**STATEMENT OF ESTIMATED QUANTITIES**

<table>
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<tr>
<th>NOTES</th>
<th>ITEM NUM.</th>
<th>SPEC NUM.</th>
<th>DESCRIPTION</th>
<th>UNIT</th>
<th>QUANTITY</th>
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<td>MORILIZATION</td>
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<td>REMOVE BITUMINOUS PAVEMENT</td>
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<td>4</td>
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<td>2211.502</td>
<td>AGGREGATE BASE CLASS 5 (LV)</td>
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<td>2360.503</td>
<td>TYPE SP 9.5 WEARING COURSE MIXTURE (3, B) 3.5&quot; THIC</td>
<td>SQ YD</td>
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<td>8</td>
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<td>CONNECT 8&quot; HDPE TO EXISTING 6&quot; CI WATER MAIN</td>
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</table>

**NOTES:**
1. ASPHALT SHALL BE PLACED IN 2 LIFTS, A 2" BASE LIFT AND A 1.5" SURFACE LIFT.
2. APPLIED AT A RATE OF 400 POUNDS PER ACRE.
3. SPREAD AT A RATE OF 125 POUNDS PER ACRE.

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**BLOCKING DIMENSIONS**

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<tr>
<th>BEND OR BRANCH SIZE</th>
<th>22-1/2&quot; BENDS</th>
<th>45° BENDS</th>
<th>90° BENDS</th>
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<td>D</td>
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<td>1'-0&quot;</td>
<td>1'-0&quot;</td>
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</table>

**THRUXT BLOCKING FOR WATERMAIN**

W-3

**REVISED/APPROVED 2/01/2013**

**CITY OF DULUTH STANDARD DETAIL**
DEPT. OF PUBLIC WORKS AND UTILITIES

**FAIRMONT ST WATER MAIN REPLACEMENT**

**DREW BY:** JMN
**DATE:** 7/10/2015
**LOCATION:** CITY OF DULUTH ENGINEERING DIVISION
431 W. 1ST ST. STE 211
DULUTH, MN 55802

**SIGNATURE:** Tim Sanders
**TYPE NAME:**
GENERAL TRAFFIC CONTROL NOTES:
1. THE CONTRACTOR SHALL FURNISH, INSTALL AND MAINTAIN THE DEVICES IN THIS TRAFFIC CONTROL PLAN UNLESS OTHERWISE NOTED.
2. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE 2014 MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES INCLUDING "TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS FIELD MANUAL 2014" (AVAILABLE AT: http://www.dot.state.mn.us/trafficeng/pub/fielmanual/index.html)
3. FIELD CONDITIONS MAY REQUIRE MODIFICATIONS OF THIS LAYOUT AS DEEMED NECESSARY BY THE ENGINEER.
4. THE NUMBER AND PLACEMENT OF TRAFFIC CONTROL DEVICES WILL DEPEND UPON THE SEQUENCE OF THE CONTRACTORS OPERATION.
5. ALL DISTANCES ARE APPROXIMATE.
6. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING ANY WORK AREAS NEAR TRAFFIC IN ACCORDANCE WITH AWWA.
7. IF THE CONTRACTOR DECIDES TO PERFORM THE CONSTRUCTION WORK IN A SEQUENCE OTHER THAN SHOWN IN THIS TRAFFIC CONTROL PLAN, THE CONTRACTOR SHALL PROVIDE COMPLETE REVISED TRAFFIC CONTROL PLANS TO BE APPROVED BY THE ENGINEER.
8. ALL TRAFFIC CONTROL DEVICES, INCLUDING OVERHEAD SIGNS ON ROADS OPEN TO TRAFFIC THAT ARE NOT CONSISTENT WITH TRAFFIC OPERATION, SHALL BE COVERED, REMOVED OR REVISED AS DIRECTED BY THE ENGINEER.
9. "ROAD WORK AHEAD" SIGNS SHALL BE MOUNTED APPROX. 300 FT (1 BLOCK) IN ADVANCE OF THE CONSTRUCTION AND SHALL HAVE A TYPE "A" LOW INTENSITY FLASHING AMBER WARNING LIGHT MOUNTED ON THEM.
10. "ROAD CLOSED AHEAD" SIGNS SHALL BE ERECTED APPROX. 300 FT (1 BLOCK) IN ADVANCE OF THE CLOSURE.
11. "ROAD CLOSED TO TRAFFIC" SIGNS SHALL BE INSTALLED ON TYPE III BARRICADES AND SHALL BE LOCATED AT A POINT IN THE STREET AS TO PERMIT LOCAL TRAFFIC USE BUT EFFECTIVELY DISCOURAGE TRAFFIC USE.
12. WHEN A "ROAD CLOSED TO TRAFFIC" SIGN IS USED, THE "STOP" OR "YIELD" SIGN AT THAT INTERSECTION SHALL BE LEFT IN PLACE OR MOVED TO A SUITABLE LOCATION WHERE THE DRIVER CAN STILL SEE THE SIGN.
13. "ROAD CLOSED" SIGNS MAY BE USED WHERE THE ROADWAY IS CLOSED TO ALL TRAFFIC EXCEPT CONTRACTOR'S EQUIPMENT OR OFFICIALLY AUTHORIZED VEHICLES.
14. ADDITIONAL SIGNING MAY BE REQUIRED FOR SEPARATE LANE CLOSURES. THE SIGNING SHALL BE IN CONFORMANCE WITH "TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS FIELD MANUAL 2014" AND SHALL BE CONSIDERED INCIDENTAL TO "TRAFFIC CONTROL".

CONSTRUCTION SITE TRAFFIC CONTROL LAYOUT

FAIRMONT ST

WOODLAND AVE

CARLISLE AVE

PROJECT AREA

TISCHER CREEK

TRAFFIC CONTROL PLAN

SITE SPECIFIC NOTES:
• ROAD CLOSURE AND CONSTRUCTION ACTIVITY SHALL ALLOW FOR UNINTERRUPTED ACCESS FOR FAIRMONT ST RESIDENTS AND CHURCH PATRONS
• REFERENCE THE MUTCD TEMPORARY TRAFFIC CONTROL FIELD MANUAL LAYOUT 20

LEGEND

- = TYPE "B" CHANNELIZING DEVICE
- = SIGN
- = TYPE III BARRICADE W/ FLASHER

1 = ROAD WORK AHEAD
2 = STOP
3 = TAKE TURNS

*THIS SIGN SHALL HAVE A RED FLASHER OR FLARES

DRAWN BY: JJJ
TRAFFIC CONTROL PLAN

SIGNATURE: TIN SANDERS, P.E.
LC. NO. 50401

DATE: 7/10/2015
CITY OF DULUTH
ENGINEERING DIVISION
411 W. 1ST ST. STE. 211
DULUTH, MN 55802

FAIRMONT ST WATER MAIN REPLACEMENT

CITY PROJECT NO.: 1333
STATE AID PROJECT NO.

SHEET NO. 4 OF 6
NOTES:
1) ALL DI PIPE AND FITTINGS SHALL BE WRAPPED IN 8 MIL. V-SILE POLYETHYLENE
2) ALL DI PIPE FITTINGS SHALL BE RESTRAIN-coded WITH MEGA-LUG CLAMPS RESTRAINED JOINTS

WATER MAIN CONNECTION DETAIL