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**STATEMENT OF ESTIMATED QUANTITIES**

**NOTES**

1. ONE MOBILIZATION QUANTITY WILL BE PRODUCED FOR EACH INDIVIDUAL PNEUMATIC HOSE PIPE, 4TH STREET END, AND LONDON ROAD PIPE PROJECT BEGINS.

2. CAPINING ABANDONED LINES AND RUNNIN 12" PE DRAINAGE PIPES ARE INCIDENTAL TO THE REMOVAL.

3. INCLUDES CURB CUTTING AT LIMITS OF REMOVAL.

4. THIS BID ITEM IS APPLICABLE TO SMC CURB CONVERTS WITH EMBANKMENT, LAKE WALK, ABUTMENTS OR CONCRETE STREET REFINISHING AT LIMITS OF THE EMBANKMENT, DAMAGED CURB LISTS SHALL BE RE-OUTED WITHOUT PAYMENT.

5. PAYMENT FOR EXCAVATION AND REMOVAL WILL ONLY OCCUR FOR BOARDS LARGER THAN 1/4" OF A CURB YARD.

6. NEW SIDEWALK INSTALLATION BID ITEM SHALL INCLUDE REMOVAL AND DISPOSAL OF EXISTING SIDEWALK.

7. REMOVAL OF DASIS AGES AT 40TH AVENUE EAST SIDE SHALL BE INCIDENTAL TO THIS BID ITEM.

8. THIS BID ITEM IS APPLICABLE FOR INSTALLATIONS IN STREET PAVEMENT (SIDEWALK OR TURF AREAS). 9. REMOVAL OF CONCRETE SIDEWALK BASE UNDER A CURB/TIMBER SHADE BOUNDARY SHALL BE INCIDENTAL TO THE Timer SHADE PAVEMENT REMOVAL.

10. THE INSERTION PER FOOT SHALL INCLUDE INSPECTION OF THE EXISTING CURB CONCRETE AND RENEWAL OF THE EXISTING CURB CONCRETE.

11. APPLY PAINT QUANTITIES SHALL BE CONSIDERED KIT AS USED FOR THE PAINT.

12. INCLUDES RUBBER MOLDING AND DISPOSAL OF EXISTING CURB CONCRETE.

13. TO BE USED AS DIRECTED BY THE ENGINEER TO PROTECT THE GAS MAIN FROM OTHER UTILITIES OR STRUCTURE MINIMUM CLEARANCE ISSUES.

14. IF REQUIRED THIS BID ITEM SHALL INCLUDE THE COSTS OF FURNISHING AND INSTALLING TEMPORARY DRAIN AND SANDBAGS TO DRAIN OUTFLOW FLOW AROUND OR ABOVE AN OPEN EXCAVATION AS SPECIFIED AT HATHORN ROAD AND 4TH STREET.

15. LAY OF THE PAYMENT FOR THIS BID ITEM WILL BE RELEASED AT THE END OF EACH PROJECT PHASE IF ALL REQUIRED INSPECTIONS OF THE ERGION CONTROL REGULATIONS AND WEEKLY REPORTS ARE SUBMITTED TO THE ENGINEER.

16. TO BE INSTALLED AS DIRECTED BY THE ENGINEER TO PROVIDE IMMEDIATE RESTORATION IN SOIL CARRY OR ENVIRONMENTALLY SENSITIVE AREAS INCL. ROUTING WORKING AS SPECIFIED IN MINN 250.4.4.5.1 FOR MAINTENANCE OF SOIL.

17. INCLUDES PAYMENT FOR PROTECTION AS SPECIFIED OF SPECIAL INLET STRUCTURES ALONG LONDON ROAD TO BE INSTALLED AS DIRECTED BY THE ENGINEER, STREAM LINES AND CONTRACTOR PLACED IN PLACE ARE INCIDENTAL.

18. THIS BID ITEM DOES NOT INCLUDE EXCAVATION, EXCAVATION SHALL BE INCLUDED TO THE NEW PIPE CONSTRUCTION.

19. KICK THAT IS REMOVED BY EXCAVATION WILL NOT BE CONSIDERED ROCK EXCAVATION, BUT ROCK CONSIDERED TO BE INCIDENTAL TO THE REMOVAL.

20. PAYMENT FOR TRENCH BOX INSTALLATION AND REMOVAL SHALL BE MADE BY THE OCCURRENCE WHEN INSTALLATION AT ONE SPECIFIC LOCATION AND UTILIZED BY THE CITY OF DULLAT TO COMPLETE A CONSTRUCTION PROCEDURE. DURATION OF THE TRENCH BOX REMAIN IN PLACE WILL NOT WARRANT ADDITIONAL PAYMENT. ADDITIONAL PAYMENT WILL NOT BE MADE FOR A SECOND INSTALLATION TO THE CONTRACTION OF A TRENCH BOX IS REMOVED AND REINSTALLED BEFORE WORK IS COMPLETED.

21. THIS BID ITEM INCLUDES EXCAVATION TO ABANDON A MAIN OR SERVICE WHERE NEW MAIN IS NOT BEING INSTALLED. CAPINING THE LIE AND ABANDONED PE MAIN IN THIS EXCAVATION IS INCIDENTAL.
TRAFFIC CONTROL NOTES

1. All signs indicated on this traffic control plan, except those signs which are in place shall be furnished and installed by the contractor. All appropriate signs shall be maintained during the life of the contract.
2. All traffic control devices shall conform to, and be placed in accordance with Part VI (including the Field Manual dated January 2014) of the Minnesota Manual on Uniform Traffic Control Devices, dated December 2011, and the Minnesota Standard Signs Manual. The contractor shall provide all signs required but not itemized in this traffic control plan.
3. Maintenance of traffic is the responsibility of the contractor. Through traffic shall be maintained during all periods of construction operations. Businesses and government buildings shall have access at all times.
4. The contractor shall provide all necessary signaling, plastic drums and barricades for channelization of traffic within the construction zone.
5. The contractor shall receive compensation for all work described herein on the basis of a lump sum payment for traffic control ($25,560).
6. The contractor shall place adequate plastic drums, warning signs and barricades within the construction zone to protect vehicular traffic and pedestrian traffic from construction operations. Additional signing may include, but is not limited to: "BUMP," "LOOSE GRAVEL," etc. The number and locations of traffic control devices shall be determined by the sequence of the contractor's operations. Traffic control devices may be adjusted in the field as directed by the engineer.
7. All warning signs are to be 48" x 48", black on orange with high intensity or "Diamond Grade" retroreflective sheathing. All black on orange zone traffic control signs, orange and white type I or type II barricades, cutout route markers and all other road signs installed to control and direct traffic during construction operations shall be constructed of high intensity or "Diamond Grade" retroreflective sheathing.
8. The contractor shall develop the traffic control plan along with the special provisions.
9. All traffic control devices shall be removed or covered as soon as they are no longer required or appropriate.
10. The initial construction signing shall be erected prior to beginning construction operations that will affect the traveling public.
1. ENFORCEMENT OF CONSTRUCTION REQUIREMENTS

All construction activities shall comply with the requirements of this project as specified in the contract documents. Non-compliance with these requirements may result in cessation of work and/or fines. The contractor shall be responsible for ensuring that all employees comply with these requirements.

2. INVESTIGATION OF SUBSURFACE CONDITIONS

The contractor shall conduct a thorough investigation of the subsurface conditions at the site prior to the commencement of construction. This investigation shall include geotechnical investigations and soil sampling to determine the nature and extent of the subsurface conditions.

3. PREVENTION OF DUST AND POLLUTION

The contractor shall take all necessary measures to prevent dust and pollution from the construction site. This includes the use of water trucks, silt fences, and other measures to control dust and pollution.

4. PROTECTION OF THE ENVIRONMENT

The contractor shall take all necessary measures to protect the environment during the course of the construction project. This includes the use of temporary sediment basins, silt fences, and other measures to prevent soil erosion and runoff.

5. SAFETY AND HEALTH

The contractor shall provide a safe working environment for all workers. This includes the provision of personal protective equipment, training, and regular inspections to ensure compliance with safety and health regulations.

6. QUALITY CONTROL AND TESTING

The contractor shall establish a quality control program to ensure the quality of the work being performed. This includes the use of quality control measures and testing to ensure compliance with the contract documents.

7. PROCUREMENT AND CONTRACT ADMINISTRATION

The contractor shall ensure that all materials and equipment are procured in accordance with the contract documents. This includes the use of approved contractors and suppliers, as well as the use of quality control measures to ensure the quality of the work being performed.

8. PERFORMANCE BOND AND LIABILITY INSURANCE

The contractor shall provide a performance bond and liability insurance as required by the contract documents. This includes the use of approved contractors and suppliers, as well as the use of quality control measures to ensure the quality of the work being performed.

9. COMPLIANCE WITH LAWS AND ORDINANCES

The contractor shall ensure compliance with all applicable laws and ordinances, including those related to environmental protection, health and safety, and construction.

10. PROTECTION OF PUBLIC PROPERTY

The contractor shall ensure that all public property is protected during the course of the construction project. This includes the use of temporary protection measures and the provision of adequate fencing and other protection.

11. PROTECTION OF NEIGHBORING PROPERTIES

The contractor shall ensure that the construction site does not cause damage to neighboring properties. This includes the use of temporary protection measures and the provision of adequate fencing and other protection.

12. COMPLIANCE WITH CONTRACT DOCUMENTS

The contractor shall ensure compliance with all contract documents, including the plans, specifications, and contract conditions. This includes the use of quality control measures and testing to ensure compliance with the contract documents.

13. COMPLIANCE WITH PERMITS AND LICENSES

The contractor shall ensure compliance with all applicable permits and licenses, including those related to environmental protection, health and safety, and construction.

14. COMPLIANCE WITH CONTRACT CONDITIONS

The contractor shall ensure compliance with all contract conditions, including those related to environmental protection, health and safety, and construction.

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30. COMPLIANCE WITH CONTRACT CONDITIONS

The contractor shall ensure compliance with all contract conditions, including those related to environmental protection, health and safety, and construction.
# Duluth City of

## Rainwater Runoff Pollution Prevention Plan (SWPPP)

1. **The project will reconstruct existing city streets and associated infrastructure including:**
   - 1.1. Grading and Excavation
   - 1.2. Thicken for new and reconstructed utilities
   - 1.3. New Curbs and Gutters
   - 1.4. New Sidewalks
   - 1.5. New Drainage Structures

2. **The total land area affected to be disturbed by the project (exclusive of borrow and disposal areas) is 1.7 acres.**

3. **Construction dates are estimated to be from May 1, 2017, to October 23, 2017.**

4. **The sediment water for storm water from the project will include existing storm sewer systems leading to St. Louis Bay in Lake Superior.**

5. **City of Duluth maintenance is responsible for long-term operation and maintenance of the stormwater system.**

6. **Contacts:**
   - **Owner & Records Retention:** The City of Duluth Project Manager: Howard O. Smith
     - **City of Duluth Project Manager:** Howard O. Smith
     - **City Hall:** 211 City Hall
     - **Duluth, MN 55802**
     - **(218) 730-5200**
     - **hsmith@duluthmn.gov**

### Typical SWPPP Installation

- **The erosion and sediment control BMPs shall be installed as necessary to minimize erosion from disturbed surfaces and capture sediment on site, and shall meet the requirements for construction activity restrictions.**
- **Temporary and permanent sediment basins shall be installed before any up gradient, soil disturbance occurs.**
- **Temporary and permanent sediment basins shall be placed within 2 days of construction completion.**
- **Placement of SWPPP shall be completed within 2 hours of a 24 hour precipitation and done in one continuous operation.**
- **Once construction activity ceases for 2 days of no work in an area, that area will be encased with temporary or permanent BMPs for erosion.**

### Calculations

- **Total disturbed area = 1.7 acres**
- **Post construction disturbance area = 19 acres**
- **Existing disturbed area = 11 acres**
- **Impervious area = 2 acres**

### SWPPP Implementation Contacts

<table>
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<th>Contact</th>
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<tr>
<td>City of Duluth</td>
<td>Howard O. Smith</td>
<td>(218) 730-5200</td>
<td><a href="mailto:hsmith@duluthmn.gov">hsmith@duluthmn.gov</a></td>
<td></td>
</tr>
<tr>
<td>State Project Office</td>
<td>Tom Johnson</td>
<td>(218) 730-3103</td>
<td><a href="mailto:tojmh@cityofduluth.com">tojmh@cityofduluth.com</a></td>
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<tr>
<td>U.S. Army Corps of Engineers</td>
<td>David K. McLean</td>
<td>(218) 730-4410</td>
<td><a href="mailto:dmclean@duluth.mil">dmclean@duluth.mil</a></td>
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<tr>
<td>Minnesota Department of Natural Resources</td>
<td>Patricia Fowler</td>
<td>(218) 834-5640</td>
<td><a href="mailto:pfowler@state.mn.us">pfowler@state.mn.us</a></td>
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</tr>
<tr>
<td>Minnesota Pollution Control Agency</td>
<td>John Loken</td>
<td>(218) 730-0140</td>
<td><a href="mailto:jloken@cityofduluth.com">jloken@cityofduluth.com</a></td>
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### Location of SWPPP Requirements in Project Plan

- **Description:** Summary of Previous & Impervious
  - **Title:** IMPERVIOUS
  - **Location:** PLAN & PROFILE SHEET

### Erosion Control

- **Description:** Erosion Control
  - **Title:** EROSION CONTROL
  - **Location:** PLAN & PROFILE SHEET

### Stormwater Management

- **Description:** Stormwater Management
  - **Title:** STORMWATER MANAGEMENT
  - **Location:** PLAN & PROFILE SHEET

### Sediment Control

- **Description:** Sediment Control
  - **Title:** SEDIMENT MANAGEMENT
  - **Location:** PLAN & PROFILE SHEET

### Stormwater Quality

- **Description:** Stormwater Quality
  - **Title:** STORMWATER QUALITY
  - **Location:** PLAN & PROFILE SHEET
**DULUTH**
THE CITY OF DULUTH

**4TH ST. CONCRETE PANEL TYPICAL SECTION**

- **2" Type SP 8.5 Non-Main Course**
- **2.5" Type SP 12.5 Non-Main Course**
- **2.5" Type SP 12.5 Non-Main Course**
- **2" Type SP 6.5 Main Course**
- **2.5" Type SP 12.5 Non-Main Course**

**2" SELECT GRAVEL (1/2" MAX. THE)**

**TYPE X NON-MAIN DETENCING VACUUM**

**GLENWOOD RD TYPICAL SECTION**

- **1" Type SP 9.5 Non-Main Course**
- **2" Type SP 12 Non-Main Course**
- **8" Aggregate Base Class 3**

**LAKE WINE TYPICAL SECTION**

- **7" Type SP 8.5 Main Course**
- **7" Type SP 8.5 Main Course**
- **6" Aggregate Base 12-14/16"**
- **4" Aggregate Base Class 3**

**HATHORNE RD AND 4TH ST CONCRETE PANEL TYPICAL SECTION**

- **2" Type SP 8.5 Main Course**
- **2.5" Type SP 12.5 Non-Main Course**
- **2.5" Type SP 12.5 Non-Main Course**
- **2" Type SP 6.5 Main Course**

**SUPERIOR ST. TYPICAL SECTION**

- **3" Type SP 9.5 Non-Main Course**
- **3" Type SP 12 Non-Main Course**
- **12" Aggregate Base Class 3**

**NOTE 4 (6") TIES SPACED EVERY 3' TO CONNECT TO ADJACENT PANELS OR CURB**

**NO 8 (1") EPOXY COATED**

**12" CLASS 3 CONCRETE**

**2" SELECT GRAVEL (1/2" MAX. THE)**

**TYPE X NON-MAIN DETENCING VACUUM**

- **2" SELECT GRAVEL (1/2" MAX. THE)**
- **TYPE X NON-MAIN DETENCING VACUUM**

**SPECIFICATION**
- **4" WIDE GAS MAIN**
- **1" WIDE GAS MAIN**
- **6" WIDE GAS MAIN**

**NOTE** CONCAVE SMALL DICE EIGHT HOLE GAS MAIN FROM CASING. THEN CLEAN CASING AND INSPECT WITH RELELETIC TO DOCUMENT CONDITION FOR THE CITY OF DULUTH.
36TH AND 40TH AVENUE EAST RESTORATION OVER TRENCH

DRIVEWAY & ALLEY ENTRANCES (STR-5)

SECTION A-A

NOTES:
1. WHERE THERE IS NO CURB, OR THERE IS A GRASS BULEVARD (BEHIND) THE SKEW, THE CURB OVER THE CENTER OF THE DRIVEWAY MUST BE AT LEAST 6" ABOVE CURB TO PROVIDE RIDGE.
2. WHERE THERE IS CURB, DIRECTLY BEHIND THE CURB, DRIVEWAY PROFILE SLOPE SHALL BE PLANNED TO MEET AND ACCOMMODATE SLOPE STANDARDS.
1. ROAD CLOSURES SHALL BE ESTABLISHED CONCURRENTLY WITH PROGRESS OF INSTALLATION OF PIPE.
2. ALLEY CLOSURES WILL OCCUR WHERE CASINGS ARE IDENTIFIED TO BE REMOVED; PROVIDE TYPE 3 BARRIERS AROUND EXCAVATION.
DULUTH
THE CITY OF MINNESOTA

NOTES:
1. ALL ACCESS PITS SHALL BE RESTORED TO EXISTING CONDITIONS UNLESS NOTED ON THE PLANS.
2. ACCESS PIT PERIMETERS IN BITUMINOUS AND CONCRETE CURB SHALL BE SAW CUT, CONCRETE SIDEWALK SHALL BE CUT BACK TO THE NEAREST JOINTS.
3. REPLACEMENT PEDESTRIAN RAMPS SHALL INCLUDE TRUNCATED DOMES.
4. ALLEY CROSSING SHALL BE DECORATED WITH DURABLE MATERIAL AND RESTORED WITH 12" CLASS V DRIVING SURFACE PLACED ON NON-WOVEN FABRIC 5 FABRIC.

PIPE BURST 6" ADS-O A GAS MAIN TO INSTALL 6" M/OPE GAS MAIN FROM STA 19+30 TO 20+48

PIPE BURST 6" ADS-O A GAS MAIN TO INSTALL 6" M/OPE GAS MAIN FROM STA 20+48 TO 22+22

PIPE BURST 6" ADS-O A GAS MAIN TO INSTALL 6" M/OPE GAS MAIN FROM STA 22+48 TO 24+24

PIPE BURST 6" ADS-O A GAS MAIN TO INSTALL 6" M/OPE GAS MAIN FROM STA 25+48 TO 27+22

6" C.I. VALVE W/ 10' LONG W/ 2" P.E. GAS MAIN

6" C.I. VALVE W/ 20' LONG W/ 2" P.E. GAS MAIN

ADD ACCESS PIT (2) WITH MECHANICAL DRIP
TRAFFIC CONTROL PHASE 5

NOTES:
1. CENTER LANE WILL BE CLOSED AND DETOUR SHOWN ON SHEET. GUESSING CONSTRUCTION BETWEEN 5TH ST. AHEAD AND 3RD AVE.
2. THE TRAFFIC CONTROL PLAN MAY DEVELOP FAST PHASE 2.
DULUTH

THE CITY OF MINNESOTA

NOTE: OUTLET EMPTIES DIRECTLY INTO TUNCHER CREEK SYSTEM, CARE MUST BE TAKEN TO MAINTAIN THE SEDIMENT CONTROL.

1. PHASE 2 OF EROSION CONTROL IS TO BE IN PLACE UNTIL RESTORATION IS COMPLETE FOR THE OPEN CUT SECTION FROM STATION 13+72 TO 15+35.
2. GUTTER DIMENSIONS ARE NOT REQUIRED IF TRENCH IS BACKFILLED PRIOR TO RAIN EVENTS, AND NEW CONCRETE CURB AND GUTTER IS PROTECTED FROM DAMAGE.
NOTE:
1. Open cut perimeters in bituminous and concrete curb shall be saw cut. Concrete sidewalk shall be cut back to the nearest joints.
2. Install 10' stub of 8" pipe with an 8" mope cap east of new valve. City will install 2" N.V. tap tee for purging, then have the option to reuse tap tee for temporary service to 3221 E 4th St.
3. Confirm that city has provided temporary gas service to 3221 E 4th St. Prior to abandoning 8" steel gas main.
1. Open cut perimeters in bituminous and concrete curb shall be saw cut, concrete sidewalk shall be cut back to the nearest joints.
2. Confirm service to 3321 E 4th St has been rerouted to the main on Redwood Rd prior to decommissioning main.
3. Confirm the City has provided temporary service to 3221 E 4th St prior to decommissioning main.
4. Install clay trench drain at Sta. 24+75 and 28+90.
NOTE: Coordinate with School and City of Duluth Service Department for shut down.

- NEW 8" x 8" service valve installed by city.
- New 3" service pipe to ex. meter set.
- Install 270 feet of 3" Wolff gas service.
- Route new 2" sewer to ex. meter set.

EX. SERVICE TO BE ABANDONED BY DEPARTMENT.

4" steel gas main to be abandoned by department.
NOTES:
1. CONTRACTOR MAY USE HOPE FITTINGS TO CONSTRUCT VERTICAL ALIGNMENT CHANGES AT PIPE CROSSINGS.
2. MAINTAIN 12" CLEARANCE BETWEEN PIPES

DATE: 03/30/2012
CREATED BY:
DULUTH ENGINEERING DIVISION
415 W. 13TH ST. STE 211
DULUTH, MN 55802

CITY PROJECT NO. 3337
STATE AND PROJECT NO. NA
SHEET NO. 40 OF 54

CITY: DULUTH
ENGINEER: RALPH E. SMITH, P.E.
PREPARED BY: NICK CERNY

MONUMENT NO. 6
R. 68 T. 107N R. 60 W. 23N
LONDO ROAD
3500 LONDON RD
3500 LONDON RD
55802
55802

PLANS CORRECTED: 08/15/2012

NOTES:
1. CONTRACTOR MAY USE HOPE FITTINGS TO CONSTRUCT VERTICAL ALIGNMENT CHANGES AT PIPE CROSSINGS.
2. MAINTAIN 12" CLEARANCE BETWEEN PIPES

DATE: 03/30/2012
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DULUTH, MN 55802

CITY PROJECT NO. 3337
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PLANS CORRECTED: 08/15/2012
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2. MAINTAIN 12" CLEARANCE BETWEEN PIPES