LAKE WHATCOM WATER AND SEWER DISTRICT
1220 LAKEWAY DRIVE
BELLINGHAM, WASHINGTON 98229

REGULAR MEETING
OF THE BOARD OF COMMISSIONERS

AGENDA

JULY 9, 2014

6:30 p.m. – Regular Session

1. CALL TO ORDER

2. PUBLIC COMMENT OPPORTUNITY
   At this time, members of the public may address the Commission. Please state your name prior to making comments.

3. ADDITIONS, DELETIONS, OR CHANGES TO THE AGENDA

4. CONSENT AGENDA

5. SPECIFIC ITEMS OF BUSINESS:

   A. Geneva Asbestos/Concrete Mains Project
   B. Monthly Budget Analysis
   C. Summary of Existing District Projects
   D. Polo Park Bridge Water Main Relocation Project – Pay Request #2 and Project Close-out

6. OTHER BUSINESS

7. MANAGER'S REPORT

8. PUBLIC COMMENT OPPORTUNITY

9. ADJOURNMENT

LAKE WHATCOM WATER AND SEWER DISTRICT

AGENDA BILL

DATE SUBMITTED:	June 30, 2014		
TO BOARD OF COMMISSIONERS			
FROM: Patrick Sorensen	MANAGER APPROVAL		
MEETING AGENDA DATE:	July 9, 2014		
AGENDA ITEM NUMBER:	5.A.		
SUBJECT:	Geneva Asbestos/Concrete Mains Project		
LIST DOCUMENTS PROVIDED ⇨ NUMBER OF PAGES INCLUDING AGENDA BILL: _____	1. Geneva AC Mains Pre-design / Project Report		
	2.		
	3.		
TYPE OF ACTION REQUESTED	RESOLUTION ☐	FORMAL ACTION/ MOTION ☐	INFORMATIONAL/ OTHER ☒

BACKGROUND / EXPLANATION OF IMPACT

Wilson Engineering will provide an Executive Summary presentation on the Pre-design / Project Report for the Geneva AC Main Replacement Project.

FISCAL IMPACT

N/A

RECOMMENDED BOARD ACTION

N/A

PROPOSED MOTION

N/A

Lake Whatcom Water and Sewer District

Whatcom County, Washington

1220 Lakeway Drive

Bellingham, Washington 98229

Pre-Design / Project Report for

Geneva AC Mains Replacement Project

July 2014

LAKE WHATCOM WATER AND SEWER DISTRICT

GENEVA AC MAINS REPLACEMENT PROJECT

PRE-DESIGN / PROJECT REPORT

This project report is submitted in advance of construction documents for Lake Whatcom Water and Sewer District's Geneva AC Mains Replacement project. This project will replace and upsize portions of the District's existing distribution system.

1. Project Description

1.1 Problem Description

The District will be replacing approximately 13,000 lineal-feet of asbestos concrete mains in several locations that in some cases are more than 30 years old. Distribution mains 4, 6, and 8-inch diameter will be replaced with 8-inch HDPE pipe. Most mains are in existing right-of-ways with only a few instances where mains are on private property.

1.2 Summary of Recommended Alternative, Construction Schedule, Estimated Project Cost and Method of Financing

The recommended alternative is to upgrade the District's water mains.

- Replace approximately 13,000 lineal-feet of water mains.
- Transfer existing fire hydrants and services to the new mains.
- Add new and replace obsolete fire hydrants where appropriate.

In the Lake Whatcom watershed, land disturbance in excess of 500 square feet is limited to June 1st-September 31st. Construction is planned for summer of 2015 and possibly 2016.

The project is estimated to cost about $2.4 million and financed through the Drinking Water State Revolving Fund (DWSRF).

1.3 Project Relationship to Other System Components

This project will not significantly affect the other system components. This project is replacing existing mains that are all interconnected with an existing neighborhood network of distribution mains.

1.4 Statement of Change in Physical Capacity

This project does not fundamentally change the underlying physical capacity of the water system, although in some cases it will improve service for customers due to the size of the mains being increased.

1.5 State Environmental Policy Act (SEPA)

This project is categorically exempt from SEPA since it is utility construction related to lines 12-inches or less in diameter (WAC 197-11-800 (23)). Since this is a federally funded project, the District will complete a public comment period and documentation of the exemption will be submitted to DOH for approval.

2. Planning

This project is called out in the District's 2010 Comprehensive Water System Plan as Geneva AC Water Mains Replacement. In the plan it is phased, spanning the years 2015-2019. The 2010 Comprehensive Water System Plan was approved by DOH in March, 2011. An update of the Comprehensive Water System Plan will begin in 2015. Drawing details and specifications regarding HDPE water mains will become incorporated with the District standards with the 2015 update.

3. Analysis of Alternatives

Several alternatives were analyzed for this project with respect to construction methods, pipe materials, and replacement pipe sizes. The District standard has been ductile iron pipe but staff requested a review and comparison with HDPE pipe for this project. The comparison of ductile iron pipe and HDPE pipe is attached as Appendix B. After discussions of the pros and cons with District engineering and operations staff, HDPE was selected as the preferred pipe for this project.

Pipe bursting was analyzed as a possible construction method for the entire project and the results are summarized in the attached memo in Appendix C. In general, pipe bursting at typical water main installation depths of 3-4 feet are not cost-effective when compared to standard open-cut construction methods. However, the preliminary design process has identified one location where pipe bursting will be advantageous. This technique may be used in other instances as the design is further refined.

3.1 Mains on Private Property

There are two instances where there is an existing 6-inch AC main on private property that connects two mains in roadways. The first connects the mains in Fir Street and Willowbrook Lane. The second connects mains in Ridgewood Avenue and Lowe Lane. See Figures 2 and 3 in Appendix A. The same solution was developed for both instances.

Replacing the AC main will require open trench, pipe bursting, slip lining, or directional drilling. Open trenching was ruled out as there were several large trees along the alignment. Pipe bursting

was ruled out due to concerns with burdening the property with asbestos waste regulations into the foreseeable future. Slip lining the existing 6-inch main with a 4-inch main would reduce the available pressure and flow rate in the area. Directional drilling is the most expensive option. However, it will allow an 8-inch main to be installed without adversely impacting the existing trees or creating the waste disposal issue with the AC pipe.

3.2 Asbestos Cement Pipe modifications, disposal, and abandonment

Due to magnitude of the project scope, additional research was conducted to understand all the regulations and limitations of replacing AC mains. The project specifications will incorporate requirements to follow all safety and handing regulations including documenting the proper disposal of all pipe removed.

Regulations were explored for the following types of work: removing pipe from ground via open trenching; cut, cap, and abandon pipe in place on private property and in public rights of way; and pipe bursting on private and public property.

There will be several instances where pipe will need to be removed from the ground at tie-ins, pipe-bursting pits, and service connections where pipe bursting is used. When the AC pipe is cut it must be done so in a manner that does not make the asbestos friable and airborne. For example, using a wheel cutter to cut the pipe instead of a chop saw. Only pieces of pipe 12-inches or longer can be left abandoned in the ground. Smaller pieces must be removed and properly disposed of. In general, all AC pipes that are removed will need to be bagged, labeled, tracked, and disposed of at an approved facility by trained personnel.

Most pipes will be cut, capped, and abandoned in the public right of way. Pipes that have at least 3-feet of cover can be abandoned in this manner per the regulations. There are a few instances where pipes may be abandoned on private property. Since these sections will not be broken up or otherwise disturbed, in these instances regulations regarding asbestos waste handling do not apply.

We considered pipe bursting on private property where there are large trees over or adjacent to the current alignment at locations in Figures 2 and 3 in Appendix A. However, the intent of bursting is to leave the pipe fragments in place, and breaking the AC pipe creates waste. This waste is governed by National Emissions Standards for Hazardous Air Pollutants (NESHAP) which requires an Inactive Waste Disposal Site Deed Notation recorded against the property. We determined that this was not a preferred alternate.

3.3 Upsizing

Three trunk water mains were considered for increases in size from 8-inch to 12-inch diameter: Euclid Ave. South, Lakeview St., and Lakehill Lane. See Figure 4 in Appendix A. The intent of upsizing these mains was to provide better fire flow rates and pressures at the Geneva Elementary School, Whatcom Hills Waldorf School, The Firs-Retreat Center, and South Whatcom Fire Authority. Several analyses were run using the District's hydraulic water model.

The modeling results indicated that upsizing did not produce significant gains in pressure or flow at these locations as shown in Table 1 of Section 7.

3.4 Abandonment of Water Mains

There is an existing 4-inch main at the south end of Geneva Street, south of Fremont Street that only has two service connections. See Figure 5 in Appendix A. Replacing the main would have required acquiring new easements on private property. Hydraulic modeling indicated that this section of main could be abandoned with little impact to the operation of the overall system. The chosen alternative is to provide two services off the main in Fremont Street to serve these customers and decommission the existing main in Geneva Street south of Fremont Street.

There is an existing 6-inch AC main on private property that connects mains in Beecher Avenue and Waterside Lane. See Figure 6 in Appendix A. A request to relocate this main came up as the property owner is in the process of building a house on the lot. He did not want a water main between the proposed house and the garage. The water pressure and flow rates for the surrounding system were modeled without this portion of the main in service. The pressures and flows were found to be acceptable. This main will be decommissioned. The main within the limits of the private property will be capped and abandoned in place.

3.5 Replacement of Mains with Substandard Cover

There is one known instance where an existing 6-inch AC main has less than 3-feet of cover within the project limits. The homeowner at 1760 Waterside Lane indicated that there is a portion of the main in the undeveloped right-of-way in front of their house that has only 6 to 8-inches of cover.

The preferred option where there is a least 2-feet of cover on the pipe is to abandon the existing AC main in place by filling it full of Controlled Density Fill (CDF) for the entire length. A new main would be installed parallel to the abandoned main. We will be seeking approval from the Northwest Clean Air Agency as this jurisdiction typically requires there to be 3-feet of cover to abandon AC pipe. Portions that have 3-feet of cover will have the ends caped only. The second option is to remove and replace the AC pipe using conventional open-cut methods.

3.6 Connections to Existing Mains

When Lakeway Drive was rebuilt in the late 1980's and in 2008 the existing water mains within the road prism were upgraded to ductile iron. In addition, the portions of main connecting to side streets were also replaced with ductile iron stubs to the edge or the new road improvements. The new mains will be connected to existing ductile iron main stubs. In a couple instances, the new mains were stubbed out, but were not clearly documented where the transition from ductile iron to AC main is located.

An as-built sketch was located for the intersection of Lakeway Drive and Euclid Avenue that showed a complex system of active and abandoned mains. Using this sketch and other background information we were able to estimate where the ductile iron was stubbed to both

north and south of the intersection in Euclid Ave. It is likely that the horizontal location of the connection point will be modified during construction once the existing main is uncovered. See Figure 7 in Appendix A.

Very little background information was located for the water mains at the intersection of Lakeway Drive and Lowell Avenue. District staff has indicated that the main at this intersection is very deep as well. It is speculated during the last road reconstruction the road received significant fill that in turn buried the main at much deeper than normal depths. We estimated where the ductile iron was stubbed to the north within Lowell Avenue. It is likely that the horizontal location of the connection point will be modified during construction once the existing main is uncovered. Modifications may also be made to account for the deep main. See Figure 8 in Appendix A.

Field verification (potholing, ground penetrating radar) is planned for the summer of 2014 to aid in determining where the transitions from ductile iron to AC pipe occur.

4. Water Quality

This project does not include any activities that will change the raw water or finished water quality.

5. Water Quantity and Water Rights

This project does not include any activities that will change the water quantity used by this system. However, the HDPE pipe is reported to be essentially leak-free whereas the AC pipe is assumed to have a leak rate of 10-20%, which should decrease the system's distribution losses.

6. Design Criteria

The District's design criteria were discussed in detail in the approved WSP (Chapters 3 and 7). All work is to be designed and constructed in accordance with the WSP other than as noted below.

This project intends to use high-density polyethylene (HDPE) pipe for the entire project. The current District Standards only permit HDPE in special cases with the approval of the District Engineer. The specifications will require DR 9 (200 psi) pipe per Table 9 of ANSI/AWWA C906 for PE3408 material.

7. Engineering Calculations

A hydraulic model analysis was performed using the existing District model to evaluate several water main replacement scenarios and their effect on fire flow availability in the area. Of particular concern for fire flow were the following non-residential institutions or developments;

The Firs (recreational retreat), Geneva Elementary School, and Waldorf School. The modeled fire flow analysis scenarios were as follows:

1. "Background" –build-out maximum day demand conditions, "Gravity" model scenario in which Beecher Transmission Pumps are OFF, existing model with no other distribution modifications.
2. "No Geneva Fremont to Anne" – deactivate (abandon) 4" AC along Geneva Street between Fremont and Anne Streets.
3. "AC to 8 inch DI" – all AC mains being replaced with 8 inch ductile iron piping, Hazen-Williams roughness coefficient C=100.
4. Upsizing various segments to 12-inch (instead of 8-inch) ductile iron pipe as follows:
   A. "Lakeview 12 in DI"
   B. "Lakeview & Columbus 12 in DI"
   C. "Lakeview & Columbus & Euclid 12 in DI"
   D. "Lakeview & Columbus & Euclid & Geneva 12 in DI"
5. "AC to 8 inch HDPE" – all AC mains being replaced with 8-inch HDPE DR9 (inside diameter = 6.6 inches) instead of 8-inch ductile iron pipe, C=130.
6. "AC to 8 inch HDPE – Columbus to 10 in HDPE" – model scenario 5. PLUS upsizing Lakehill Lane to 10-inch HDPE (inside diameter = 8.7 inches).
7. "AC to 8 inch HDPE – Columbus to 12 in HDPE" – model scenario 5. PLUS upsizing Lakehill Lane to 12 –inch HDPE (inside diameter = 10.3 inches).

Model results indicate that sufficient fire flow (target 1500 – 2500 for non-residential) is currently available at each non-residential institution or development (Scenario #1). Modeling results as shown in Table 1 indicate negligible difference in available fire flows between using ductile iron (Scenario #3) vs HDPE (Scenario #5) in the same nominal diameter for the project. The various upsizing scenarios (#4, #6 and #7) evaluated with the model were deemed unnecessary, since the benefits in additional fire flow were relatively small compared to the additional cost for the larger pipe size.

Table 1. Summary of Model Results - Available Fire Flow at selected hydrant locations

Location: Scenario	Geneva Elementary School (Node J-812)	The Firs Retreat (Node J-70)	Waldorf School (Node J-548)
1. Background	3030 gpm	3024 gpm	4146 gpm
2. Abandon 4-inch @ Geneva	3026 gpm	3019 gpm	4111 gpm
3. Upgrade AC to 8-in DI	3447 gpm	3239 gpm	4111 gpm
4. Upsize trunk mains to 12-in DI	3667- 4147 gpm	3417-3596 gpm	4269-4276 gpm
5. Upgrade AC to 8-in HDPE	3364 gpm	3176 gpm	4083 gpm
6. #5 + upsize Columbus to 10-in HDPE	3404 gpm	3223 gpm	4097 gpm
7. #5 + upsize Columbus to 12-in HDPE	3418 gpm	3240 gpm	4102 gpm

Note: See Appendix D for the water model node map.

Based on the results above, the project will abandon the 4-inch AC line along Geneva from Fremont to Anne Court and replace AC mains with 8-inch HDPE pipe. The project will not upsize any of the trunk water mains.

Available fire flows at the two hydrants nearest the three non-residential locations analyzed, after the proposed upgrades to 8-inch HDPE and selected pipe abandonments, are approximately as follows (as indicated by the modeling analysis):

- Geneva Elementary School = 2,980 gpm (J1944) and 3,440 gpm (J812)
- The Firs = 3,230 gpm (J70) and 4,150 gpm (J680)
- Waldorf School = 3,780 gpm (J640) and 4,100 gpm (J548)

8. Legal Considerations

The majority of the water mains being replaced are in existing right-of-ways. In a couple instances, the mains to be replaced reside on private property. Easements are in place for these properties. These mains are at the following locations:

1. Connection from Ridgewood Avenue to Lowe Avenue at 4153 Ridgewood Avenue. See Figure 3 in Appendix A.
2. Connection from Fir Street to Willowbrook Lane at 4020 Willowbrook Lane. See Figure 2 in Appendix A.

9. Operation and Maintenance Considerations

Since much of the District's water system is ductile iron pipe and fittings, replacement of AC mains with HDPE will change the Districts approach to maintenance or repair efforts. HDPE can be repaired and modified with similar fittings to ductile iron although they are specific to HDPE installations. The familiar fittings are modified to accommodate the thermal expansion that is expected with HDPE pipe. HDPE also has the option of electro-fused fittings which have advantages and disadvantages. Taking the AC mains out of service will also reduce workers exposure to asbestos in any future repairs or modifications.

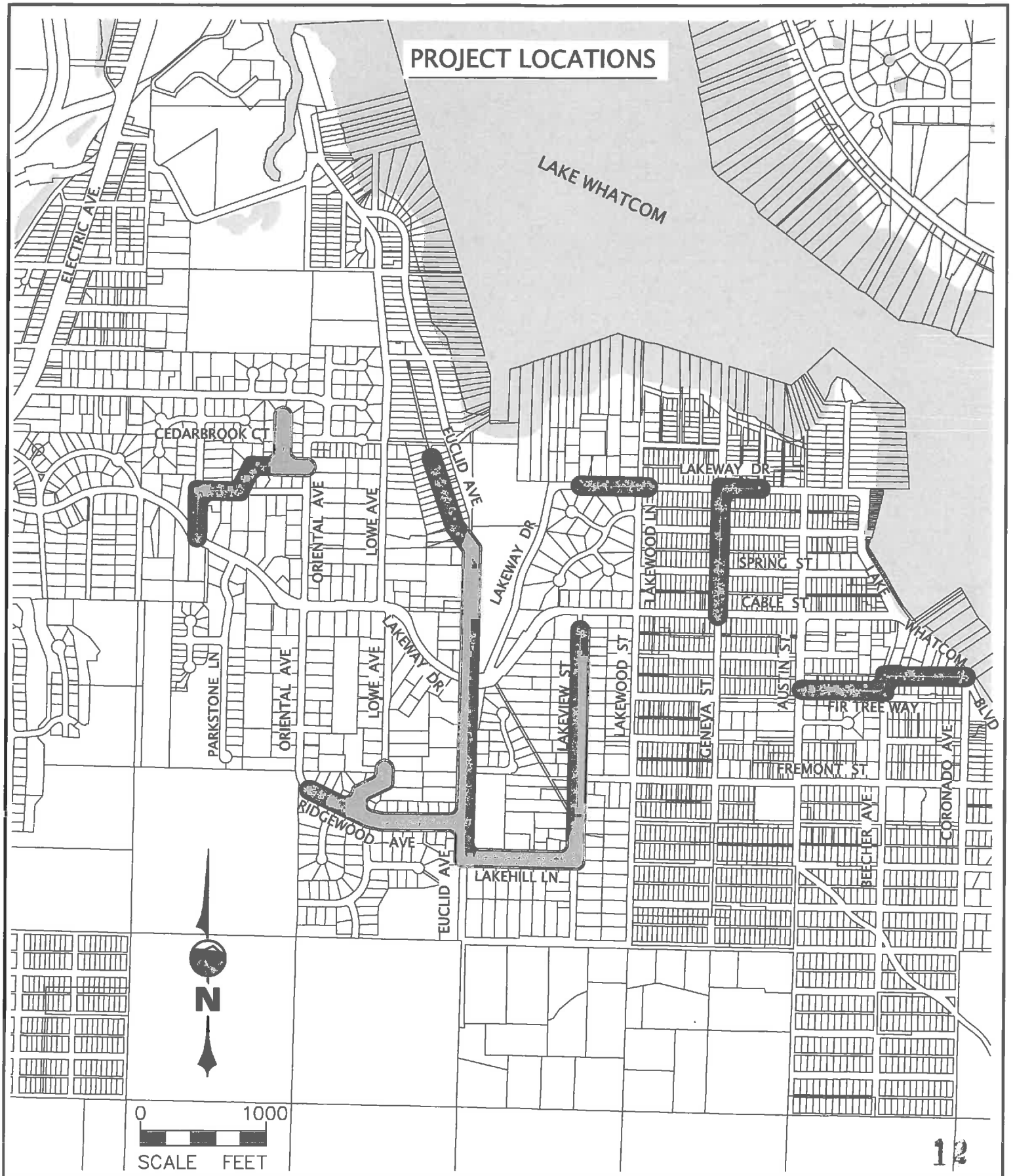
The HDPE pipe to be installed will be Iron Pipe Size (IPS) rather than Ductile Iron Pipe Size (DIP) as the pipe and fittings are more readily available and don't come at a premium cost. HDPE pipe requires a different approach to repairs and possibly to water services.

Repairs to HDPE pipe can be made with mechanical couplers or with electro-fusion couplers. Mechanical couplers are similar are straightforward to install with minimal tools, but they must be specifically designed for HDPE. Romac of Bothell, WA manufactures mechanical couplings that are designed to account for the thermal expansion of HDPE. Electro-fusion couplings require the main to be dry, trained personnel, and the use of an electro-fusion machine. Although the use of an electro-fusion coupling may be more involved, it may also provide a faster, leak free solution. Strongbridge International of Jacksonville, FL manufactures electro-fusion saddles and couplings.

Tapping saddles for services can be done with mechanical or electro-fusion saddles. The same information discussed for repairs applies to tapping saddles with the exception that HDPE taping saddles can be installed on an active water main.

APPENDIX A

- Figure 1: Vicinity Map
- Figure 2: Meadowbrook Lane
- Figure 3: Ridgewood Avenue
- Figure 4: Lakehill Lane, Lakeview Street, and Euclid Avenue
- Figure 5: Geneva Street and Fremont Street
- Figure 6: Beecher Avenue
- Figure 7: Lakeway Drive and Euclid Avenue
- Figure 8: Lakeway Drive and Lowell Avenue



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GENEVA AC MAINS REPLACEMENT PROJECT

FIGURE 1 – VICINITY MAP

DATE 7/2014

SCALE 1"=200'

JOB NO. 2013-131

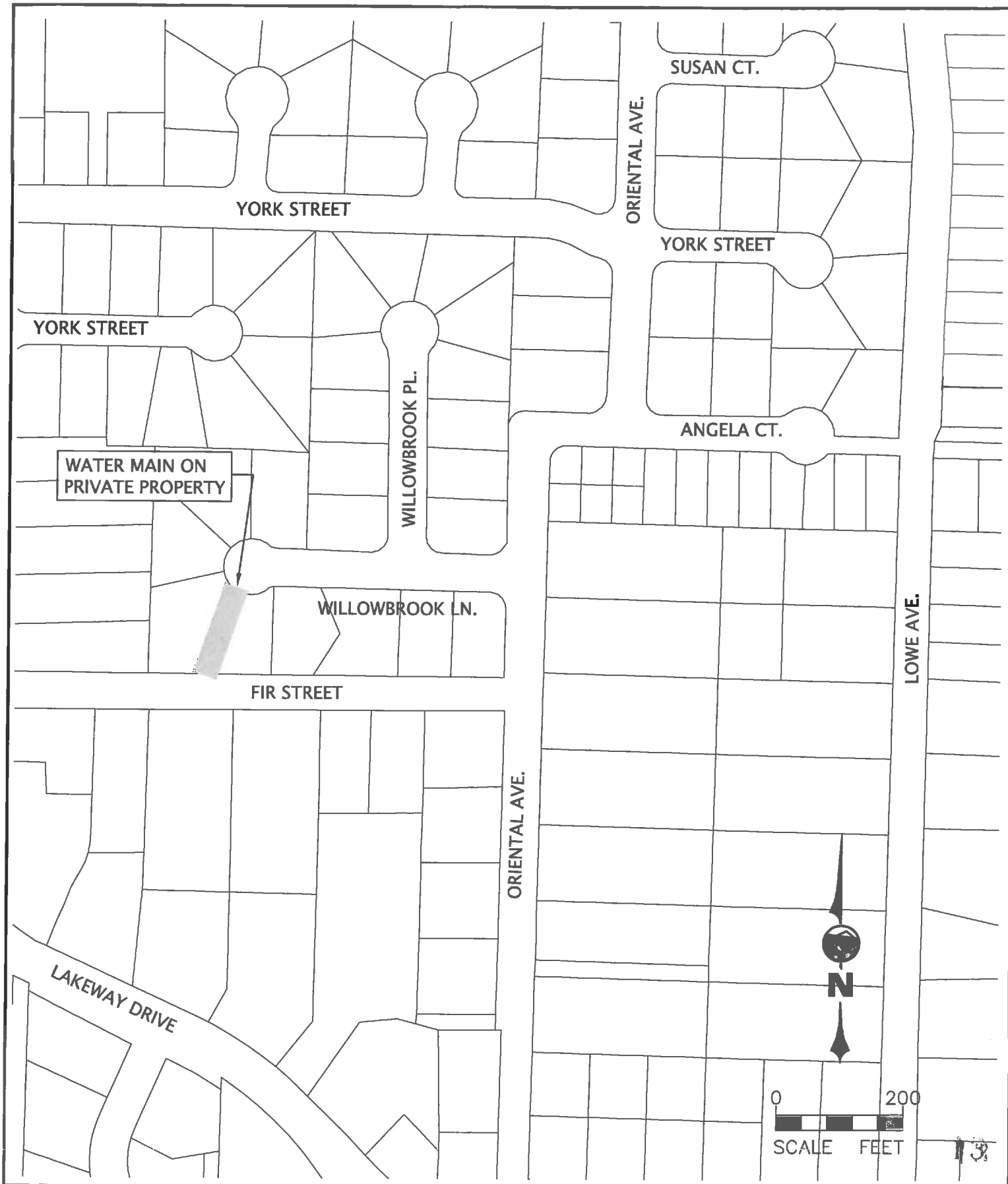

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FIGURE 2 – WILLOWBROOK LN.

DATE 7/2014

SCALE 1"=200'

JOB NO. 2013-131

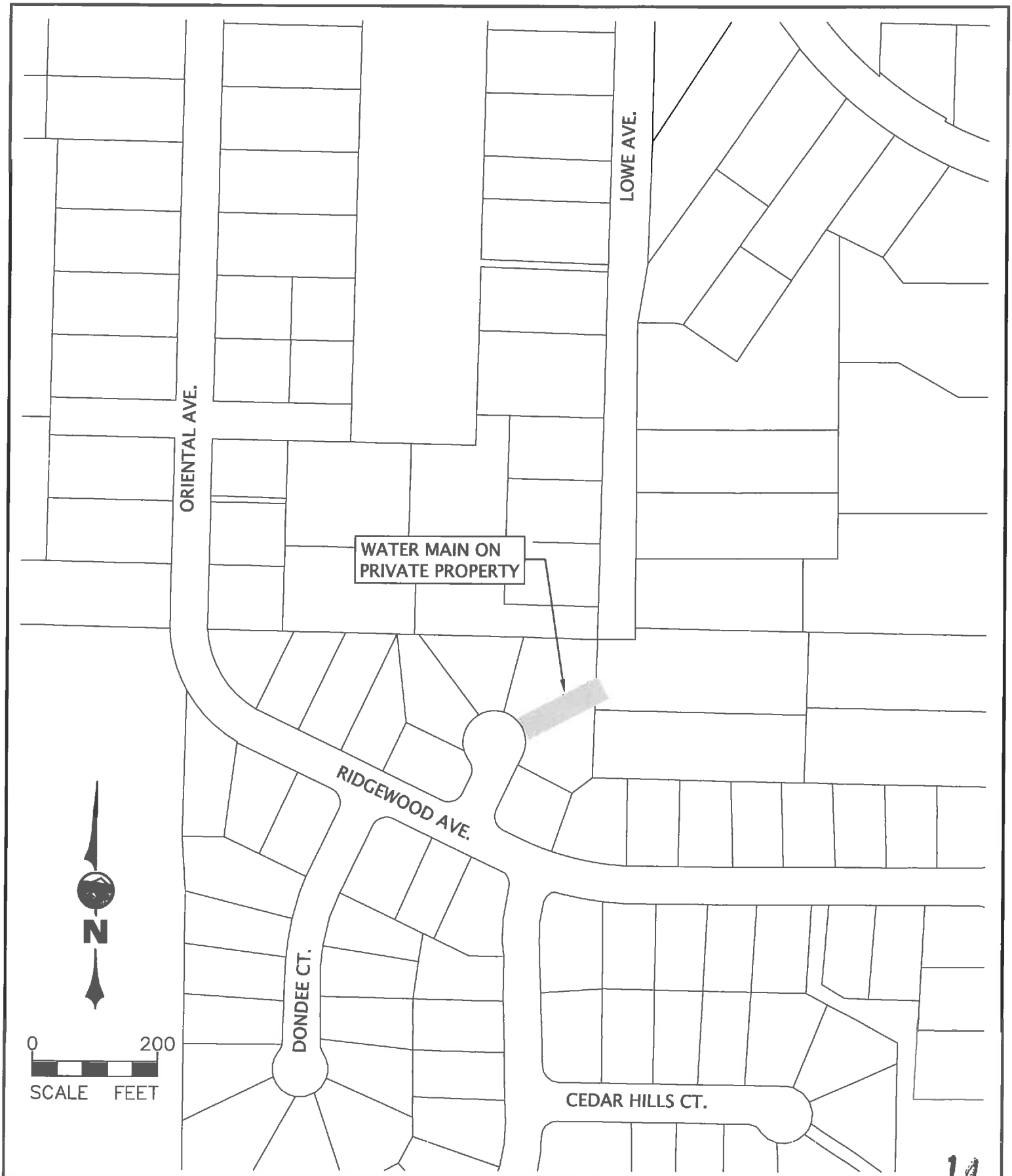

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FIGURE 3 - RIDGEWOOD & LOWELL

DATE 7/2014

SCALE 1"=200'

JOB NO. 2013-131

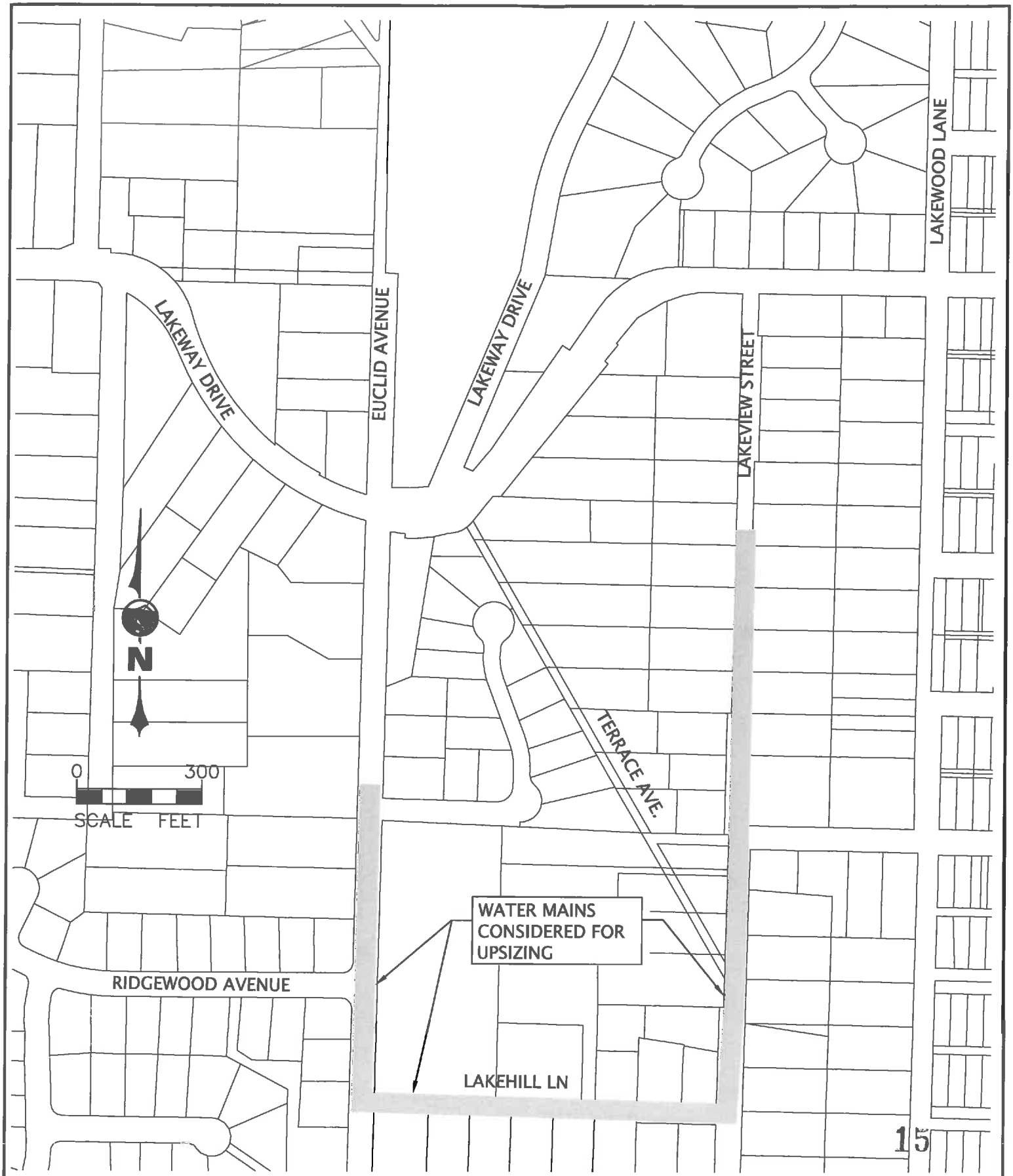

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FIGURE 4 – LAKEHILL-LAKEVIEW-ECULID

DATE 7/2014

SCALE 1"=300'

JOB NO. 2013-131

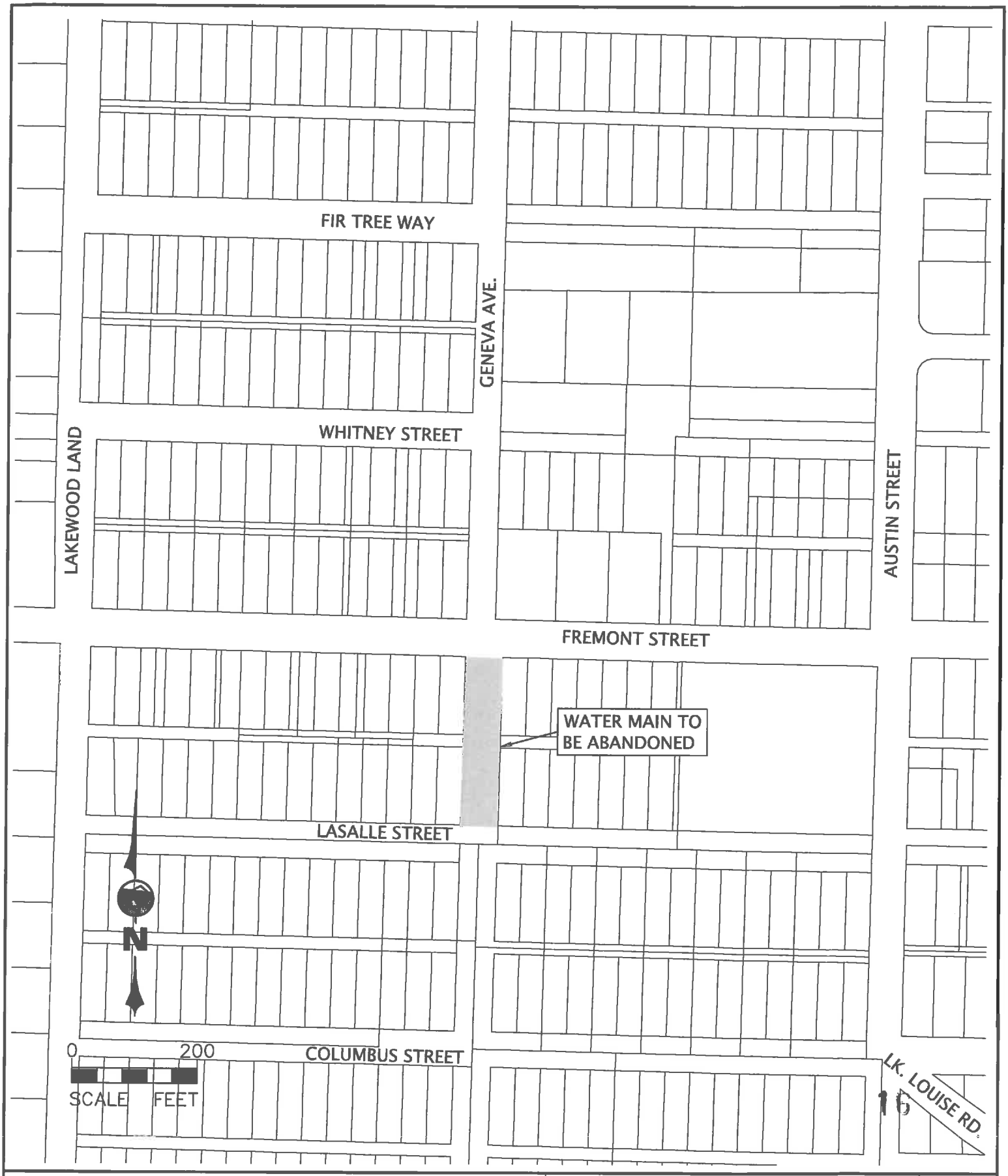

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FIGURE 5 – GENEVA-FREEMONT ABANDOMENT

DATE 7/2014

SCALE 1"=200'

JOB NO. 2013-131

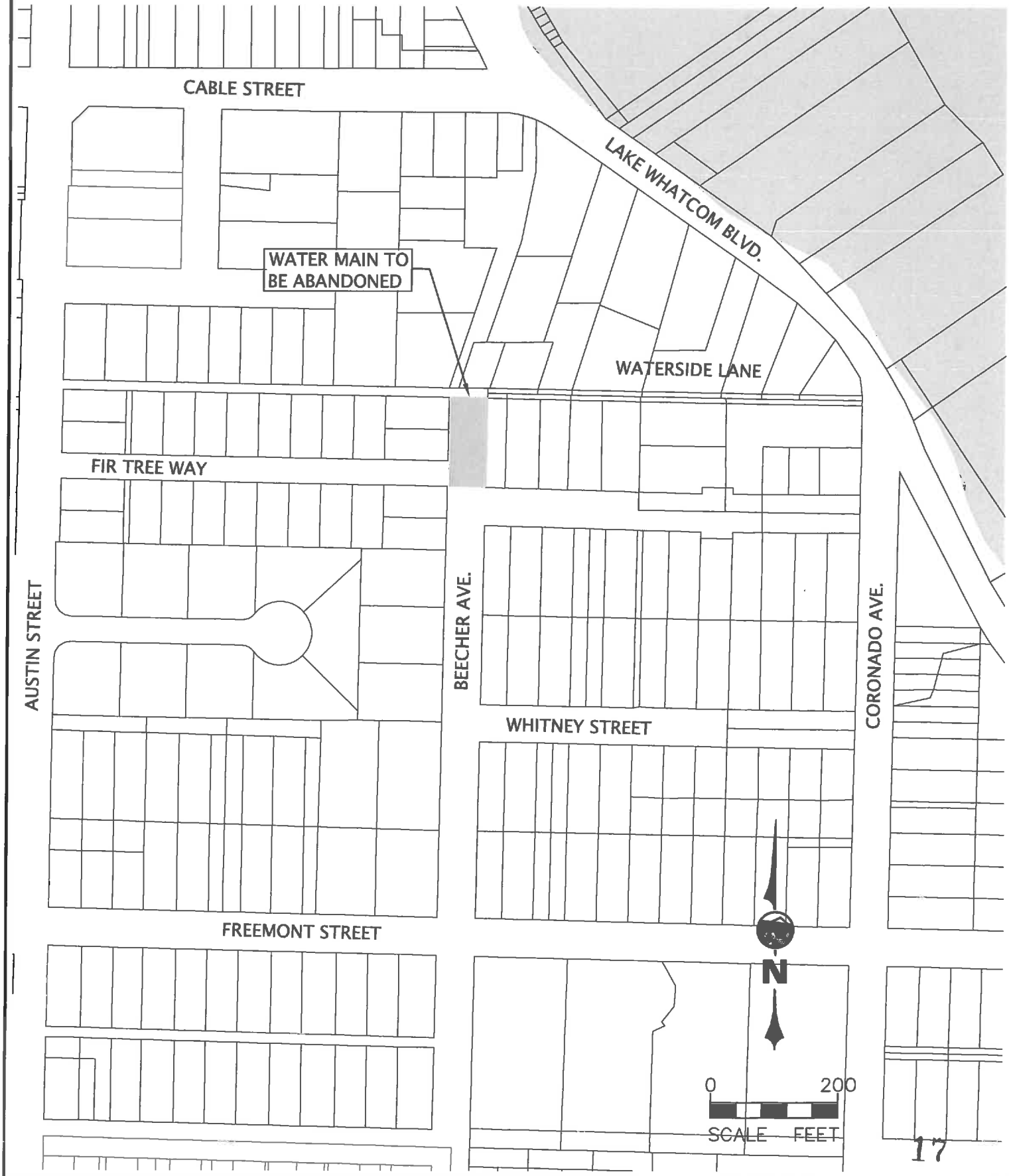

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FIGURE 6 – BEECHER ABANDONMENT

DATE 7/2014

SCALE 1"=200'

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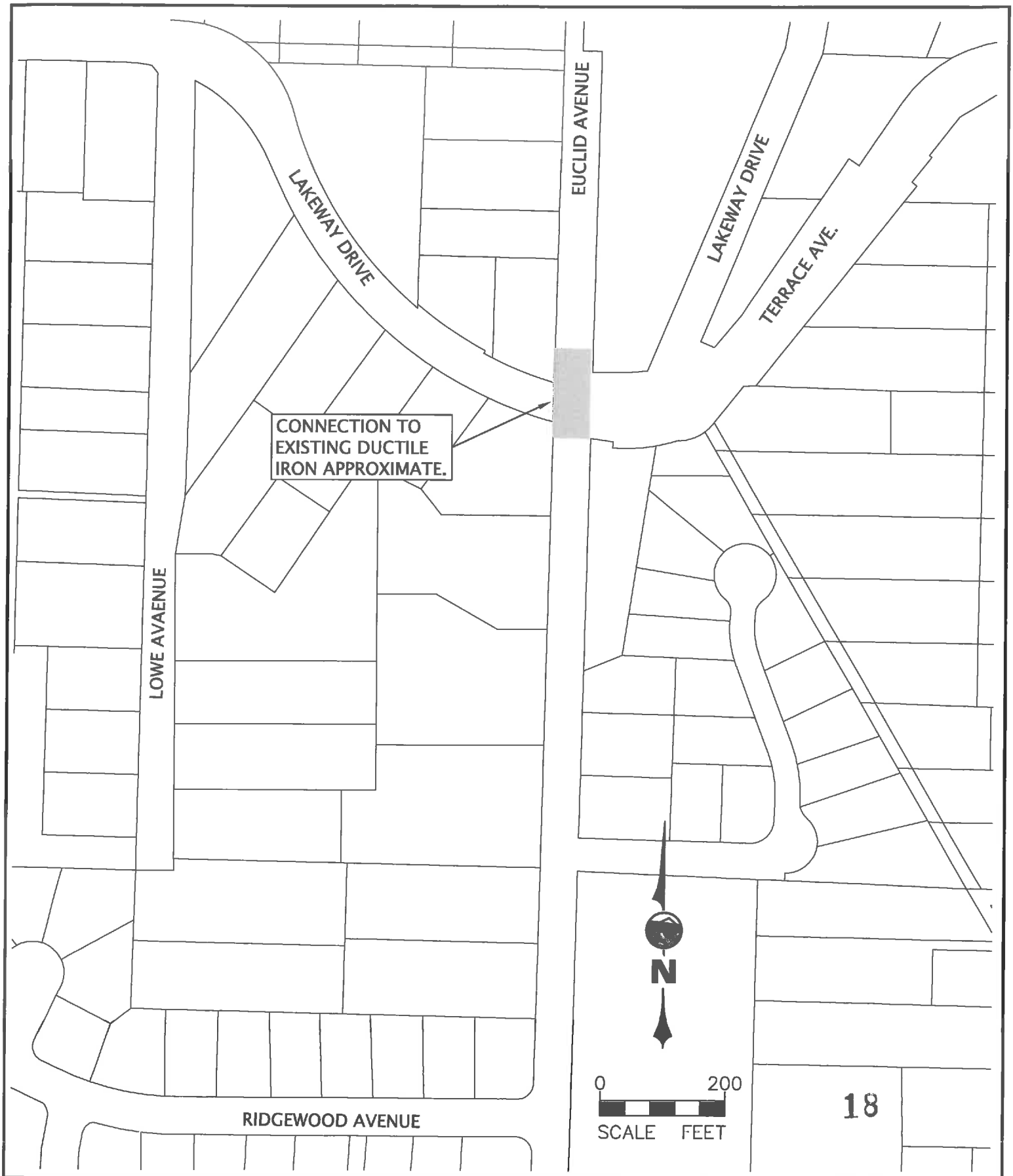

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GENEVA AC MAINS REPLACEMENT PROJECT

FIGURE 7 – LAKEWAY-ECULID

DATE 7/2014

SCALE 1"=200'

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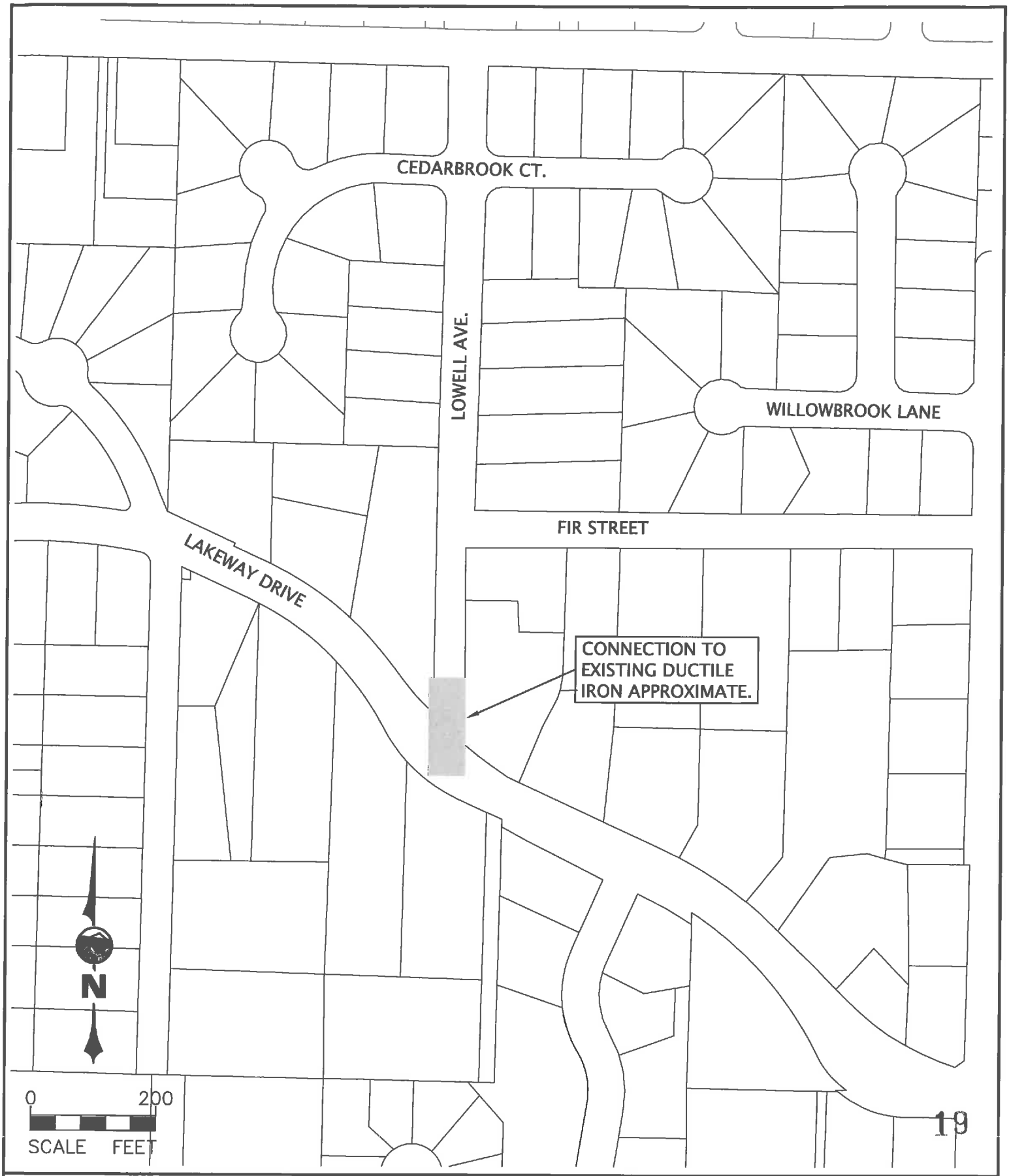

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GENEVA AC MAINS REPLACEMENT PROJECT

FIGURE 8 – LAKEWAY–LOWELL INTERSECTION

DATE 7/2014

SCALE 1"=200'

JOB NO. 2013-131

APPENDIX B

- Memorandum: Findings and Recommendations Regarding High Density Polyethylene Pipe

Wilson
SURVEY/ENGINEERING

June 19, 2014

Bill Hunter, P.E.
Lake Whatcom Water and Sewer District
1220 Lakeway Drive
Bellingham, WA 98229

RE: Geneva AC Mains Replacement: Findings and Recommendations Regarding High Density Polyethylene Pipe

Dear Bill,

The current District standard for water mains is ductile iron pipe although the District has allowed the installation of High Density Polyethylene Pipe (HDPE) in a few instances for special circumstances. HDPE is being considered as an alternative to ductile iron primarily for the following reasons: ease of installation, cost, and a potential reduction in disruption to residents for this waterline replacement project. However, several other advantages and disadvantages are contrasted in this memo as well.

Compare and contrast of Ductile Iron and HDPE
Ductile iron is a familiar, simple, bell and spigot type pipe, and is readily available. HDPE is a familiar, seamless, flexible pipe, and is readily available.

-Replacement Interval of 100 years for ductile iron and HDPE is estimated at 70 years.

-Since ductile iron is metallic it is easy to locate whereas HDPE requires a metallic wire to be installed for locating purposes.

-Ductile iron is subject to corrosion and to what extent is based on soil chemistry. The current District standard addresses this by requiring all pipe be thoroughly wrapped in a polyethylene film encasement. HDPE is not subject to corrosion, so no encasement is needed.

-Ductile iron may have leak rates of 10-20% whereas HDPE is said to be leak-free.

-Ductile Iron requires thrust blocks or restraints at bends and tees. HDPE does not require thrust blocks at bends and tees.

-Currently the District standard, 8" diameter Class 52 ductile iron pipe, is $34 per foot for material costs plus freight. A comparable HDPE pipe, 8" diameter iron pipe size, DR-9 is $28 per foot plus freight.

-Ductile iron is more durable for handling than HDPE. HDPE must also be stored away from sunlight if stored for a significant length of time.

-HDPE is the most likely pipe material to be used for pipe bursting.

-HDPE pipe can be manufactured "pre-chlorinated" to save time by eliminating the need to chlorinate as a separate process after the pipe is installed.

-HDPE pipe is specified, sized, and pressure tested differently that ductile iron. HDPE is specified by is Dimension Ratio (DR) to meet certain pressure requirements. Ductile iron is typically sized by its interior

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dimension. HDPE is normally sized by its exterior dimension and is labeled Iron Pipe (IP) size. Although less common, HDPE is also available in Ductile Iron Pipe (DIP) sizes that are sized based on their interior dimension. DIP size HDPE is about the same material cost per foot as ductile iron is right now. Specifying IP-sized HDPE pipe although smaller than the 8-inch District standard has less friction and our water model shows that it provides adequate flow and pressure at key nodes.

HDPE pipe is considerably more flexible than ductile iron, thus it is tested at lower pressures. Since HDPE is more flexible it is also more resilient at absorbing water hammer. For instance, if a pump turning on increase the pressure from 100 psi to 180 psi in ductile iron pipe it may only increase the pressure in an HDPE line to 130 psi.

Due to the number of benefits HDPE offers and the District's familiarity with ductile iron, the rest of the memo focuses on HDPE.

Fittings and Connections for HDPE

All of the common fittings for water mains are also made in HDPE and can be welded to the HDPE mains including tees, bends, tapping saddles, etc. Some fittings are embedded with wires that ensure even thermal welding occurs when electrified during installation and joining. Other fittings are simply butt fused to the main similar to joining sections of main.

The two options explored for HDPE connections were to use flanged adaptors or mechanical joints adaptors (MJ). Both of these adaptors are butt fused to the main. The flange adaptors are installed with a follower ring to provide the bearing surface to the bolts used in the flanged connection. MJ connections have the advantage of allowing for some angular deflection at the joint and require less precision than aligning and squaring flanges. The MJ adaptors come with a gasket and follower gland to connect to MJ valves and fittings.

Electro-fused tapping saddles are available of use on HDPE, but Romac makes a tapping saddle that is very similar to the ones for ductile iron. Although the electro-fused saddle could offer a tighter fit, it also requires special machinery and employee training.

It would be advantageous to use butt welded HDPE bends as they would not require thrust blocks.

For the tees in the project, Ductile or HDPE would work in either case. Ductile iron could have the advantage of being flanged and thus bolted up to valves and placed as one large piece. The HDPE tees consist of a stub that can take an MJ follower to attach to a valve or can simply be butt fused to the main if there are not any valves or other fittings to install. The HDPE tee configuration could also be bolted up ahead of time and placed as one piece. We could not find any major advantages or disadvantages to using one over the other. We recommend that that the contractor be allowed to use both.

Fire hydrant runs can be HDPE all the way to the lower elbow of the fire hydrant. An MJ adaptor can be used to connect the hydrant to the HDPE main. Constructing the hydrant runs out of HDPE have the added benefit of not needing the rod lugs for providing restraint.

Repair of HDPE

HDPE can be repaired with an electro-fused coupling or with mechanical couplings. Installing an electro fused coupling would require the main to be dry and the coupling must be installed with an electro-fusion machine. These machines are estimated to be $3,000-$4,000. Welding machines can also be

rented from local suppliers. The electro fusion machines rely on barcodes that are stamped on all fittings, couplers, taping saddles, etc. These barcodes provide the heating intensity and duration as recommended by the manufacturer for proper installation.

The mechanical couplers that Romac offers for HDPE pipe repair are straightforward to install, but are specifically designed to account for the flexibility and thermal expansion that is anticipated in HDPE pipe.

Sources

Our research and conclusions are based on interviewing an experienced contractor, an experienced supplier, and internet research of trade associations and manufacturers of both ductile iron and HDPE.

We discussed with the contractor the practicality and cost implication of installing wrapped ductile iron per the District standard versus HDPE in developed neighborhoods with many utility crossings. Further, we inquired about fittings used, fire hydrants runs, repairs, butt welding, and general installation considerations.

The local supplier we interviewed was able to provide cost comparison information and guidance on fittings advantages, disadvantages, product availability, and comments they had received from contractors.

Recommendations

It is recommended that HDPE mains be allowed with the option of using welded HDPE fittings. Further, fire hydrant runs could also be butt-fused HDPE to eliminate the need for rod lugs.

HDPE is anticipated to be at least 20-percent cheaper and offer a comparable life cycle. Reductions in leaks by 10-20 percent could also have big implications for water treatment costs, booster station pumping costs, conveyance and storage infrastructure need and costs, water rights, and efforts toward sustainability of water use.

If HDPE is used for this project the contract documents will need to require that the contractor have the proper training for handling and installation of the pipe.

Since ductile iron requires the use of thrust blocks, rod lugs for fire hydrant runs, and other material-specific design considerations, the District should pick a pipe material to use for this project rather than allowing the option of using either ductile iron or HDPE. However, if HDPE is the material selected, the specifications and drawings could include options for fittings, saddles, etc.

Sincerely,

Rhett Winter, P.E., LEED AP ND
Wilson Engineering LLC

APPENDIX C

- Memorandum: Findings and Recommendations Regarding Pipe Bursting

Wilson
SURVEY/ENGINEERING

June 19, 2014

Bill Hunter, P.E.
Lake Whatcom Water and Sewer District
1220 Lakeway Drive
Bellingham, WA 98229

RE: Geneva AC Mains Replacement: Findings and Recommendations Regarding Pipe Bursting

Dear Bill,

As part of our research to identify the most appropriate construction methods for the Geneva AC Main Replacement Project, we reviewed the benefits and costs associated with pipe bursting. Pipe bursting is the process of splitting the existing pipe in place and dragging into place a new pipe inside the shell of what remains of the existing pipe. The original pipe is displaced just outside of the new pipe and is abandoned in place below ground. This technology is effective on a range of pipe materials and sizes including the Asbestos Concrete (AC) pipe that is being replaced with this project. This process works for replacing pipes with the same size and also can be used to install larger pipes with some limitations.

Pipe bursting is a proven technology that has some major benefits in some situations. Pipe bursting can be the best choice in areas where construction disturbance and duration to the surface are a high priority. Bursting is also an attractive choice if the existing pipe is deep (over 7-feet) or there are a lot of existing utility crossings over the main.

For this project, bursting was considered for all new main installation. Although it is important to consider the disturbance to existing surfaces and disruption to customers, cost and practicality was also considered in evaluating whether bursting made sense. One major advantage to bursting is not having to pay the excavation, backfill, and surface restoration costs for much of the main. However, bursting requires the excavation of entry and exit pits at each end of the main to be burst. Also, upon completion of bursting customer services would need to be excavated and reconnected. General cost comparisons of bursting to open trench main installation indicated that the excavation and restoration costs start to outweigh bursting costs at around 5-7 feet of cover on the existing pipe. Due to the number of excavations that would be required for bursting and restoration of all the services it is our opinion that the disruptions of service and inconvenience to customers would not be appreciably less with bursting.

Since bursting causes the soils around the pipe to be compressed it can also cause issues with surface improvements and surrounding utilities. Depending on the method of bursting, the existing soil near the pipe, and the proximity of other structures, these structures can be damaged during the bursting operation. Underground pipes, building foundations, or concrete surfaces can be impacted by the bursting that results in cracking or crushing of these facilities.

Pipe bursting may be a cost-effective choice in the undeveloped portion of the Lakehill Lane right of way. The existing pipe is in some steeper terrain, crosses what may be a regulated stream, and may be in the only suitable place within the right of way that is adequately spaced from the sewer and not in a steep side slope scenario. Bursting with a butt-fused High Density Polyethylene Pipe (HDPE) within the existing alignment can be advantageous for a few reasons. HDPE does not require external thrust restraints on steeper slopes like a ductile iron pipe would. Bursting in the old alignment allows for simpler permitting for the possibly regulated stream crossing. Further, bursting in the old alignment

WILSON ENGINEERING, LLC 805 Dupont Street, Suite 7, Bellingham, WA 98225 T (360) 733-6100 F (360) 647-9061 www.wilsonengineering.com

would provide the same distance from sewer mains and would not require extra effort to locate it in a steep cross slope scenario.

With regard to disposal of the burst AC pipe, disposal in the public right of way is a preferred alternative. The pipe can be abandoned in the right of way as long as it has 3 feet of cover. AC pipe disposal is discussed further in the Project Report for this project.

Recommendations

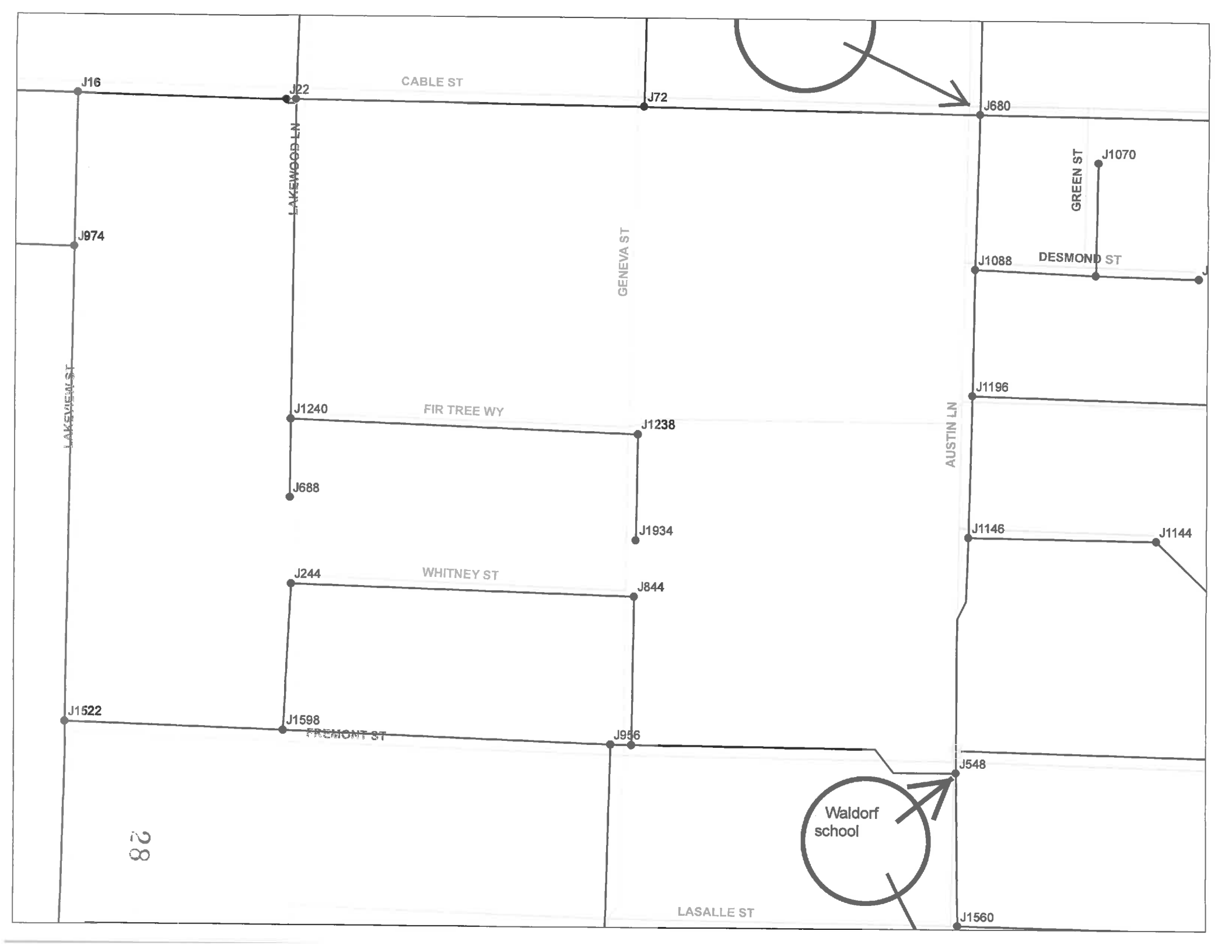
We recommend that bursting be used in the undeveloped portion of Lakehill Lane right of way and possibly for all of Lakehill Lane to Lakeview Street if deemed the best approach by the designer. There may be other locations with tight horizontal clearances where we would recommend pipe bursting. In general however, we do not recommend pipe bursting for the rest of the project as we feel it is not the most cost-effective approach and that any potential benefits do not justify the increase in costs.

Sincerely,

Rhett Winter, P.E., LEED AP ND
Wilson Engineering LLC

APPENDIX D

- Hydraulic Model Node Map (portion of Geneva)


J16
J22
CABLE ST
J72
J680
LAKEWOOD LN
GREEN ST
J1070
J974
GENEVA ST
J1088
DESMOND ST
LAKEVIEW ST
AUSTIN LN
J1196
J1240
FIR TREE WY
J1238
J688
J1934
J1146
J1144
J244
WHITNEY ST
J844
J1522
J1598
FREMONT ST
J956
J548
Waldorf school
LASALLE ST
J1560

LAKE WHATCOM WATER AND SEWER DISTRICT

AGENDA BILL

DATE SUBMITTED:	June 30, 2014		
TO BOARD OF COMMISSIONERS			
FROM: Debi Hill	MANAGER APPROVAL		
MEETING AGENDA DATE:	July 9, 2014		
AGENDA ITEM NUMBER:	5.B.		
SUBJECT:	Monthly Budget Analysis		
LIST DOCUMENTS PROVIDED ⇨ NUMBER OF PAGES INCLUDING AGENDA BILL:	1. Monthly Budget Analysis as of 6/30/2014		
	2.		
TYPE OF ACTION REQUESTED	RESOLUTION ☐	FORMAL ACTION/ MOTION ☐	INFORMATIONAL/ OTHER ☒

BACKGROUND / EXPLANATION OF IMPACT
Information only

FISCAL IMPACT
n/a

RECOMMENDED BOARD ACTION
n/a

PROPOSED MOTION
n/a

MONTHLY BUDGET ANALYSIS

OPERATING FUND - 401

REVENUES

	Description	2014 Budget	YTD 6/30/2014 50%	
401-343-40-10	Water Sales Metered (9% rate increase) *	1,701,326	803,370	47%
401-343-50-11	Sewer Service Residential (3% rate increase) *	3,537,394	1,721,076	49%
401-343-50-19	Sewer Service Other (Multi units)	9,500	3,166	33%
401-343-81-10	Combined Fees (Locks, Liens, Transfers, Suspensions)	33,000	18,351	56%
401-359-90-00	Late Charges	65,000	31,473	48%
401-361-11-00	Investment Interest	200	44	22%
401-369-10-00	Sale of scrap/junk recycle	-	1,430	
401-369-90-00	Bank Fees	3,000	1,544	51%
401-379-10-20	Permits Operation portion (5 new connection permits)	10,000	16,224	162%
401-395-40-00	Sale of capital assets		5,000	
401-398-20-00	Insurance Recoveries			
401-397-10-40	Transfers in from ULID 18 Fund 480	83,000	84,000	77%
	TOTAL REVENUES	**5,442,420**	**2,685,678**	**49.0%**

MONTHLY BUDGET ANALYSIS	Description		2014 Budget	YTD 6/30/2014	
				50%	
OPERATING FUND - 401					
401-53X-10-10	Payroll (1% cola plus step increases - 2014)		1,450,000	705,443	49%
401-53X-10-20	Personnel Benefits		570,000	255,936	45%
401-53X-10-31	Gen Admin Supplies		25,000	12,100	48%
401-53X-10-32	Meetings/Team building		2,500	887	35%
401-53X-10-40	Bank Fees (BofA, AFTS, Expect)		9,500	6,650	70%
	Interlocal - Lake Whatcom Management Program		25,000		
	Interlocal - Invasive Species		50,000		
	Interlocal - Lake Whatcom Tributary Monitor		5,000		
401-534-10-41-00	Water Quality Assurance Programs (TOTAL)		80,000	4,171	
	County Auditor filing fees (Simplifile)		6,000		
	DataBar (Statement processing)		20,000		
	Answering Service		1,500		
	BIAS Financial Software		20,000		
	Webcheck (Title company transactions)		2,000		
	GE Scada System Software Maintenance		7,500		
	WA State Auditor (2 year audit)		18,500		
	Wilson Engineering		10,000		
	Sewer Comp Plan Update C13-15		20,886		
	Legal counsel		38,000		
	FCS Rate Study		48,500		
	3D - Computer support (includes new server install)		30,000		
	Docu Ware annual maint/support		5,000		
	Data Pro - Time clock system		1,500		
	Watchguard		1,000		
	CPA firm		10,000		
	ESRI (ARC GIS)		2,000		
	Cartegraph		8,000		
	SCADA/PLC Support (Engineering)		5,000		
	Auto Desk (Engineering)		1,000		
	Rockwell (Engineering)		500		
	Inovise (Engineering)		2,000		
	Master Meter		2,000		
	Custodial/Building maint. services/Security		11,000		
	Landscaping service		4,000		
	GIS with Whatcom County		1,000		
	Camera Van software		1,500		
	Oasys (Docuware/copy machine contract)		5,000		
	Generator Load Testing		20,000		
	Cyberlock software		1,000		
	Misc (Bid notices etc.)		1,000		
401-53X-10-41-01	Professional Services (TOTAL)		385,386	180,571	47%
401-53X-10-42	Communication		40,000	24,958	62%
401-53X-10-43	Memberships/Dues		16,000	21,916	137%
401-53X-10-44	B&O Taxes		175,000	77,998	45%
401-53X-10-45	Admin Lease		2,500	1,358	54%
401-53X-10-46	Insurance		102,000	-	0%
401-53X-10-49	Admin Misc.		1,000	595	60%
401-53X-40-43	Training & Travel		30,000	11,048	37%
401-53X-40-44	Tuition reimbursement		6,000	-	0%
401-53X-40-49	Insurance claims		5,000	57,686	
401-53X-50-31	Maintenance Supplies		145,000	73,517	51%
401-53X-50-48	Oper Repair/Maint (includes Asset Mgmnt tools)		35,000	23,386	67%
	Edge Analytical - water		7,000		
	Emergency Response - sewer tank trucks		5,000		
401-53X-60-41	Operations Contracted (TOTAL)		12,000	6,029	50%
401-534-60-47	Water Ops City of Bellingham		30,000	15,126	50%
401-535-60-47	Sewer Ops City of Bellingham		800,000	408,235	51%
401-53X-80-32	Operations Fuel		30,000	18,905	63%
401-53X-80-34	Safety supplies		12,000	198	2%
401-53X-80-47	General Utilities		210,000	104,519	50%
401-53X-80-49	Laundry		2,000	940	47%
	TOTAL OPERATING EXPENSES		**4,095,886**	**2,012,172**	**49.1%**
	Transfers Out to Capital Projects Fund 420		900,000	371,000	
	Transfers Out to 2009 Bond Debt Service Fund 450		447,450	106,375	
	Transfers Out to Water Loan Debt Service Fund 470		65,500	65,339	
	TOTAL EXPENDITURES		**5,508,836**	**2,554,886**	**46.4%**
OPERATING FUND	**REVENUES**		**5,442,420**	**2,640,946**	
	EXPENDITURES		**(5,508,836)**	**(2,554,886)**	
	BEGINNING BALANCE		**500,000**	**1,073,881**	
	CASH/INVESTMENTS BALANCE		**433,584**	**1,161,453**	

MONTHLY BUDGET ANALYSIS	Description		2014 Budget	YTD 6/30/2014
SYSTEM REINVESTMENT FUND - 420				
420-343-40-19	DEA Permits		2,500	-
420-361-11-00	Investment interest		-	
420-379-10-30	Permits Capital Portion (5 permits for 2012)		40,000	30,304
420-379-10-40	Latecomer Fees		500	
420-397-10-00	Transfers In from Operating Fund 401		900,000	246,000
	TOTAL REVENUES		**943,000**	**276,304**
420-534-10-41	DEA Contracted Services		2,500	
420-534-60-41	Contracted Operations		-	
420-534-80-61	DEA Refunds		-	
420-594-38-60	Capital Outlay			
	Previous Projects		231,933	
C12-07	Reservoir Drains to Daylight	13,000		
C12-14	Dead end blow offs	37,960		
C12-16	Polo Park Bridge	49,351		29,063
C13-03	SVWTP Generator			164,645
C13-04	Cathodic Corrosion protection	75,000		
C13-08	Backup benchtop analyzer	3,000		
C13-13	Safety Grates at Pump Stations	9,376		3,262
C13-14	Server upgrade	15,000		15,301
C13-16	Boulevard Sewer Pump Station	39,246		148,661
	New Projects		944,000	
C 13-16	Boulevard Sewer Pump Station	570,000		
C 14-03	Water System Rehab/Replacement projects	120,000		
C 14-04	CMOM - Sewer I&I	103,000		
C 14-05	Strawberry Point Pump Station - Predesign	101,958		27,261
C 14-06	Sewer Push Camera	7,000		
C 14-07	Lowe Pump Station	7,000		
C 14-08	SVWTP Spare Raw Water Pump	5,000		
C 14-09	Dehumidifiers	5,000		4,955
C 14-10	Water Service Rebuilds	12,000		7,263
C 14-11	Gravel/Asphalt material bin at shop	5,000		
C 14-12	Admin building irrigation system	-		
	TOTAL EXPENDITURES		**1,178,433**	**400,411**
SYSTEM REINVESTMENT FUND	**REVENUES**		**943,000**	**276,304**
	EXPENDITURES		**(1,178,433)**	**(400,411)**
	BEGINNING BALANCE		**300,000**	**0**
	CASH/INVESTMENTS BALANCE		**64,567**	**893**
SEWER/STORM WATER CONTINGENCY FUND - 425				
425-361-11-00	Investment Interest		930	
	TOTAL REVENUES		**930**	**-**
425-535-10-41	Comp Plan Stormwater Chapter		4,821	7,268
425-535-10-89	Bank Fees		100	72
425-594-38-64	Machinery/Equipment			1,300
	TOTAL EXPENDITURES		**4,921**	**8,640**
SEWER/STORM WATER CONTINGENCY FUND	**REVENUES**		**930**	**-**
	EXPENDITURES		**(4,921)**	**(8,640)**
	BEGINNING BALANCE		**933,450**	**932,970**
	CASH/INVESTMENTS BALANCE		**929,459**	**924,330**

MONTHLY BUDGET ANALYSIS		Description		2014 Budget	YTD 6/30/2014
CAPITAL BOND PROJECTS FUND (RESTRICTED) - 430					
430-361-11-00		Investment interest		-	
		TOTAL REVENUES		-	
430-594-38-63		Capital Outlay		-	
	C09-01	Cable-Ranch-PM Pump stations (Retainage)		57,250	
		TOTAL EXPENDITURES		57,250	-
CAPITAL BOND PROJECTS FUND		**REVENUES**		-	
		EXPENDITURES		(57,250)	-
		BEGINNING BALANCE		57,250	62,683
		CASH/INVESTMENTS BALANCE			62,683
DWSRF PROJECTS FUND - 440					
440-382-90-31		Division 22 Reservoir			
440-382-90-43		Geneva AC Mains			
		TOTAL REVENUES			-
440-594-34-62	C14-01	Division 22 Reservoir			13,817
440-594-34-63	C14-02	Geneva AC Mains			117,784
		TOTAL EXPENDITURES			131,601
DWSRF PROJECTS FUND		**REVENUES**			-
		EXPENDITURES			131,601
		BEGINNING BALANCE			
		CASH/INVESTMENTS BALANCE			(131,601)
Expenditures offset by draws as projects progress.					
2009 BOND DEBT SERVICE FUND - 450					
450-361-11-00		Investment interest			
450-397-10-00		Transfers in from Operating Fund 401		447,450	106,375
		TOTAL REVENUES		447,450	106,375
450-535-10-41		Bond Admin Fee		300	300
450-591-35-72		Redemption of Long Term Debt		235,000	
450-591-35-83		Bond Interest payments		212,150	106,075
		TOTAL EXPENDITURES		447,450	106,375
2009 BOND DEBT SERVICE FUND		**REVENUES**		447,450	106,375
		EXPENDITURES		(447,450)	(106,375)
		BEGINNING BALANCE		-	-
		CASH/INVESTMENTS BALANCE			
2009 BOND RESERVE FUND (RESTRICTED) - 460					
460-361-11-00		Investment interest		500	
		TOTAL REVENUES		500	-
460-535-10-89		Debt Service Charges		100	72
		TOTAL EXPENDITURES		100	72
2009 BOND RESERVE FUND		**REVENUES**		500	-
		EXPENDITURES		100	72
		BEGINNING BALANCE		501,170	501,157
		CASH/INVESTMENTS BALANCE		501,770	501,085

MONTHLY BUDGET ANALYSIS	Description		2014 Budget	YTD 6/30/2014	
WATER LOANS DEBT SERVICE FUND - 470					
470-397-10-00	Transfers In from Operating Fund 401		65,500	65,339	
	TOTAL REVENUES		**65,500**	**65,339**	
470-591-38-79	Redemption of Long Term Debt		56,193	56,192	
470-592-34-83	Debt Service Interest Loan 119		715	715	
470-592-34-83	Debt Service Interest Loan 064		8,505	8,505	
	TOTAL EXPENDITURES		**65,413**	**65,412**	
WATER LOANS DEBT SERVICE FUND	**REVENUES**		**65,500**	**65,339**	
	EXPENDITURES		**(65,413)**	**(65,412)**	
	BEGINNING BALANCE				
	CASH/INVESTMENTS BALANCE			-	
ULID 18 LOAN DEBT SERVICE FUND (RESTRICTED) - 480					
480-361-50-00	ULID 18 Interest/Penalties		30,000	22,319	
480-368-10-00	Current ULID 18 Principal Payments		50,000	42,864	
480-379-10-30	Latecomers Fee		3,000	-	
	TOTAL REVENUES		**83,000**	**65,183**	
480-591-35-73	Principal payment			294	
480-592-35-83	Interest payment			1	
480-597-10-01	Transfers Out to Operating Fund 401		83,000	64,000	
	TOTAL EXPENDITURES		**83,000**	**64,295**	
ULID 18 LOAN DEBT SERVICE	**REVENUES**		**83,000**	**65,183**	
	EXPENDITURES		**(83,000)**	**(64,295)**	
	BEGINNING BALANCE				
	CASH/INVESTMENTS BALANCE			**887**	

LAKE WHATCOM WATER AND SEWER DISTRICT

AGENDA BILL

DATE SUBMITTED:	June 30, 2014		
TO BOARD OF COMMISSIONERS			
FROM: Bill Hunter and Staff	MANAGER APPROVAL		
MEETING AGENDA DATE:	July 9, 2014		
AGENDA ITEM NUMBER:	5.C.		
SUBJECT:	Summary of Existing District Projects		
LIST DOCUMENTS PROVIDED ⇨ NUMBER OF PAGES INCLUDING AGENDA BILL: _____	1. July 2014 Summary of Existing District Projects		
	2.		
	3.		
TYPE OF ACTION REQUESTED	RESOLUTION ☐	FORMAL ACTION/ MOTION ☐	INFORMATIONAL/ OTHER ☒

BACKGROUND / EXPLANATION OF IMPACT
Information only

FISCAL IMPACT
n/a

RECOMMENDED BOARD ACTION
Review and discuss

PROPOSED MOTION
n/a

LAKE WHATCOM WATER AND SEWER DISTRICT
Summary of Existing District Projects

Meeting Date	Effective Date	Prepared by
July 9, 2014	July 1, 2014	LE/BH

	Status of Water and Sewer Permit Issuance		
SCOPE	Provide a monthly update on permit activity.		
STATUS		Permits Issued 2014	Permits Issued 2013
	No of permits issued No of permits projected 2014	7 5	16

Completed Capital Projects in 2014	
C1410	Water Service Rebuilds
C1409	Sudden Valley WTP and Agate Heights WTP Dehumidifiers
C1314	Replace Server Hardware
C1313	Safety Grates at Pump Stations
C1211	Wet Well Pressure Transmitters

State Required Report Status

Reporting	Name of Report & Preparer	Completed	When Due
MONTHLY	Chlorination Report Agate Heights (Kevin)	Jan ☒ Feb ☒ Mar ☒ Apr ☒ May ☒ June ☒ July ☐ Aug ☐ Sept ☐ Oct ☐ Nov ☐ Dec ☐	Postmarked by 10th of month
	Surface Water Treatment Rule Report (SVWTP) (Kevin)	Jan ☒ Feb ☒ Mar ☒ Apr ☒ May ☒ June ☒ July ☐ Aug ☐ Sept ☐ Oct ☐ Nov ☐ Dec ☐	Postmarked by 10th of month
	Department of Revenue (Debi)	Jan ☒ Feb ☒ Mar ☒ Apr ☒ May ☒ June ☒ July ☒ Aug ☐ Sept ☐ Oct ☐ Nov ☐ Dec ☐	Due end of following month
ANNUALLY	Community Right to Know (Hazardous Materials) (Rich)	Completed March 3, 2014	Due by March 31st
	WA State Cross Connection Report (Rich)	Completed April 24, 2014	Due Annually
	Consumer Confidence Reports (Kevin)	Completed April, 2014	• Geneva- 4/14 • Sudden Valley 4/14 • Eagleridge – 4/14 • Agate Hghts – 4/14
	Hazardous Waste Activity Report (Rich)	Completed March 3, 2014	Due by March 31st
	OSHA 300 Log (Rich)	Completed January 30, 2014	Due by Feb 28th
	Water Use Efficiency Performance Report (Kevin)	Completed April 2014	Due by July 1st
	Washington State Financial Report (Debi)	Completed May 2014	Due by May 31st
OTHER	CPR/First Aid Training (Rich)	Completed 12/18/12	Due Biennially Next Due 2014
	Flagging Card Training (Rich)	Completed 7/22/2013	Due Triennially Next Due 2016

SAFETY PROGRAM SUMMARY

Completed by Rich Munson

Annual Safety Training
Staff participates in a local government on-line training system. Each employee is assigned with an individual training course that is relevant to their position. The courses contain check points, quizzes and tests to ensure the training was completed and understood by the employee. Learners can track their progress and manage their training with their workload.

Weekly Crew Safety Meetings
Safety meetings for the field crew take place every Tuesday at 3:30 p.m.

Dates of Safety Committee Meetings	
January 8, 2014	July 10, 2014 - Scheduled
February 12, 2014	
March 13, 2014	
April 9, 2014	
May 14, 2014	
June 10, 2014	

Summary Of Work-Related Injuries & Illnesses

Year	2014	2013	2012	2011
Total Number of Work Related Injuries Defined as a work related injury or illness that results in: • Death • Medical treatment beyond first aid • Loss of consciousness • Significant injury or illness diagnosed by a licensed health care professional • Days away from work (off work) • Restricted work or job transfer	0	11	8	5
Total Number of Days of Job Transfer or Restriction (Light duty or other medical restriction)	0	5	24	0
Total Number of Days Away From Work (At home, in hospital, not at work)	0	13	9	0

LAKE WHATCOM WATER AND SEWER DISTRICT

AGENDA BILL

DATE SUBMITTED:	July 1, 2014		
TO BOARD OF COMMISSIONERS			
FROM: Patrick Sorensen	MANAGER APPROVAL		
MEETING AGENDA DATE:	July 9, 2014		
AGENDA ITEM NUMBER:	5.D.		
SUBJECT:	Polo Park Bridge Water Main Relocation Project – Pay Request #2 and Project Close-out		
LIST DOCUMENTS PROVIDED ⇨ NUMBER OF PAGES INCLUDING AGENDA BILL: _____	1. Pay Request #2 - 2 pgs		
	2.		
	3.		
TYPE OF ACTION REQUESTED	RESOLUTION ☐	FORMAL ACTION/ MOTION ☒	INFORMATIONAL/ OTHER ☐

BACKGROUND / EXPLANATION OF IMPACT

In conjunction with Sudden Valley Community Association's installation of a bridge across Beaver Creek (replacing a failing culvert), the District needed to relocate one of its water mains and install it under the new bridge.

The construction project is complete and closeout paperwork is nearly done as of July 1, 2014. We expect to receive the final required documents prior to the July 9 meeting.

FISCAL IMPACT

None.

RECOMMENDED BOARD ACTION

Wilson Engineering recommends that the Board accept the project as complete and authorizing payment of Pay Request #2 subject to the District receiving the final required documents.

PROPOSED MOTION

Approve Pay Request #2 and accept the project as complete subject to receiving all required closeout paperwork from the Contractor.

PROJECT NAME: LAKE WHATCOM WATER AND SEWER DISTRICT; POLO PARK BRIDGE WATERMAIN REPLACEMENT PROJECT
WILSON PROJECT NO.: 2012-074

PAY ESTIMATE NO. 02
page 1 of 2
PERIOD: OCTOBER 1, 2013 THROUGH COMPLETION

OWNER:
LAKE WHATCOM WATER & SEWER DISTRICT
1220 LAKEWAY DR
BELLINGHAM, WA 98229
TEL. (360) 734-9224

ENGINEER:
WILSON ENGINEERING LLC
805 DUPONT ST.
BELLINGHAM, WA 98225
TEL. (360) 733-6100

CONTRACTOR
STRIDER CONSTRUCTION, CO.
4721 NORTHWEST DR.
BELLINGHAM, WA 98228
TEL. (360) 380-1234

	FINAL COMPLETION
PAYMENT FOR WORK THROUGH	12/8/13
SUBSTANTIAL COMPLETION	6/20/13
CONTRACT EXECUTED	6/20/13
START ON CONTRACT PERIOD	09/30/12
ORIGINAL CONTRACT COMPLETION DATE	0
EXTENSION OF TIME BY CHANGE ORDER	169
CONTRACT DAYS ELAPSED	
DATE WORK COMPLETED	
FINAL ACCEPTANCE	

	SCHEDULE A	TOTAL
1. ORIGINAL CONTRACT AMOUNT	$33,852.00	$33,852.00
2. APPROVED & EXECUTED CHANGE ORDERS OR EXTRAS TO DATE	$0.00	
3. ADJUSTED TOTAL CONTRACT AMOUNT TO DATE	$33,852.00	$33,852.00
4. TOTAL AMOUNT OF WORK DONE TO DATE	$31,200.00	$31,200.00
5. TOTAL VALUE OF MATERIALS AUTHORIZED FOR PAYMENT	$0.00	$0.00
6. TOTAL WORK/MATERIALS AUTHORIZED FOR PAYMENT TO DATE	$31,200.00	$31,200.00
10. LESS RETAINAGE (5% OF 6.)	-$1,560.00	-$1,560.00
11. ADD SALES TAX - WHATCOM COUNTY (8.5%)	$2,652.00	$2,652.00
13. LESS PREVIOUSLY AUTHORIZED PAYMENTS	$29,062.80	$29,062.80
14. AMOUNT AUTHORIZED FOR PAYMENT BY THIS ESTIMATE		$3,229.20

RECOMMENDED FOR PAYMENT:

WILSON ENGINEERING LLC

BY: _____

DATE: _____

STRIDER CONSTRUCTION

BY: _____

DATE: _____

LAKE WHATCOM WATER & SEWER DISTRICT

BY: _____

DATE: _____

PROJECT NAME: LAKE WHATCOM WATER AND SEWER DISTRICT; POLO PARK BRIDGE WATERMAIN REPLACEMENT PROJECT

OWNER: LAKE WHATCOM WATER & SEWER DISTRICT

ENGINEER: WILSON ENGINEERING LLC

CONTRACTOR: STRIDER CONSTRUCTION, INC.

PROJECT ESTIMATE SUMMARY SHEET

PROGRESS ESTIMATE NO.: 02

DATES: October 1, 2013 THRU Completion

BID SCHEDULE A

ITEM NO.	DESCRIPTION	QTY	UNITS	PRICE SCHEDULE Unit Price	PRICE SCHEDULE AMOUNT	PREVIOUSLY APPROVED QUANTITY	PREVIOUSLY APPROVED AMOUNT	THIS PERIOD QUANTITY	THIS PERIOD AMOUNT	TOTAL TO DATE QUANTITY	TOTAL TO DATE AMOUNT
SCHEDULE A - BASE BID											
A.1	Mobilization	1	LS	$ 2,000.00	$ 2,000.00	0.90	$ 1,800.00	0.10	$ 200.00	1.00	$ 2,000.00
A.2	Project Schedule	1	LS	$ 500.00	$ 500.00	0.90	$ 450.00	0.10	$ 50.00	1.00	$ 500.00
A.3	Trench Safety and Shoring	1	LS	$200.00	$200.00	0.90	$ 180.00	0.10	$20.00	1.00	$200.00
A.4	Watermain Replacement	1	LS	$ 28,500.00	$ 28,500.00	0.90	$ 25,650.00	0.10	$ 2,850.00	1.00	$ 28,500.00
	SUBTOTAL - SCHEDULE A - BASE BID ITEMS & CHANGE ORDERS				$ 31,200.00		$ 28,080.00		$ 3,120.00		$ 31,200.00
	TOTAL (Less Sales Tax)				$ 31,200.00		$ 28,080.00		$ 3,120.00		$ 31,200.00

LAKE WHATCOM WATER AND SEWER DISTRICT

AGENDA BILL

DATE SUBMITTED:	June 30, 2014		
TO BOARD OF COMMISSIONERS			
FROM: Patrick Sorensen	MANAGER APPROVAL		
MEETING AGENDA DATE:	July 9, 2014		
AGENDA ITEM NUMBER:	7		
SUBJECT:	Manager's Report		
LIST DOCUMENTS PROVIDED ⇨ NUMBER OF PAGES INCLUDING AGENDA BILL: _____	1. Manager's Report		
	2.		
	3.		
TYPE OF ACTION REQUESTED	RESOLUTION ☐	FORMAL ACTION/ MOTION ☐	INFORMATIONAL/ OTHER ☒

BACKGROUND / EXPLANATION OF IMPACT
Updated information from the General Manager in advance of the Board meeting.

FISCAL IMPACT
None

RECOMMENDED BOARD ACTION
None required.

PROPOSED MOTION
None

General Manager Comments

July 9, 2014

Board Meeting

Important Upcoming Dates:

- **Meetings Associated with the Lake Whatcom Management Program:**
  - **Policy Group Meeting:** The next meeting is scheduled for July14 at 1:30 p.m. in the Garden Room. Remember, all Policy Group Meetings are publicly noticed by the District.
  - **Management Meeting:** The last meeting with the Mayor and County Executive was held on June 6, 2014. The next meeting has not been scheduled at this time.
- **Next Regular Board Meeting:** The next regular meeting is scheduled for **Wednesday, July 30, 2014** at 8:00 a.m.

  A Special Rate Hearing Meeting is scheduled for July 29, 2014 at 7:00 in the District's Board Room.
- **Next Employee Staff Meeting:** Is set for **Thursday, July 10, 2014 at 8:00 a.m.** in the Board Room. Commissioner Lambert is scheduled to attend this coming meeting. Scheduling is rotated by alphabetical order each month.
- **Washington Association of Sewer & Water Districts (WASWD) Section III Meeting:** The next Section III meeting will be held at Bob's Burger & Brew in Tulalip at 6:15 p.m. on **Tuesday, July 8, 2014**. An agenda was sent to you previously. All WASWD Section III Meetings are publicly noticed by the District.
- **Whatcom Water District's Caucus Meeting:** The next meeting is scheduled for **Wednesday, July 16, 2014** from 1:00 p.m. to 3:00 p.m. in the District's Board Room. These meetings are held on the third Wednesday of each month.
- **WRIA 1 Planning Unit Meeting:** The next meeting is scheduled for **July 23, 2014 at 6:00 p.m.** in the County's Garden Room. This meeting is held on the fourth Wednesday of the month.

Other:

- **Committee Meeting Reports as Needed:** This is a place holder for Board and staff members to report on recent committee meetings since the last Board Meeting.
- **Out of Area:** Commissioner Citron will be out of the area for the July 9 meeting. I will be out of the area from July 3 through July 7. Bill Hunter will be back in the office July 7th following his vacation.