEVELOPED IN ACCORDANCE WITH STATE OF ALASKA FOREST RESOURCES AND PRACTICES REGULATIONS AS THEY ADDRESS WINTER ROADS/TRAILS AND STREAM CROSSINGS. ALL CROSSINGS SHALL BE ASSESSED BY A QUALIFIED ENGINEER AND APPROVED FOR USE.

DONLIN GOLD PROJECT
APPLICANT: Donlin Gold, LLC.
4720 Business Park Blvd., Suite G-25
Anchorage, Alaska 99503

WINTER ROAD STREAM CROSSING
CROSS SECTION
TYPICAL STREAM WITH HIGH BANKS

OWNER:

DATE: OCTOBER 2013

PRELIMINARY NOT FOR CONSTRUCTION!
NOTES:
1. CLEARING LIMITS TO BE MIN. 15' EACH SIDE OF CENTERLINE OR MAX. 30' TOTAL WIDTH.
2. MULCH AND ORGANIC DEBRIS FROM CLEARING TO REMAIN ON GROUND SURFACE.
3. DEPTH OF PACKED SNOW AND ICE FOR RUNNING SURFACE WILL VARY.
4. SOIL NOT TO BE DISTURBED EXCEPT AT SPECIFIC LOCATIONS AS PERMITTED.
5. ADD TURNOUT LANE AT LOCATIONS DETERMINED BY ENGINEER; SURFACE WIDTH INCREASED TO 28' FOR TURNOUT. (APPROX. ONE PER 1/4 MILE).

PRELIMINARY
NOT FOR CONSTRUCTION!
TYPICAL TURNOUT PLAN
NOT TO SCALE

NOTES:
1. TURNOUT TO BE FIELD LOCATED BY ENGINEER TO BEST FIT TERRAIN CONDITIONS AND MAXIMIZE OPERATIONAL SAFETY.
2. TURNOUT TO BE CONSTRUCTED SIMILAR TO ROAD RUNNING SURFACE.
3. OPEN AREA TURNOUTS MAY BE SHAPED AND SIZED TO BEST FIT TERRAIN AND NATURAL CLEARINGS. RADIUS IS REPRESENTATIVE ONLY.

PRELIMINARY
NOT FOR CONSTRUCTION!