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<td>TURF ESTABLISHMENT</td>
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</table>
EROSION CONTROL NOTES

1. WHD standards specifications for construction shall apply, along with the (A) City of Duluth (B) developer. The contractor will be co-permitted for the WPD lakes storm water construction permit for this project. Contractors' signature on permits is required.

1.1. Submit initial erosion control (EC) schedule at or before the preconstruction conference.

1.2. Submit EC schedule alterations/adjustments weekly thereafter for engineer's approval.

2. The contractor is responsible for erosion control quality control (QC) on this project. The contractor shall prepare/design the project to minimize exposure to erosion. Contractor shall place on the project:

2.1. Erosion control blanket and soil stabilizers shall be used.

2.2. Sediment traps shall be used at all drain inlets.

2.3. Silt fences shall be used in conjunction with erosion control.

2.4. Rock ditches are to be used to reduce ditch velocities and reduce erosion.

2.5. Storm inlet and outlet areas shall be continuously protected with approved erosion control devices.

2.6. Permanent vegetation will be established right after topsoil is spread.

3. Control all site solid waste, debris, material storage and concrete washout on site. No movement of debris or refuse into ditches/storm systems permitted.

4. All slopes and ditch banks shall be stabilized prior to opening new culverts into existing ditches in accordance with Erosion Control.

5. All stockpiles to remain in place for 30 days after the installation of erosion control blankets shall be used.

6. Water pumped or otherwise discharged from the site during construction shall be directed through effective filtering devices in accordance with WPD storm water specifications.

7. In use of approved fluorocarbons for acceptable process to prevent unacceptable soil tracking to roadsides, acceptable soil wash, or debris washed, tracked, or deposited/onto paved surfaces shall be removed prior to the end of each work day.

8. All stabilized construction areas cut into stabilized areas shall be restored after grading is complete.

9. The contractor's erosion control program shall ensure that a competent individual shall inspect erosion and sediment control devices weekly and after each rain event. All non-functional devices shall be repaired/replaced/cleaned/innoculated. Written weekly log of all weekly and rain event inspections shall include the corrective actions that were taken.

10. The contractor shall maintain the capability to implement rapid stabilization methods 4 (WHD 2973.4) at all times. Includes cat III erosion control blanket (ECB) on American green 510 or approved equal, along with seed mixture, fertilizers, and soil stabilizer mix 250.3. The upper end of each blanket strip shall be buried at least 6 inches in a vertical check slot. Staples shall be placed at 100 feet and throughout the blanket at a minimum spacing in all directions of 2 feet. Payment allowance shall be per contract or in accordance with contract.

11. The contractor shall maintain the capability to implement rapid stabilization methods 4 (WHD 2973.4) at all times. Includes cat III erosion control blanket (ECB) on American green 510 or approved equal, along with seed mixture, fertilizers, and soil stabilizer mix 250.3. The upper end of each blanket strip shall be buried at least 6 inches in a vertical check slot. Staples shall be placed at 100 feet and throughout the blanket at a minimum spacing in all directions of 2 feet. Payment allowance shall be per contract or in accordance with contract.

12. The contractor shall be proactive in their approach to minimizing soil erosion and sediment transfer from the site. Current technology for erosion control and weather indicators will be used to ensure that the contractor will have erosion control blankets installed and functioning for a rain event. All construction sites shall be prepared for a rain event during non-work times. Use of non-work times is to ensure that the contractor will have erosion control blankets installed and functioning for a rain event.

13. As site conditions change, the work progresses and weather conditions vary, the contractor shall be reactive to these changing conditions. Therefore EBC installation, installation, and inspection will be performed in the most conducive conditions.
CONSTRUCTION NOTES

- Construction shall be conducted in accordance with the Minnesota Department of Health, the City of Duluth, and the Contractor’s erosion control plans, which include the SWPPP implementation plan.

- The Contractor shall be responsible for implementing the SWPPP and the installation, inspection, and maintenance of the erosion and sediment control BMPs before and during construction.

- The Contractor shall keep written inspection and maintenance logs (including all clean-out and corrective actions) in accordance with this SWPPP and all permits.

SWPPP IMPLEMENTATION CONTACTS

<table>
<thead>
<tr>
<th>AGENCY</th>
<th>PERMIT</th>
<th>NAME</th>
<th>PHONE/E-MAIL</th>
</tr>
</thead>
<tbody>
<tr>
<td>NPCA</td>
<td>NPDES</td>
<td>JIM DEXTER</td>
<td>(218)529-6253 <a href="mailto:jomes.dexter@pcastate.mn.us">jomes.dexter@pcastate.mn.us</a></td>
</tr>
<tr>
<td>SWCD</td>
<td>WCA</td>
<td>RC BOHEIM</td>
<td>(218)723-4629 RC.Boheim@southst其實SWCD.org</td>
</tr>
<tr>
<td>MNDNR WATERS AREA</td>
<td>HYDROLOGIST</td>
<td>PATRICIA FOWLER</td>
<td>(218)834-6621 <a href="mailto:patricia.fowler@dnr.state.mn.us">patricia.fowler@dnr.state.mn.us</a></td>
</tr>
<tr>
<td>CORPS OF ENGINEERS</td>
<td>SECTION 404</td>
<td>DARYL WIERZBINSKI</td>
<td>218-834-6630 <a href="mailto:daryl.wierzbinski@dmv02.usace.army.mil">daryl.wierzbinski@dmv02.usace.army.mil</a></td>
</tr>
<tr>
<td>STATE DUTY OFFICER</td>
<td>N/A</td>
<td>MPC</td>
<td>800-422-0798</td>
</tr>
<tr>
<td>CITY REVIEW</td>
<td>N/A</td>
<td>TOM JOHNSON</td>
<td>(218) 730-5103 <a href="mailto:tjejohnson@duluthmn.gov">tjejohnson@duluthmn.gov</a></td>
</tr>
<tr>
<td>CITY OF DULUTH SOLID WASTE OFFICER</td>
<td>N/A</td>
<td>KAREN ODDONNELL</td>
<td>(218)730-5148 <a href="mailto:kodonnell@duluthmn.gov">kodonnell@duluthmn.gov</a></td>
</tr>
</tbody>
</table>

LOCATION OF SWPPP REQUIREMENTS IN PROJECT PLAN

- **DESCRIPTION**
  - SUMMARY OF PERVERSOUS & IMPERVIOUS
  - DIRECTION OF FLOW/DRAINAGE AREA
  - RECEPTIVE SURFACE WATERS
  - NO DISTURBANCE AREAS & AREAS OF CONSTRUCTION
  - DRAINAGE STRUCTURES
  - DRAINAGE TABULATIONS
  - DRAINAGE CONTROL TABULATIONS
  - EROSION CONTROL SHEETS
  - EROSION CONTROL DETAILS
  - SEDIMENT CONTROL PRACTICES
  - FINAL STABILIZATION
  - SEDIMENT BASKET (POND) TABULATIONS
  - POND SHEETS (SEDIMENT BASINS)
  - LOCATION OF PONDS

- **LOCATION**
  - SHEET 6
  - SHEETS 8-10
  - SHEETS 21
  - SHEETS 22-28
  - SHEETS 6-10
  - SHEET 2
  - SHEETS 5-6
  - SHEET 2
  - N/A
  - N/A
  - N/A
  - N/A
  - N/A

- **DATE:** 06/17/2014
- **DRAWN BY:** JRL
- **DRAFTSMAN NO.:** 44
- **SIGNATURE:** NORRIS E. SMITH, P.E.
EXISTING GRADE

LIFT STRAPS

"DANCEY BAG" (OR EQUAL)

ORANGE WOVEN MONOFILAMENT GEOTEXTILE

DUMPING STRAP ALLOWS FOR EASY REMOVAL OF CONTENTS

EXISTING CATCH BASIN


TYPE A

INLET PROTECTION

CATCH BASIN SEDIMENT BAG INSERT TYPE DETAIL

NO SCALE

SANDBAGS OR TUBES TO CHANNELED SURFACE WATER

FLOW

TYPE B

SANDBAG DIVERSION

NO SCALE

ROCK SOCKS

FLOW

3"

TYPE C

GUTTER LINE ROCK CHECKS

NO SCALE

NOTE: ROCK SOCKS SHALL BE CONSTRUCTED OF SUITABLE GEOTEXTILE AND 3/4" ROCK
TRAFFIC CONTROL NOTES

1. All signing indicated on this Traffic Control Plan, except those signs which are in place, shall be furnished and installed by the Contractor. All appropriate signage shall be maintained during the life of the Contract.

2. All Traffic Control Devices shall conform to, and be placed in accordance with, part II (including the field manual) 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 convenience buildings shall have access at all times.

4. The Contractor shall provide all necessary signage, plastic drums and barricades for channelization of traffic within the construction zone.

5. The Contractor shall request reimbursement for all work described herein on the basis of a lump sum payment for Traffic Control (2536.45).

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 signage may be installed, but is not limited to, stop, yield, lane closures, etc. The number and locations of traffic control devices shall be determined by the sequence of the Contractor's operations.

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 work zone traffic control signs, orange and white type I, type II and type III barricades, detour 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 follow this 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 signage shall be erected prior to beginning construction operations that will affect the traveling public.

11. Type A (low intensity) flashers shall be furnished, installed, and maintained on all type I barricades and advanced warning signs as detailed in this Traffic Control Plan. Additional flashers shall be furnished, installed, and maintained on signs, barricades, and channelizers as needed or as directed by the Engineer for Traffic Control through work zones within the project limits.

12. Temporary lane closures by the Contractor shall be permitted during those hours and at those locations approved by the Engineer, in accordance with the pavement layouts shown in Appendix 1 of the Manual. All such work relating to the closures, including flashers, shall be considered to be included in the lump sum payment under Item No. 2536.45 (Traffic Control).

13. Third Street shall remain open to Traffic during Construction. Aggregate/shoulder rock shall be placed as needed to maintain adequate accessibility. Construction shall be staged to keep original roadway surface intact as long as possible.

SIGN SCHEDULE

ROAD CLOSED AHEAD
ROAD WORK AHEAD
ROAD CLOSED
ROAD CLOSED 1/2 MILE AHEAD
ROAD CLOSED LOCAL TRAFFIC ONLY
STOP
WARNING SIGNS
ROAD CLOSED
WARNING LIGHTS
ROAD CLOSED
ROAD CLOSED
ROAD CLOSED
ROAD CLOSED
TRAFFIC CONTROL PHASE 2: 19TH AVE. E LANE SHIFT AND E 9TH ST. ALLEY CLOSURE

NOTES:
1. SIDEWALKS SHALL BE CLOSED ON THE EAST SIDE OF 19TH AVE. E BETWEEN 8TH ST. AND SELLING AVE.
2. COORDINATE WITH SDOT TO RELOCATE BUS STOP LOCATION

LEGEND
CONSTRUCTION SIGN
BARCODE
TYPE B CHANNELING Device
DEER CROSS
TRAFFIC DIRECTION
ROAD CENTERLINE

SCALE IN FEET
0 50 100

DATE: 06/17/2016

SIGNATURE: Howard Smith, PE
LICENSE: 46873

CITY OF DULUTH
ENGINEERING DEPARTMENT
411 W. 1ST ST., STE. 211
DULUTH, MN 55802

TRAFFIC CONTROL PLAN - PHASE 2
CITY PROJECT NO.: 1450
STATE AID PROJECT NO.: 3140

DRAWN BY: JHL
SHEET NO. 13 OF 44
CONCRETE AND BITUMINOUS PAVEMENT REMOVAL AS NEEDED FOR DIRECTIONAL DRILLING

CONCRETE AND BITUMINOUS PAVEMENT REMOVAL FOR OPEN CUT INSTALLATIONS

SCALE: 1" = 50'
NOTES:
1. TEMPORARILY RECONNECT SEVEN 2" P.E. SERVICES, REMOVE TEMPORARY GAS MAIN WHEN SERVICES ARE RECONNECTED TO PERMANENT 8" M.D.P.E. MAIN, SEE SPECIAL PROVISIONS FOR TEMPORARY GAS MAIN INSTALLATION, ALSO SEE CONNECTION PROCEDURE STEPS # 26 AND #33 FOR ADDITIONAL DETAILS.
2. CONNECTIONS TO THE RED STATION SHALL BE BY CONTRACTOR AS NOTED IN PROCEDURES.