STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
&
PUBLIC FACILITIES

PROPOSED HIGHWAY PROJECT
62251
AMBLER BRIDGE #1552 REPLACEMENT
(AKA Grizzlies Bridge)

THE FOLLOWING STANDARD DRAWINGS APPLY TO THIS PROJECT:
D-01.02  S-05.01
D-04.21  S-01.00
D-13.10  S-30.03
S-00.11

PROJECT SUMMARY
WIDTH OF PAVEMENT  N/A
LENGTH OF GRADEING  500 FT
LENGTH OF PAVING    N/A
LENGTH OF PROJECT   500 FT

As Advertised
May 15, 2013
Northern Region
### ESTIMATE OF QUANTITIES

<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>DESCRIPTION</th>
<th>UNIT</th>
<th>QUANTITY</th>
</tr>
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<tbody>
<tr>
<td>201(4B)</td>
<td>HAND CLEARING</td>
<td>LUMP SUM</td>
<td>ALL REQUIRED</td>
</tr>
<tr>
<td>202(1)</td>
<td>REMOVAL OF STRUCTURES AND OBSTRUCTIONS</td>
<td>LUMP SUM</td>
<td>ALL REQUIRED</td>
</tr>
<tr>
<td>203(110)</td>
<td>NOA BORROW, 700 CUBIC YARD</td>
<td>LUMP SUM</td>
<td>ALL REQUIRED</td>
</tr>
<tr>
<td>204(10)</td>
<td>STRUCTURE EXCAVATION</td>
<td>CUBIC YARD</td>
<td>90</td>
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<tr>
<td>301(1)</td>
<td>AGGREGATE BASE COURSE, GRADING E-1</td>
<td>LUMP SUM</td>
<td>ALL REQUIRED</td>
</tr>
<tr>
<td>305(2)</td>
<td>STOCKPILED MATERIAL, SECTION 300, GRADING E-1</td>
<td>TON</td>
<td>25</td>
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<tr>
<td>305(10)</td>
<td>STOCKPILE - BRIDGE MATERIAL</td>
<td>LUMP SUM</td>
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<tr>
<td>602(1)</td>
<td>STRUCTURE PLATE PIPE, 72&quot; DIAMETER, 10 GAGE</td>
<td>LINEAR FT</td>
<td>129.5</td>
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<tr>
<td>602(2)</td>
<td>DEADMAN</td>
<td>EACH</td>
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</tr>
<tr>
<td>602(10)</td>
<td>CULVERT END REINVEST SOIL ANCHOR ASSEMBLIES</td>
<td>EACH</td>
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<tr>
<td>615(1)</td>
<td>DITCH LINING</td>
<td>CUBIC YARD</td>
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<tr>
<td>611(1)</td>
<td>RIPRAP, CLASS I</td>
<td>CUBIC YARD</td>
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<td>613(2)</td>
<td>CULVERT MARKER POST</td>
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<td>615(1)</td>
<td>STANDARD SIGN</td>
<td>SQUARE FT</td>
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<td>615(5)</td>
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<td>616(3)</td>
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<td>618(2)</td>
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<td>GEOTEXTILE, STABILIZATION</td>
<td>SQUARE YD</td>
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<td>641(6)</td>
<td>EROSION AND POLLUTION CONTROL CONTINGENT SUM</td>
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<td>641(8)</td>
<td>HILLHOLDING</td>
<td>CONTINGENT SUM</td>
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<td>644(6)</td>
<td>VEHICLES</td>
<td>LUMP SUM</td>
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<td>644(15)</td>
<td>NUCLEAR TESTING EQUIPMENT STORAGE SHED</td>
<td>EACH</td>
<td>ALL REQUIRED</td>
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### TABLE OF ESTIMATING FACTORS

<table>
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<tr>
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<th>DESCRIPTION</th>
<th>FACTORS</th>
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<tr>
<td>203(19)</td>
<td>NOA BORROW</td>
<td>2 TON/CY</td>
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<td>203(21)</td>
<td>NOA BORROW</td>
<td>2 TON/CY</td>
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<td>301(1)</td>
<td>AGGREGATE BASE COURSE, GRADING E-1</td>
<td>2 TON/CY</td>
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<tr>
<td>611(1)</td>
<td>RIPRAP, CLASS I</td>
<td>1.75 TON/CY</td>
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### TABLE OF LUMP SUM QUANTITIES

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<thead>
<tr>
<th>ITEM NO.</th>
<th>ITEM</th>
<th>QUANTITY</th>
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<tr>
<td>201(4B)</td>
<td>HAND CLEARING</td>
<td>0.5 ACRES</td>
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<td>203(19)</td>
<td>NOA BORROW</td>
<td>700 CUBIC YARD</td>
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<td>301(1)</td>
<td>AGGREGATE SURFACE COURSE, GRADING E-1</td>
<td>1501 CUBIC YARD</td>
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### PIPE SUMMARY

<table>
<thead>
<tr>
<th>STATION</th>
<th>DIAMETER</th>
<th>LENGTH</th>
<th>SKEW</th>
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<tbody>
<tr>
<td>STA 21+90</td>
<td>72&quot;</td>
<td>51.5'</td>
<td>0'</td>
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<tr>
<td>STA 22+50</td>
<td>72&quot;</td>
<td>78</td>
<td>24.9'</td>
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### FLEXIBLE DELINERATOR SUMMARY

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<th>STATION</th>
<th>LEFT</th>
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<tr>
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<td>STA 24+50</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>STA 26+50</td>
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### STOCKPILE BRIDGE MATERIAL

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<tr>
<th>QUANTITY</th>
<th>MEASUREMENT</th>
<th>DESCRIPTION</th>
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<tr>
<td>30</td>
<td>5'x12'x20'</td>
<td>DECK BEAMS</td>
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<tr>
<td>200</td>
<td>5&quot;</td>
<td>SS12 SQUARE HEAD SCREWS</td>
</tr>
<tr>
<td>6</td>
<td>6&quot;x6&quot;x10&quot;</td>
<td>TRANSVERSE BRACING</td>
</tr>
<tr>
<td>8</td>
<td>6&quot;x6&quot;x10&quot;</td>
<td>COLUMNS</td>
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</table>
THALWEG SURVEY:

SURVEY THE CHANNEL THALWEG PROFILE AND WATER SURFACE PROFILE ELEVATIONS FOR A MINIMUM OF 300 FEET UPSTREAM AND DOWNSTREAM OF THE PROPOSED CULVERT ENDS.


TO DETERMINE CHANNEL SLOPE PLOT THALWEG SURVEY ELEVATIONS AND DETERMINE THE SLOPE OF THE "BEST FIT" LINE OF RIFFLE SHOTS OVER THE ENTIRE THALWEG SURVEY. POOL SHOTS ARE USED TO ESTIMATE THE EXTENT OF POTENTIAL SCOUR.

THE FINAL PLOT SHOULD INCLUDE BOTH UPSTREAM AND DOWNSTREAM SURVEY, IN ADDITION TO EXISTING EMBANKMENT AND CULVERT FEATURES.
HYDRAULIC AND HYDROLOGIC SUMMARY:

AMBLER AIRPORT ACCESS ROAD, STATION 22+30, 72 INCH 10 GA. SPP

DRAINAGE AREA: 0.9 SQUARE MILES
EXCEEDENCE PROBABILITY: Q2 = 28 CFS Q5 = 48 CFS Q50 = 91 CFS Q100 = 104 CFS

DESIGN HIGH WATER ELEVATION AT Q50 = 1.6FT BELOW TOP OF MAIN CULVERT
ESTIMATED BACKWATER ELEVATION at Q100 = 1.3FT BELOW TOP OF MAIN CULVERT

HEADWATER/DEPTH RATIO (HW/D) AT Q50: 0.73

THE CAPACITY OF THIS CULVERT AT ROADWAY OVERTOPPING IS APPROXIMATELY 260 FT³/S AT ELEVATION 8 FEET ABOVE CULVERT, WHICH HAS AN EXCEEDENCE PROBABILITY OF LESS THAN 0.2% (Q500 = 1.34 FT³/S).

*THIS CULVERT IS OVERSIZED FOR ICING. ANALYSIS DOES NOT INCLUDE THE 6FT OVERFLOW CULVERT.

NOTES:

1. NO RIPRAP IS TO BE PLACED IN THE CULVERT INVERT.
2. MAIN SPP INLET TO BE RESTRAINED WITH DEADMAN, SEE SHEET 7.
3. INVERT ELEVATIONS ARE APPROXIMATE AND WILL BE VERIFIED IN THE FIELD BY THE CONTRACTOR. SEE SHEET 8. OVERFLOW SPP TO BE RESTRAINED BY SOIL ANCHORS, SEE SHEET 8.
4. SEED ALL DISTURBED GROUND NOT COVERED BY DITCH LINING, RIPRAP, OR AGGREGATE SURFACE COURSE, GRADING E-1.
5. INSTALL THAW WIRES IN BOTH SPP BARRELS PER STANDARD DRAWING D13.10.
6. BED SPP'S WITH 12" OF SELECT B PASSING 3" SEIVE.
9" NON-NOA AGGREGATE SURFACE COURSE, GRADING E-1

FINISH GRADE PROFILE

HAND CLEARING AND SEEDING LIMITS

2" LAYERS OF SELECTED MATERIAL, TYPE B (TYPICAL)

Geotextile, Erosion Control

12" NON-NOA SELECTED MATERIAL, TYPE B

ROADWAY WITH RIPRAP TYPICAL SECTION

STA 19+00 TO STA 21+81 RT & LT
STA 22+56 LT TO STA 24+00 LT
STA 23+08 TO STA 24+00 RT

NOTES:
1. TRANSITION TYPICAL 9" SURFACE MATERIAL TO MATCH EXISTING ROADWAY OVER 25 FEET.

STATE DESIGNATION YEAR SHEET TOTAL NO. SHEETS
ALASKA 62251 2013 6 15

LEFT HAND CLEARING AND SEEDING LIMITS

10' 10'

12" LAYERS OF SELECTED MATERIAL, TYPE B (TYPICAL)

Geotextile, Stabilization (Typical)**

EXCAVATION PAY LIMITS

A P P R O X . 3 7'

ROAD TYPICALS

72 INCH SPP

TOP ELEVATION OF LOWER CULVERT EQUALS BOTTOM ELEVATION OF UPPER CULVERT

APP. LOCATION EXISTING BRIDGE

12" LAYERS OF SELECTED MATERIAL, TYPE B (TYPICAL)

Geotextile, Stabilization (Typical)**

EXISTING PROFILE

STA 19+00 TO STA 21+81 RT & LT
STA 22+56 LT TO STA 24+00 LT
STA 23+08 TO STA 24+00 RT

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ALASKA 62251 2013 6 15

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EXCAVATION PAY LIMITS

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ROAD TYPICALS

72 INCH SPP

TOP ELEVATION OF LOWER CULVERT EQUALS BOTTOM ELEVATION OF UPPER CULVERT

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12" LAYERS OF SELECTED MATERIAL, TYPE B (TYPICAL)

Geotextile, Stabilization (Typical)**

EXISTING PROFILE

STA 19+00 TO STA 21+81 RT & LT
STA 22+56 LT TO STA 24+00 LT
STA 23+08 TO STA 24+00 RT

NOTES:
1. TRANSITION TYPICAL 9" SURFACE MATERIAL TO MATCH EXISTING ROADWAY OVER 25 FEET.
DEADMAN DETAIL

PIPE BAND (12 INCH WIDE TYP.)

CABLE CLIPS

CIRCULAR CULVERT

GALVANIZED REINFORCING STRIP

5/8 INCH X 4 INCH X FULL WIDTH GALVANIZED REINFORCING STRIP

CONCRETE DEADMAN ANCHOR

1-1/2 INCH MIN. JAW X JAW TURNBUCKLE FOR PRETENSION

CABLE CLIPS

GROUT FILLET

3/4 INCH X 4 INCH CABLE FULL DEPTH OF CONCRETE WITH ROPE ANCHOR AT THE END

4 #5 REBAR 6 INCH O.C. CONCRETE CLASS W

HOOK BOLT (CENTERED)

PIPE SET IN BED OF NON-SHRINK GROUT.

NOTE: REBAR SIZES ARE MINIMUMS.

SECTION B-B

CONCRETE DEADMAN ANCHOR DETAILS

1. If drop forged U-Bolt type clips are used, they should be installed using the following:
   MIN. AMT. WIRE ROPE TO TURN BACK OR SPlice (INCHES): 11
   TORQUE REQUIRED TO REACH HOLDING POWER (FT-UB): 65


3. WIRE ROPE SHALL BE 6X3W IWRC, CIPS AND MEET ASHTO M30 TYPE II REQUIREMENTS OR APPROVED EQUAL.

4. ALL HARDWARE SHALL BE GALVANIZED TO MEET ASHTO M232.

5. CONCRETE CLASS W CONCRETE SHALL BE USED TO CONSTRUCT THE CONCRETE DEADMAN. REINFORCEMENT SHALL BE ASTM A523 GRADE 40.

6. ALL WORK AND MATERIALS REQUIRED FOR THE CONSTRUCTION AND INSTALLATION OF THE DEADMAN SHALL NOT BE MEASURED OR PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED SUBSIDIARY TO OTHER ITEMS.

7. CONCRETE DEADMAN SHALL BE CAST TO CONFORM TO THE OUTER RADIUS OF THE CULVERT.

8. USE A SPREADER BEAM/BRACE WHEN LIFTING DEADMAN TO AVOID BENDING OF TIE-DOWN/LIFTING LOOP.

9. THE PIPE SHALL BE SET IN A BED OF NON-SHRINK GROUT OF SUFFICIENT THICKNESS TO FULLY FILL THE CORRUGATIONS AFTER TENSIONING OF THE ANCHOR BOLTS AND TIE-DOWN BAND. THE GROUT SURFACE SHALL BE PROPERLY PREPARED FOR BEST BONDING WITH GROUT - CLEAN, DUST FREE, SATURATED SURFACE (SSD) CONDITION. BOTTOM OF PIPE SHALL BE AS CLEAN AND DUST FREE AS PRACTICABLE. GROUT SHALL BE FILLETED/CROWNED ALONG SIDES OF PIPE AT THE DEADMAN/Pipe Seam in ORDER TO REDUCE WATER INFILTRATION INTO THE GIRED AREA.

10. PENETRATE CULVERT INSERT HOOK BOLTS IN A CORRUGATION VALLEY TO PROTECT NUT ANCHOR BOLT HOLES SHALL BE DRILLED, NOT CUT WITH A TORCH, AND COATED WITH APPROPRIATE ZINC RICH PAINT PRIOR TO INSTALLATION. AFTER INSTALLATION AND ANCHOR BOLT NUTS HAVE BEEN TIGHTENED, COAT THE ANCHOR BOLT AND SURROUNDING AREA WITH ZINC RICH PAINT.

11. SEE STANDARD DRAWING C-00-01 SHEET 4 FOR ROPE ANCHOR DETAILS.
CULVERT ANCHOR DETAIL

DRAINAGE SWALE TYPICAL SECTION

NOTES:

1. EXISTING HALF CULVERTS TO BE REMOVED PER 202(1).
2. CONSTRUCT SLOPES OF DRAINAGE SWALES TO MATCH EXISTING GROUND OR AS DIRECTED BY THE ENGINEER. TRANSITION SWALE INLETS AND OUTLETS WITH EXISTING DRAINAGES TO THE ENGINEER'S SATISFACTION. THERE WILL BE NO DIRECT PAYMENT FOR DRAINAGE SWALE EXCAVATION AND DISPOSAL OF UNUSABLE MATERIAL, AND IT SHALL BE CONSIDERED SUBSIDIARY TO 610(1).

NOTES:

1. IF DROP FORGED U-BOLT TYPE CLIPS ARE USED, THEY SHOULD BE INSTALLED USING THE FOLLOWING:
   - AFT. WIRE ROPE TO TURN BACK OR SPICE (INCHES): 11
   - TORQUE REQUIRED TO REACH HOLDING POWER (FT-LBS): 65

2. THE LENGTH OF THE PIPE BANDS SHALL BE A MINIMUM OF 0.5 THE CIRCUMFERENCE OF THE ROUND CULVERT OR SHALL EXTEND TO WITHIN 6" OF THE SPRINGLINE ON PIPE ARCH CULVERT. THE PIPE BANDS SHALL HAVE A MINIMUM THICKNESS OF 0.125" GALVANIZED ASTM A1011 SS GRADE 36 OR MINIMUM THICKNESS 0.109" GALVANIZED AASHTO M218. THE REINFORCING STRIP SHALL BE GALVANIZED ASTM A36.

3. WIRE ROPE SHALL BE 6X19 IWRC, EIPS & GALVANIZED AND MEET AASHTO M30 TYPE II REQUIREMENTS OR APPROVED EQUAL.

4. ALL HARDWARE SHALL BE GALVANIZED TO MEET AASHTO M232.

5. ALL WORK AND MATERIALS REQUIRED FOR THE CONSTRUCTION AND INSTALLATION OF THE SOIL ANCHOR ASSEMBLIES SHALL BE PAID UNDER PAY ITEM 602(106).

6. MINIMUM DISTANCE BETWEEN BANDS SHALL BE TWICE THE MANUFACTURER'S RECOMMENDED INSTALLATION DEPTH OF SOIL ANCHOR.

7. INSTALL 2 ANCHOR ASSEMBLIES (2 BANDS + 4 SOIL ANCHORS) AT THE INLET AND OUTLET OF THE OVERFLOW CULVERT AND AT THE OUTLET OF THE MAIN CULVERT.

SEE CULVERT FOUNDATION DETAILS ON SHEETS 4.
NOTES:
1. THE EXACT SKED ANGLE AND GRADIENTS WILL BE VERIFIED AND APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.
2. FUEL LINE IS OUTSIDE OF RIGHT OF WAY. EXACT OFFSET FROM CENTERLINE IS UNKNOWN.
3. DRAINAGE SWALE LOCATIONS AND LENGTHS SHALL BE APPROVED BY THE ENGINEER IN-THE-FIELD.

STATE PROJECT DESIGNATION YEAR SHEET TOTAL
ALASKA 62251 2013 9 15

STA. 22+40 45' LT
STA. 22+37 39' LT
15'

NOTES:
(STA. 22+56 ROW BOUNDARY 46' LT CREEK - ___ /._ 50' LT)
1. THE EXACT SKEW ANGLE AND GRADIENTS STA. 21+81 STA. 22+37

2. FUEL LINE IS OUTSIDE OF RIGHT OF WAY. EXACT OFFSET FROM CENTERLINE ISUNKNOWN.

3. DRAINAGE SWALE LOCATIONS AND LENGTHS SHALL BE APPROVED BY THE ENGINEER IN-THE-FIELD.

72 INCH SPP, OVERFLOW APPROX. 40' 72 INCH SPP, MAIN

STA. 22+56 14' LT

CLASS I RIPRAP

STA. 23+04 15.5' LT

ROW BOUNDARY 50' LT

CLASS I RIPRAP

STA. 23+37 15.5' LT

DRAINAGE SWALE

STA. 23+37 CULVERT DITCH LINING

1-3 STA. 22+64 LT

72 INCH SPP, OVERFLOW APPROX. 40' 72 INCH SPP, MAIN

STA. 22+56 14' LT

POWER POLE

STA. 23+09 12' RT

DRAINAGE SWALE

STA. 23+09 CULVERT DITCH LINING

ROW BOUNDARY 50' LT

CLASS I RIPRAP

STA. 22+14 45' RT

BURIED FUEL LINE

LEGEND
FLEXIBLE DELINERATOR

CULVERT LAYOUT PLAN

PLAN VIEW
SIGN SUMMARY

<table>
<thead>
<tr>
<th>STATION LOCATION ASOS</th>
<th>LEGEND</th>
<th>BRACING/FRAMING SHAPE</th>
<th>BRACING/FRAMING AREA</th>
<th>LQTY. (SQ FT)</th>
<th>POSTS</th>
<th>SIZE (INCHES)</th>
<th>TYPE (INCHES)</th>
<th>REMARKS</th>
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<tbody>
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<td>21+70</td>
<td>Grizzly Creek</td>
<td>4x6/24</td>
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<td>8.00</td>
<td>SN wood</td>
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<tr>
<td>22+64</td>
<td>Grizzly Creek</td>
<td>4x6/24</td>
<td>x</td>
<td>8.00</td>
<td>NE wood</td>
<td>6x6</td>
<td>1</td>
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<td><strong>TOTAL</strong></td>
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<td><strong>16.00</strong></td>
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SIGNING NOTES:
1. MOUNTING HEIGHTS ARE PER STANDARD DRAWING S-05.01 UNLESS OTHERWISE NOTED.
2. DETERMINE POST LENGTHS IN THE FIELD. DO NOT EXTEND POSTS ABOVE TOP OF SIGN.
3. ALL FASTENER HARDWARE SHALL MEET THE REQUIREMENTS OF THE "FASTENER SPECIFICATION TABLE" ON THIS SHEET.
4. ALL LETTERING THAT INCLUDES UPPPER AND LOWER CASE LETTERS SHALL BE SERIES E-MODIFIED OR CLEARVIEW AS NOTED IN APPENDIX C OF THE ASOS, EXCEPT FOR D3-1 SIGNS WHICH ARE SERIES 2000 LETTERS.
5. LOCATE AND PROTECT ALL NEW AND EXISTING UNDERGROUND UTILITIES, INCLUDING BUT NOT LIMITED TO: PIPELINES, INTERCONNECT CABLES, SIGNAL SYSTEMS, LIGHTING SYSTEMS, STORM AND SANITARY SEwers, WATER SYSTEMS, AND TELEPHONE AND ELECTRICAL CABLES, PRIOR TO INSTALLING SIGN POSTS. NOT ALL EXISTING UTILITIES MAY BE SHOWN ON THE PLANS.
6. ATTACH FRAMED SIGNS TO POSTS WHEREVER THE FRAMES CROSS THE POSTS. AT EACH CROSSING, ATTACH THE SIGN USING A Bracket WITH SQUARE CORNERS ON WOOD POSTS
7. THE BRACKET DETAILS SHOWN INDICATE GENERAL DESIGNS ONLY. DESIGNS MAY VARY BY MANUFACTURER.

FASTENER SPECIFICATION TABLE

<table>
<thead>
<tr>
<th>FASTENERS</th>
<th>STEEL</th>
<th>STAINLESS STEEL</th>
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<tbody>
<tr>
<td>BOLTS</td>
<td>ASTM A 307</td>
<td>ASTM F 593</td>
</tr>
<tr>
<td>NUTS</td>
<td>ASTM A 563</td>
<td>ASTM F 594</td>
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<tr>
<td>WASHERS</td>
<td>ASTM A 36</td>
<td>ASTM A 480</td>
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WINDBEAM NOTES:
1. ALUMINUM ALLOY 6061-T6 SHALL BE USED FOR EXTRUDED WINDBEAM AND RIVETS.
2. ATTACH SIGN TO WINDBEAM AND HINGE WITH 3/16" RIVETS AT 4" STAGGERED SPACING.
3. A NYLON WASHER SHALL BE PLACED BETWEEN THE SIGN FACE AND ANY OTHER WASHER (EXCLUDING WIND WASHERS) REQUIRED ON SIGNS CONSTRUCTED OF ENCAPSULATED LENS SHEETING MATERIAL.

BRICK BASE
TYPE IA JUNCTION BOX
NTS

CAST IRON LID
MINIMUM WEIGHT 50#2

1/4" STAINLESS STEEL SCREW
W/3' GROUND CABLE (COPPER BRAID)

THE WORD "LIGHTING" OR "TRAFFIC" TO BE
EMBOSSED, AS APPLIES.
LIFTING EYE

9 GA. WELDED WIRE
FRAME OR 3-6 GAUGE
HORIZONTAL WIRE HOOPS

BOTTOM WT. 148#'

DEPRESS 1" (2" IN SEEDED AREAS)
SLOPE AFTER
FINAL GRADING

6"-10" ABOVE
THE BOTTOM OF BOX
BRICK BASE
ALL SIDES
(TYP)

TYPE IA JUNCTION BOX DETAIL
NTS

SECTION A-A

TYPE IA J-BOX INSTALLATION ON SLOPE
NTS

JBOX DETAILS
NOTES:

1. Maintain a minimum of 10 feet of traveled way open to the public, with a maximum grade of 6% south of Grizzly Creek and a maximum grade of 10% north of Grizzly Creek.

2. It is anticipated additional fill may be required to construct the temporary traveled way. Any fill outside the design footprint shall be removed. All costs associated shall be subsidiary to 643(2).

3. All temporary traffic control signs shall have high level warning devices.

4. Modify and adjust distances shown according to site conditions.

5. Traffic control devices shown are a graphical representation only. Actual quantity of devices shall be as required by the Alaska Traffic Manual.

6. This traffic control setup shall be used for all work associated at Grizzly Creek.

7. Plans shown on this sheet are generalized to depict traffic layout only.

LEGEND:

1. Type II Barricade

TRAFFIC CONTROL PLAN

PLANS SHOWN ON THIS SHEET ARE GENERALIZED TO DEPICT TRAFFIC LAYOUT ONLY.
PLAN NOTES:
1. Inspect benches of embankment used as site access for erosion potential, and install proper BMP as necessary to prevent erosion, subsumery to 641 PAY ITEMS.
2. Use velocity reducing intake guard on all pump intake hoses.
3. The Contractor shall mark the boundaries of the area to be disturbed on uplands and wetlands.

DISCHARGE ENERGY DISSIPATION NOTES:
1. A velocity dissipater is required for all temporary discharge points.
2. Use sufficient size impermeable fabric to produce laminar sheet output flow.
3. Fold flaps over to further assist in spreading the water across the sheet.
4. Fasten securely to pump hose outlet.
5. Raise side edges as necessary to direct water to end of fabric.
6. Dowels may be placed under fabric perpendicular to flow direction to produce desired flow characteristics.
7. Surround output with BMP, such as straw wattles, to collect sediment.

DETAIL - OPTIONAL METHOD FOR PUMP DISCHARGE ENERGY DISSIPATION

NOT TO SCALE

Sheet Total

No. Sheets

ALASKA
62251
2013
14
15
CROSS CULVERT MARKER POST DETAIL
N.T.S.

POST DETAIL

3/8" GALV. BOLT, W/ NUT AND LOCK WASHER, TYP 4

BRASS PLATE DETAIL
N.T.S.

STAMP STATION AND PIPE SIZE, USING 3/8" HIGH MINIMUM LETTERS INTO A 2 1/4" x 0.064" THICK BRASS PLATE. FASTEN PLATE TO THE SIDE FACING THE ROADWAY WITH TWO 1/8" DIAMETER BLIND RIVETS.

BRASS PLATE (STREET SIDE)

YELLOW MARKER POST, 4' LONG

1/4" x 2" GALV. FLAT STEEL

3/8" GALV. BOLT, W/ NUT AND LOCK WASHER, TYP 4

PIPE

PIPE

BRACKET DETAIL
N.T.S.

1/4" x 2" x 7" GALV. FLAT STEEL

3/8" GALVANIZED BOLT, W/ NUT AND LOCK WASHER (TYP)

1/4" x 2" x 16" GALV. FLAT STEEL (GALV. AFTER BENDING)

BRACKET DETAIL
N.T.S.

CULVERT MARKER POSTS NOTES:
1. MARKER POSTS ARE TO BE INSTALLED ON CROSS CULVERTS ONLY.
2. IF CULVERTS ARE CLOSELY SPACED, MARK ONLY THE FIRST AND LAST CULVERT IN SERIES AS APPROVED BY THE ENGINEER.
3. DRILL ALL BOLT HOLES. COAT HOLES WITH ZINC RICH PAINT. FLAME CUTTING SHALL NOT BE PERMITTED.
4. GASKET MATERIAL SHALL BE PLACED BETWEEN DISSIMILAR METALS. GASKET MATERIAL SHALL BE APPROVED PRIOR TO INSTALLATION.