

Air Odor Noise Committee

Roi Dagan, M.D. – Chair
Michelle Tappouni
Mobeen Rathore, M.D.
David Wood
Gabriel DuPree – Alt

Education & Public Outreach

Michelle Tappouni – Chair
Lucinda Sonnenberg, Ph.D.
Nick Howland
Bobby Baker, P.E.

**Water Committee**

Lucinda Sonnenberg, Ph.D. – Chair
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Bobby L. Baker, P.E.
David Wood – Alt

Nick Howland – Chairman

Amy Fu, P.E. – Vice Chairman

Bobby L. Baker, P.E., Roi Dagan, M.D., Gabriel DuPree

Mobeen Rathore, M.D., Lucinda Sonnenberg, Ph.D., Michelle Tappouni, David Wood

Public Hearing

Noise Variance Request – JEA Main Street Well 15

Monday, August 14, 2017

5:00 p.m.

Ed Ball Building

214 N. Hogan Street

5th Floor – Conference Room West

AGENDA

CALL TO ORDER

NICK HOWLAND

I. CERTIFICATION OF PUBLIC NOTICE

JAMES RICHARDSON

II. VARIANCE INFORMATION

RICHARDSON

III. PRESENTATION BY PETITIONER

JEa / GOLDER

IV. STAFF DISCUSSION OF PETITIONER REQUEST
AND STAFF RECOMMENDATION

MIKE WILLIAMS, P.E.

V. COMMENTS FROM PUBLIC

HOWLAND

VI. STAFF REBUTTAL/CLARIFICATION TO PUBLIC COMMENT

WILLIAMS

VII. PETITIONER REBUTTAL/CLARIFICATION TO PUBLIC COMMENT

JEa / GOLDER

VIII. BOARD QUESTIONS/CLARIFICATION

HOWLAND

IX. BOARD VOTE

HOWLAND

X. PROCEDURAL SUMMARY

JEFF CLOSE

XI. ADJOURNMENT



July 14, 2017

17-79019

Mr. James Richardson
Environmental Protection Board
Edward Ball Building
City of Jacksonville
214 North Hogan Street, 5th Floor
Jacksonville, Florida 32202

RE: NOISE VARIANCE APPLICATION FOR JEA SEGMENT 4, DUVAL COUNTY, FLORIDA

Dear James:

On behalf of JEA, Golder Associates Inc. (Golder) is pleased to present the City of Jacksonville with the JEA Main Street Well 15 noise variance application for construction activities associated with the drilling and installation of a well near the intersection of East 2nd Street and Clark Street in the Springfield neighborhood. The noise generated is projected to temporarily operate outside of the construction noise limits outlined in Jacksonville Environmental Protection Board's Rule 4, Section 209 Parts A and C.

If you have any questions about this application, please do not hesitate to contact me (gmler@golder.com or 352/336-5600).

Sincerely,

GOLDER ASSOCIATES INC.

Gage B. Miller
Project Manager and Noise Specialist

Kennard F. Kosky, P.E.
Principal

cc: Brian A. Gaines (JEA)

Enclosures

GBM/edk



APPLICATION FOR VARIANCE FROM EPB RULES

Please type or print this application in blue or black ink
and submit **in person** or by agent with 2 additional copies to:

Application No.
Set for Public Hearing on:
Notice of Violation:

Environmental Resource Management Department
Attn: Christi Veleta
City Hall at St. James
117 W. Duval Street, Suite 225
Jacksonville, Florida 32202

FOR INFORMATION REGARDING THIS FORM. CALL: (904) 630-3692

THIS SECTION FOR OFFICE USE ONLY

1. Date Submitted:	2. Date Submitted:	3. Date Approved:	4. Permit Required:	5. Applicable Section of EPB Rule

TO BE COMPLETED BY APPLICANT

6. Location for which Variance is being sought: <u>1) Southeast corner of E 2nd Street and Clark Street.</u>		7. Cross streets bracketing area: <u>See attached figures</u>													
8. Proximity of site to nearest residential neighborhoods: <table border="0"> <tr> <td><u>Name of subdivision, apt., etc.</u></td> <td><u>Distance (miles)</u></td> </tr> <tr> <td><u>Springfield neighborhood</u> (Project adjacent to residences)</td> <td><u>0.0</u></td> </tr> </table>		<u>Name of subdivision, apt., etc.</u>	<u>Distance (miles)</u>	<u>Springfield neighborhood</u> (Project adjacent to residences)	<u>0.0</u>	9. Proximity of site to nearest schools: <table border="0"> <tr> <td><u>Name of School</u></td> <td><u>Distance (miles)</u></td> </tr> <tr> <td><u>Mathew Gilbert Middle School</u></td> <td><u>0.5</u></td> </tr> <tr> <td><u>RL Brown Elementary</u></td> <td><u>0.6</u></td> </tr> <tr> <td><u>Darnell-Cookman Middle-High</u></td> <td><u>1.3</u></td> </tr> </table>		<u>Name of School</u>	<u>Distance (miles)</u>	<u>Mathew Gilbert Middle School</u>	<u>0.5</u>	<u>RL Brown Elementary</u>	<u>0.6</u>	<u>Darnell-Cookman Middle-High</u>	<u>1.3</u>
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<u>Name of School</u>	<u>Distance (miles)</u>														
<u>Mathew Gilbert Middle School</u>	<u>0.5</u>														
<u>RL Brown Elementary</u>	<u>0.6</u>														
<u>Darnell-Cookman Middle-High</u>	<u>1.3</u>														
10. Has enforcement action commenced? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (i.e. Notice to Correct, Warning Letter, Cease and Desist Citation or any other enforcement action)															
11. Action or operation for which variance is being sought (check all that apply and indicate rule number):															
<input type="checkbox"/> Air/Odor Pollution Rules		Rule 2. _____													
<input type="checkbox"/> Water Pollution Rules		Rule 3. _____													
<input checked="" type="checkbox"/> Noise Pollution Rules		Rule 4. <u>209A & C (Rev 05/29/17)</u>													

RULES OF THE ENVIRONMENTAL PROTECTION BOARD CAN BE FOUND AT:

<http://www.coj.net/Departments/Regulatory+Boards+and+Commissions/Environmental+Protection+Board/EPB+Rules.htm>

*****NOTICE TO OPERATOR/AGENT*****

Please provide detailed responses to each of the following pertaining to the standards and criteria contained in Sec. 360.111. You may attach separate sheets if necessary.

(Please note that failure by the applicant to adequately substantiate the need for the variance and to respond to and meet the criteria set forth below may result in a denial of the application or a return of the application for additional information. Any activity that violates EPB Rules occurring during the time between submission of this application and the determination of completeness may be cited as a violation of EPB Rules. Safe harbor provisions will only apply if the application is deemed sufficient).

- (1) The law or rule, and sections thereof, from which a variance is sought.

Rule 4, Section 209, Part A, which prohibits construction or maintenance activities during nighttime hours except for certain equipment that shall not exceed 60 dBA. Rule 4, Section 209, Part C which prohibits construction or maintenance during daytime hours which emit a noise greater than 65 dBA when measured at the complainant's Class A or Class B property line.

- (2) The facts which show that a variance should be granted because of one of the following reasons:

- (i) There is no practicable means known or available for the adequate control of the pollution involved. A variance granted under the authority of this subparagraph shall be limited to a period of sixty months.
- (ii) Compliance with the particular requirement or requirements from which a variance is sought will necessitate the taking of measures which, because of their extent or cost, must be spread over a considerable period of time. (A variance granted for this reason shall prescribe a timetable for the taking of the measures required. A variance granted under the authority of this subparagraph shall be limited to a period of sixty months).
- (iii) It is necessary to relieve or prevent hardship of a kind other than those provided in subparagraphs (i) and (ii). A variance granted under the authority of this subparagraph shall be limited to a period of twenty-four months.

(i) Rule 4, Section 209, Part A, prohibits construction or maintenance activities during nighttime hours. A number of practical means and techniques are planned to limit the main construction activities to daytime hours only. Construction activity primarily includes the drilling of a new raw water well at the project location. Certain periods of the drilling activity, however, cannot be ceased once work has begun or the drill excavation may collapse. Additionally, pump testing and at least one 72 hour portion of the drilling event are anticipated to occur during nighttime hours.

Rule 4, Section 209, Part C, prohibits construction or maintenance during daytime hours which emit a noise greater than 65 dBA when measured at the complainant's Class A or Class B property line. A number of practicable means and techniques planned to control noise emitted from construction activities associated with the Project (as described in Item 6 below) may not result in compliance with current established daytime limits. The noise level associated with drilling will be constant and steady engine-driven power and with some intermittent ancillary equipment operations. The intermittent work will include a crane, small backhoe, diesel generator, and welding rig operations. All exhaust systems for the drilling and ancillary equipment will, at a minimum, operate in accordance with Rule 4, Section 209, Part D, in order to limit noise emissions.

- (3) The period of time for which the variance is sought, including the reasons and facts in support thereof.

A variance for Rule 4, Section 209, Part A and C, is sought for the duration of the construction activities which are anticipated to start on September 1, 2017 and is expected to be completed by July 31, 2018 on the well site. Duration of construction includes timeframes for; drilling the well to a depth of 1,300 feet below soil surface, installation and setting of concrete casing around the drill shafts to provide for the long term integrity of the drill shafts, and pump testing of the wells. While efforts will be made to expedite the construction timeframe, the timeframe for the drilling portion of the project will be dependent on the strength of substrate that the drill encounters during drilling.

While the majority of work will be conducted during daytime hours, it is not possible to identify the exact dates that these nighttime construction activities will occur.

- (4) The damage or harm resulting or which may result to the person requesting the variance from a compliance with the law or rule.

The project cannot be constructed without the requested variance. If the project cannot be completed, JEA's ability to serve the community will be diminished. The potential effects to JEA and the nearby communities if the variances to allow nighttime construction and to exceed the daytime 65 dBA noise limit were not granted include the following:

- a) **Possible Potable Water Shortage:** A future shortage of potable water supply to Jacksonville residents and businesses. JEA's Main Street water treatment plant (WTP) is expected to produce 23 million gallons per day (MGD) of potable water to meet future demands however is currently only supplied 16 MGD of raw water. The proposed well will provide an addition 3.6 MGD of raw water capacity to the plant. This project, in addition to other well installations and existing well rehabilitations are necessary to provide a 23 MGD supply of raw water to the Main Street WTP.
- b) **Increase Cost to Rate Payer:** The Project will aid JEA in meeting anticipated potable water demands in a cost effective manner for rate payers.
- c) **Increased Project Time:** In the event such variance is not granted successful drilling and the installation of the well are subject to increased risk of collapse, loss of drill bit, and loss of boring hole. This could create prolonged adverse impact to residential areas in the vicinity of the project site.

- (5) The requirements which the person requesting the variance can meet and the date when the person can comply with these requirements.

The Applicant and its contractors shall meet a requested 75 dBA noise level for the daytime and nighttime hours during the construction process at the neighboring property boundaries.

- (6) The steps the person requesting the variance is taking to meet the requirements from which the variance is sought and when compliance will be achieved.

Noise control strategies for the Project equipment will be as follows.

- Using newer and/or well-maintained quieter equipment that complies with exhaust system requirements outlined in Rule 4, Section 209, Part D.
- Using equipment suitable for that job that isn't over or under powered
- Whenever possible using the quietest equipment alternative
- When practicable scheduling louder or impulsive noise sources to daytime hours only
- Equipment arrangement to position prominent noise sources away from Class A and Class B land uses
- The use of acoustical barriers at nearest residences
- Other measures as may be necessary in the event a complaint is received.

Daily visual inspection of all equipment will be performed, prior to any construction activities, ensuring that the safety and environmental controls (noise reducing devices such as mufflers and engine enclosures) are in proper working order. All equipment noise issues identified through the daily inspection process will be remedied prior to equipment usage. The contractor will have in place an action plan (attached) for corrective procedures in the event that any of the noise control equipment breaks down or fails during operations.

The sound barriers will consist of a 10-foot perimeter barrier wall along the northern and western boundaries which are directly adjacent to residential receptors. The barriers will be placed as close as practical to the noise sources without interfering with operations.

The sound barriers will be constructed of a rugged flexible acoustical material that is designed for applications where sound blocking is required. The barrier specification listed in the table below is for example purposes, but would be appropriate for the project. Actual barrier specifications may be slightly different. With a surface mass of at least 1.3 pound per square foot (lb/ft²), the sound transmission loss will be approximately 27 dB. The transmission loss using this material would be expected to be:

Tarp Weight lb/ft ²	Frequency (Hz)						STC (dB)
	125	250	500	1000	2000	4000	
1.3	11	16	24	30	35	35	27

Figure 2 illustrates the predicted construction noise levels without the sound barrier network for the current equipment configuration and Figure 3 illustrates the noise levels with the barrier network in place. The figures show a 5 to 10 dBA noise level reduction at the closest residential receptors.

Additionally, prior to the commencement of construction, a community outreach meeting will be held for the residents in the area that may be impacted by construction noise. A 24-hour per day, 7 day per week public contact number will also be provided to these residents for questions or concerns. The contractor will have in place an action plan for corrective procedures in the event that public complaints are received through this contact number which will include:

- A communications plan

- Noise source identification
- Elimination or isolation of noise source causing exceedance
- Resolution of the issue

- (7) Any beneficial or adverse impact to residents and the environment in the affected area resulting from the Board's requiring compliance or granting a variance.

This variance request is limited to the construction phase of the project. The construction phase is a temporary activity and, therefore, is not expected to introduce any permanent or long term adverse impacts or health issues. These conclusions are based on US Environmental Protection Agency guidelines and Occupational Safety and Health Administration noise exposure limits.

- (8) The economic or social impacts of granting or denying the variance.

The potential effects to JEA and the nearby communities if a variance was not granted will include an eventual lack of potable water supply. In the nearer term, potential damage to the Main Street WTP and potable water distribution grid may occur as these systems are designed to treat, pump, and otherwise move a larger water supply than is currently provided.

IMPORTANT NOTICE: THE GRANTING OF A VARIANCE HEREUNDER IS NOT A WAIVER OF ANY APPLICABLE STATE OR FEDERAL RULES AND DOES NOT PROVIDE PROTECTION FROM ENFORCEMENT OF ANY SUCH RULES.

I HEREBY CERTIFY THAT I HAVE READ AND UNDERSTAND the information contained in this application, that I am the owner or authorized agent for the owner with authority to make this application, and that all of the information contained in this application, including any attachments, is true and correct to the best of my knowledge.

PLEASE PRINT:

NAME AND ADDRESS OF OWNER/APPLICANT: NAME: <u>Brian Gaines</u> ADDRESS: <u>21 West Church St</u> CITY: <u>Jacksonville</u> STATE: <u>FL</u> ZIP: <u>32202</u> DAYTIME TELEPHONE: <u>(904) 665-6246</u> FAX NUMBER: _____ <u>Brian Gaines</u> SIGNATURE OF OWNER/APPLICANT	NAME AND ADDRESS OF AUTHORIZED AGENT: NAME: _____ ADDRESS: _____ CITY: _____ STATE: _____ ZIP: _____ DAYTIME TELEPHONE: _____ FAX NUMBER: _____ _____ SIGNATURE OF OWNER/APPLICANT
---	--



- LEGEND**
- Well 15
 - Schools
 - Daycare Facilities
 - Neighborhoods



REFERENCES

1. GEORGE M. CENTER, 2012
2. DAYCARE FACILITIES, FLORIDA DEPARTMENT OF CHILDREN AND FAMILIES, 2010
3. NEIGHBORHOODS, Zillow, 2017

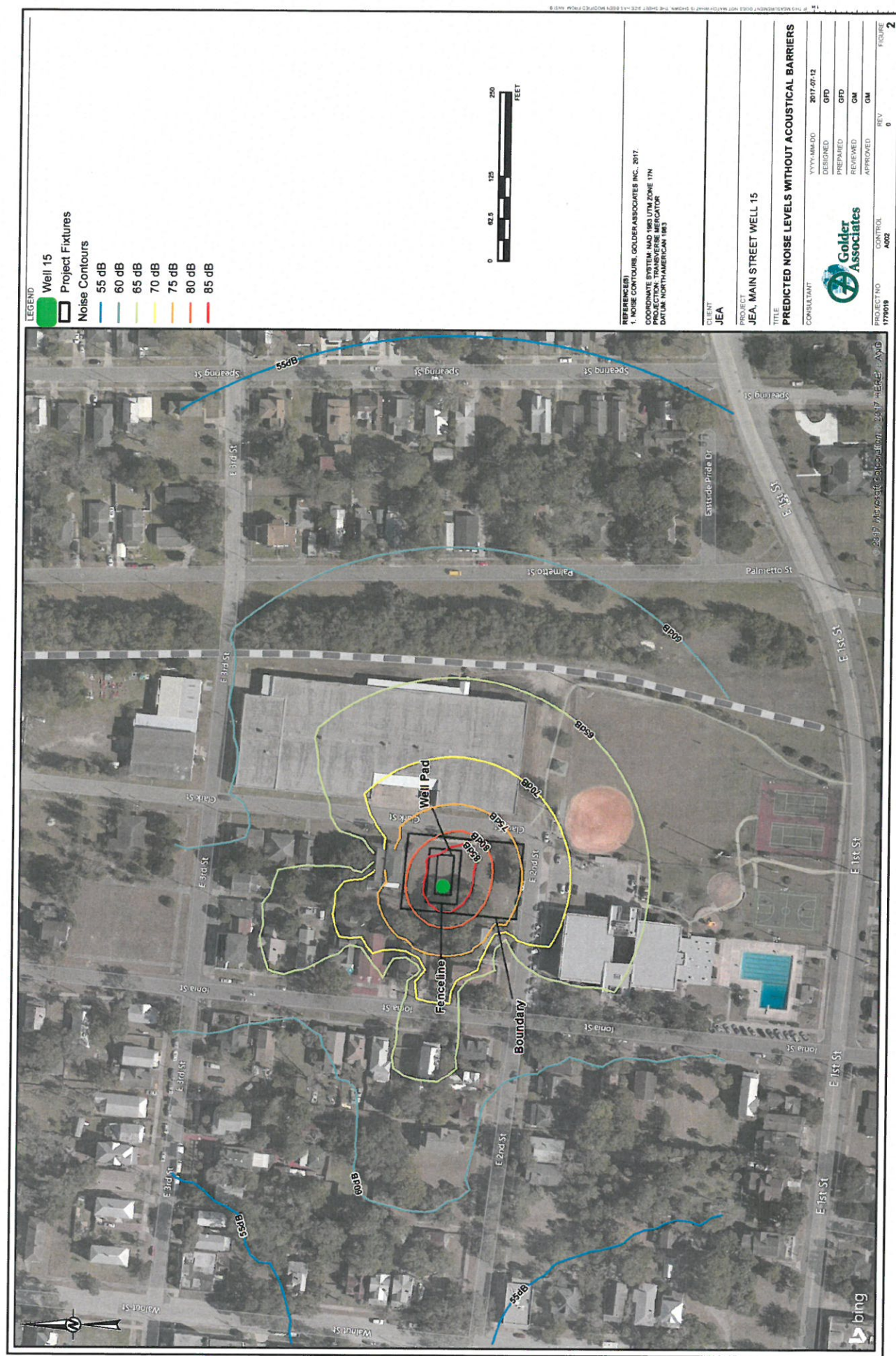
COORDINATE SYSTEM: NAD 1983 UTM ZONE 17N
 PROJECTION: TRANSVERSE MERCATOR
 DATUM: NORTH AMERICAN 1983

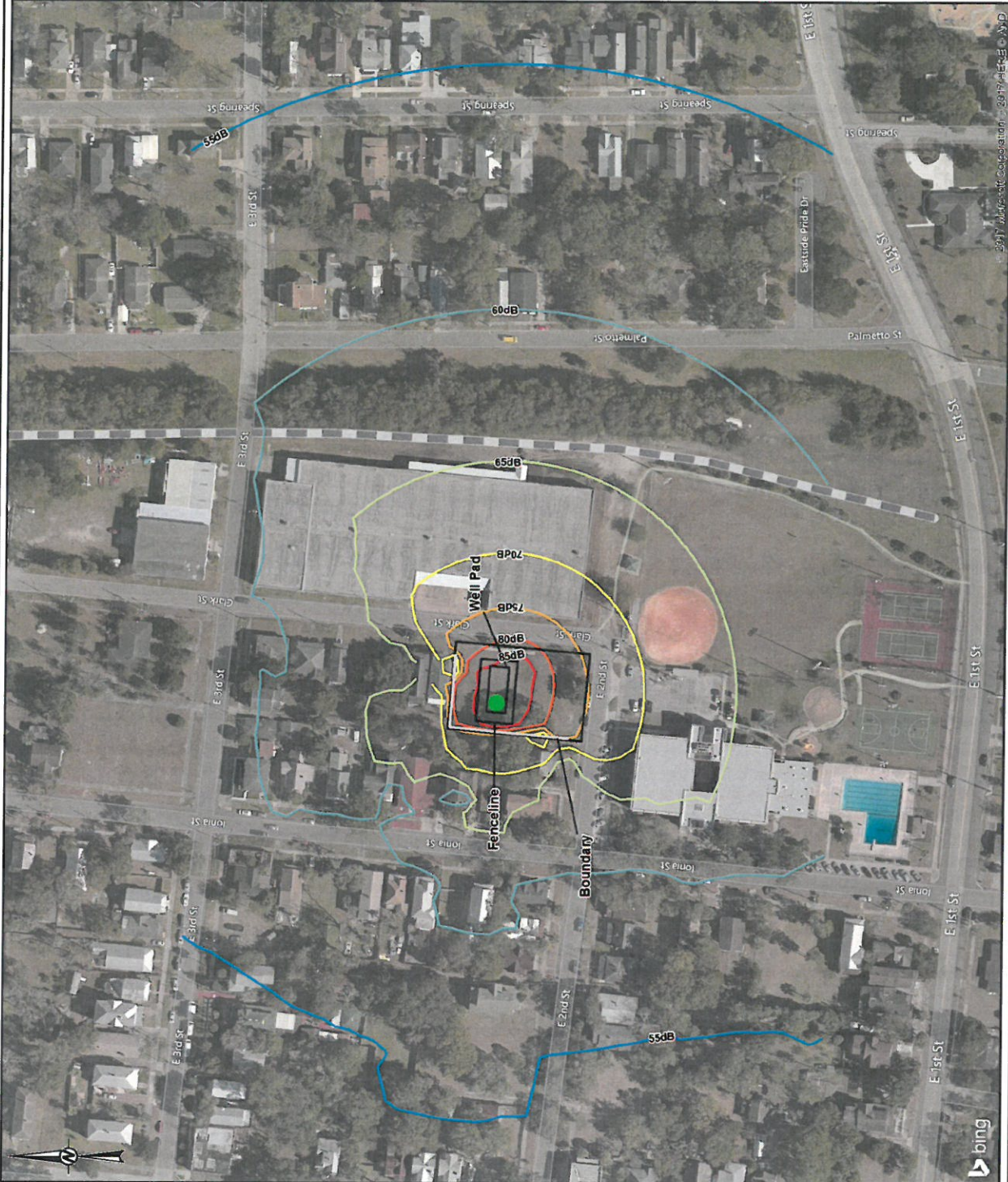
CLIENT
JEA

PROJECT
JEA, MAIN STREET WELL 15

TITLE
LOCAL NEIGHBORHOODS, SCHOOLS, & DAYCARE FACILITIES

CONSULTANT	Goldier Associates
DESIGNED	2017-07-12
PREPARED	OPD
REVIEWED	GM
APPROVED	GM
PROJECT NO.	1770018
CONTROL	A001
REV	0
FIGURE	1





- LEGEND**
- Well 15
 - Project Fixtures
 - Barrier
 - Noise Contours**
 - 55 dB
 - 60 dB
 - 65 dB
 - 70 dB
 - 75 dB
 - 80 dB
 - 85 dB



REFERENCES
 1. NOISE CONTOURS, GOLDER ASSOCIATES INC., 2017.
 2. COORDINATE SYSTEM: NAD 1983 UTM ZONE 17N
 3. DATUM: NORTH AMERICAN 1983

CLIENT
 JEA

PROJECT
 JEA, MAIN STREET WELL 15

TITLE
 PREDICTED NOISE LEVELS WITH ACOUSTICAL BARRIERS

DESIGNED	2017-07-12
PREPARED	GPD
REVIEWED	GM
APPROVED	GM
CONTROL	0
PROJECT NO.	1775018
FIGURE	3

