



**King County**

**KING COUNTY**

**Signature Report**

**April 2, 2007**

1200 King County Courthouse  
516 Third Avenue  
Seattle, WA 98104

**Ordinance 15706**

**Proposed No.** 2007-0127.2

**Sponsors** Constantine and Hague

1 AN ORDINANCE making a supplemental appropriation of  
 2 \$6,100,000 to cover costs and expenses relating to the  
 3 procurement of construction, design and other services,  
 4 materials and equipment on an emergency basis to perform  
 5 the Mercer Island Pump Station Interceptor Line  
 6 Replacement Project; and amending the 2007 Budget  
 7 Ordinance, Ordinance 15652, Section 121, as amended.

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10 BE IT ORDAINED BY THE COUNCIL OF KING COUNTY:

11 SECTION 1. Findings.

12 A. On December 14, 2006, a powerful rain and windstorm hit the Puget Sound  
 13 area, causing outages and surges in the conveyance lines throughout the county and  
 14 prompting the King County executive to issue a Local Proclamation of Emergency on  
 15 December 15, 2006. On January 8, 2007, the King County council adopted Motion  
 16 12430, which recognized the resultant damage and extended to March 1, 2007, the

17 authority of the county to waive standard procurement processes to quickly mobilize to  
18 repair the damage.

19 B. An underground gravity sewer conveyance line located on both SE 24th Street  
20 and 84th Avenue SE and Luther Burbank Park on Mercer Island failed, creating a  
21 sinkhole that was approximately ten feet long, two feet wide and two feet deep on 84th  
22 Avenue SE on Mercer Island. Further investigation and excavation revealed that the  
23 underground gravity sewer conveyance line made of a material called Techite failed  
24 during the storm.

25 C. A second sinkhole on the line developed approximately ten feet upstream from  
26 the original sinkhole on December 21, 2006. This sinkhole was caused by a loss of  
27 backfill and gravel resulting from the original storm surge on December 14, 2006.

28 D. Wastewater treatment division ("WTD") personnel inspecting the pipe  
29 determined that it would not hold for another significant event and decided to temporarily  
30 bypass the line in order to relieve stress on the pipe and initiate a permanent replacement  
31 of the pipe. WTD, in conjunction with construction support from Frank Coluccio  
32 Construction Company installed an emergency bypass from December 26, 2006, through  
33 January 4, 2007, at which time the line became operable. The bypass consists of an 18-  
34 inch high-density polyurethane ("HDPE") pipe, which is laid on top of the ground, with  
35 the exception of when it is lowered into the pavement and protected by steel sheets to  
36 allow driveway access.

37 E. The county's closed circuit television ("CCTV") crew sent a camera through  
38 the system and located numerous fractures in addition to the initial damaged area, within  
39 the pipe. The fractures were found in the pipe run of nine hundred fifty feet along 84th

40 Avenue SE. A second run of seven hundred feet pipe made from Techite on SE 24th  
41 Street was inspected with CCTV and there was no indication of fractures along that run.  
42 However, the pipe entering Luther Burbank Park from SE 26th Street was found to have  
43 a twelve-inch longitudinal fracture along the crown approximately eighteen feet from the  
44 manhole through the parking lot to the wetland. This additional fracture was problematic  
45 as it was not expected to withstand high pressure surges from the newly operating bypass.  
46 WTD directed Coluccio Construction to bypass that last section of pipe to eliminate  
47 further risk of breakage and sewage spills in the area while a new pipe is installed. An  
48 additional bypass of approximately four hundred eighty feet running from just north of  
49 the lower entrance to Luther Burbank park through the wetland to a private residence on  
50 the edge of the wetland was completed January 18, 2007.

51 F. In light of the current condition of the pipeline system and the inadvisability of  
52 using the above-ground temporary bypass longer the minimum necessary where it may be  
53 more easily subject to damage or vandalism, WTD staff has moved to replace the existing  
54 pipe system from the pump station to the wetland with a new underground line made  
55 from HDPE on an emergency procurement basis pursuant to the authority granted in  
56 Motion 12430.

57 G. A pipe bursting technique will be used to replace the damaged pipe as it  
58 presents the least amount of disruption to the surface streets and allows for the old pipe to  
59 simply stay "in place" while the new pipe takes over its new function. This technique is  
60 widely used in trenchless pipe replacement. If the soil composition within the wetland  
61 does not allow pipe bursting, the pipe will be replaced using traditional trenching  
62 methods.

63 H. The initial work on the replacement project began on January 19, 2007, once  
64 the final bypass pipe was installed. Substantial completion of the replacement project,  
65 road and parking lot restoration, and demobilization can be accomplished by mid-April  
66 2007. Wetland restoration will remain an open item until the fall when plantings will  
67 have the best opportunity to root and survive during the late fall and winter months.  
68 Additionally, wetland monitoring will continue for at least another year post construction.

69 SECTION 2. Ordinance 15652 Section 121, as amended, is hereby amended by  
70 adding thereto and inserting therein the following:

71 The Mercer Island Pump Station Interceptor Line Replacement Project 423XXX,  
72 in appropriation project category A20400 Conveyance Pipeline and Storage requires an  
73 appropriation of \$7,000,000 to cover all costs and expenses associated with the design,  
74 construction and completion of the emergency restoration.

| 75 | <b>Fund</b> | <b>Fund Name</b>             | <b>Amount</b> |
|----|-------------|------------------------------|---------------|
| 76 | 4616        | Wastewater Treatment Capital | \$6,100,000   |

77 SECTION 3. Attachment A to this ordinance hereby amends Attachment D to

**Ordinance 15706**

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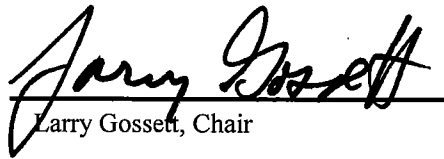
78 Ordinance 15652, as amended, by adding thereto and inserting therein the projects listed  
79 in Attachment A to this ordinance.

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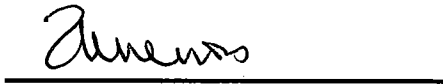
Ordinance 15706 was introduced on 3/5/2007 and passed by the Metropolitan King  
County Council on 4/2/2007, by the following vote:

Yes: 9 - Mr. Gossett, Ms. Patterson, Ms. Lambert, Mr. von Reichbauer, Mr.  
Dunn, Mr. Ferguson, Mr. Phillips, Ms. Hague and Mr. Constantine  
No: 0  
Excused: 0

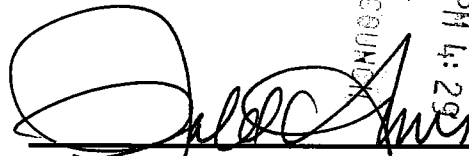
KING COUNTY COUNCIL  
KING COUNTY, WASHINGTON

  
Larry Gossett, Chair

ATTEST:

  
Anne Noris, Clerk of the Council

APPROVED this 11 day of April, 2007.

  
Ron Sims, County Executive

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2007 APR 11 PM 4:29  
KING COUNTY COUNCIL CLERK

**Attachments** A. Adopted Ordinance 15652, Section 121: Wastewater Treatment Capital  
Improvement, dated March 21, 2007

Attachment A (March 21, 2007)

Adopted Ordinance 15652, Section 121: Wastewater Treatment Capital Improvement

| <u>Fund</u> | <u>Project</u> | <u>Description</u>                                       | <u>2007</u>      | <u>2008</u> | <u>2009</u> | <u>2010</u> | <u>2011</u> | <u>2012</u> | <u>Total</u><br><u>2007 - 2012</u> |
|-------------|----------------|--|------------------|-------------|-------------|-------------|-------------|-------------|------------------------------------|
| 4616        | A20400         | Wastewater Treatment<br>Conveyance Pipelines and Storage | 6,100,000        |             |             |             |             |             | 6,100,000                          |
|             |                | <b>Total Fund 4616</b>                                   | <b>6,100,000</b> |             |             |             |             |             | <b>6,100,000</b>                   |