

**CITY OF MURFREESBORO
BOARD OF ZONING APPEALS**

Regular Meeting, April 28, 2021, at 1:00 p.m.
City Hall, 111 West Vine Street, Council Chambers, 1st Floor

A G E N D A

1. Call to order
2. Determination of a quorum
3. Old Business

Special Use Permit Request

- a. **Application Z-21-004 by H. C. Klover Architects** is requesting a special use permit in order to install a drive-up window electronic menu board and queuing lane within 200 feet of property zoned PRD (Planned Residential District) in a Commercial Fringe (CF) zone for property located at 2901 South Church Street. (Project Planner: Austin Cooper)
4. Staff Reports and Other Business
 5. Adjourn

**MURFREESBORO BOARD OF ZONING APPEALS
STAFF REPORT
APRIL 28, 2021
PROJECT PLANNER: MARINA RUSH**

Application: Z-21-004

Location: 2901 South Church Street

Applicant: H.C. Klover Architects

Owner: Edward & Ruth Smotherman

Zoning: Commercial Fringe (CF)

Requests: A special use permit in order to operate drive-thru elements within 200 feet of a residentially zoned property



Project Background

The Board of Zoning Appeals conducted a public hearing on March 24, 2021 regarding the request for a Special Use Permit to allow construction and operation of a drive-thru elements for a restaurant use within 200 feet of a residentially zoned property. The item was deferred by the Board of Zoning Appeals to April 28, 2021 to allow time for the applicant to conduct and submit a noise study, conducted by an acoustical engineer, to the City to confirm the existing noise levels and the future expected noise levels with the project operating with a drive-thru lane.

The Murfreesboro Noise Control Ordinance allows the maximum permissible sound level for:

- Residential and Noise Sensitive Areas – Exterior as measured from the exterior of the building:
 - 7:00 am – 10:00 pm = 55dBA
 - 10:00 pm – 7:00 am = 48 dBA
- Sound Amplification Device:
 - 7:00 am – 10:00 pm = 55dBA
 - 10:00 pm – 7:00 am = not allowed to be heard

The noise study was completed by Richard Lemker, Spectra Tech, Cincinnati, Ohio. The following information summarizes the testing and conclusion; for more details please refer to the attached study and summary letter.

Noise study testing:

- Tests were conducted multiple times of the day (see below) on the dates of April 5th and April 9th
- Tests were conducted at four locations, on the residential properties east of the subject property (see map on Noise Study, Page 3)
- Current noise levels tested:
 - 12:00 pm = 48.7 to 55.6 db
 - 3:00 pm = 51.8 to 53.7 db
 - 6:00 pm = 52.0 to 59.4 db
 - 7:30 pm = 49.9 to 53.1 db

Noise study conclusions:

- The current noise levels are generally under the maximum permissible sound level allowed by the Noise Control Ordinance of 55 dBA.
- The future four (4) feet tall berm will block the sound from the drive thru vehicles and speaker box due to its height and mass. The adjacent residents will experience a significant reduction in noise, including current noise levels generated from the S. Church Street traffic.
- Due to the berm and the distance, the residents will not hear noise from ordering or staff replying on the speaker box.
- The construction of the project with the berm will reduce the noise level and minimize current and future noise impacts on the residential properties to the east.
- The speaker box will not be heard, even intermittently.

Site Design, Layout and Parking Requirements:

The BZA discussed the site design and parking relative to possible modifications to mitigate the noise from the drive-thru lane and speaker box. The required parking for the uses proposed on the subject property is 68 spaces; the parking provided is 75 spaces. The seven additional spaces is not enough to reduce or relocate a row of parking as designed. As such, the applicant has chosen not to make any site modifications because they state in their correspondence from acoustical engineer that the future noise will be mitigated to a less than significant level by the 4 feet tall earthen berm.

Dunkin Donuts – No Special Use Permit

Staff reviewed the Planning Department files relating to the Dunkin Donuts, located at 2943 S. Church Street, and concluded there was not an application or approval of a Special Use Permit for the drive-thru lane and speaker box. The Dunkin Donuts Site Plan Review included a staff comment for the applicant to obtain a Special Use Permit for the drive-thru; however, the comment was missed during the permit review. This omission would not be precedence for the Special Use Permit requirement.

Dunkin Donuts Noise

The BZA received public comments at the March 24, 2021 public hearing regarding the amount of noise and sound from the speaker box equipment from the Dunkin Donut drive-thru on to the adjacent residences. The Panda Express site will be constructed with the 4 feet tall earthen berm along the east property line, the Dunkin Donut site does not have any berm. In addition, the Panda Express electronic box manufacturing data submitted indicates the sound level will adjust downward as the ambient noise level reduces during the day. These would mitigate potential noise impacts on the adjacent residences.

Zoning Ordinance

As indicated in the March 24, 2021 BZA staff report, the Zoning Ordinance standard for the CF zoning district requires:

Section 21 - Commercial Fringe District (CF) District:

(B)(2) Use Regulations – Additional Limitations and Conditions for Drive-Up Windows in CF:

The Board of Zoning Appeals may approve separations less than those required by subsection (8)(2) as a special use for developments having drive-up windows. In making application to the BZA, the applicant must demonstrate that the drive-up window and associated queuing lane, menu boards, on-site circulation, and ordering system will not have an adverse impact on the property zoned RS, RD, RS-A, or PRD or the residential portion of land zoned in the PUD classification. The BZA may consider any factor having a bearing on the impact of such use on the residential uses including, but not limited to, the actual distance of separation, the site design and arrangement, proposed screening and buffering, the intended use, orientation of the structures and site elements, traffic conditions, hours of operation, and sounds and smells associated with the intended use, if any. As with any special

use, the BZA may place appropriate conditions upon its approval to assure compatibility of the proposed use with the property in the RS, RD, RS-A, or PRD classifications or the residential portion of land zoned in the PU D classification.

Staff Recommendation:

Staff supports the request for a Special Use Permit to allow construction and operation of a drive-thru elements for a restaurant use within 200 feet of a residentially zoned property based on the use meeting the standards of general applicability, results of the noise study concluding the noise levels will be reduced and less than the maximum noise levels allowed per the Noise Ordinance, and with the following recommended Conditions of approval.

Recommended Conditions of Approval:

- 1) Applicant shall apply for and obtain approval of a site plan prior to the application of a building permit.
- 2) Site Plan shall incorporate a landscaped buffer (Type D), minimum 4 feet tall earthen berm, and 6 feet tall privacy fence along the east property line.
- 3) Drive-through window shall be closed and may not be open or operate between the hours of 10:00 PM to 7:00 AM daily.

Attached Exhibits

1. Noise Study Summary Letter
2. Noise Study, Spectra Tech
3. Applicant Letter, Klover
4. April 24, 2021 BZA Staff Report

April 11, 2021

Mr. Henry Klover
Senior Project Leader
HC Klover Architect
8813 Penrose Ln #400
Lenexa, KS 66219

Project: Panda Express
2901 S. Church Street
Murfreesboro, TN

Subject: Sound Study

Dear Mr. Klover:

I'm writing to provide the answers to the questions you posed concerning a rezoning request that is pending on property located at 2901 S. Church Street, Murfreesboro, TN 37127. This is the same property where construction of a Panda Express fast food restaurant has been proposed by CFV NT Developments, LLC.

As I am a Professional Sound and Noise Control Consultant, with decades of experience in matters involving community noise issues, you have asked me to study two issues regarding this project and render a professional opinion. The issues are:

1. Will the residents of homes on Runnymede Drive, immediately abutting the proposed Panda Express site, hear more, or less, noise after this project is completed?
2. What are the chances that these residents will hear voices from the Panda Express exterior order station?

I understand that the City is interested in a third issue:

- ✚ 3. Will the Panda Express restaurant be at risk of violating the City noise ordinance at any time?

In order to provide a response on these matters, I have reviewed project materials provided by your firm (Klover Architects), and I have spoken at length with your staff concerning the proposed construction plans. I have studied the City of Murfreesboro Zoning Ordinance Section 21-105 *Sound Measurement Procedures*. My firm conducted onsite testing to confirm neighborhood sound levels on April 5th and April 9th. I was also onsite on April 5th to appraise and understand the sound issues. My research found the following statements to be critically important in my response to the questions you posed:

- A. The Project team, including the architects in your office, and the Owner's staff behind the scenes, are all committed to blending in with the neighborhood culture, as I have witnessed in regard to resolving these sound issues. I have good reason to believe that this project will be carried through to completion, to the satisfaction of neighbors and the Murfreesboro community.
- B. The design of the Panda Express project includes the formation of a 8 foot high earthen berm at the rear of the property, abutting the Runnymede properties. This berm will have high shrubs planted on the top of it behind the Runnymede properties, and it will connect to the Duncan Donuts berm to form a continuous barrier providing noise reduction on the order of 15 dBA.
- C. I am told that the developers of Panda Express selected a drive-thru menu intercom system with automatic volume control for installation at this restaurant location. The system will sense the neighborhood background noise level at the intercom speaker and adjust the sound output level of the intercom system accordingly.

D. Sound levels emitted from the system will always be less 55 dBA in the vicinity of the drive-thru patron's vehicle. The drive-thru will not add 35db but will be drowned out by background noise. The drive-thru speaker could not be heard during any of our tests at the 3 locations from 7:30PM to 8PM on 4/9/21. There is absolutely no chance that sound from the system, equipped with automatic volume control, will ever exceed 55 dBA at any property line.

Based on the information I was able to gather and review, I can render my professional assessment regarding the issues posed above:

- ✚ The future berm to be constructed by Panda Express will have a natural ability to block sound, due to its height and mass. The residents of Runnymede properties abutting the Panda Express project site will experience a significant reduction of noise originating from the primary source of noise reaching their property – traffic on S. Church Street / Shelbyville Hwy.
- ✚ It will be impossible for anyone on the Runnymede side of the future high berm to hear anyone ordering or staff replying on the Panda Express drive-thru speaker box to be installed on the back side of the building. Plans call for installation of a drive-thru order system that incorporates a volume control which automatically adjusts the exterior volume level relative to the background noise level. This feature alone will effectively reduce sound emissions from Panda Express to an unintelligible level. The berm makes any sound transfer virtually impossible.

The Runnymede neighbors will be able to enjoy relative peace and quiet in their homes and in their yards for the first time ever! And the benefit will be theirs to enjoy forever – at no cost to them.

From my viewpoint, CFV NT Developments, LLC, dba Panda Express, continues to work proactively to be a good neighbor, with solid plans for controlling

sound levels, never providing good reason for a citizen complaint or
Community action.

At your service,

SPECTRA TECH LTD



Richard J. Lemker
President / Lead Consultant

Attached:

Sound Study

cc: Henry Klover

Vu Le

Consultants in matters of Acoustics - Sound - Noise & Vibration Control - Impact Insulation

PROJECT DESIGN & ONSITE TESTING

SOUND STUDY

for

CFV NT Developments, LLC.

dba Panda Express

2901 S. Church Street,

Murfreesboro, TN 37127

April 9, 2021

PREPARED FOR

Klover Architects, 8813 Prose Ln #400, Lenexa, KS 66219

BY

Cincinnati, OH 45233

www.SpectraTechLtd.com



6432 GRACELY DRIVE, CINCINNATI, OHIO 45233

Preface

Within this report, you will find a Plot Plan rendering of the proposed Panda Express Site. An existing house on the site is partially illustrated under a treetop canopy, with two of three out-buildings situated along the rear property line. Eleven locations (marked 1 through 11) prescribed by Klover Architects, indicate where sound tests were conducted.

Forty-Four individual Field Test Reports are also included in the report, documenting four sound level tests conducted at each of the eleven identified test locations. Sound levels were recorded at each location during three time periods: 12 to 1PM, 3 to 4 PM, and 6 to 7 PM. The variations in time were scheduled in order to document changes in the neighborhood background noise levels. This also allows for notation of the predicted Drive-Thru Menu / Intercom System sound level at each residence (marked on the Plot Plan as Residences A through D) situated along the abutting rear property line during each time period.

Many of the sound tests were conducted at locations not directly related to the prediction of sound levels at neighborhood residences. Nevertheless, all eleven test locations were chosen to document existing “base” background sound levels on the site prior to construction. After construction is completed, background sound levels can once again be tested to compare pre and post construction conditions.

All sound tests were conducted in general accordance with the City of Murfreesboro Zoning Ordinance Section 21-105 Sound Measurement Procedures. Since the Sound Study sought to determine more than whether a certain sound source met the requirements of the Zoning Ordinance, certain test procedures were optimized to satisfy the objectives of the Sound Study.



6432 GRACELY DRIVE, CINCINNATI, OHIO 45233

RESUME

Richard Lemker, President / Lead Consultant

Richard was admitted to the **Audio Engineering Society** in 1977, providing proof of work experience equivalent to a 4-year engineering degree. In 1982, Richard began to provide consulting services under the names Architectural Audio Services and Spectron, which were subsidiary operations of the systems contractor ICS. In 1986, he founded the independent consulting firm Richard J. Lemker & Associates, and as the firm's Lead Consultant, he has been personally involved in a wide range of projects including college education and sports facilities, hi-tech high schools, state courtrooms, numerous city council chambers, TV and radio broadcast and production facilities, meeting facilities of various sizes serving groups of from 50 to 18,000 people, high end residential condominium developments, complex industrial facilities, sophisticated national security installations, prominent corporate offices, and churches of all faiths.



Richard Lemker has experience as an end user of sophisticated audio systems, systems installation contractor, program analyst, construction project manager and construction specifier, facility design consultant, corporate meeting planning consultant, and implementation budget estimator. He has personally developed numerous proprietary design and testing programs and protocols in the fields of acoustics, vibration, and communication systems design involving hardware and software that are highly respected by his most sophisticated clientele. He has successfully completed hundreds of projects ranging from small impact assessments to large renovation and new construction projects. He has testified as an expert witness in numerous court cases and community zoning hearings involving noise control issues.

In 2009, the firm's name was changed to Spectra Tech Ltd to emphasize our expertise in a wide spectrum of audio and visual energies and frequencies. Today, Richard draws on his wealth of past project experience and hands-on knowledge to guide him in his current service in the interest of his clients. He has a track record of working as a project team member with client staff to assure that work is implemented in a timely manner and within the project budget estimate. Many of his diverse projects involve specialized "one of a kind," "never been done before" work. Proudly, the majority of his new work comes as a result of referrals from his clients and project team co-members.

Richard has served as an expert witness in numerous instances where the impact of noise on the community was an issue, as well as in numerous Worker's Compensation Cases.

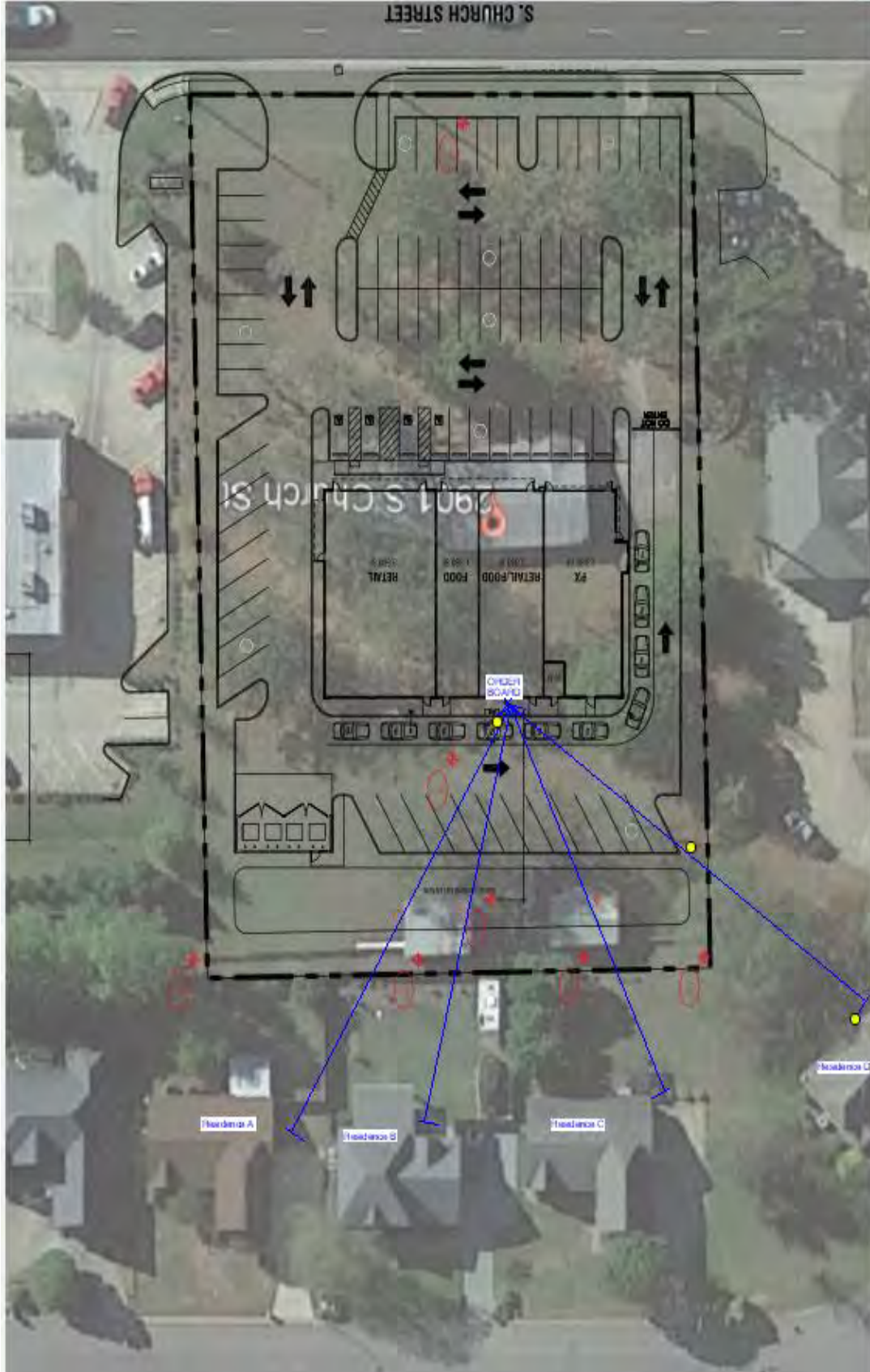
A master communicator, Mr. Lemker has been an invited Visiting Lecturer at Miami University School of Architecture in Oxford, Ohio, and chaired or served on numerous Riverfront Planning / Zoning / Development / Committees, Park Boards, and citizen groups in the greater Cincinnati area.

For a more information, you are invited to visit the company's website at www.SpectraTechLtd.com

www.SpectraTechLtd.com



6432 GRACELY DRIVE, CINCINNATI, OHIO 45233



NOTE: SOUND MEASUREMENTS TO OCCUR AT LOCATIONS MARKED ON THE SITE PLAN BELOW. EACH SOUND MEASUREMENT LOCATION TO BE RECORDED DURING 12PM, 6PM, AND 9PM. THE MEASUREMENT PERIOD SHOULD BE SUFFICIENT IN LENGTH TO DETERMINE THAT THE SOUND LEVELS MEASURED ARE TYPICAL OF THE SOURCE IN QUESTION.



6432 GRACELY DRIVE, CINCINNATI, OHIO 45233

Excerpt from HME Product Literature Describing Their Automatic Volume Control (AVC) Option

HME

Customer Driven

Memo

Re: Drive-Thru Sound Pressure Levels From the Menu Board or Speaker Post

Also, HME incorporates automatic volume control (AVC) into many of our Systems. AVC will adjust the outbound volume based on the outdoor, ambient noise level. When ambient noise levels naturally decrease at night, AVC will reduce the outbound volume on the system. See below for example:

Distance from Outside Speaker	Decibel level of standard system with 45 dB of outside noise <u>with</u> AVC active
1 foot	60 dBA
2 feet	54 dBA
4 feet	48 dBA
8 feet	42 dBA
16 feet	36 dBA

HM Electronics, Inc.
14110 Stowe Drive
Poway, CA 92064 USA

Phone: 800-848-4468
Fax: 858-552-0172
Website: www.hme.com
Email: support@hme.com



Micro Precision Calibration Columbus
 3570 Commerce Dr.
 Columbus IN 47201
 812-372-7969

Certificate of Calibration

Date: Jan 11, 2021

Cert No. 551220084023217

Customer:

SPECTRA TECH LTD
 6432 GRACELY DR
 CINCINNATI OH CINCINNATI 45233

MPC Control #: DX3135
 Asset ID: DX3135
 Gage Type: SOUND LEVEL METER & ANALYZER
 Manufacturer: BRUEL & KJAER
 Model Number: 2270
 Size: N/A
 Temp/RH: 20.0°C / 45.0%
 Location: Calibration performed at MPC facility

Work Order #: CL-60005882
 Purchase Order #: 123020-01
 Serial Number: 2644661
 Department: N/A
 Performed By: BILL VELA
 Received Condition: IN TOLERANCE
 Returned Condition: IN TOLERANCE
 Cal. Date: January 06, 2021
 Cal. Interval: 12 MONTHS
 Cal. Due Date: January 06, 2022

Calibration Notes:

Standards Used to Calibrate Equipment

I.D.	Description	Model	Serial	Manufacturer	Cal. Due Date	Traceability #
CS1228	NOISE LOGGING DOSIMETER	M-27	GW5050125	QUEST TECHNOLOGIES	Jun 30, 2021	551220083661311
DH2205	AUDIO ANALYZER	9803B	3514A15129	HEWLETT PACKARD	Dec 31, 2021	551220083985366
DT8574	SOUND LEVEL CALIBRATOR	407744	2028304	EXTECH	Jan 31, 2021	551220083410245
R4479	SPECTRUM ANALYZER	8563E	3804A08491	HEWLETT PACKARD	Dec 31, 2021	551220083985370

Procedures Used in this Event

Procedure Name	Description
33K3-4-2911-1	Type 1 Sound Level Meters, Bruel & Kjaer 2230, 2231, 2232, 2235, 2236 (), 2238, 2260, Jan-30-2020

Calibrating Technician:

BILL VELA

QC Approval:

JULIAN CONTRERAS

STATEMENTS OF PASS OR FAIL CONFORMANCE: The integrity of measurement has been taken into account when determining compliance with specifications. All measurements and test results qualified in relation to availability of Measurement trace not exceed 2% in accordance with ANSI/ISO 10012:2003 and in cases without stated beyond the possibility of falsification depending on test uncertainty ratio.

THE CALIBRATION REPORT STATUS:

PASS: Term used when compliance statement is given, and the measurement result is PASS.
PASS*: Term used when compliance statement is given, and the measurement result is conditional passed or PASS*.
FAIL: Term used when compliance statement is given, and the measurement result is FAIL.
FAIL*: Term used when compliance statement is given, and the measurement result is conditional failed or FAIL*.
REPORT OF VALUE: Term used when reported measurement is not meeting compliance statement or report.
ADJUSTED: When adjustments are made to an instrument which changes the value of measurement from what was measured as found to true value as set.
LIMITED: When an instrument fails calibration but is still functional in a limited manner.

The estimated uncertainty of measurement is stated on the standard uncertainty of measurement multiplied by the coverage factor k=2, when for a normal distribution corresponds to a coverage probability of approximately 95%. Unless otherwise stated, this calibration report complies with ISO/IEC 17025:2017 and ANSI/ISO 10012:2003. Calibration cycles and resulting due dates may be extended/adjusted by the customer. Any holder of letters may receive an extension to lift out of tolerance before the next scheduled calibration. Recalibration cycles should be based on frequency of use, environmental conditions and customer's established systematic accuracy. All standards are traceable to SI through the National Institute of Standards and Technology (NIST) and/or recognized national or international standards laboratories. Services rendered include proper manufacturer's service instruction and are available for no less than thirty (30) days. The information on this report pertains only to the instrument specified. No way not be responsible in part or in whole without the prior written approval of the issuing MP Calibration Laboratory.



6432 GRACELY DRIVE, CINCINNATI, OHIO 45233

Address: 2901 S. Church Street, Murfreesboro, TN Date: April 5, 2021 DAY: Monday

Test Location #: 1 **Wind Speed:** 5-10 **Mph** **Direction:** SW **Temperature:** 75.

Impulsive: **Non-Impulsive:** X **Significant Low Freq Component:**

Test Was Conducted: **On Property Line** 40 **Feet from Property Line**

Land Use: Residential: **Institutional:** **Business:** X **Recreational:**

Stage: Baseline X **Ongoing Construction** **Post-Construction**

Duration of Sound Test: Start Time: 1:21:31PM **End Time:** 1:22:57PM

Test#: 210405-011 **dB Levels: LA min:** 52.7 **LA eq:** 67.3 **LA max:** 73.7 **LA peak:** 85.4

Estimated dB Levels Reaching

The Nearest Residence: : **L__min:** **L__eq:** **L__max:** **L__peak:**

Field Notes:

Mic placed in front parking lot of Dunkin Donuts property near main road traffic.

Sound Level Meter: Mfgr And Model: Bruel & Kjaer 2270 SN 2644861 with microphone

Annual Calibration By: Micro Precision Calibration Laboratory **Date:** 01/06/2021

Pre-test Calibration Check: 11:55AM **Post Test Calibration Check:** 6:33PM

Report Prepared By:

SPECTRA TECH, LTD.

Richard J. Lemker
President / Lead Consultant

PROJECT DESIGN & ONSITE TESTING
Consultants in matters of Acoustics - Sound - Noise & Vibration Control - Impact Insulation



6432 GRACELY DRIVE, CINCINNATI, OHIO 45233

FIELD SOUND TEST RECORD

Address: 2901 S. Church Street, Murfreesboro, TN Date: April 5, 2021 DAY: Monday

Test Location #: 3 Wind Speed: 1-5 Mph Direction: SW Temperature: 75.

Impulsive: Non-Impulsive: X Significant Low Freq Component:

Test Was Conducted: On Property Line 30 Feet from Property Line

Land Use: Residential: Institutional: Business: X Recreational:

Stage: Baseline X Ongoing Construction Post-Construction

Duration of Sound Test: Start Time: 1:06:37PM End Time: 1:08:06PM

Test#: 210405-008 dB Levels: LA min: 43.0 LA eq: 49.5 LA max: 60.8 LA peak: 89.4

Estimated dB Levels Reaching

The Nearest Residence: : L_min: L_eq: L_max: L_peak:

Field Notes:

Mic placed in the retention ditch located behind the Dunkin Donuts.

Sound Level Meter: Mfgr And Model: Bruel & Kjaer 2270 SN 2644861 with microphone

Annual Calibration By: Micro Precision Calibration Laboratory Date: 01/06/2021

Pre-test Calibration Check: 11:55AM Post Test Calibration Check: 6:33PM

Report Prepared By:

SPECTRA TECH LTD

Richard J. Lemker
President / Lead Consultant

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FIELD SOUND TEST RECORD

Address: 2901 S. Church Street, Murfreesboro, TN Date: April 5, 2021 DAY: Monday

Test Location #: 4 Wind Speed: 1-5 Mph Direction: SW Temperature: 75.

Impulsive: Non-Impulsive: X Significant Low Freq Component:

Test Was Conducted: On Property Line 30 Feet from Property Line

Land Use: Residential: Institutional: Business: X Recreational:

Stage: Baseline X Ongoing Construction Post-Construction

Duration of Sound Test: Start Time: 1:08:43PM End Time: 1:10:05PM

Test#: 210405-009 dB Levels: LA min: 47.8 LA eq: 52.7 LA max: 64.5 LA peak: 80.6

Estimated dB Levels Reaching

The Nearest Residence: : L_min: L_eq: L_max: L_peak:

Field Notes:

Mic placed on the berm of the retention ditch located behind the Dunkin Donuts.

Sound Level Meter: Mfgr And Model: Bruel & Kjaer 2270 SN 2644861 with microphone

Annual Calibration By: Micro Precision Calibration Laboratory Date: 01/06/2021

Pre-test Calibration Check: 11:55AM Post Test Calibration Check: 6:33PM

Report Prepared By:

SPECTRA TECH LTD

Richard J. Lemker
President / Lead Consultant

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FIELD SOUND TEST RECORD

Address: 2901 S. Church Street, Murfreesboro, TN Date: April 5, 2021 DAY: Monday

Test Location #: 5 **Wind Speed:** 1-5 Mph **Direction:** SW **Temperature:** 75.

Impulsive: **Non-Impulsive:** X **Significant Low Freq Component:**

Test Was Conducted: X **On Property Line** **Feet from Property Line**

Land Use: Residential: **Institutional:** **Business:** X **Recreational:**

Stage: Baseline X **Ongoing Construction** **Post-Construction**

Duration of Sound Test: Start Time: 1:03:17PM **End Time:** 1:04:48PM

Test#: 210405-007 **dB Levels: LA_min:** 41.8 **LA_eq:** 51.4 **LA_max:** 62.8 **LA_peak:** 85.0

Estimated dB Levels Reaching

The Nearest Residence: : **L_min:** **L_eq:** **L_max:** **L_peak:**

Field Notes:

Mic placed at the back right corner of the Panda Express property.

Sound Level Meter: Mfgr And Model: Bruel & Kjaer 2270 SN 2644861 with microphone

Annual Calibration By: Micro Precision Calibration Laboratory **Date:** 01/06/2021

Pre-test Calibration Check: 11:55AM **Post Test Calibration Check:** 6:33PM

Report Prepared By:

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PROJECT DESIGN & ONSITE TESTING
Consultants in matters of Acoustics - Sound - Noise & Vibration Control - Impact Insulation



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FIELD SOUND TEST RECORD

Address: 2901 S. Church Street, Murfreesboro, TN Date: April 5, 2021 DAY: Monday

Test Location #: 6 **Wind Speed:** 1-5 Mph **Direction:** SW **Temperature:** 75.

Impulsive: **Non-Impulsive:** X **Significant Low Freq Component:**

Test Was Conducted: **On Property Line** 10 **Feet from Property Line**

Land Use: Residential: **Institutional:** **Business:** X **Recreational:**

Stage: Baseline X **Ongoing Construction** **Post-Construction**

Duration of Sound Test: Start Time: 12:47:50PM **End Time:** 12:49:40PM

Test#: 210405-004 **dB Levels: LA_min:** 43.2 **LA_eq:** 51.5 **LA_max:** 58.8 **LA_peak:** 80.5

Estimated dB Levels Reaching

The Nearest Residence: : **L_min:** **L_eq:** **L_max:** **L_peak:**

Field Notes:

Mic placed between the front of the two small buildings near the back of the Panda

Express property.

Sound Level Meter: Mfgr And Model: Bruel & Kjaer 2270 SN 2644861 with microphone

Annual Calibration By: Micro Precision Calibration Laboratory **Date:** 01/06/2021

Pre-test Calibration Check: 11:55AM **Post Test Calibration Check:** 6:33PM

Report Prepared By:

SPECTRA TECH LTD

Richard J. Lemker
President / Lead Consultant

PROJECT DESIGN & ONSITE TESTING
Consultants in matters of Acoustics - Sound - Noise & Vibration Control - Impact Insulation



6432 GRACELY DRIVE, CINCINNATI, OHIO 45233

FIELD SOUND TEST RECORD

Address: 2901 S. Church Street, Murfreesboro, TN Date: April 5, 2021 DAY: Monday

Test Location #: 7 **Wind Speed:** 1-5 Mph **Direction:** SW **Temperature:** 75.

Impulsive: **Non-Impulsive:** X **Significant Low Freq Component:**

Test Was Conducted: On Property Line 40 Feet from Property Line

Land Use: Residential: **Institutional:** **Business:** X **Recreational:**

Stage: Baseline X **Ongoing Construction** **Post-Construction**

Duration of Sound Test: Start Time: 1:17:59PM **End Time:** 1:19:28PM

Test#: 210405-010 **dB Levels: LA min:** 49.4 **LA eq:** 57.7 **LA max:** 66.0 **LA peak:** 82.0

Estimated dB Levels Reaching

The Nearest Residence: : **L_min:** **L_eq:** **L_max:** **L_peak:**

Field Notes:

Mic placed in the middle of the yard behind the existing home on Panada Express
property. Horn heard in the background.

Sound Level Meter: Mfgr And Model: Bruel & Kjaer 2270 SN 2644861 with microphone

Annual Calibration By: Micro Precision Calibration Laboratory **Date:** 01/06/2021

Pre-test Calibration Check: 11:55AM **Post Test Calibration Check:** 6:33PM

Report Prepared By:

SPECTRA TECH LTD

Richard J. Lemker
President / Lead Consultant

PROJECT DESIGN & ONSITE TESTING
Consultants in matters of Acoustics - Sound - Noise & Vibration Control - Impact Insulation



6432 GRACELY DRIVE, CINCINNATI, OHIO 45233

FIELD SOUND TEST RECORD

Address: 2901 S. Church Street, Murfreesboro, TN Date: April 5, 2021 DAY: Monday

Test Location #: 8 Wind Speed: 1-5 Mph Direction: SW Temperature: 75.

Impulsive: Non-Impulsive: X Significant Low Freq Component:

Test Was Conducted: X On Property Line Feet from Property Line

Land Use: Residential: Institutional: Business: X Recreational:

Stage: Baseline X Ongoing Construction Post-Construction

Duration of Sound Test: Start Time: 1:00:57PM End Time: 1:02:27PM

Test#: 210405-006 dB Levels: LA_min: 46.9 LA_eq: 55.6 LA_max: 67.5 LA_peak: 85.1

Estimated dB Levels Reaching

The Nearest Residence: : L_min: L_eq: L_max: L_peak:

Field Notes:

Mic placed at the back fence line of the Panda Express property.

Sound Level Meter: Mfgr And Model: Bruel & Kjaer 2270 SN 2644861 with microphone

Annual Calibration By: Micro Precision Calibration Laboratory Date: 01/06/2021

Pre-test Calibration Check: 11:55AM Post Test Calibration Check: 6:33PM

Report Prepared By:

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6432 GRACELY DRIVE, CINCINNATI, OHIO 45233

FIELD SOUND TEST RECORD

Address: 2901 S. Church Street, Murfreesboro, TN Date: April 5, 2021 DAY: Monday

Test Location #: 9 **Wind Speed:** 5-10 **Mph Direction:** SW **Temperature:** 75.

Impulsive: **Non-Impulsive:** X **Significant Low Freq Component:**

Test Was Conducted: **On Property Line** 5 **Feet from Property Line**

Land Use: Residential: **Institutional:** **Business:** X **Recreational:**

Stage: Baseline X **Ongoing Construction** **Post-Construction**

Duration of Sound Test: Start Time: 12:19:04PM **End Time:** 12:25:35PM

Test#: 210405-001 **dB Levels: LA min:** 53.2 **LA eq:** 74.8 **LA max:** 99.3 **LA peak:** 115.8

Estimated dB Levels Reaching

The Nearest Residence: : **L_min:** **L_eq:** **L_max:** **L_peak:**

Field Notes:

Mic placed 10' from main road on the front of Panda Express property.

Sound Level Meter: Mfgr And Model: Bruel & Kjaer 2270 SN 2644861 with microphone

Annual Calibration By: Micro Precision Calibration Laboratory **Date:** 01/06/2021

Pre-test Calibration Check: 11:55AM **Post Test Calibration Check:** 6:33PM

Report Prepared By:

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6432 GRACELY DRIVE, CINCINNATI, OHIO 45233

FIELD SOUND TEST RECORD

Address: 2901 S. Church Street, Murfreesboro, TN Date: April 5, 2021 DAY: Monday

Test Location #: 10 **Wind Speed:** 1-5 **Mph Direction:** SW **Temperature:** 75.

Impulsive: **Non-Impulsive:** X **Significant Low Freq Component:**

Test Was Conducted: X **On Property Line** **Feet from Property Line**

Land Use: Residential: **Institutional:** **Business:** X **Recreational:**

Stage: Baseline X **Ongoing Construction** **Post-Construction**

Duration of Sound Test: Start Time: 12:45:20PM **End Time:** 12:46:31PM

Test#: 210405-003 **dB Levels: LA_min:** 42.1 **LA_eq:** 48.7 **LA_max:** 55.0 **LA_peak:** 75.6

Estimated dB Levels Reaching

The Nearest Residence: : **L_min:** **L_eq:** **L_max:** **L_peak:**

Field Notes:

Mic placed at the back fence line of the Panda Express property, between small buildings.

Sound Level Meter: Mfgr And Model: Bruel & Kjaer 2270 SN 2644861 with microphone

Annual Calibration By: Micro Precision Calibration Laboratory **Date:** 01/06/2021

Pre-test Calibration Check: 11:55AM **Post Test Calibration Check:** 6:33PM

Report Prepared By:

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6432 GRACELY DRIVE, CINCINNATI, OHIO 45233

FIELD SOUND TEST RECORD

Address: 2901 S. Church Street, Murfreesboro, TN Date: April 5, 2021 DAY: Monday

Test Location #: 11 **Wind Speed:** 1-5 **Mph Direction:** SW **Temperature:** 75.

Impulsive: **Non-Impulsive:** X **Significant Low Freq Component:**

Test Was Conducted: X **On Property Line** **Feet from Property Line**

Land Use: Residential: **Institutional:** **Business:** X **Recreational:**

Stage: Baseline X **Ongoing Construction** **Post-Construction**

Duration of Sound Test: Start Time: 12:29:33PM **End Time:** 12:36:58PM

Test#: 210405-002 **dB Levels: LA min:** 45.2 **LA eq:** 55.4 **LA max:** 75.1 **LA peak:** 89.5

Estimated dB Levels Reaching

The Nearest Residence: : **L_min:** **L_eq:** **L_max:** **L_peak:**

Field Notes:

Mic placed on the back left corner of the Panda Express property. Dog barking in the background.

Sound Level Meter: Mfgr And Model: Bruel & Kjaer 2270 SN 2644861 with microphone

Annual Calibration By: Micro Precision Calibration Laboratory **Date:** 01/06/2021

Pre-test Calibration Check: 11:55AM **Post Test Calibration Check:** 6:33PM

Report Prepared By:

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FIELD SOUND TEST RECORD

Address: 2901 S. Church Street, Murfreesboro, TN Date: April 5, 2021 DAY: Monday

Test Location #: 1 Wind Speed: 1-5 Mph Direction: SW Temperature: 80.

Impulsive: Non-Impulsive: X Significant Low Freq Component: X

Test Was Conducted: On Property Line 10 Feet from Property Line

Land Use: Residential: Institutional: Business: X Recreational:

Stage: Baseline X Ongoing Construction Post-Construction

Duration Of Sound Test: Start Time: 3:21:40PM End Time: 3:23:16PM

Test#: 210405-014 dB Levels: LA min: 57.6 LA eq: 71.3 LA max: 78.1 LA peak: 90.4

Estimated dB Levels Reaching

The Nearest Residence: : L_min: L_eq: L_max: L_peak:

Field Notes:

Mic in parking space in front of Dunkin Donuts near road traffic

Sound Level Meter: Mfgr And Model: Bruel & Kjaer 2270 SN 2644861 with microphone

Annual Calibration By: Micro Precision Calibration Laboratory Date: 01/06/2021

Pre-test Calibration Check: 11:55AM Post Test Calibration Check: 6:33PM

Report Prepared By:

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FIELD SOUND TEST RECORD

Address: 2901 S. Church Street, Murfreesboro, TN Date: April 5, 2021 DAY: Monday

Test Location #: 2 Wind Speed: 1-5 Mph Direction: SW Temperature: 80.

Impulsive: Non-Impulsive: X Significant Low Freq Component:

Test Was Conducted: On Property Line 30 Feet from Property Line

Land Use: Residential: Institutional: Business: X Recreational:

Stage: Baseline X Ongoing Construction Post-Construction

Duration of Sound Test: Start Time: 3:27:33PM End Time: 3:33:01PM

Test#: 210405- 015 dB Levels: LA min: 47.1 LA eq: 60.7 LA max: 80.0 LA peak: 92.3

Estimated dB Levels Reaching

The Nearest Residence: : L_min: L_eq: L_max: L_peak:

Field Notes:

Dunkin donuts ordering speaker. 2 orders placed during test

Sound Level Meter: Mfg and Model: Bruel & Kjaer 2270 SN 2644861 with microphone

Annual Calibration By: Micro Precision Calibration Laboratory Date: 01/06/2021

Pre-test Calibration Check: 11:55AM Post Test Calibration Check: 6:33PM

Report Prepared By:

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FIELD SOUND TEST RECORD

Address: 2901 S. Church Street, Murfreesboro, TN Date: April 5, 2021 DAY: Monday

Test Location #: 3 Wind Speed: 1-5 Mph Direction: SW Temperature: 80.

Impulsive: Non-Impulsive: Significant Low Freq Component:

Test Was Conducted: On Property Line: 30 Feet From Property Line

Land Use: Residential: Institutional: Business: X Recreational:

Stage: Baseline X Ongoing Construction Post-Construction

Duration Of Sound Test: Start Time: 3:05:36PM End Time: 3:11:22PM

Test#: 210405-012 dB Levels: LA min: 45.1 LA eq: 50.6 LA max: 73.7 LA peak: 98.5

Estimated dB Levels Reaching

The Nearest Residence: : L_min: L_eq: L_max: L_peak:

Field Notes:

Sound Level Meter: Mfgr And Model: Bruel & Kjaer 2270 SN 2644861 with microphone

Annual Calibration By: Micro Precision Calibration Laboratory Date: 01/06/2021

Pre-test Calibration Check: 11:55AM Post Test Calibration Check: 6:33PM

Report Prepared By:

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FIELD SOUND TEST RECORD

Address: 2901 S. Church Street, Murfreesboro, TN Date: April 5, 2021 DAY: Monday

Test Location #: 4 Wind Speed: 1-5 Mph Direction: SW Temperature: 80.

Impulsive: Non-Impulsive: X Significant Low Freq Component: .

Test Was Conducted: On Property Line: 30 Feet From Property Line

Land Use: Residential: Institutional: Business: X Recreational:

Stage: Baseline X Ongoing Construction Post-Construction

Duration Of Sound Test: Start Time: 3:11:58PM End Time: 3:19:03PM

Test#: 210405-013 dB Levels: LA min: 48.9 LA eq: 55.6 LA max: 72.3 LA peak: 90.1

Estimated dB Levels Reaching

The Nearest Residence: : L_min: L_eq: L_max: L_peak:

Field Notes:

Hill top at fence line behind Dunkin Donuts. One car in Drive thru

Sound Level Meter: Mfgr And Model: Bruel & Kjaer 2270 SN 2644861 with microphone

Annual Calibration By: Micro Precision Calibration Laboratory Date: 01/06/2021

Pre-test Calibration Check: 11:55AM Post Test Calibration Check: 6:33PM

Report Prepared By:

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FIELD SOUND TEST RECORD

Address: 2901 S. Church Street, Murfreesboro, TN Date: April 5, 2021 DAY: Monday

Test Location #: 5 **Wind Speed:** 1-5 Mph **Direction:** SW **Temperature:** 80.

Impulsive: **Non-Impulsive:** X **Significant Low Freq Component:**

Test Was Conducted: X **On Property Line** **Feet From Property Line**

Land Use: Residential: **Institutional:** **Business:** X **Recreational:**

Stage: Baseline X **Ongoing Construction** **Post-Construction**

Duration Of Sound Test: Start Time: 3:53:53PM **End Time:** 3:56:55PM

Test#: 210405-020 **dB Levels: LA_min:** 45.9 **LA_eq:** 53.3 **LA_max:** 61.4 **LA_peak:** 83.0

Estimated dB Levels Reaching

The Nearest Residence: : **L_min:** **L_eq:** **L_max:** **L_peak:**

Field Notes:

Mic located at SE corner of property at end of fence

Sound Level Meter: Mfgr And Model: Bruel & Kjaer 2270 SN 2644861 with microphone

Annual Calibration By: Micro Precision Calibration Laboratory **Date:** 01/06/2021

Pre-test Calibration Check: 11:55AM **Post Test Calibration Check:** 6:33PM

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FIELD SOUND TEST RECORD

Address: 2901 S. Church Street, Murfreesboro, TN Date: April 5, 2021 DAY: Monday

Test Location #: 6 **Wind Speed:** 1-5 Mph **Direction:** SW **Temperature:** 80.

Impulsive: **Non-Impulsive:** X **Significant Low Freq Component:**

Test Was Conducted: **On Property Line:** 10ft **Feet From Property Line**

Land Use: Residential: **Institutional:** **Business:** X **Recreational:**

Stage: Baseline X **Ongoing Construction** **Post-Construction**

Duration Of Sound Test: Start Time: 3:47:44PM **End Time:** 3:49:17PM

Test#: 210405- 018 **dB Levels: LA_min:** 50.6 **LA_eq:** 57.9 **LA_max:** 67.3 **LA_peak:** 78.7

Estimated dB Levels Reaching

The Nearest Residence: : **L_min:** **L_eq:** **L_max:** **L_peak:**

Field Notes:

Mic located between two structures located along fence at back of the property. Plane overheard

Sound Level Meter: Mfgr And Model: Bruel & Kjaer 2270 SN 2644861 with microphone

Annual Calibration By: Micro Precision Calibration Laboratory **Date:** 01/06/2021

Pre-test Calibration Check: 11:55AM **Post Test Calibration Check:** 6:33PM

Report Prepared By:

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FIELD SOUND TEST RECORD

Address: 2901 S. Church Street, Murfreesboro, TN Date: April 5, 2021 DAY: Monday

Test Location #: 7 **Wind Speed:** 1-5 **Mph Direction:** SW **Temperature:** 80

Impulsive: **Non-Impulsive:** X **Significant Low Freq Component:**

Test Was Conducted **on Property Line** 40ft **Feet from Property Line**

Land Use: Residential: **Institutional:** **Business:** X **Rcreational:**

Stage: Baseline X **Ongoing Construction** **Post-Construction**

Duration Of Sound Test: Start Time: 3:59:38PM **End Time:** 4:03:10PM

Test#: 210405-021 **dB Levels: LA min:** 48.3 **LA eq:** 55.9 **LA max:** 64.5 **LA peak:** 83.3

Estimated dB Levels Reaching

The Nearest Residence: : **L_min:** **L_eq:** **L_max:** **L_peak:**

Field Notes:

Mic is located in the middle of the back yard

Sound Level Meter: Mfgr And Model: Bruel & Kjaer 2270 SN 2644861 with microphone

Annual Calibration By: Micro Precision Calibration Laboratory **Date:** 01/06/2021

Pre-test Calibration Check: 11:55AM **Post Test Calibration Check:** 6:33PM

Report Prepared By:

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FIELD SOUND TEST RECORD

Address: 2901 S. Church Street, Murfreesboro, TN Date: April 5, 2021 DAY: Monday

Test Location #: 8 **Wind Speed:** 1-5 Mph **Direction:** SW **Temperature:** 80.

Impulsive: **Non-Impulsive:** X **Significant Low Freq Component:**

Test Was Conducted: X **On Property Line** **Feet From Property Line**

Land Use: Residential: **Institutional:** **Business:** X **Recreational:**

Stage: Baseline X **Ongoing Construction** **Post-Construction**

Duration of Sound Test: Start Time: 3:49:53PM **End Time:** 3:52:16PM

Test#: 210405-019 **dB Levels: LA_min:** 45.9 **LA_eq:** 52.8 **LA_max:** 59.8 **LA_peak:** 76.7

Estimated dB Levels Reaching

The Nearest Residence: : **L_min:** **L_eq:** **L_max:** **L_peak:**

Field Notes:

Mic located along fence at rear of property. Good line of sight to the road along front of property.

Sound Level Meter: Mfgr And Model: Bruel & Kjaer 2270 SN 2644861 with microphone

Annual Calibration By: Micro Precision Calibration Laboratory **Date:** 01/06/2021

Pre-test Calibration Check: 11:55AM **Post Test Calibration Check:** 6:33PM

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FIELD SOUND TEST RECORD

Address: 2901 S. Church Street, Murfreesboro, TN Date: April 5, 2021 DAY: Monday

Test Location #: 9 **Wind Speed:** 5-10 **Mph** **Direction:** SW **Temperature:** 80.

Impulsive: **Non-Impulsive:** X **Significant Low Freq Component:**

Test Was Conducted: **On Property Line** **5ft** **Feet from Property Line**

Land Use: Residential: **Institutional:** **Business:** X **Recreational:**

Stage: Baseline X **Ongoing Construction** **Post-Construction**

Duration of Sound Test: Start Time: 4:07:01PM **End Time:** 4:08:56PM

Test#: 210405-022 **dB Levels: LA_min:** 60.4 **LA_eq:** 71.8 **LA_max:** 81.7 **LA_peak:** 93.1

Estimated dB Levels Reaching

The Nearest Residence: : **L_min:** **L_eq:** **L_max:** **L_peak:**

Field Notes:

Mic located at front of the property, near main road traffic

Sound Level Meter: Mfgr And Model: Bruel & Kjaer 2270 SN 2644861 with microphone

Annual Calibration By: Micro Precision Calibration Laboratory **Date:** 01/06/2021

Pre-test Calibration Check: 11:55AM **Post Test Calibration Check:** 6:33PM

Report Prepared By:

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FIELD SOUND TEST RECORD

Address: 2901 S. Church Street, Murfreesboro, TN Date: April 5, 2021 DAY: Monday

Test Location #: 10 **Wind Speed:** 1-5 Mph **Direction:** SW **Temperature:** 80.

Impulsive: **Non-Impulsive:** X **Significant Low Freq Component:**

Test Was Conducted: X **On Property Line** **Feet from Property Line**

Land Use: Residential: **Institutional:** **Business:** X **Recreational:**

Stage: Baseline X **Ongoing Construction** **Post-Construction**

Duration of Sound Test: Start Time: 3:45:13PM **End Time:** 3:46:38PM

Test#: 210405-017 **dB Levels: LA_min:** 47.2 **LA_eq:** 51.8 **LA_max:** 63.8 **LA_peak:** 83.5

Estimated dB Levels Reaching

The Nearest Residence: : **L_min:** **L_eq:** **L_max:** **L_peak:**

Field Notes:

Mic located at back fence line of the property between structures. Calm noise level

Sound Level Meter: Mfgr And Model: Bruel & Kjaer 2270 SN 2644861 with microphone

Annual Calibration By: Micro Precision Calibration Laboratory **Date:** 01/06/2021

Pre-test Calibration Check: 11:55AM **Post Test Calibration Check:** 6:33PM

Report Prepared By:

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FIELD SOUND TEST RECORD

Address: 2901 S. Church Street, Murfreesboro, TN Date: April 5, 2021 DAY: Monday

Test Location #: 11 Wind Speed: 1-5 Mph Direction: SW Temperature: 80.

Impulsive: Non-Impulsive: X Significant Low Freq Component

Test Was Conducted: X On Property Line Feet From Property Line

Land Use: Residential: Institutional: Business: X Recreational:

Stage: Baseline X Ongoing Construction Post-Construction

Duration Of Sound Test: Start Time: 3:42:46pm End Time: 3:43:51PM

Test#: 210405-016 dB Levels: LA min: 48.4 LA eq: 53.7 LA max: 62.3 LA peak: 81.6

Estimated dB Levels Reaching

The Nearest Residence: : L_min: L_eq: L_max: L_peak:

Field Notes:

Mic is located at back corner of the property. Traffic noise audible

Sound Level Meter: Mfgr And Model: Bruel & Kjaer 2270 SN 2644861 with microphone

Annual Calibration By: Micro Precision Calibration Laboratory Date: 01/06/2021

Pre-test Calibration Check: 11:55AM Post Test Calibration Check: 6:33PM

Report Prepared By:

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FIELD SOUND TEST RECORD

Address: 2901 S. Church Street, Murfreesboro, TN Date: April 5, 2021 DAY: Monday

Test Location #: 1 **Wind Speed:** 1-5 Mph **Direction:** SW **Temperature:** 76.

Impulsive: **Non-Impulsive:** **Significant Low Freq Component:**

Test Was Conducted: On Property Line 40 Feet from Property Line

Land Use: Residential: Institutional: **Business:** X **Recreational:**

Stage: Baseline X **Ongoing Construction** **Post-Construction**

Duration of Sound Test: **Start Time:** 5:49:23PM **End Time:** 5:50:41PM

Test#: 210405-023 **dB Levels:** **LA min:** 65.4 **LA eq:** 72.7 **LA max:** 82.3 **LA peak:** 92.0

Estimated dB Levels Reaching

The Nearest Residence: : **L min:** **L eq:** **L max:** **L peak:**

Field Notes:

Mic placed in front parking lot of Dunkin Donuts property near main road traffic. Rush hour traffic.

Sound Level Meter: Mfgr And Model: Bruel & Kjaer 2270 SN 2644861 with microphone

Annual Calibration By: Micro Precision Calibration Laboratory **Date:** 01/06/2021

Pre-test Calibration Check: 11:55AM **Post Test Calibration Check:** 6:33PM

Report Prepared By:

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FIELD SOUND TEST RECORD

Address: 2901 S. Church Street, Murfreesboro, TN Date: April 5, 2021 DAY: Monday

Test Location #: 2 Wind Speed: 1-5 Mph Direction: SW Temperature: 76.

Impulsive: Non-Impulsive: Significant Low Freq Component:

Test Was Conducted: On Property Line 30 Feet from Property Line

Land Use: Residential: Institutional: Business: X Recreational:

Stage: Baseline X Ongoing Construction Post-Construction

Duration of Sound Test: Start Time: 6:05:55PM End Time: 6:10:07PM

Test#: 210405-027 dB Levels: LA min: 44.7 LA eq: 58.9 LA max: 77.4 LA peak: 86.6

Estimated dB Levels Reaching

The Nearest Residence: : L_min: L_eq: L_max: L_peak:

Field Notes:

Mic placed 2' from Dunkin Donuts order box. First order was audible, second was short.

and much quieter.

Sound Level Meter: Mfgr And Model: Bruel & Kjaer 2270 SN 2644861 with microphone

Annual Calibration By: Micro Precision Calibration Laboratory Date: 01/06/2021

Pre-test Calibration Check: 11:55AM Post Test Calibration Check: 6:33PM

Report Prepared By:

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FIELD SOUND TEST RECORD

Address:2901 S. Church Street, Murfreesboro, TN Date: April 5, 2021 DAY: Monday

Test Location #: 3 **Wind Speed:** 1-5 Mph **Direction:** SW **Temperature:** 76.

Impulsive: **Non-Impulsive:** X **Significant Low Freq Component:**

Test Was Conducted: **On Property Line** **30** Feet from Property Line

Land Use: Residential: **Institutional:** **Business:** X **Recreational:**

Stage: Baseline X **Ongoing Construction** **Post-Construction**

Duration of Sound Test: Start Time: 5:59:09PM **End Time:** 6:01:46PM

Test#: 210405-025 **dB Levels: LA min:** 46.7 **LA eq:** 52.8 **LA max:** 68.7 **LA peak:** 89.4

Estimated dB Levels Reaching

The Nearest Residence: : **L_min:** **L_eq:** **L_max:** **L_peak:**

Field Notes:

Mic placed in retention ditch located behind Dunkin Donuts. One car with loud muffler .
ordered, but could not hear clerk or order.

Sound Level Meter: Mfgr And Model: Bruel & Kjaer 2270 SN 2644861 with microphone

Annual Calibration By: Micro Precision Calibration Laboratory **Date:** 01/06/2021

Pre-test Calibration Check: 11:55AM **Post Test Calibration Check:** 6:33PM

Report Prepared By:

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FIELD SOUND TEST RECORD

Address: 2901 S. Church Street, Murfreesboro, TN Date: April 5, 2021 DAY: Monday

Test Location #: 4 Wind Speed: 1-5 Mph Direction: SW Temperature: 76.

Impulsive: Non-Impulsive: X Significant Low Freq Component:

Test Was Conducted: On Property Line 30 Feet from Property Line

Land Use: Residential: Institutional: Business: X Recreational:

Stage: Baseline X Ongoing Construction Post-Construction

Duration of Sound Test: Start Time: 6:02:08PM End Time: 6:04:19PM

Test#: 210405-026 dB Levels: LA min: 51.1 LA eq: 54.2 LA max: 61.9 LA peak: 77.5

Estimated dB Levels Reaching

The Nearest Residence: : L_min: L_eq: L_max: L_peak:

Field Notes:

Mic placed on berm behind the retention ditch behind Dunkin Donuts. Pick-up truck with windows down placed order, but clerk and order could not be heard.

Sound Level Meter: Mfgr And Model: Bruel & Kjaer 2270 SN 2644861 with microphone

Annual Calibration By: Micro Precision Calibration Laboratory Date: 01/06/2021

Pre-test Calibration Check: 11:55AM Post Test Calibration Check: 6:33PM

Report Prepared By:

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FIELD SOUND TEST RECORD

Address:2901 S. Church Street, Murfreesboro, TN Date: April 5, 2021 DAY: Monday

Test Location #: 5 **Wind Speed:** 1-5 **Mph Direction:** SW **Temperature:** 76.

Impulsive: **Non-Impulsive:** **Significant Low Freq Component:**

Test Was Conducted: X **On Property Line** **Feet from Property Line**

Land Use: Residential: **Institutional:** **Business:** X **Recreational:**

Stage: Baseline X **Ongoing Construction** **Post-Construction**

Duration of Sound Test: Start Time: 6:23:52PM **End Time:** 6:25:11PM

Test#: 210405-033 **dB Levels: LA min:** 45.8 **LA eq:** 52.0 **LA max:** 60.2 **LA peak:** 74.3

Estimated dB Levels Reaching

The Nearest Residence: : **L_min:** **L_eq:** **L_max:** **L_peak:**

Field Notes:

Mic placed at the back right corner of the Panda Express property.

Sound Level Meter: Mfgr And Model: Bruel & Kjaer 2270 SN 2644861 with microphone

Annual Calibration By: Micro Precision Calibration Laboratory **Date:** 01/06/2021

Pre-test Calibration Check: 11:55AM **Post Test Calibration Check:** 6:33PM

Report Prepared By:

SPECTRA TECH, LTD.

Richard J. Lemker
President / Lead Consultant

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Consultants in matters of Acoustics - Sound - Noise & Vibration Control - Impact Insulation



6432 GRACELY DRIVE, CINCINNATI, OHIO 45233

FIELD SOUND TEST RECORD

Address: 2901 S. Church Street, Murfreesboro, TN Date: April 5, 2021 DAY: Monday

Test Location #: 6 **Wind Speed:** 1-5 **Mph Direction:** SW **Temperature:** 76.

Impulsive: **Non-Impulsive:** **Significant Low Freq Component:**

Test Was Conducted: **On Property Line** **10** **Feet from Property Line**

Land Use: Residential: **Institutional:** **Business:** X **Recreational:**

Stage: Baseline X **Ongoing Construction** **Post-Construction**

Duration of Sound Test: Start Time: 6:19:25PM **End Time:** 6:20:13PM

Test#: 210405-031 **dB Levels: LA_min:** 50.6 **LA_eq:** 59.4 **LA_max:** 73.3 **LA_peak:** 86.2

Estimated dB Levels Reaching

The Nearest Residence: : **L_min:** **L_eq:** **L_max:** **L_peak:**

Field Notes:

Mic placed between front of small buildings at the back of the Panda Express property. .

Dog barking.

Sound Level Meter: Mfgr And Model: Bruel & Kjaer 2270 **SN** 2644861 **with microphone**

Annual Calibration By: Micro Precision Calibration Laboratory **Date:** 01/06/2021

Pre-test Calibration Check: 11:55AM **Post Test Calibration Check:** 6:33PM

Report Prepared By:

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6432 GRACELY DRIVE, CINCINNATI, OHIO 45233

FIELD SOUND TEST RECORD

Address: 2901 S. Church Street, Murfreesboro, TN Date: April 5, 2021 DAY: Monday

Test Location #: 7 **Wind Speed:** 1-5 **Mph Direction:** SW **Temperature:** 76.

Impulsive: **Non-Impulsive:** **Significant Low Freq Component:**

Test Was Conducted: **On Property Line** **40** **Feet from Property Line**

Land Use: Residential: **Institutional:** **Business:** X **Recreational:**

Stage: Baseline X **Ongoing Construction** **Post-Construction**

Duration of Sound Test: Start Time: 6:29:25PM **End Time:** 6:30:53PM

Test#: 210405-034 **dB Levels: LA_min:** 48.3 **LA_eq:** 54.0 **LA_max:** 59.8 **LA_peak:** 75.1

Estimated dB Levels Reaching

The Nearest Residence: : **L_min:** **L_eq:** **L_max:** **L_peak:**

Field Notes:

Mic placed behind the existing home on the Panada Express property in middle of yard.

Sound Level Meter: Mfgr And Model: Bruel & Kjaer 2270 **SN** 2644861 **with microphone**

Annual Calibration By: Micro Precision Calibration Laboratory **Date:** 01/06/2021

Pre-test Calibration Check: 11:55AM **Post Test Calibration Check:** 6:33PM

Report Prepared By:

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6432 GRACELY DRIVE, CINCINNATI, OHIO 45233

FIELD SOUND TEST RECORD

Address: 2901 S. Church Street, Murfreesboro, TN Date: April 5, 2021 DAY: Monday

Test Location #: 8 **Wind Speed:** 1-5 Mph **Direction:** SW **Temperature:** 76.

Impulsive: **Non-Impulsive:** **Significant Low Freq Component:**

Test Was Conducted: X **On Property Line** **Feet from Property Line**

Land Use: Residential: **Institutional:** **Business:** X **Recreational:**

Stage: Baseline X **Ongoing Construction** **Post-Construction**

Duration of Sound Test: Start Time: 6:21:17PM **End Time:** 6:23:11PM

Test#: 210405-032 **dB Levels: LA_min:** 49.1 **LA_eq:** 54.1 **LA_max:** 60.5 **LA_peak:** 69.9

Estimated dB Levels Reaching

The Nearest Residence: : **L_min:** **L_eq:** **L_max:** **L_peak:**

Field Notes:

Mic placed at back fence line of the Panda Express property. Good line of sight to road..

Sound Level Meter: Mfgr And Model: Bruel & Kjaer 2270 SN 2644861 with microphone

Annual Calibration By: Micro Precision Calibration Laboratory **Date:** 01/06/2021

Pre-test Calibration Check: 11:55AM **Post Test Calibration Check:** 6:33PM

Report Prepared By:

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6432 GRACELY DRIVE, CINCINNATI, OHIO 45233

FIELD SOUND TEST RECORD

Address: 2901 S. Church Street, Murfreesboro, TN Date: April 5, 2021 DAY: Monday

Test Location #: 9 Wind Speed: 5-10 Mph Direction: SW Temperature: 76.

Impulsive: Non-Impulsive: X Significant Low Freq Component: X

Test Was Conducted: On Property Line 5 Feet from Property Line

Land Use: Residential: Institutional: Business: X Recreational:

Stage: Baseline X Ongoing Construction Post-Construction

Duration of Sound Test: Start Time: 6:11:27PM End Time: 6:13:23PM

Test#: 210405-028 dB Levels: LA min: 58.4 LA eq: 73.3 LA max: 89.1 LA peak: 107.9

Estimated dB Levels Reaching

The Nearest Residence: : L_min: L_eq: L_max: L_peak:

Field Notes:

Mic placed 10' from main road traffic in front of Panda Express property

Sound Level Meter: Mfgr And Model: Bruel & Kjaer 2270 SN 2644861 with microphone

Annual Calibration By: Micro Precision Calibration Laboratory Date: 01/06/2021

Pre-test Calibration Check: 11:55AM Post Test Calibration Check: 6:33PM

Report Prepared By:

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6432 GRACELY DRIVE, CINCINNATI, OHIO 45233

FIELD SOUND TEST RECORD

Address: 2901 S. Church Street, Murfreesboro, TN Date: April 5, 2021 DAY: Monday

Test Location #: 10 Wind Speed: 1-5 Mph Direction: SW Temperature: 76.

Impulsive: Non-Impulsive: X Significant Low Freq Component:

Test Was Conducted: X On Property Line Feet from Property Line

Land Use: Residential: Institutional: Business: X Recreational:

Stage: Baseline X Ongoing Construction Post-Construction

Duration of Sound Test: Start Time: 6:17:20PM End Time: 6:18:24PM

Test#: 210405-030 dB Levels: LA_min: 47.5 LA_eq: 56.0 LA_max: 73.0 LA_peak: 85.7

Estimated dB Levels Reaching

The Nearest Residence: : L_min: L_eq: L_max: L_peak:

Field Notes:

Mic placed at back fence line of Panada Express property between buildings. Dog and .

loud muffler heard, but otherwise fairly quiet.

Sound Level Meter: Mfgr And Model: Bruel & Kjaer 2270 SN 2644861 with microphone

Annual Calibration By: Micro Precision Calibration Laboratory Date: 01/06/2021

Pre-test Calibration Check: 11:55AM Post Test Calibration Check: 6:33PM

Report Prepared By:

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Consultants in matters of Acoustics - Sound - Noise & Vibration Control - Impact Insulation



6432 GRACELY DRIVE, CINCINNATI, OHIO 45233

FIELD SOUND TEST RECORD

Address: 2901 S. Church Street, Murfreesboro, TN Date: April 5, 2021 DAY: Monday

Test Location #: 11 **Wind Speed:** 1-5 **Mph Direction:** SW **Temperature:** 76.

Impulsive: **Non-Impulsive:** X **Significant Low Freq Component:**

Test Was Conducted: X **On Property Line** **Feet from Property Line**

Land Use: Residential: **Institutional:** **Business:** X **Recreational:**

Stage: Baseline X **Ongoing Construction** **Post-Construction**

Duration of Sound Test: Start Time: 6:15:21PM **End Time:** 6:16:32PM

Test#: 210405-029 **dB Levels: LA_min:** 49.8 **LA_eq:** 55.1 **LA_max:** 64.3 **LA_peak:** 77.8

Estimated dB Levels Reaching

The Nearest Residence: : **L_min:** **L_eq:** **L_max:** **L_peak:**

Field Notes:

Mic placed at back left corner of Panda Express property. Traffic noise audible.

Sound Level Meter: Mfgr And Model: Bruel & Kjaer 2270 SN 2644861 with microphone

Annual Calibration By: Micro Precision Calibration Laboratory **Date:** 01/06/2021

Pre-test Calibration Check: 11:55AM **Post Test Calibration Check:** 6:33PM

Report Prepared By:

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Consultants in matters of Acoustics - Sound - Noise & Vibration Control - Impact Insulation



6432 GRACELY DRIVE, CINCINNATI, OHIO 45233

FIELD SOUND TEST RECORD

Address: 2901 S. Church Street, Murfreesboro, TN Date: April 9, 2021 DAY: Friday

Test Location #: 4 Wind Speed: 1-5 Mph Direction: SW Temperature:

Impulsive: Non-Impulsive: Significant Low Freq Component:

Test Was Conducted: X On Property Line Feet from Property Line

Land Use: Residential: Institutional: Business: X Recreational:

Stage: Baseline X Ongoing Construction Post-Construction

Duration of Sound Test: Start Time: 7:32:32PM End Time: 7:36:13PM

Test#: 210405-006 dB Levels: LA min: 46.0 LA eq: 53.8 LA max: 66.3 LA peak: 94.4

Estimated dB Levels Reaching

The Nearest Residence: : L_min: L_eq: L_max: L_peak:

Field Notes:

Mic placed behind existing Dunkin Donuts berm. One car placed order, not audible.

Loud car on the road during last minute of the test.

Sound Level Meter: Mfgr And Model: Bruel & Kjaer 2270 SN 2644861 with microphone

Annual Calibration By: Micro Precision Calibration Laboratory Date: 01/09/2021

Pre-test Calibration Check: 2:00PM Post Test Calibration Check: 8:00AM

Report Prepared By:

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6432 GRACELY DRIVE, CINCINNATI, OHIO 45233

FIELD SOUND TEST RECORD

Address: 2901 S. Church Street, Murfreesboro, TN Date: April 9, 2021 DAY: Friday

Test Location #: 4 Wind Speed: 1-5 Mph Direction: SW Temperature:

Impulsive: Non-Impulsive: Significant Low Freq Component:

Test Was Conducted: X On Property Line Feet from Property Line

Land Use: Residential: Institutional: Business: X Recreational:

Stage: Baseline X Ongoing Construction Post-Construction

Duration of Sound Test: Start Time: 7:42:55PM End Time: 7:45:54PM

Test#: 210405-009 dB Levels: LA min: 44.1 LA eq: 48.6 LA max: 52.4 LA peak: 78.0

Estimated dB Levels Reaching

The Nearest Residence: : L_min: L_eq: L_max: L_peak:

Field Notes:

Mic placed behind existing Dunkin Donuts berm. Quiet, no drive-thru.

Sound Level Meter: Mfgr And Model: Bruel & Kjaer 2270 SN 2644861 with microphone

Annual Calibration By: Micro Precision Calibration Laboratory Date: 01/09/2021

Pre-test Calibration Check: 2:00PM Post Test Calibration Check: 8:00AM

Report Prepared By:

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FIELD SOUND TEST RECORD

Address: 2901 S. Church Street, Murfreesboro, TN Date: April 9, 2021 DAY: Friday

Test Location #: 4 Wind Speed: 1-5 Mph Direction: SW Temperature:
Impulsive: Non-Impulsive: Significant Low Freq Component:

Test Was Conducted: X On Property Line Feet from Property Line

Land Use: Residential: Institutional: Business: X Recreational:

Stage: Baseline X Ongoing Construction Post-Construction

Duration of Sound Test: Start Time: 7:53:00PM End Time: 7:59:04PM

Test#: 210405-012 dB Levels: LA min: 43.1 LA eq: 47.3 LA max: 55.1 LA peak: 82.0

Estimated dB Levels Reaching

The Nearest Residence: : L_min: L_eq: L_max: L_peak:

Field Notes:

Mic placed behind existing Dunkin Donuts berm. Quiet, no drive-thru.

Sound Level Meter: Mfgr And Model: Bruel & Kjaer 2270 SN 2644861 with microphone

Annual Calibration By: Micro Precision Calibration Laboratory Date: 01/09/2021

Pre-test Calibration Check: 2:00PM Post Test Calibration Check: 8:00AM

Report Prepared By:

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FIELD SOUND TEST RECORD

Address: 2901 S. Church Street, Murfreesboro, TN Date: April 9, 2021 DAY: Friday

Test Location #: 8 **Wind Speed:** 1-5 **Mph Direction:** SW **Temperature:**
Impulsive: **Non-Impulsive:** **Significant Low Freq Component:**

Test Was Conducted: **On Property Line** **Feet from Property Line**

Land Use: Residential: **Institutional:** **Business:** **Recreational:**

Stage: Baseline **Ongoing Construction** **Post-Construction**

Duration of Sound Test: Start Time: 7:29:40PM **End Time:** 7:31:36PM

Test#: 210405-005 **dB Levels: LA min:** 49.9 **LA eq:** 53.7 **LA max:** 58.4 **LA peak:** 79.4

Estimated dB Levels Reaching

The Nearest Residence: : **L_min:** **L_eq:** **L_max:** **L_peak:**

Field Notes:

Mic placed at the back of the Panda Express property at fence line. Multiple cars in the Drive-thru, but no orders were audible.

Sound Level Meter: Mfgr And Model: Bruel & Kjaer 2270 SN 2644861 with microphone

Annual Calibration By: Micro Precision Calibration Laboratory **Date:** 01/09/2021

Pre-test Calibration Check: 2:00PM **Post Test Calibration Check:** 8:00AM

Report Prepared By:

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6432 GRACELY DRIVE, CINCINNATI, OHIO 45233

FIELD SOUND TEST RECORD

Address: 2901 S. Church Street, Murfreesboro, TN Date: April 9, 2021 DAY: Friday

Test Location #: 8 Wind Speed: 1-5 Mph Direction: SW Temperature:
Impulsive: Non-Impulsive: Significant Low Freq Component:

Test Was Conducted: On Property Line Feet from Property Line

Land Use: Residential: Institutional: Business: Recreational:

Stage: Baseline Ongoing Construction Post-Construction

Duration of Sound Test: Start Time: 7:39:56PM End Time: 7:42:01PM

Test#: 210405-008 dB Levels: LA min: 47.5 LA eq: 52.1 LA max: 62.0 LA peak: 71.8

Estimated dB Levels Reaching

The Nearest Residence: : L_min: L_eq: L_max: L_peak:

Field Notes:

Mic placed at the back of the Panda Express property at fence line. Quiet, no drive-thru.

Sound Level Meter: Mfgr And Model: Bruel & Kjaer 2270 SN 2644861 with microphone

Annual Calibration By: Micro Precision Calibration Laboratory Date: 01/09/2021

Pre-test Calibration Check: 2:00PM Post Test Calibration Check: 8:00AM

Report Prepared By:

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6432 GRACELY DRIVE, CINCINNATI, OHIO 45233

FIELD SOUND TEST RECORD

Address: 2901 S. Church Street, Murfreesboro, TN Date: April 9, 2021 DAY: Friday

Test Location #: 8 Wind Speed: 1-5 Mph Direction: SW Temperature:
Impulsive: Non-Impulsive: Significant Low Freq Component:

Test Was Conducted: On Property Line Feet from Property Line

Land Use: Residential: Institutional: Business: Recreational:

Stage: Baseline Ongoing Construction Post-Construction

Duration of Sound Test: Start Time: 7:50:47PM End Time: 7:51:51PM

Test#: 210405-011 dB Levels: LA min: 48.3 LA eq: 53.4 LA max: 60.1 LA peak: 73.7

Estimated dB Levels Reaching

The Nearest Residence: : L_min: L_eq: L_max: L_peak:

Field Notes:

Mic placed at the back of the Panda Express property at fence line. Quiet, no drive-thru.

Sound Level Meter: Mfgr And Model: Bruel & Kjaer 2270 SN 2644861 with microphone

Annual Calibration By: Micro Precision Calibration Laboratory Date: 01/09/2021

Pre-test Calibration Check: 2:00PM Post Test Calibration Check: 8:00AM

Report Prepared By:

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FIELD SOUND TEST RECORD

Address: 2901 S. Church Street, Murfreesboro, TN Date: April 9, 2021 DAY: Friday

Test Location #: 11 **Wind Speed:** 1-5 **Mph Direction:** SW **Temperature:**

Impulsive: **Non-Impulsive:** **Significant Low Freq Component:**

Test Was Conducted: **On Property Line** **Feet from Property Line**

Land Use: Residential: **Institutional:** **Business:** **Recreational:**

Stage: Baseline **Ongoing Construction** **Post-Construction**

Duration of Sound Test: Start Time: 7:25:29PM **End Time:** 7:28:18PM

Test#: 210405-004 **dB Levels: LA min:** 48.0 **LA eq:** 53.1 **LA max:** 59.0 **LA peak:** 77.9

Estimated dB Levels Reaching

The Nearest Residence: : **L_min:** **L_eq:** **L_max:** **L_peak:**

Field Notes:

Mic placed at the back left corner of the Panda Express Property. Quiet, only traffic.

Sound Level Meter: Mfgr And Model: Bruel & Kjaer 2270 SN 2644861 with microphone

Annual Calibration By: Micro Precision Calibration Laboratory **Date:** 01/09/2021

Pre-test Calibration Check: 2:00PM **Post Test Calibration Check:** 8:00AM

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FIELD SOUND TEST RECORD

Address: 2901 S. Church Street, Murfreesboro, TN Date: April 9, 2021 DAY: Friday

Test Location #: 11 **Wind Speed:** 1-5 **Mph** **Direction:** SW **Temperature:**

Impulsive: **Non-Impulsive:** **Significant Low Freq Component:**

Test Was Conducted: **On Property Line** **Feet from Property Line**

Land Use: Residential: **Institutional:** **Business:** **Recreational:**

Stage: Baseline **Ongoing Construction** **Post-Construction**

Duration of Sound Test: Start Time: 7:37:40PM **End Time:** 7:39:06PM

Test#: 210405-007 **dB Levels: LA min:** 47.7 **LA eq:** 51.3 **LA max:** 54.1 **LA peak:** 73.4

Estimated dB Levels Reaching

The Nearest Residence: : **L_min:** **L_eq:** **L_max:** **L_peak:**

Field Notes:

Mic placed at the back left corner of the Panda Express Property. Quiet, no drive-thru.

Sound Level Meter: Mfgr And Model: Bruel & Kjaer 2270 SN 2644861 with microphone

Annual Calibration By: Micro Precision Calibration Laboratory **Date:** 01/09/2021

Pre-test Calibration Check: 2:00PM **Post Test Calibration Check:** 8:00AM

Report Prepared By:

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6432 GRACELY DRIVE, CINCINNATI, OHIO 45233

FIELD SOUND TEST RECORD

Address: 2901 S. Church Street, Murfreesboro, TN Date: April 9, 2021 DAY: Friday

Test Location #: 11 **Wind Speed:** 1-5 **Mph Direction:** SW **Temperature:**
Impulsive: **Non-Impulsive:** **Significant Low Freq Component:**

Test Was Conducted: **On Property Line** **Feet from Property Line**

Land Use: Residential: **Institutional:** **Business:** **Recreational:**

Stage: Baseline **Ongoing Construction** **Post-Construction**

Duration of Sound Test: Start Time: 7:47:12PM **End Time:** 7:49:59PM

Test#: 210405-010 **dB Levels: LA min:** 48.6 **LA eq:** 54.7 **LA max:** 61.9 **LA peak:** 76.1

Estimated dB Levels Reaching

The Nearest Residence: : **L_min:** **L_eq:** **L_max:** **L_peak:**

Field Notes:

Mic placed at the back left corner of the Panda Express Property. One car in the drive-
thru was not audible. Two airplanes, noisy truck, and motorcycle shifting in background.

Sound Level Meter: Mfgr And Model: Bruel & Kjaer 2270 SN 2644861 with microphone

Annual Calibration By: Micro Precision Calibration Laboratory **Date:** 01/09/2021

Pre-test Calibration Check: 2:00PM **Post Test Calibration Check:** 8:00AM

Report Prepared By:

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Memo**Re: Drive-Thru Sound Pressure Levels From the Menu Board or Speaker Post**

The sound pressure levels from the menu board or speaker post are as follows:

1. Sound pressure level (SPL) contours (A weighted) were measured on a typical HME SPP2 speaker post. The test condition was for pink noise set to 84 dBA at 1 foot in front of the speaker. All measurements were conducted outside with the speaker post placed 8 feet from a non-absorbing building wall and at an oblique angle to the wall. These measurements should not be construed to guarantee performance with any particular speaker post in any particular environment. They are typical results obtained under the conditions described above.
2. The SPL levels are presented for different distances from the speaker post:

Distance from the Speaker (Feet)	SPL (dBA)
1 foot	84 dBA
2 feet	78 dBA
4 feet	72 dBA
8 feet	66 dBA
16 feet	60 dBA
32 feet	54 dBA

3. The above levels are based on factory recommended operating levels, which are preset for HME components and represent the optimum level for drive-thru operations in the majority of the installations.

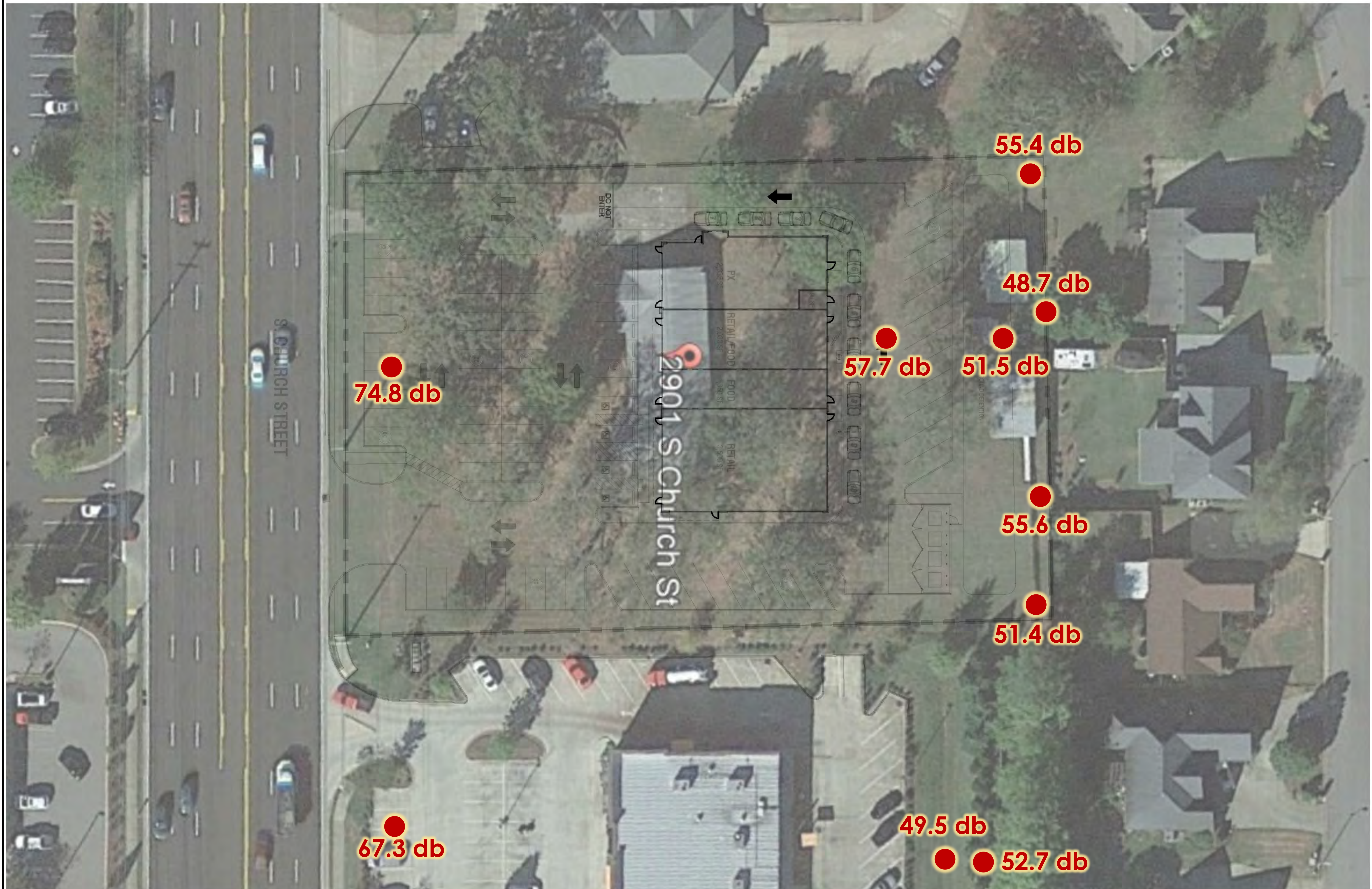
Also, HME incorporates automatic volume control (AVC) into many of our Systems. AVC will adjust the outbound volume based on the outdoor, ambient noise level. When ambient noise levels naturally decrease at night, AVC will reduce the outbound volume on the system. See below for example:

Distance from Outside Speaker	Decibel Level of standard system with 45 dB of outside noise <u>without</u> AVC	Decibel level of standard system with 45 dB of outside noise <u>with</u> AVC active
1 foot	84 dBA	60 dBA
2 feet	78 dBA	54 dBA
4 feet	72 dBA	48 dBA
8 feet	66 dBA	42 dBA
16 feet	60 dBA	36 dBA

If there are any further questions regarding this issue please contact HME customer service at 1-800-848-4468.

Thank you for your interest in HME's products.

12:00 PM Average Noise Level



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project title

CFT NV DEVELOPMENTS, LLC
 2910 CHURCH STREET
 MURFREESBORO, TN 37127

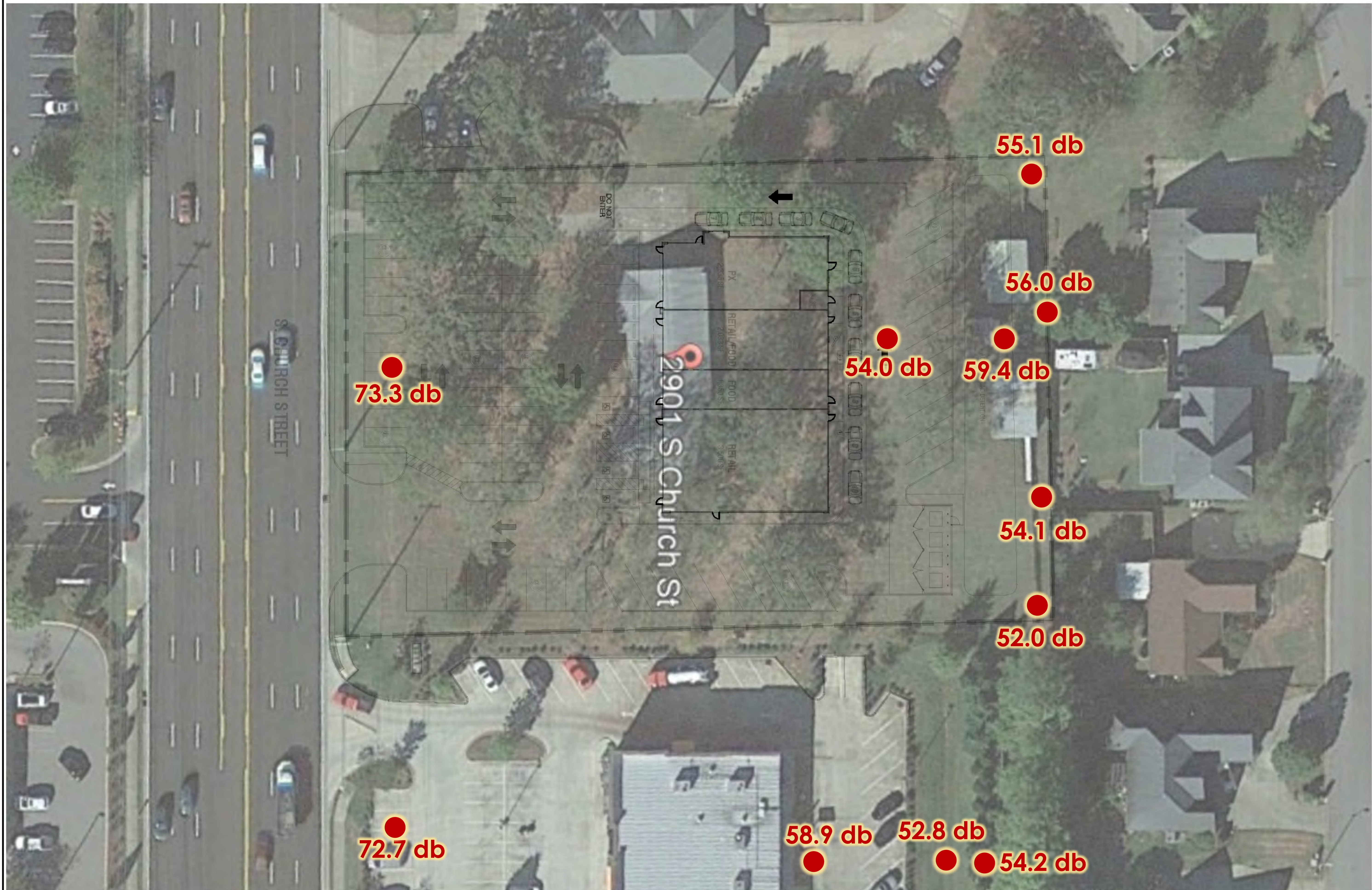
project number
 20045 0036
 drawing issuance
 SPECIAL USE PERMIT 3.25.21
 drawing revisions
 No. Description Date

professional seal

drawing title

drawing number

6:00 PM Average Noise Level



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PROJECT TITLE: PROJECT TITLE

CFT NV DEVELOPMENTS, LLC
 2910 CHURCH STREET
 MURFREESBORO, TN 37127

project number: 20045.0036
 drawing issuance: SPECIAL USE PERMIT 3.25.21
 drawing revisions:

professional seal

drawing title
 drawing number

7:30 PM Average Noise Level



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PROJECT TITLE

CFT NV DEVELOPMENTS, LLC
 2910 CHURCH STREET
 MURFREESBORO, TN 37127

project number
 200-45-0036
 drawing issuance
 SPECIAL USE PERMIT 3.25.21
 drawing revisions

professionalseal

drawing title

drawing number



April 12, 2021

City of Murfreesboro Board of Zoning Appeals
111 W. Vine Street
Murfreesboro, TN 37130

To Whom it May Concern:

Please let this letter serve as a formal request for a Special Use Permit for the proposed multi-tenant building at 2901 South Church Street, APN: 125-010.00-000. The proposed building would have 4 tenants and total 9,300 SF. One tenant, Panda Express, will have a drive-thru that does not meet the 200 foot separation between its ordering elements and the properties to the east, which are zoned PRD. Criteria for approval and our responses are below.

- 1. that the proposed building or use will not have a substantial or undue adverse effect upon adjacent property, the character of the neighborhood, traffic conditions, parking, utility facilities, and other matters affecting the public health, safety, and general welfare;**

The property has been recently zoned CF, Commercial Fringe. A multitenant building, with tenants such as retail, offices and restaurants, is a permitted use for the zoning classification. It will be self-sufficient in terms of parking and utilities, and be consistent with the commercial area along South Church Street. There will be no substantial adverse effects to adjacent properties in terms of traffic, public health, safety or general welfare with the mitigation efforts outlined in number 6 below.

- 2. that the proposed building or use will be constructed, arranged, and operated so as to be compatible with the immediate vicinity and not to interfere with the development and use of adjacent property in accordance with the applicable district regulations;**

The building is designed to face west onto South Church Street, consistent with neighboring parcels. It will meet all City of Murfreesboro design guidelines and be a compatible addition to the area. The site will be self sufficient within the property lines and cause no interference to adjacent properties with the mitigation efforts proposed.

3. **that the proposed buildings or use will be served adequately by essential public facilities and services such as highways, streets, parking spaces, drainage structures, refuse disposal, fire protection, water and sewers; or that the persons or agencies responsible for the establishment of the proposed use will provide adequately for such services;**

The parcel is currently adequately served by all essential utilities and infrastructure. The proposed building is a higher intensity than the existing single-family residence, and the utilities will be designed to ensure the continuation of adequate service. The site will be utilizing above-ground and underground detention to ensure adequate drainage, and the tenants will be provided with the refuse disposal and all required fire protection.

4. **that the proposed building or use will not result in the destruction, loss, or damage of any feature determined by the BZA to be of significant natural, scenic, or historic importance; and,**

The existing site has not been determined to contain any significant natural, scenic or historic features, and thus the building will not be of any disturbance.

5. **that the proposed building or use complies with all additional standards imposed on it by the particular provision of this section authorizing such use.**

The proposed development intends to comply with all additional standards imposed by the City of Murfreesboro Planning & Zoning Department, subject to the approval of the special use requested.

6. **Drive-up windows shall be permitted only when developments with such are located a minimum distance of two hundred feet from any property line of land zoned in the RS, RD, RS-A, or PRD classification or the residential portion of land zoned in the PUD classification. The required distance shall be measured from the closest part of the drive-up window use including the queuing lanes to the land zoned in the RS, RD, RS-A, PRD or PUD (if applicable) classification. Upon application in the manner described in Section 8 of this article, the Board of Zoning Appeals may approve separations less than those required by subsection (B)(2) as a special use for developments having drive-up windows. In making application to the BZA, the applicant must demonstrate that the drive-up window and associated queuing lane, menu boards, on-site circulation, and ordering system will not have an adverse impact on the property zoned RS, RD, RS-A, or PRD or the residential portion of land zoned in the PUD classification. The BZA may consider any factor having a bearing on the impact of such use on the residential uses including, but not limited to, the actual distance of separation, the site design and arrangement, proposed screening and buffering, the intended use, orientation of the structures and site elements, traffic conditions, hours of operation, and sounds and smells associated with the intended use, if any. As with any special use, the BZA may place appropriate conditions upon its approval to assure compatibility of the proposed use with the property in the RS, RD, RS-A, or PRD classifications or the residential portion of land zoned in the PUD classification**

As designed, the drive-thru lane of this new development will be 83 feet from the nearest residentially zoned property line, and the audible order box is 94 feet from that same property line. The layout of this site and the location of drive-thru elements was designed to be consistent with the area featuring the majority of the parking close to South Church Street and the building towards the rear of the parcel. The site is also consistent with the neighboring property to the south, 2943 South Church Street, with the majority of the parking occurring along South Church Street, and a drive-thru and single row of parking behind the building, placing the buildings in almost identical locations in relation to South Church Street.

The east property line of the site features 38 densely staggered evergreen trees that wrap around to the north property line as well. These, in conjunction with an earthen berm, opaque fence, detention pond and another row of continuous shrubbery along the parking, provide an intense visual and audible buffer between the subject property and adjacent parcels.

We had a sound study conducted that showed the primary cause of noise pollution to adjacent properties was a lack of a physical buffer between properties and South Church Street as well as a lack of buffer between the properties and 2943 South Church Street, which features a drive-thru speaker system as well. The study showed that not only would Panda Express's drive-thru not cause additional noise pollution, but the proposed building and buffers would reduce current noise levels.

The speaker system that will be used features Automatic Volume Control, which will automatically reduce the volume level when ambient noise is low. This is especially useful during times such as dinner, when noise from South Church Street has decreased but the drive-thru is still in use. The order box volume decreases to less than 50 decibels at just 4 feet from the box, bringing it down to a level which cannot overpower the existing ambient noise. This means at just a few feet from the order box, the speaker drops to a volume that cannot be heard, eliminating any possibility the sound could travel to the eastern property line or any distance past it.

Refuse is typically picked up twice weekly, which has proved adequate to control any odor. However, frequency of pickup can be increased if necessary. It will also be requested that refuse pickup happen at a reasonable hour, such as between 9:00 and 10:00 A.M. Panda Expresses are designed with proper roof ventilation of cooking equipment, so as to not cause any unwelcome odors to neighboring properties.

The Panda Express that will utilize the drive-thru will be open 7 days a week, with hours ranging between 10:30 AM and 9:30 PM. It is expected that the Panda Express will serve 400 customers each day, with 50% utilizing the drive-thru.

In conclusion, it is our belief that the proposed distance of our drive-thru elements, in conjunction with the landscaping and microphone location listed above, is sufficient to not only have no negative effects on nearby residences, but actually improve existing noise conditions. Thank you for your consideration and we look forward to discussing this with you.

Sincerely,

Henry Klover
Proprietor
H.C. Klover Architects

CC: Panda Express, Inc. & CFT Developments, LLC

Attached Files: Application, Submittal Package (site plan, landscape plan & elevations), Sound Study



Date Signed APR 12 2021

PROJECT CONTACTS

DEVELOPER:
 PANDA EXPRESS
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 ROSEMEAD, CALIFORNIA 91770
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 FAX: (626) 372-8288

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 CROWE - WHEELER AND ASSOCIATES
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 SCOTTSVILLE, KY 42164
 270-393-8500

GAS COMPANY
 ATMOS ENERGY

TELEPHONE COMPANY
 AT&T

WATER DEPARTMENT/AGENCY
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PLANNING AND ZONING AGENCY
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LANDSCAPE ARCHITECT:
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 PH. 615.469.1222

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OWNER:
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 ARNOLD CONSULTING
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 CARL PEAS
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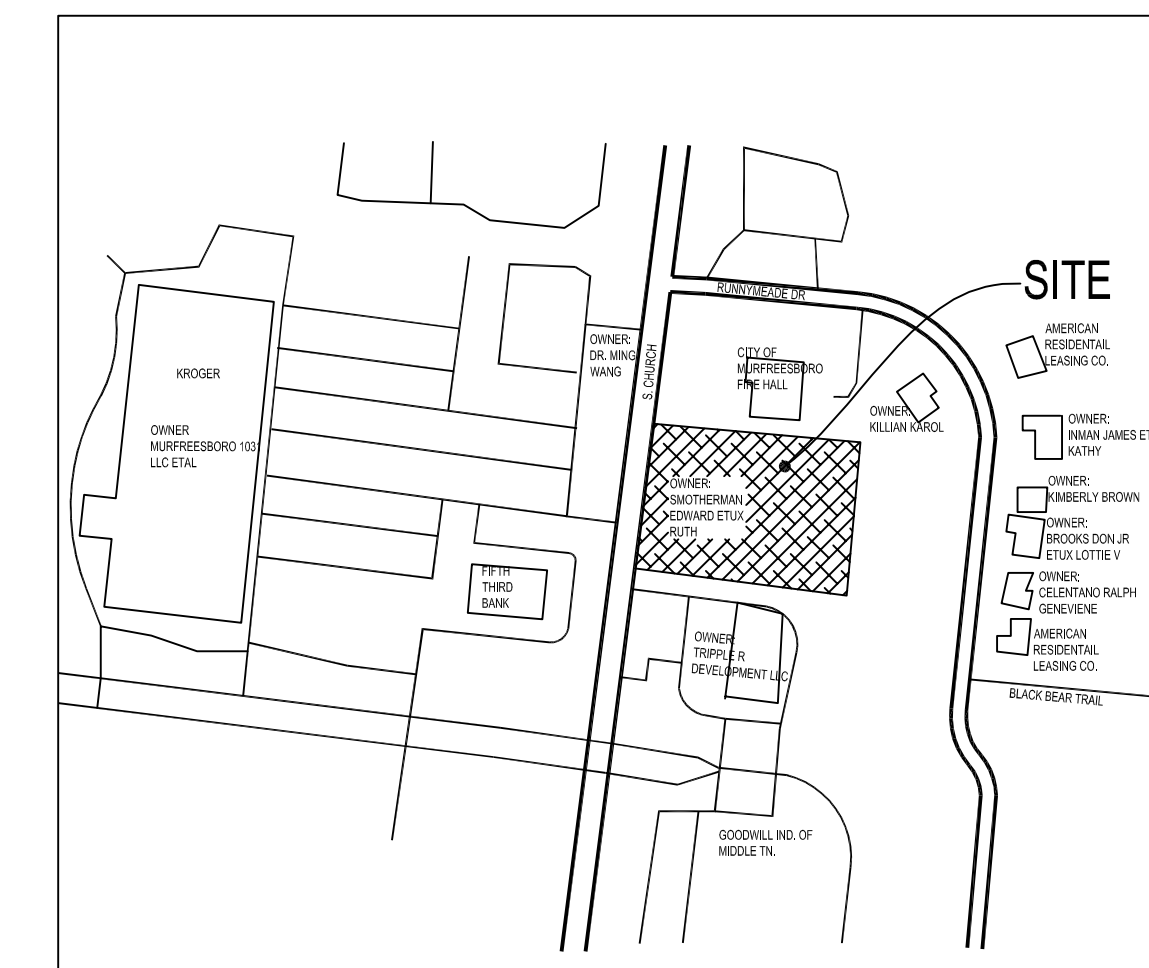
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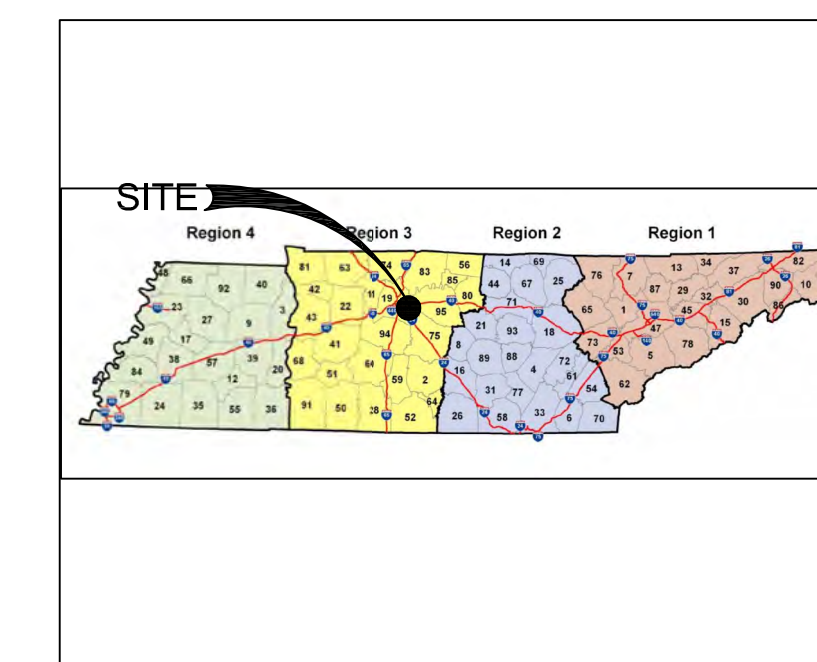
SPECIAL PERMIT FOR



PANDA EXPRESS
 2901 S. CHURCH STREET,
 MURFREESBORO, TN
 37127

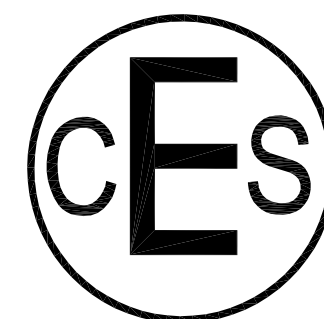


LOCATION MAP
 NOT TO SCALE



REGIONAL MAP
 NOT TO SCALE

PREPARED FOR:
 PANDA EXPRESS INC.
 1683 WALNUT GROVE AVE.
 ROSEMEAD, CALIFORNIA 91770
 PHONE: 626.799.9898
 FAX: 626.372.8288



Civil Engineering Services

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 Fairview, Tennessee fax: (615) 523-8865
 37062 e-mail: ray@civilengineeringservices.net

Engineering, Land Planning, and Environmental

SHEET INDEX			
NO.	TITLE	ISSUE - S/RECAL (PERMIT) 02/08/2021	
C01.0	CIVIL COVER SHEET	●	
C02.1	SITE PLAN	●	
L01.0	LANDSCAPE PLAN	●	
L01.1	LANDSCAPE PLAN	●	
A-100	BUILDING ELEVATIONS 1	●	
A-101	BUILDING ELEVATIONS 2	●	

SITE DATA TABLE

COUNTY:
 RUTHERFORD

ZONING:
 CF

SITE USE:
 RESTAURANT, DRIVE-IN

REQUIRED BUILDING SETBACKS:
 FRONT (E) = 42'
 REAR (W) = 25'
 SIDE (N) = 10'
 SIDE (S) = 10'

SITE USE: RESTAURANT, DRIVE-IN
 1 SPACE FOR EACH 100 SQUARE FEET OF F.A. OR 1 SPACE FOR EVERY 2 SEATS PROVIDED ON THE PREMISES, WHICHEVER IS GREATER.

SEATS: 68 = 34 SPACES
 F.A. 2,300 SF = 23 SPACES
 PARKING SPACES REQUIRED = 34
 PARKING SPACES = 82
 HANDICAP SPACES = 2
 TOTAL SPACES = 82
 BUILDING HEIGHT: 22' 6" TALL (1 STORY TALL)

PARKING
 RESTAURANT: 1 SPACE PER 100 SQFT OF FLOOR AREA OR 1 SPACE PER 2 SEATS.
 RETAIL: 1 SPACE PER 200 SQFT OF FLOOR AREA
 PARKING REQUIRED = 64
 TOTAL REGULAR STALLS PROVIDED PANDA EXPRESS = 43
 HANDICAP = 2

REQUIRED PARKING SETBACKS:
 FRONT = 8'
 REAR = 25'
 SIDE (N) = 5'
 SIDE (S) = 5'

FLOOD HAZARD:
 F.I.R.M. MAP NO. 47149C0270H, DATED JANUARY 5, 2007. ZONE "X"



PANDA EXPRESS, INC.
 1683 Walnut Grove Ave.
 Rosemead, California
 91770
 Telephone: 626.799.9898
 Facsimile: 626.372.8288

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REVISIONS:

NO.	DATE	DESCRIPTION

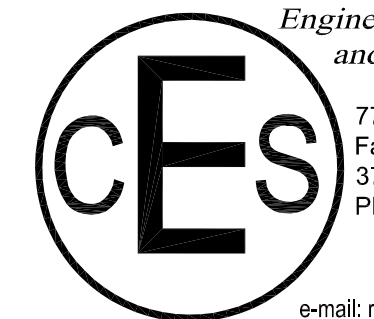
ISSUE DATE:

XXXX	XX-XX-XXXX

DRAWN BY: PTD

PANDA PROJECT #: - XX-XX-XXXX
 PANDA STORE #: - XXXXX
 PARTNER #: - 20-291366.3

Civil Engineering Services
Engineering, Land Planning, and Environmental



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PANDA EXPRESS

2901 S. CHURCH ST.
 MURFREESBORO, TN. 37127

TRUE WARM & WELCOME 2300-2020

COVER SHEET

C01.0

SITE DATA TABLE

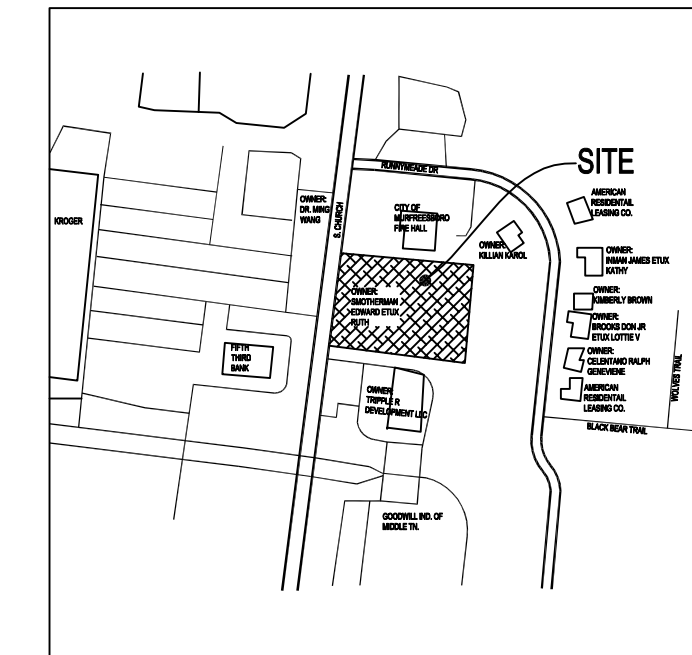
- ZONING:**
CF - COMMERCIAL FRINGE DISTRICT
- REQUIRED BUILDING SETBACKS:**
FRONT (W) = 42'
REAR (E) = 25'
SIDE (N) = 10'
SIDE (S) = 10'
- SITE ACREAGE:**
PANDA EXPRESS = 66,956 SF / 1.537 ACRES
- FLOOR AREA RATIO:**
PANDA EXPRESS = 2,335 SF BLDG / SITE AREA 66,956 = 3.487%
GROSS FAR = 8,883 SF BLDG / SITE AREA 66,956 = 10.28%
PROPOSED SITE IMPERVIOUS SURFACE RATIO
TOTAL SITE = 66,956 SF
PAVEMENT/SIDEWALKS = 41,657 SF
BUILDING = 8,883 SF
TOTAL IMPERVIOUS = 48,540 SF
TOTAL PERVIOUS = 18,416 SF
PERCENT IMPERVIOUS = 72.50%
- PARKING**
RETAIL: 1200 SF
RESTAURANT: 1/100 SF OR 1/2 SEATS, WHICHEVER IS GREATER
MEDICAL/DENTAL: 2/EXAM ROOM + 1/EMPLOYEE OR 1/200 SF IF ROOMS/EMPLOYEES UNKNOWN
PANDA EXPRESS - 2,335 SF/56 SEATS = 28 SPACES
RETAIL - 2,033 SF = 8 SPACES
RESTAURANT - 1,350 SF/SEATS UNKNOWN = 14 SPACES
MEDICAL/DENTAL OFFICE - 3,500 SF/EXAM ROOMS UNKNOWN = 18 SPACES
TOTAL REQUIRED NON-ADA PARKING: 68
TOTAL PROVIDED NON-ADA: 75
TOTAL PARKING PROVIDED: 79 (75 STANDARD, 4 ADA)
- REQUIRED PARKING SETBACKS:**
FRONT (W) = 8'
REAR (E) = 25'
SIDE (N) = 15'
SIDE (S) = 15'
- FLOOD HAZARD:**
F.I.R.M. MAP NO. 47149C0270H, DATED JANUARY 5, 2007

PANDA EXPRESS STANDARD NOTES

1. THE GEOTECHNICAL INVESTIGATION PREPARED BY TERRACON, DATED 09/20/2020 AND ANY SUBSEQUENT ADDENDUMS IS CONSIDERED PART OF THE CONTRACT DOCUMENTS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE THE REPORT'S RECOMMENDATIONS AND FINDINGS WITH THE OWNER, ENGINEER AND ARCHITECT PRIOR TO CONSTRUCTION. IMPLEMENTATION OF THE REPORT'S RECOMMENDATIONS MAY REQUIRE THE CONTRACTOR TO PERFORM ADDITIONAL WORK NOT SHOWN ON THE CIVIL PLANS INCLUDING BUT NOT LIMITED TO EXCAVATION, REMEDIATION, DEWATERING, COMPACTION ETC.
2. CONTRACTOR SHALL COORDINATE AND VERIFY LOCATION OF ALL SIGNAGE WITH OWNER PRIOR TO CONSTRUCTION.
3. CONTRACTOR SHALL COORDINATE AND ADJUST LOCATION OF LOOP DETECTORS TO AVOID UTILITY CONFLICTS PRIOR TO CONSTRUCTION.
4. CONTRACTOR SHALL ENSURE 100% COVERAGE OF ALL LANDSCAPED AREAS WITHIN LIMITS OF WORK, INCLUDING POTENTIAL OFFSITE AREAS. COVERAGE SHALL INCLUDE BOTH LANDSCAPING AND IRRIGATION.

MURFREESBORO STANDARD NOTES

1. FOR ANY WORK PROPOSED IN THE PUBLIC RIGHT-OF-WAY, THE FOLLOWING NOTE SHOULD BE ADDED TO THE PLANS: "CONTRACTOR TO COORDINATE WITH THE TRAFFIC ENGINEER IN THE CITY TRANSPORTATION DEPARTMENT PRIOR TO COMMENCEMENT OF WORK IN THIS AREA TO AVOID DAMAGE TO TRAFFIC SIGNAL DEVICES."
2. THE FOLLOWING STANDARD NOTE SHALL APPEAR ON ALL SITE PLANS THAT ARE NOT EXEMPT FROM PROVIDING A STORMWATER MANAGEMENT PLAN: "A STORMWATER MANAGEMENT PLAN DEMONSTRATING THAT THE SITE PROVIDES FOR TREATMENT OF THE WATER QUALITY VOLUME AND PROVIDES FOR MANAGEMENT OF THE STREAMBANK PROTECTION VOLUME MUST BE PROVIDED."
3. THE FOLLOWING STANDARD NOTE SHALL APPEAR ON ALL SITE PLANS: "AN ENGINEER'S CERTIFICATION OF THE CONSTRUCTION OF THE STORMWATER MANAGEMENT FACILITIES MUST BE PROVIDED TO THE CITY ENGINEER PRIOR TO ISSUANCE CERTIFICATE OF OCCUPANCY."
4. THE FOLLOWING STANDARD NOTE SHALL APPEAR ON ALL SITE PLANS: "A STORMWATER FEE CREDIT APPLICATION MUST BE SUBMITTED PRIOR TO THE ISSUANCE OF A BUILDING PERMIT."
5. THE FOLLOWING STANDARD NOTE SHALL APPEAR ON ALL SITE PLANS: "A STORMWATER FACILITIES OPERATION AND MAINTENANCE PLAN AND A STORMWATER FACILITIES MAINTENANCE AGREEMENT MUST BE SUBMITTED PRIOR TO ISSUANCE OF A BUILDING PERMIT."
6. THE FOLLOWING STANDARD NOTE SHALL APPEAR ON ALL SITE PLANS: "THE STORMWATER FACILITIES MAINTENANCE AGREEMENT MUST BE RECORDED PRIOR TO CERTIFICATE OF OCCUPANCY."



LOCATION MAP
NOT TO SCALE

PROPOSED SITE LEGEND

- (8) PARKING STALL COUNT - SEE PLANS
- LIGHT DUTY CONCRETE PAVING - SEE DETAIL SHEET SECTION (C03.1)
- HEAVY DUTY CONCRETE PAVING - SEE DETAIL SHEET SECTION (C03.1)
- CONCRETE SIDEWALK - SEE DETAIL SHEET (C03.1)
- CONCRETE PAVING AT DUMPSTER ENCLOSURE, DRIVE THRU, AND PARKING ALONG BUILDING PER GEOTECHNICAL REPORT
- CONCRETE PAVERS - SEE DETAIL SHEET SECTION (C03.2)
- ♿ HANDICAP PARKING
- DIRECTIONAL ARROWS
- PROPOSED CURB AND GUTTER AT CONCRETE - MONOLITHIC AT CONCRETE PAVEMENT - SEE DETAIL SHEET (C03.1)
- LIGHT POLE - SEE PHOTO METRIC PLAN - SEE LIGHT POLE BASE ON DETAIL SHEET (C03.1)

GENERAL NOTES

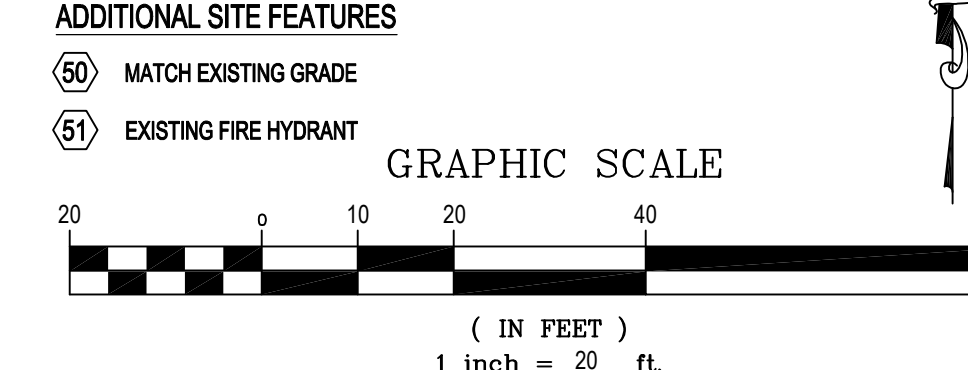
SEE NOTES ON SHEET C01.1

SITE KEY NOTES:

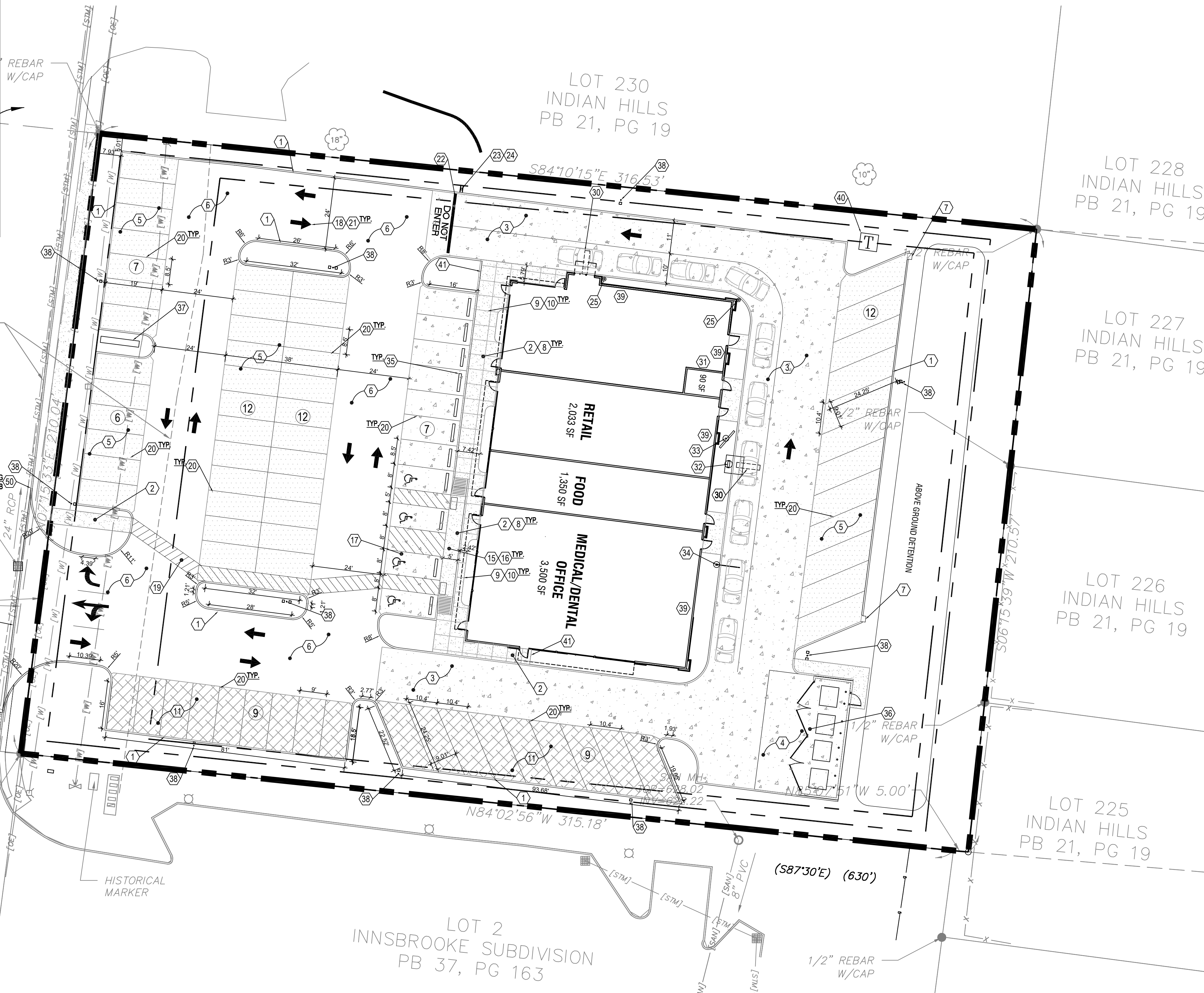
- PAVEMENT AND CURBING**
- 1 PROVIDE CURB AND GUTTER AT ASPHALT - MONOLITHIC CURB AT CONCRETE PAVEMENT - SEE DETAIL SHEET (C03.1)
 - 2 PROVIDE CONCRETE SIDEWALKS PER DETAIL SHEET (C03.2) - PROVIDE CONCRETE SIDEWALK WITH INTEGRAL CURB AT BUILDING AND PARKING PER DETAIL SHEET (C03.2)
 - 3 HEAVY DUTY CONCRETE PAVING AT DRIVE THRU ISLE - SEE DETAIL SHEET (C03.1) & GEO-TECH REPORT (GRAY COLOR, LIGHT BROOM FINISH)
 - 4 NEW HEAVY DUTY CONCRETE APRON AT DUMPSTER ENCLOSURE - SEE ARCHITECTURAL DETAIL SHEET - SEE DETAIL SHEET (C03.1)
 - 5 LIGHT DUTY ASPHALT PAVING - SEE DETAIL SHEET (C03.2) & GEO-TECH REPORT
 - 6 HEAVY DUTY ASPHALT PAVING - SEE DETAIL SHEET (C03.2) & GEO-TECH REPORT
 - 7 PROVIDE 2' WIDE CURB CUT - SEE SHEET (C03.2)
 - 8 SEALED CONC. SIDEWALK (AQUA MIX SEALERS CHOICE GOLD), CONCRETE TO BE LIGHT BROOM TEXTURE FINISH. PROVIDE UNDER SLAB TREATMENT PER SOIL REPORT. PROVIDE POSITIVE DRAINAGE AWAY FROM BLDG. AND ALL SIDE WALKS.
 - 9 EXPANSION JOINT - SEE SOILS REPORT FOR SPACING - SEE DETAIL SHEET (C03.1)
 - 10 CONTROL JOINTS - SEE SOILS REPORT FOR SPACING - SEE DETAIL SHEET (C03.1)
 - 11 PERVIOUS PAVERS - SEE DETAIL SHEET (C03.2)

- PAVEMENT STRIPING / ADA FEATURES / TRAFFIC SIGNAGE**
- 15 ADA ACCESSIBLE RAMP AT HANDICAP PARKING STALLS - SEE GRADING PLAN FOR ELEVATIONS - SEE HANDICAP PARKING ON DETAIL SHEET (C03.1)
 - 16 ADA DETECTABLE WARNING AT EDGE OF PAVEMENT - SEE HANDICAP PARKING DETAIL ON DETAIL SHEET (C03.1)
 - 17 HANDICAP AND VAN ACCESSIBLE PARKING LAYOUT, SIGNAGE, AND STRIPING - SEE DETAIL SHEET (C03.1)
 - 18 ALL SITE DIRECTIONAL SIGNAGE, PAVEMENT STRIPING AND MARKINGS SHALL BE COORDINATED WITH PRG'S PROJECT MANAGER.
 - 19 4" WIDE DIAGONAL STRIPES PAINTED WHITE AT 2 FT. O.C. PER MUTCD SPECS.
 - 20 4" WIDE PARKING STRIPE PAINTED WHITE PER MUTCD SPECS.
 - 21 TRAFFIC ARROW PAINTED WHITE - SEE DETAIL SHEET (C03.1)
 - 22 STOP BAR PAINTED WHITE PER MUTCD SPECS.
 - 23 *STOP SIGN PER MUTCD/LOCAL MUNICIPALITY SPECIFICATIONS
 - 24 DO NOT ENTER SIGN PER MUTCD / LOCAL SPECS.
 - 25 BOLLARD PLAN - SEE DETAIL (C03.2)

- PANDA EXPRESS SITE FEATURES**
- 30 DRIVE THRU LANE SENSOR LOOP SEE DETAIL - SEE ARCH DETAIL SHEET
 - 31 NEW PAINTED SWITCHGEAR LOCATION - SEE ELECTRICAL PLANS
 - 32 ORDER CONFIRMATION BOARD - SEE ARCH DETAIL SHEET
 - 33 DRIVE THROUGH MENU BOARD-INSTALLED BY GC. VERIFY WITH PANDA P.M. - SEE ARCH DETAIL SHEET
 - 34 CLEARANCE BAR INSTALLED BY SIGN VENDOR - RE: ELECTRICAL DRAWING FOR REQUIREMENTS, G.C. TO COORDINATE LOCATION WITH PRG P.M.
 - 35 WHEEL STOP - CHN TECHNOLOGIES, "PARK-IT" # PARKING CURB #16201R (BLACK AND YELLOW) OR OWNER APPROVED EQUAL
 - 36 TRASH ENCLOSURE, CONFIRM BIN SIZE WITH LOCAL WASTE MANAGEMENT COMPANY. (TYP. 6 YARD BIN) - SEE ARCH DETAIL SHEET
 - 37 LOCATION OF POLE MOUNTED SIGN (SEE SIGN DESIGN BY OTHERS)
 - 38 LIGHT POLE - SEE PHOTO METRIC PLAN - SEE LIGHT POLE BASE ON DETAIL SHEET (C03.1)
 - 39 TIE TO ROOF DRAIN COLLECTOR FROM BUILDING - SEE PLUMBING PLANS FOR UNDERGROUND CONNECTION AT BUILDING - SEE ELEVATION THIS SHEET - OVERFLOW PIPE FROM ROOF DRAIN TO DAYLIGHT UNDER CONCRETE FLATWORK AT FACE OF CURB - SEE PLUMBING PLANS FOR LOCATION
 - 40 APPROXIMATE LOCATION OF PAD MOUNTED TRANSFORMER PAD PER SERVICE PROVIDER SPECS. - COORDINATE WITH SERVICE PROVIDER PRIOR TO CONSTRUCTION
 - 41 EDGE OF CONCRETE SIDEWALK AT PLANTER BED - SEE LANDSCAPE PLAN (L01.0)



FLOOD STATEMENT
A FIELD SURVEY WAS NOT CONDUCTED TO DETERMINE THE FLOOD ZONE AREAS. ANY FLOOD ZONE LINES DISTINGUISHING BETWEEN FLOOD AREAS ARE GRAPHICALLY PLOTTED FROM FEMA FLOOD INSURANCE RATE MAPS (FIRM). A FLOOD ELEVATION CERTIFICATE MAY BE NEEDED TO DETERMINE OR VERIFY THE LOCATION OF THE FLOOD AREAS. THE SUBJECT PROPERTY'S COMMUNITY DOES PARTICIPATE IN THE PROGRAM. IT IS DETERMINED THAT THE SUBJECT PROPERTY RESIDES IN THE FOLLOWING FLOOD ZONE(S) X AS DETERMINED BY OR SHOWN BY FIRM COMMUNITY PANEL NO. 47149C0270H DATED 01/05/2007 AND IS NOT IN A FLOOD ZONE AREA. THE FLOOD INSURANCE RATE PROGRAM WAS CONTACTED ON 9-24-2020 BY EMAIL (www.fema.gov)



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1683 Walnut Grove Ave.
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91770
Telephone: 626.799.9898
Facsimile: 626.372.8288

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REVISIONS:

NO.	DESCRIPTION	DATE

ISSUE DATE:
CITY COMMENTS 04-07-21

DRAWN BY: PTD

PROJECT #: 20045.003
PANDA STORE #:
PARTNER #: 20-291366.3



Civil Engineering Services
Engineering, Land Planning,
and Environmental

CEs 7705 Spicer Farm Lane
Fairview, Tennessee
37062
Phone: (615) 533-0401
e-mail: ray@civilingineeringservices.net

PANDA EXPRESS
2901 S. CHURCH ST.
MURFREESBORO, TN. 37127

TRUE WARM & WELCOME 2300-2020

SITE PLAN
C02.1



*CITY OF MURFREESBORO WILL NOT PROVIDE SOLID WASTE SERVICE TO NON-SINGLE-FAMILY RESIDENTIAL DEVELOPMENTS.



Beauty | Economy | Sustainability

Kevin Reff, RLA
KITA Sustainable Designs, LLC
2101 Masters Drive
Springfield, TN 37172
(615) 469-1222 Ofc.
(615) 594-7333 Cell.
kreff@kitadesign.biz

Any utility structure, light poles, sign, or other feature may not be added to any required landscape island in such a manner that would displace the required element(s) (trees, shrubs, etc.)

ANY SUBSTITUTIONS MUST BE SUBMITTED TO THE CITY OF MURFREESBORO, FOR REVIEW AND APPROVED PRIOR TO PLANTING. CONTACT BRAD BARBEE AT (615) 893-6441



PANDA EXPRESS LANDSCAPE NOTES:

- WHEN APPLICABLE, IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROTECT EXISTING TREES TO REMAIN. NO HEAVY EQUIPMENT SHOULD BE PERMITTED TO OPERATE OR BE STORED, NOR ANY MATERIALS TO BE HANDLED OR STORED, WITHIN THE DRIP LINES OF TREES OUTSIDE THE LIMIT OF GRADING.
- THE QUANTITIES INDICATED ON THE PLANT LIST AND PLAN ARE PROVIDED FOR THE BENEFIT OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIS OWN QUANTITY CALCULATIONS AND THE LIABILITY WHICH PERTAINS TO THOSE QUANTITIES AND TO ANY RELATED CONTRACT DOCUMENTS AND/OR PRICE QUOTATIONS. QUESTIONS SHOULD BE DIRECTED TO THE LANDSCAPE ARCHITECT.
- ALL PLANT MATERIALS SHALL BE NURSERY GROWN, GRADE "A" QUALITY, UNLESS OTHERWISE NOTED AND SHALL COMPLY WITH THE AMERICAN STANDARD FOR NURSERY STOCK: ANSI Z60.1, LATEST EDITION, FOR SIZE AND QUALITY.
- NO SUBSTITUTIONS AS TO TYPE, SIZE, OR SPACING OF PLANT MATERIALS SPECIFIED ON THIS PLAN MAY BE MADE WITHOUT THE APPROVAL OF THE LANDSCAPE ARCHITECT. KITA SUSTAINABLE DESIGNS, LLC (615) 469-1222.
- THE CONTRACTOR IS TO VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES AND TO PROTECT UTILITIES THAT ARE TO REMAIN. THE CONTRACTOR SHALL REPAIR ANY DAMAGE ACCORDING TO LOCAL STANDARDS AT THE CONTRACTOR'S EXPENSE. COORDINATE ALL CONSTRUCTION WITH THE APPROPRIATE UTILITY COMPANY.
- STABILIZE ALL DISTURBED AREAS WITH SOD. PRIOR TO INSTALLATION, CONTRACTOR TO COORDINATE WITH PANDA EXPRESS PROJECT MANAGER TO VERIFY SOD TYPE TO BE USED. ROLL ALL SOD AFTER PLACING.
- SOIL USED FOR PLANTING SHALL CONSIST OF (5) PARTS TOPSOIL, (1) PART SAND AND (2) PARTS ORGANIC MATTER, MIXED WITH 1 POUND OF FERTILIZER PER CUBIC YARD.
 - A. SAND SHALL BE CLEAN MASONRY SAND.
 - B. ORGANIC MATTER SHALL BE PEAT MOSS, OR WELL COMPOSTED PINE BARK, OR APPROVED EQUAL AND SHALL BE FINELY GROUND AND FREE OF WEEDS.
 - C. ALL FERTILIZER SHALL BE 10-10-10 WITH MINOR ELEMENTS. FERTILIZER SHALL HAVE 40-50% OF ITS TOTAL NITROGEN IN A WATER INSOLUBLE FORM.
- PRE-EMERGENT HERBICIDE SHALL BE APPLIED TO ALL PLANT BEDS AND SOD AREAS PRIOR TO INSTALLATION. TREFLAN OR AN APPROVED EQUAL SHALL BE USED.
- ALL PLANT BEDS SHALL HAVE A MINIMUM OF 3" DEEP MULCH. MULCH SHALL BE RIVER ROCK (OR LOCAL EQUAL), 1" - 1.5" DIAMETER INSTALLED OVER PERMEABLE WEED BARRIER.
- IT IS THE LANDSCAPE CONTRACTOR'S RESPONSIBILITY TO CONFIRM MATERIAL QUANTITIES. IN THE EVENT OF A DISCREPANCY, THE QUANTITIES SHOWN ON THE PLAN SHALL TAKE PRECEDENCE OVER QUANTITIES SHOWN ON THE PLANT LIST.
- PRIOR TO FINAL PAYMENT, THE LANDSCAPE CONTRACTOR SHALL PROVIDE THE OWNER WITH COMPLETE WRITTEN INSTRUCTIONS ON PROPER CARE OF ALL SPECIFIED PLANT MATERIALS.
- THE LANDSCAPE INSTALLATION SHALL BE COORDINATED WITH THE IRRIGATION INSTALLATION WHEN APPLICABLE. IRRIGATION TO BE DESIGN-BUILD BY THE G.C.
- THE LANDSCAPE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE AWAY FROM STRUCTURES AND TAKE SPECIAL CARE TO INSURE THAT BED PREPARATION DOES NOT INHIBIT DRAINAGE.
- ALL LAWN AREAS SHALL BE CULTIVATED TO A DEPTH OF 4" PRIOR TO SODDING. PREPARED TURF BEDS SHALL BE FREE FROM STONES OVER 2" DIAMETER, WEEDS AND OTHER DELETERIOUS MATERIAL.
- THE LANDSCAPE CONTRACTOR SHALL RAKE SMOOTH ALL SOD AREAS PRIOR TO INSTALLATION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR BACKFILLING BEHIND THE CURB SO GRADE IS LEVEL WITH TOP OF CURB.
- CUT AWAY ROPES OR WIRES FROM B&B PLANTS. PULL BACK BURLAP FROM TOP OF ROOT BALL. DO NOT ALLOW BURLAP TO BE EXPOSED AT SURFACE. TOTALLY REMOVE BURLAP IF IT IS SYNTHETIC.
- IF CONTAINER GROWN PLANTS SHOW SIGNS OF BEING ROOT BOUND, SCORE ROOTS VERTICALLY.
- ALL PLANT MATERIAL SHALL BE GUARANTEED FOR ONE YEAR FROM DATE OF FINAL ACCEPTANCE.
- ALL REPLACEMENTS SHALL BE OF THE SAME TYPE, SIZE, AND QUALITY AS SPECIFIED ON THE PLANT LIST, UNLESS APPROVED OTHERWISE IN WRITING BY THE LANDSCAPE ARCHITECT.
- ANY MATERIAL THAT IS DEEMED TO BE 25% DEAD OR MORE SHALL BE CONSIDERED DEAD, AND MUST BE REPLACED AT NO CHARGE. A TREE IS CONSIDERED DEAD WHEN THE MAIN LEADER HAS DIED BACK, OR MORE THAN 25% OF THE CROWN IS DEAD.
- REPLACEMENTS SHALL BE MADE DURING THE NEXT PLANTING SEASON UNLESS THE LANDSCAPE CONTRACTOR AGREES TO AN EARLIER DATE.
 - PLANTING DATES
 - SPRING: MARCH 15 - APRIL 15
 - FALL: OCTOBER 1 - NOVEMBER 30
- THE LANDSCAPE CONTRACTOR WILL NOT BE RESPONSIBLE FOR PLANT MATERIAL THAT HAS BEEN DAMAGED BY VANDALISM, FIRE, RELOCATION, WILDLIFE, THEFT, OR OTHER ACTIVITIES BEYOND THE LANDSCAPE CONTRACTOR'S CONTROL.
- GENERAL CONTRACTOR TO COORDINATE AND BE RESPONSIBLE FOR WATERING ALL PLANTS AND TURF AREAS AFTER PLANTING UNTIL IRRIGATION SYSTEM IS OPERABLE.
- CONTRACTOR TO IRRIGATE ALL NEW LANDSCAPE PLANTINGS AND LAWN AREAS WITH AN AUTOMATED UNDERGROUND IRRIGATION SYSTEM. IRRIGATION SYSTEM TO BE DESIGN-BUILD BY G.C.
- IRRIGATION TO HAVE A SEPARATE METER.
- PLANT MATERIAL SHALL BE APPROPRIATE FOR THE APPLICABLE USDA PLANT HARDINESS ZONE.
- SPECIES MUST MEET BOTH MINIMUM CALIPER OR GALLON SIZE AND HEIGHT IF LISTED.
- LANDSCAPE CONTRACTOR TO MAINTAIN LANDSCAPING FOR 60 DAYS AFTER TURNOVER. MAINTENANCE SHALL INCLUDE MOWING, EDGING AND TRIMMING SHRUBS.



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REVISIONS:

NO.	DESCRIPTION	DATE

ISSUE DATE:

AC PRELIM REVIEW 07-17-20

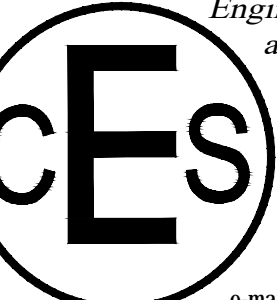
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PANDA PROJECT #: - S8-20-D7906
PANDA STORE #: - D7906
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MURFREESBORO, TN. 37129

TRUE WARM & WELCOME 2300-2020

LANDSCAPE PLAN

L01.0

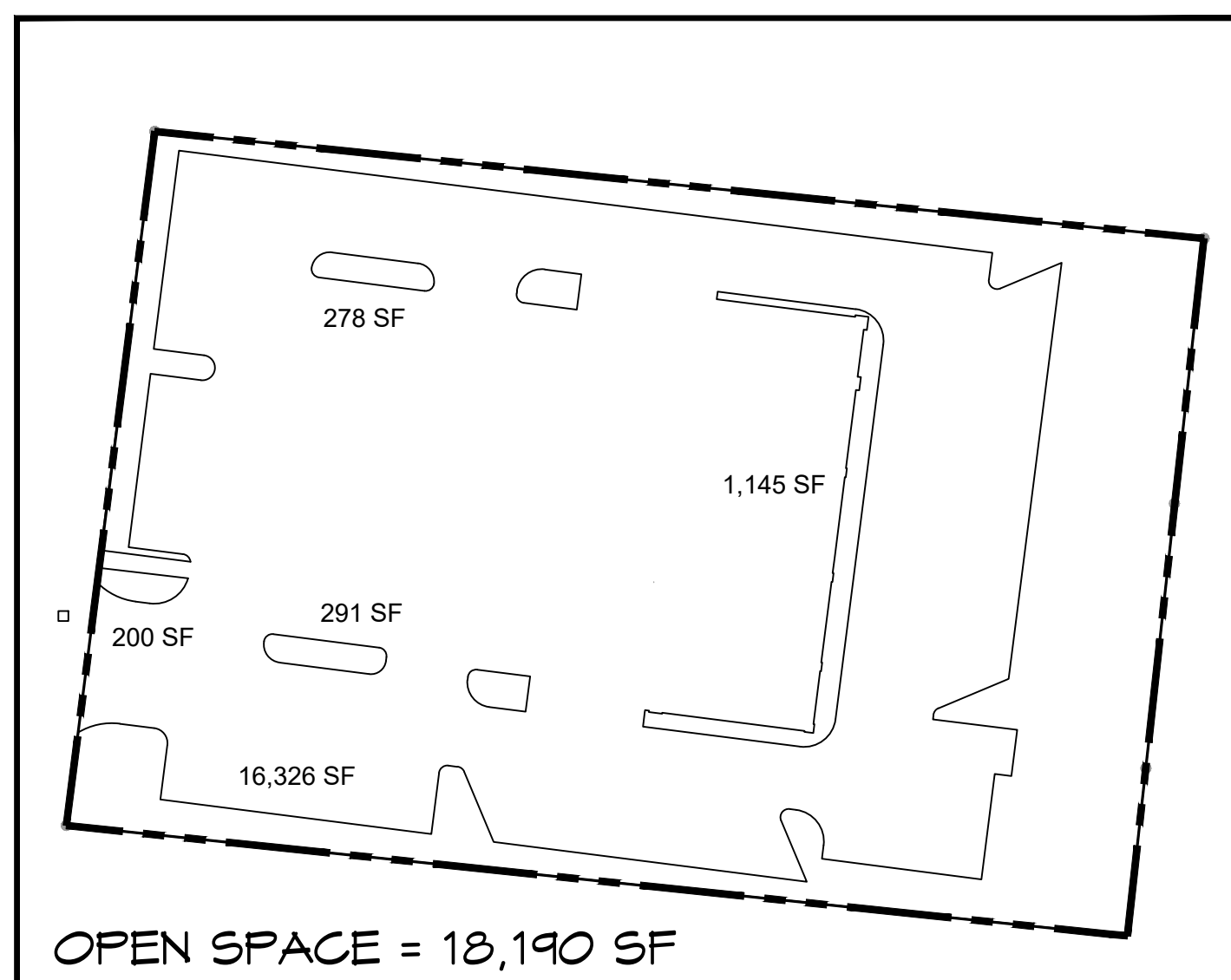
PLANT SCHEDULE

QTY.	COMMON NAME	BOTANICAL NAME	HEIGHT	TRUNK	COMMENTS
CANOPY TREES					
4	River Birch	Betula nigra	10' - 12'	2.5" Cal.	5' CLEAR TRUNK, FULL CANOPY, SINGLE STRAIGHT CENTRAL LEADER
3	Bosque Elm	Ulmus parvifolia 'Bosque'	10' - 12'	2.5" Cal.	5' CLEAR TRUNK, FULL CANOPY
4	'Green Vase' Japanese Zelkova	Zelkova serrata 'Green Vase'	10' - 12'	2.5" Cal.	5' CLEAR TRUNK, FULL CANOPY
3	'October Glory' Red Maple	Acer rubrum 'October Glory'	14' - 16'	4" Cal.	5' CLEAR TRUNK, FULL CANOPY, SINGLE STRAIGHT CENTRAL LEADER
6	Shumard Oak	Quercus shumardii	14' - 16'	4" Cal.	5' CLEAR TRUNK, FULL CANOPY, SINGLE STRAIGHT CENTRAL LEADER
4	Tulip Poplar	Liriodendron tulipifera	10' - 12'	2.5" Cal.	SINGLE STRAIGHT CENTRAL LEADER
24	TOTAL - CANOPY TREES				
EVERGREEN TREES					
4	'Emerald Green' Arborvitae	Thuja occidentalis 'Smaragd'	6' - 7'		Full to ground, well formed
38	'Green Giant' Arborvitae	Thuja (standish x plicata) 'Green Giant'	10' Min.		Full to ground, well formed
12	'Nellie R. Stevens' Holly	Ilex x 'Nellie R. Stevens'	6' - 7'		Well formed
54	TOTAL - EVERGREEN TREES				
UNDERSTORY TREES					
1	'Dynamite' Crapemyrtle	Lagerstroemia indica 'Whit II'	6' - 7'	2" Cal.	Multi-Trunk, Min. (3) 3/4" canes
8	Yoshino Cherry	Prunus x yedoensis	8' - 10'	2" Cal.	B&B
9	TOTAL - UNDERSTORY TREES				
87	TOTAL - ALL TREES				
SHRUBS					
9	'Bobo' Hydrangea	Hydrangea paniculata 'LVOBO'	18" Min.		Container
58	Carissa Holly	Ilex cornuta 'Carissa'	18" Min.		Container
19	China Girl Holly	Ilex x meserveae 'Mesog'	24" Min.		Container
13	'Green Velvet' Boxwood	Buxus 'Green Velvet'	24" Min.		Container
11	'Grey Owl' Juniper	Juniperus virginiana 'Grey Owl'	18" Min.		Container
17	'Kaleidoscope' Abelia	Abelia grandiflora 'Kaleidoscope'	12" Min.		Container
10	'Obsession' Nandina	Nandina domestica 'Seika'	12" Min.		Container
6	'Purple Diamond' Loropetalum	Loropetalum chinense 'Shang-hi'	24" Min.		Container
17	'Red Ruffle' Azalea	Azalea x 'Red Ruffles'	12" Min.		Container
17	'Soft Touch' Holly	Ilex crenata 'Soft Touch'	12" Min.		Container
6	'Vintage Jade' Distylium	Distylium 'Vintage Jade'	18" Min.		Container
183	TOTAL - SHRUBS				
GRASSES, PERENNIALS AND GROUND COVER					
15	Karl Foerster Grass	Calamagrostis x acutiflora 'Karl Foerster'		1 Gal.	
10	Red Drift Rose	Rosa 'Meigalpio'		3 Gal.	
85	Variegated Liriope	Liriope muscari 'Variegata'		1 Gal.	
TURF					
	Hybrid Fescue Sod	Drought tolerant fescue blend			

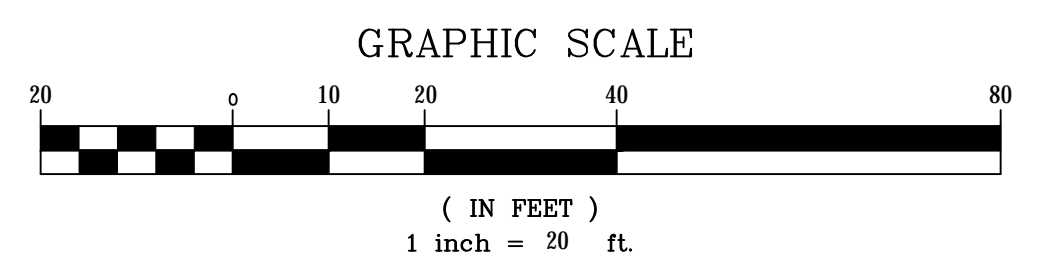
NOTES:
ALL OTHER AREAS
1. ALL CANOPY TREES - 5' CLEAR TRUNK, FULL CANOPY, SINGLE STRAIGHT CENTRAL LEADER
2. ALL ORNAMENTAL TREES - 4' CLEAR TRUNK, FULL CANOPY

LANDSCAPE BED NOTES:

- ALL LANDSCAPE BEDS SHOULD BE PREPARED 3" BELOW GRADE PRIOR TO START.
- APPLY PRE-EMERGENT TO ALL LANDSCAPE BEDS AS SUGGESTED PER MANUFACTURER'S SPECIFICATIONS. (SEE NOTE #8).
- APPLY PERMEABLE WEED BARRIER TO ALL LANDSCAPE BEDS.
- INSTALL RIVER ROCK MUCH (OR LOCAL EQUAL) (1" - 1.5" DIAMETER), APPROXIMATELY 3" DEEP IN ALL LANDSCAPE BEDS OVER WEED BARRIER.



Know what's below.
Call before you dig.

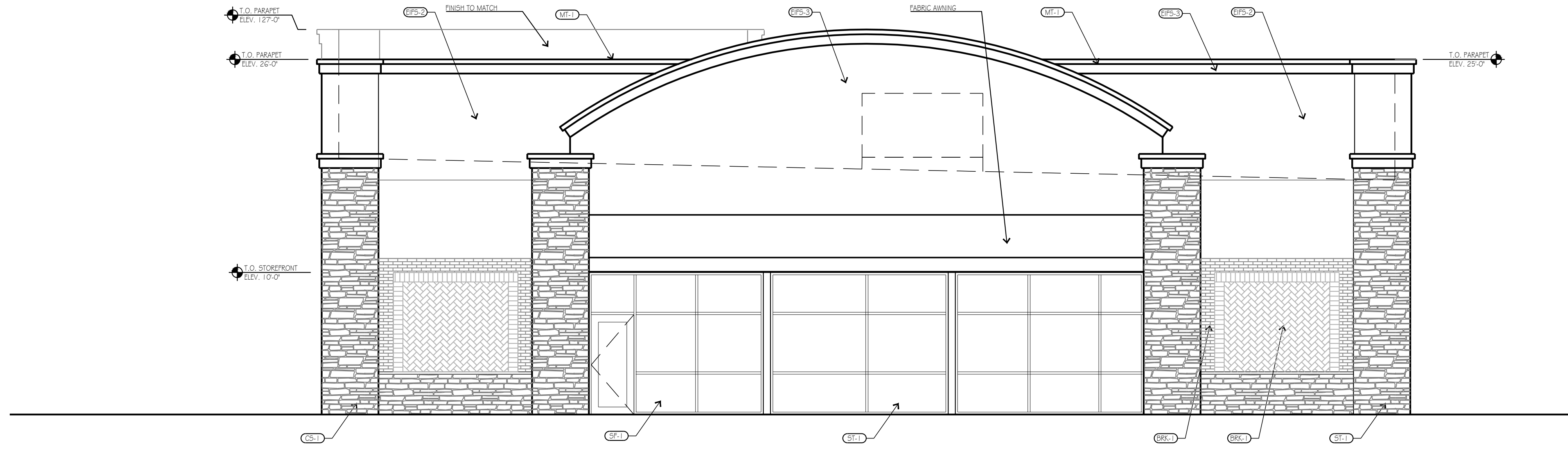


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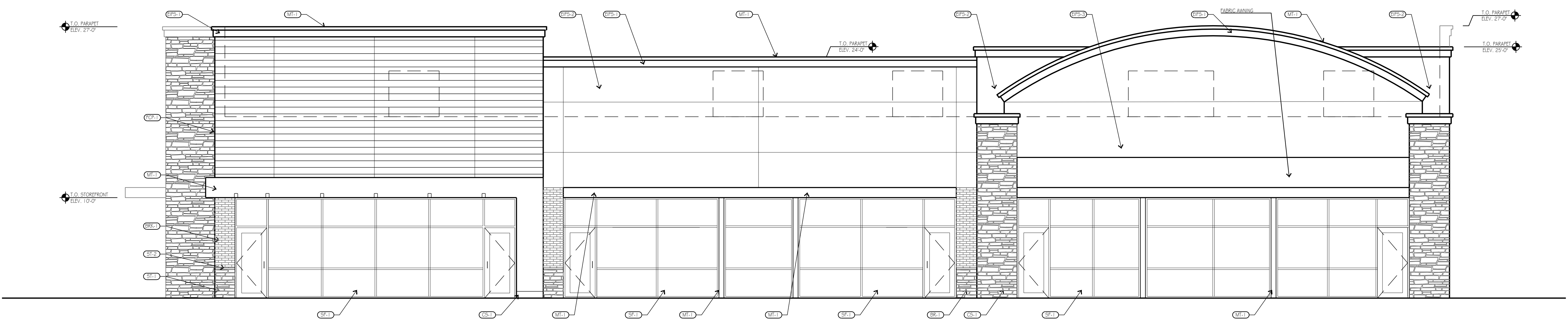
EXTERIOR FINISH SCHEDULE				
SYMBOL	MATERIAL	MANUFACTURER	COLOR	TEXTURE / FINISH
BRK-1	BRICK	ACME KING SIZE THIN BRICK	DOVE GRAY	VELOUR
CS-1	CAST STONE	TBD	TBD	-
EFS-1	EIFS	STO	SW 7069 - IRON ORE	FINE
EFS-2	EIFS	STO	SW G148 - WOOL SKIN	FINE
EFS-3	EIFS	STO	SW 7067 - CITYSCAPE	FINE
FCP-1	FIBER COMPOSITE PLANK	FIBERON	60% IPE/40% TUDOR BROWN RANDOM MIX	NON-GROOVE
MT-1	ALUMINUM	BERRIDGE	IRON ORE	ANODIZED
SF-1	GLAZING	TBD	DARK BRONZE	ANODIZED
ST-1	STONE VENEER	CORONADO STONE	SHALE GRAY	INDUSTRIAL LEDGE
ST-2	STONE CAP	CORONADO STONE	#2 GRAY	900 SERIES

NOTE:
ALL ROOF MOUNTED MECHANICAL EQUIPMENT SHALL NOT PROJECT ABOVE PARAPET WALLS

EXTERIOR FINISH CALCULATIONS	
MATERIAL	PERCENTAGE
BRICK	13%
STONE	18%
EIFS	37%
COMPOSITE CLADDING	7%
GLAZING	18%
ACCENT METAL	2%
VOID SPACE	5%



SOUTH ELEVATION ②
SCALE: 1/4" = 1'-0"



WEST ELEVATION ①
SCALE: 1/4" = 1'-0"

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COMPLY WITH all laws, codes, ordinances and regulations with authorities having jurisdiction and with requirements of the Landlord, if applicable. Do not start Work until all permits and required approvals are obtained.

VERIFY ACTUAL CONDITIONS and dimensions prior to construction. Commencement of work constitutes verification and acceptance of all existing conditions. Application of a material or equipment item to Work related by others constitutes acceptance of that Work and assumption of responsibility for satisfactory installation.

DIMENSIONS SHOWN are in inch sizes of a material unless otherwise indicated. CALCULATE & MEASURE dimensions - DO NOT SCALE drawings unless otherwise directed.

project title

CFT RETAIL BUILDING
2901 S. CHURCH STREET
MURFREESBORO, TN 37127

project number
20045.003
drawing issuance
SITE PLAN REVIEW 3.18.2021
drawing revisions
No. Description: Date:

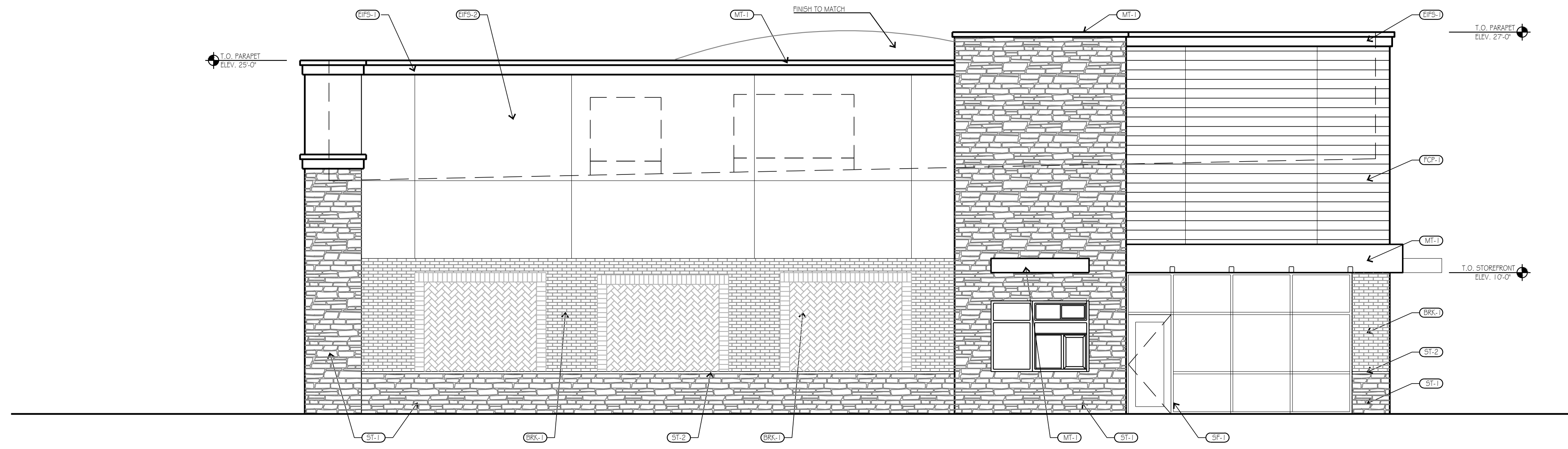
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drawing title
EXTERIOR ELEVATIONS
drawing number
A200

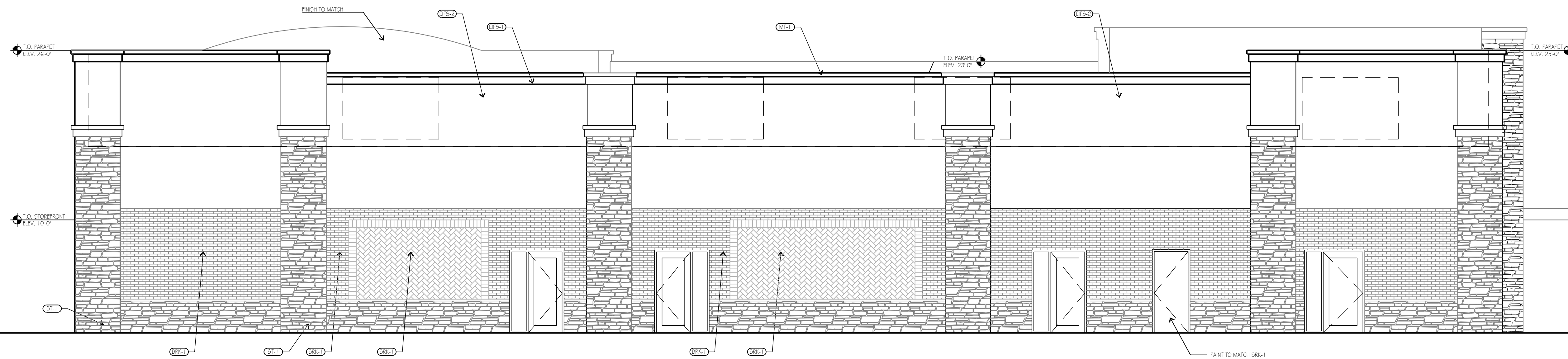
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EIFS	37%
COMPOSITE CLADDING	7%
GLAZING	18%
ACCENT METAL	2%
VOID SPACE	5%



NORTH ELEVATION ②
SCALE: 1/4" = 1'-0"



EAST ELEVATION ①
SCALE: 1/4" = 1'-0"

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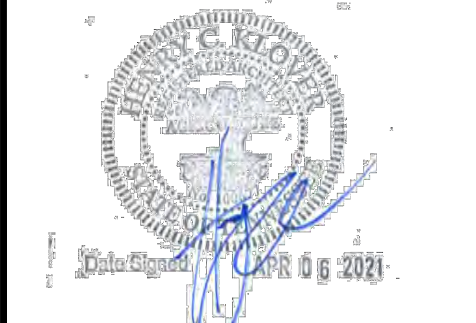
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