ROCK ISLAND
ILLINOIS

City Council Meeting Agenda
June 26, 2023 - 6:45 PM
City Council Chambers, City Hall, 3rd Floor, 1528 Third Avenue, Rock Island, IL

Click here to watch live

1. **Call to Order**
2. **Roll Call**
3. **Pledge of Allegiance**
4. **Moment of Silence**
5. **Public Comment**
6. **Minutes**

   a. Minutes of the June 2, 2023 Special City Council Meeting.

Motion:	Motion whether or not to approve the minutes as printed.
RC	Roll Call vote is needed.

   b. Minutes of the June 12, 2023 Study Session and City Council Meeting.

Motion:	Motion whether or not to approve the minutes as printed.
RC	Roll Call vote is needed.

7. **Awards and Honor Presentations, Officer Swearing in Ceremony, and Proclamations**

   a. Proclamation Celebrating the 25th Anniversary of the Quad City Botanical Center.

   b. Proclamation declaring July 3rd, 2023 as Red, White and Boom & Military and Arsenal Appreciation Day.

8. **Update Rock Island**
9. **Special Presentations**

a. Finance Department Presentation of the Auditor's Annual Comprehensive Financial Report for CY 2022.

10. Ordinances

a. An ordinance regarding the sale of City-owned property located at 1423 6th Street (PIN 1603232007) to Christina & Giovanni Crouch for $421.25 plus closing costs. (Second Reading)

Motion:	Motion whether or not to pass the ordinance.
RC	Roll Call vote is needed.

11. Consent Agenda

All items under the Consent Agenda are considered to be routine in nature and will be enacted by a single motion and subsequent roll call vote. There will be no separate discussion of these items unless an Alderperson so requests, in which case, the item will be moved from the Consent Agenda and considered as the first item after approval of the Consent Agenda.

a. Claims for the weeks of June 2 through June 8, 2023 in the amount of $524,748.65; for the weeks of June 9 through June 15, 2023 in the amount of $1,170,187.00; and payroll for the weeks of May 29 through June 11, 2023 in the amount of $1,719,544.02.

b. International City/County Management Association (ICMA) claims for the week of June 9 through June 15, 2023 in the amount of $33,834.20.

c. Report from the Human Resources Department regarding payment in the amount of $16,309.08 to David G. Morrison, City Attorney, for services rendered during the month of May 2023.

d. Report from the Fire Department regarding payment in the amount of $13,200.00 to Builders Sales & Service Company (BSSC) for the installation of a suspended ceiling at the Fire Department's Central House.

e. Report from the Public Works Department requesting approval to purchase a replacement backwash pump for the Southwest Wastewater Treatment Plant from Zimmer & Francescon, Moline, IL in the amount of $21,700.00.

f. Report from the Public Works Department regarding payment in the amount of $14,532.29 to Xylem Dewatering Solutions, Inc. Chicago, IL, for the rental of flood pumps.

Motion:	Motion whether or not to approve Consent Agenda items a through f.
RC	Roll Call vote is needed.

12. Contracts / Agreements

a. Report from the Public Works Department recommending city staff negotiate a contract with Hanson Professional Service, Springfield, IL, for the purpose of developing a Capital Asset Management Plan.

Motion: Motion whether or not to authorize staff to negotiate a contract with Hanson Professional Service.

RC Roll Call vote is needed.

b. Report from the Community & Economic Development Department regarding an Amendment to the Sala Flats Redevelopment Agreement.

Motion: Motion whether or not to approve the amendment to the redevelopment agreement.

RC Roll Call vote is needed.

c. Report from the Community & Economic Development Department regarding the assignment of the LRC Redevelopment Agreement.

Motion: Motion whether or not to approve the assignment of the redevelopment agreement to LRC Equity, LLC.

RC Roll Call vote is needed.

d. Report from the Human Resources Department regarding bids for the former City Parks Office Demolition Project, recommending the contract be awarded to H. Coopman Truck & Excavation, Moline, IL in the amount of $38,908.00.

Motion: Motion whether or not to award the bid and direct the City Manager to execute the contract documents.

RC Roll Call vote is needed.

13. Ordinances with Reports from Departments

a. Report from the Community & Economic Development Department regarding the Rezoning of the Solomon Site properties from a B-3 (community business) district to PUD (planned unit development) district for four (4) parcels. (First Reading)

Motion: Motion whether or not to approve the rezoning of the Solomon Site properties and consider the ordinance.

RC Roll Call vote is needed.

b. Report from the Community & Economic Development Department regarding a Special Use Permit at 1325 30th Street for Skylight Luxury Lounge, LLC. (First Reading)

Motion: Motion whether or not to approve the Special Use Permit and consider the ordinance.

RC Roll Call vote is needed.

c. Report from the Community & Economic Development regarding amendments to the Nuisance, Weeds and Grass Penalties Ordinance. (First Reading)

Motion: Motion whether or not to consider the amendments to the ordinance.

RC Roll Call vote is needed.

14. Budget/Finance Items

a. Report from the Finance Department regarding a budget adjustment increasing the Special Service Area Fund revenue and expense by $310,613.00 for the approved property tax levy.

Motion: Motion whether or not to approve the budget adjustment.

RC Roll Call vote is needed.

b. Report from the Finance Department regarding an adjustment to the CY 2023 budget, decreasing the General Fund (101) expenses by $35,500.00 and increasing the Sunset Marina (541) revenue and expense funds by $35,500.00.

Motion: Motion whether or not to approve the budget adjustment as recommended.

RC Roll Call vote is needed.

c. Report from the City Manager regarding the approval of the FY 2024 Rock Island Downtown Alliance (RIDA) budget.

Motion: Motion whether or not to approve the RIDA budget and authorize the RIDA Board to make amendments with the exception of changes to add full-time positions or increase the overhead expense.

RC Roll Call vote is needed

d. Report from the Mayor's Office and General Administration recommending the allocation of $125,000.00 in ARPA funds (unrestricted) to the Botanical Center.

Motion: Motion whether or not to approve $125,000.00 in ARPA funds for the Botanical Center and authorize the City Manager to execute the agreement.

RC Roll Call vote is needed.

e. Report from the Mayor's Office and General Administration recommending the allocation of $125,000.00 in ARPA funds (unrestricted) to the Backwater Gamblers.

Motion: Motion whether or not to approve $125,000.00 in ARPA funds for the Backwater Gamblers and authorize the City Manager to execute the agreement.

RC Roll Call vote is needed.

f. Report from the Mayor's Office and General Administration recommending the allocation of $50,000.00 in ARPA funds (unrestricted) to the Quad City Arts.

Motion: Motion whether or not to approve $50,000.00 in ARPA funds for the Quad City Arts and authorize the City Manager to execute the agreement.

RC Roll Call vote is needed.

15. Department Reports

a. Report from the Community & Economic Development Department regarding a Lease Agreement with Mr. Scott Doxstader to farm the City-owned parcels in the Ridgewood Business Park area.

Motion: Motion whether or not to approve the lease agreement subject to minor attorney modifications and authorize the City Manager to execute the contract documents.

RC Roll Call vote is needed.

b. Report from the Community & Economic Development Department regarding an Updated National Register of Historic Places (HRHP) Nomination for the Broadway Historic District.

Motion: Motion whether or not to endorse the updated NRHP nomination for the Broadway Historic District subject to minor consultant revisions.

RC Roll Call vote is needed.

c. Report from the Community & Economic Development Department regarding a Zoning Code Variance Request at 3008 7th Avenue.

Motion: Motion whether or not to approve the Zoning Code Variance request with prescribed stipulations.

RC Roll Call vote is needed.

16. Traffic Engineering Requests

a. Report from the Traffic Engineering Committee regarding a request to place the parking lot for Inspiredesign Jewelry located at 1815 24th Street, under City ordinance control. (First Reading)

Motion: Motion whether or not to approve the request and consider the ordinance.

RC Roll Call vote is needed.

b. Report from the Traffic Engineering Committee regarding a request to install a 2-way stop sign on 8th Street at its intersection with 16th Avenue and yield signs on 8th Street and 17th Avenue.

Motion: Motion whether or not to deny the request.

RC Roll Call vote is needed.

c. Report from the Traffic Engineering Committee regarding a request to install a handicapped parking space in front of 601 7th Avenue. (First Reading)

Motion: Motion whether or not to approve the request as recommended and consider the ordinance.

RC Roll Call vote is needed.

d. Report from the Traffic Engineering Committee regarding a request to remove the handicapped parking space in front of 2049 46th Street. (First Reading)

Motion: Motion whether or not to approve the request as recommended and consider the ordinance.

RC Roll Call vote is needed.

17. Events/Misc Requests

a. Report from the Fire Marshal regarding a request from Cesar Benitez of Fire Alarm Fireworks for a pyrotechnic display permit for fireworks to be held on July 7, 2023 from 8:00 p.m. to 10:00 p.m. at Bally's Quad Cities, 777 Bally Boulevard.

Motion: Motion whether or not to approve the request as recommended; temporarily waive Chapter 10, Article 1, Sec. 10-9(a) of the Code of Ordinances to allow for the issuance of the pyrotechnic display permit; and authorize the Fire Marshal to issue the permit.

RC Roll Call vote is needed.

18. Other Business/New Business

19. Closed Session

a. 5 ILCS 120/2 (c)(21) Discussion of minutes of meetings lawfully closed under this Act, whether for purposes of approval by the body of the minutes or semi-annual review of the minutes as mandated by Section 2.06.

Motion: Motion whether or not to go into Closed Session for the exception cited.

RC Roll Call vote is needed.

20. Adjourn

a. Motion to Adjourn.

Motion: Motion to adjourn to July 10, 2023

RC Roll Call vote is needed.

This agenda may be obtained in accessible formats by qualified persons with a disability by making appropriate arrangements from 8:00 am to 5:00 pm, Monday through Friday, by contacting the City Clerk's Office at (309) 732-2010 or visiting in person at: 1528 Third Avenue, Rock Island, IL 61201.

CITY OF ROCK ISLAND
CITY COUNCIL SPECIAL MEETING
City Council Chambers, City Hall, 3rd Floor,
1528 Third Avenue, Rock Island, IL

6/2/2023 - Minutes

1. Call to Order

Mayor Thoms called the meeting to order at 4:15 p.m. and welcomed everyone.

2. Roll Call

Mayor Thoms asked Deputy City Clerk Josh Adams to call the roll.

Present: Alderpersons Moses Robinson, Randy Hurt, Judith Gilbert, Jenni Swanson, Dylan Parker, Mark Poulos, and Mayor Mike Thoms.

Absent: Alderperson Bill Healy.

Staff: City Manager Todd Thompson, City Attorney Hector Lareau, Police Chief Rich Landi, and Deputy City Clerk Josh Adams.

3. Public Comment

Mayor Thoms asked if anyone in the public wished to speak. No residents volunteered.

4. Events/Misc Requests

a. Report from the City Clerk's Office regarding a request from Stephen Ahrens of Common Chord to close 21st Street between 3rd Avenue and the alley South of 3rd Avenue as well as sound amplification and the outdoor sale and consumption of alcohol on Friday, June 2, 2023 from 5:00 p.m to 8:00 p.m. and Friday, June 9, 2023 from 5:00 p.m. to 7:00 p.m for two Live @ Five outdoor concerts.

Motion:	Motion whether or not to approve the requests as recommended.
RC	Roll Call vote is needed.

MOTION:

Alderperson Swanson moved to approve the requests as recommended; Alderperson Robinson seconded.

Alderperson Gilbert noted for the record that Common Chord was not the liquor license holder for the event. Mayor Thoms confirmed that was correct, and Bent River was the holder of the liquor license.

Alderperson Poulos asked for clarification that the event was over at 8:00 p.m. Mayor Thoms confirmed that both Fridays ended at 8:00 p.m. Deputy Clerk Adams noted that the application showed that the event on the second Friday was to end at 7:00 p.m. Alderperson Swanson said this event would not have happened unless the City had a positive relationship with the Chamber of Commerce. Mayor Thoms said this was in a part of town that normally did not get exposure, and this would serve as a fundraiser for the tragic event that took place in Davenport, Iowa. Alderperson Poulos asked if police officers were hired for the event. Mayor Thoms said he was unaware of any. Police Chief Rich Landi said no officers had been hired, and due to the suddenness of the event, there was no time for the organization of the event. He added that he sent the application to the entire Police Department so that the control force and RICOM were aware of the event.

VOTE:

Motion passed on a 6-0-1 roll call vote. Aye: Hurt, Gilbert, Swanson, Parker, Poulos, and Robinson. Nay: None. Absent: Healy.

5. Adjourn

a.

Motion:	Motion whether or not to adjourn to June 12, 2023.
RC	Roll Call vote is needed.

MOTION:

Alderperson Poulos moved to adjourn; Alderperson Hurt seconded.

VOTE:

Motion passed on a 6-0-1 roll call vote. Aye: Hurt, Gilbert, Swanson, Parker, Poulos, and Robinson. Nay: None. Absent: Healy.

The meeting adjourned at 4:23 p.m.

_____

Josh Adams, Deputy City Clerk

CITY OF ROCK ISLAND
CITY COUNCIL STUDY SESSION
City Council Chambers, City Hall, 3rd Floor,
1528 Third Avenue, Rock Island, IL

6/12/2023 - Minutes

1. Call to Order

Mayor Thoms called the meeting to order at 5:45 p.m. and welcomed everyone.

2. Roll Call

Mayor Thoms asked City Clerk Samantha Gange to call the roll.

Present: Alderpersons Moses Robinson, Judith Gilbert, Jenni Swanson, Dylan Parker, Mark Poulos, Bill Healy and Mayor Thoms.

Absent: Randy Hurt.

Staff: City Manager Todd Thompson, Attorney Dave Morrison, City Clerk Samantha Gange, and other City Staff.

3. Public Comment

Mayor Thoms asked if anyone in the public wished to speak. No residents volunteered.

4. Presentations

a. City of Rock Island Communications & Community Engagement Plan

Community Engagement Manager Sarah Hayden approached the podium to present the City's Communications and Community Engagement Plan. She provided an overview and discussed the progress that has been made since the position was created in August 2022, including social media and standard media engagement statistics. She said it is important to have a a full-time person to push out a positive narrative for stories. She communicated the City's progress regarding certain projects, including progress with gaining followers to social media pages. She encouraged Council members to have Ward meetings to communicate with the public, noting Alderperson Gilbert's upcoming meeting on June 19. As a former member of the media herself, she feels it has been beneficial to have direct contact with nearly every reporter and editor of local media.

Alderperson Robinson asked how many residents have been contacted that do not have social media or other means of electronic access. Ms. Hayden said there is contact outside of social media, but it is minimal, and the bulk of contact is done through Facebook. Alderperson Gilbert said there needs to be some connectivity for

those that are not on social media, via a link on the City's webpage or app. Ms. Hayden said there is pending new software that allows users to click and submit a question to the City. Alderperson Robinson noted that the City is still behind the curve if a large portion of the population is not contacted via means other than social media. City Manager Thompson referenced page 16 of the plan, which indicates a goal to identify non-traditional methods to connect with residents. Ms. Hayden said she has discussed this with Mr. Thompson to ensure the City is communicating with everyone. Alderperson Swanson asked if the water bill could be utilized to communicate information to residents. Finance Director Linda Barnes responded affirmatively and said Public Works has utilized this in the past.

Ms. Hayden continued her presentation, providing an overview and purpose of the communication plan and referenced City Council goals, noting she would update the plan accordingly after the presentation and receipt of feedback from Council. She discussed the nineteen goals related to the Communication Plan. She pointed to the importance of having a good relationship with local media, as the better the relationship, the better reach for the City. She noted the City's continued relationship with the local school district, and discussed her interactions with local media outlets and the results of that correspondence. She noted improvements with internal City communications amongst various departments, as well as activity updates from department directors sent to Council. She discussed involvement in attendance at business openings and other City events, as well as featuring them on the City's social media accounts. She noted the potential internship program through the Public Works Department and the local school district, as well as the pending City resident survey. Also noted was the monthly Operations Report distributed to Council that discusses what has been accomplished. She highlighted the target audience, tools of communication, media relations, public opinion surveys, and City logo included in the plan.

Alderperson Gilbert remarked she was glad to hear Ms. Hayden will be working on updating the City website. She asked if there was an option to add a press room tab that would highlight interviews, press releases, and pictures. Ms. Hayden said she welcomed the feedback and would look into that option. Alderperson Gilbert said there were many good ideas and themes received from residents amongst the many responses to the American Rescue Plan Act (ARPA) survey, and asked to have staff pay attention to what was suggested. She suggested reformatting the Monthly Operations Report. Ms. Hayden said she would work with Council to get feedback. Mr. Thompson invited all Council members to provide feedback for the Operations Report so it could be tailored to the desired information.

Alderperson Robinson suggested an employee portal to highlight announcements and other employee milestones or accomplishments. He suggested having consistency with Unplugged and other events with regards to how information is released. He asked if Ms. Hayden could provide specific examples of how to reach populations that do not use technology or electronics, and if there is a designated number for nuisance complaints. Ms. Hayden said the aforementioned 3-1-1 platform is being developed for residents to click and complain about an issue. Alderperson Parker said he liked the idea of the pending resident survey, as it better measures transparency and public satisfaction. He said it is instrumental to get a baseline measurement on how to improve. He said he is intrigued by goal number 14 regarding an annual report summarizing city-wide accomplishments, and wished to highlight the connections with existing reports and aligning resources. He noted the strategic plan and budget, which includes Key Performance Indicators (KPI) along with a plethora of data from the Community Development Block Grant (CDBG), as well as the monthly operations report. He asked how to point all of this material and formalize it into an annual report, such as what is being measured, how it will be reported, and how it will align with the planning and execution process. He said CDBG has a specific plan that is required, which specifies how the public should be involved, and how it should align with that plan.

Alderperson Poulos said the annual report should be brief, as people value their time, and the City should be mindful and respectful of how information is presented. He said more people are likely to read materials that are brief in nature. In response to a question from Mayor Thoms regarding the purpose of targeted citizen surveys, Mr. Thompson and Ms. Hayden said there are various survey methodologies, and it will represent a random sample of residents. Mayor Thoms remarked on the website update, suggesting it would be helpful if information would be presented in a simple manner, such as a pie chart or other visual that connects residents. Alderperson Swanson suggested utilizing community partners such as Project Now and the Martin Luther King, Jr. Center for assistance with citizen communication. Alderperson Robinson suggested utilizing churches as an additional avenue of communication. Alderperson Healy suggested providing short videos on how certain elements of the City function, as well as working with interns to help communicate with the public.

5. Adjourn

a. Motion to Adjourn.

Motion:	Motion whether or not to adjourn.
RC	Roll Call vote is needed.

MOTION:

Alderperson Healy moved to Adjourn; Alderperson Poulos seconded.

VOTE:

Motion PASSED on a 6-0-1 roll call vote. Aye: Robinson, Gilbert, Swanson, Parker, Poulos, Healy. Nay: None. Absent: Hurt.

The meeting adjourned at 6:38 p.m.

_____
Josh Adams, Deputy City Clerk

CITY OF ROCK ISLAND
CITY COUNCIL MEETING
City Council Chambers, City Hall, 3rd Floor,
1528 Third Avenue, Rock Island, IL

6/12/2023 - Minutes

1. Call to Order

Mayor Thoms called the meeting to order at 6:45 p.m. and welcomed everyone.

2. Roll Call

Mayor Thoms asked City Clerk Samantha Gange to call the roll.

Present: Mayor Mike Thoms, Alderpersons Moses Robinson, Randy Hurt, Judith Gilbert, Jenni Swanson, Dylan Parker, Mark Poulos, and Bill Healy.

Absent: None.

Staff: City Manager Todd Thompson, Attorney Dave Morrison, CityClerk Samantha Gange, and other City Staff.

3. Pledge of Allegiance

Mayor Thoms led in the reciting of the Pledge of Allegiance.

4. Moment of Silence

Mayor Thoms requested a moment of silence. A moment of silence was observed.

5. Public Comment

Lyle Braun, Secretary of the Rock Island Fraternal Order of the Eagles approached the podium to address the Council. He expressed concern about the City's video gaming fee and asked the Council to consider lowering the fee as it is a burden on small businesses.

Regina Tsosie addressed the Council and said she was a member of the Navajo Nation and a resident of Moline. She has also been a resident of the Quad Cities for 40 years and is the President of the Quad Cities Native American Coalition. She encouraged Council members to dismantle the metallic sign that resembles a Native American man and recycle it as it creates hostility and represents racial imagery. She noted recent national activism that has centered around removing Native American imagery associated with various college and professional sports mascots as it created misinformation, stereotypes and hostility.

Naomi Torrence approached the podium to share a letter of support from her tribe in Michigan and a resolution passed by their Tribal Council as it relates to eliminating negative Native American imagery in communities. Ms. Torrence read the letter, which expressed their condemnation of Native American imagery in any way that may be deemed offensive, disrespectful or otherwise harmful to the Native American community.

Rudy Vallejo addressed the City Council and encouraged members to restore the Native American statue. He said if the City didn't want to maintain it, the Inter Tribal League of American Indians would like the opportunity to restore the statue and use it to honor Native American culture. He opined tearing down statues of Native Americans cancels the relevance of their culture.

Vince Thomas addressed Council regarding the signage and identified as a Rock Island resident and member of the Quad Cities Native American Coalition. He opined the Native American sign represents a stereotypical racist point of view. He suggested the City Council appoint a committee to hold discussions about the varying opinions of the different groups on what to do with the sign.

6. Minutes

a. Minutes from the May 22, 2023 Study Session and City Council Meeting.

MOTION:

Alderperson Gilbert moved to approve the minutes as printed; Alderperson Swanson seconded.

VOTE:

Motion PASSED on a 7-0-0 roll call vote. Aye: Robinson, Hurt, Gilbert, Swanson, Parker, Poulos, Healy. Nay: None. Absent: None.

7. Update Rock Island

Do you know a person or organization that deserves recognition?

The City of Rock Island is seeking nominations for the 36th annual Citizen of the Year awards. The awards were founded in 1987 as a way to recognize individuals and organizations that make a positive difference in the Rock Island community.

Each year, people in the community have an opportunity to submit a nomination for those who have made selfless contributions of service to the City of Rock Island. There are eight categories available for nomination:

Individual; Youth; City Employee; Professional; Education; Veteran; Organization, Church or Non-Profit; and Business.

Nomination forms can be accessed on the City's website at rigov.org or contact Community Engagement Manager Sarah Hayden at hayden.sarah@rigov.org.

Enjoy free music in Lincoln Park

Come dance or relax under the stars at this year's Starlight Revue free concert series in Lincoln Park at 38th Street and 11th Avenue. Concerts are every Tuesday night for the next seven weeks from 7 to 9 p.m. Tomorrow's night band will be the Gray Wolf Band.

Food and desserts will be available for purchase starting at 5 p.m. from the Hy-Vee Grill and Dessert Station; and popcorn and drinks will be served by the Parks Department. Enjoy a beautiful night in Lincoln Park with great music, food, dancing and fun.

Calling all third ward residents and anyone with questions about the city

Third Ward Alderwoman Judith Gilbert will hold a ward meeting at City Hall on June 19 from 6 to 8 p.m. The meeting is here in the council chambers on the third floor of City Hall, 1528 Third Ave. Alderwoman Gilbert and several department directors will answer questions from residents. All are invited to attend the meeting. Bring a neighbor and friend and learn more about how the city operates.

8. Ordinances

a. An Ordinance regarding the consolidation of the six boards of appeal into a single Inspections Commission. (Second Reading)

Motion:	Motion whether or not to pass the ordinance.
RC	Roll Call vote is needed.

MOTION:

Alderperson Healy moved to pass the ordinance; Alderperson Poulos seconded.

VOTE:

Motion PASSED on a 7-0-0 roll call vote. Aye: Robinson, Hurt, Gilbert, Swanson, Parker, Poulos, Healy. Nay: None. Absent: None.

9. Consent Agenda

All items under the Consent Agenda are considered to be routine in nature and will be enacted by a single motion and subsequent roll call vote. There will be no separate discussion of these items unless an Alderperson so requests, in which case, the item will be moved from the Consent Agenda and considered as the first item after approval of the Consent Agenda.

a. Claims for the weeks of May 12 through May 18, 2023 in the amount of $616,697.80, May 19 through May 25, 2023 in the amount of $939,770.74, and May 26 through June 1, 2023 in the amount of $811,128.15; and payroll for the weeks of May 1 through May 14, 2023 in the amount of $1,665,053.31, the Employee Retention Bonus of May 24, 2023 in the amount of $288,396.20, and May 15 through May 28, 2023 in the amount of $1,699,052.46.

b. International City/County Management Association (ICMA) claims for the week of May 12 through May 18, 2023 in the amount of $35,979.60; and the week of May 26 through June 1, 2023 in the amount of $34,190.85.

c. Purchase Card Claims for the period of March 28, 2023 through April 26, 2023 in the amount of $61,201.22.

d. Report from the Public Works Department regarding payment in the amount of $14,531.44 to CDM Smith, Boston, MA for services provided from April 16 through May 13, 2023 for the Mill Street Anaerobic Digester Maintenance Project.

e. Report from the Public Works Department regarding payment in the amount of $29,514.30 Xylem Dewatering Solutions, Inc, Chicago, IL for Flood Pump Rental for the rental of pumps used from April 19 through May 9, 2023 during the flood along the Mississippi River.

Motion:	Motion whether or not to approve Consent Agenda items a through e.
RC	Roll Call vote is needed.

MOTION:

Alderperson Robinson moved to approve Consent Agenda items a through e; Alderperson Swanson seconded.

VOTE:

Motion PASSED on a 7-0-0 roll call vote. Aye: Robinson, Hurt, Gilbert, Swanson, Parker, Poulos, Healy. Nay: None. Absent: None.

10. Claims

a. Report from the Public Works Department regarding payment #2 in the amount of $186,845.35 to Five Cities Construction, Coal Valley, IL for the 37th Avenue & 46th Street Reconstruction Project (Project 2606).

b. Report from the Public Works Department regarding payment in the amount of $72,143.95 to Centennial Contractors of the Quad Cities, Moline, IL for emergency water main replacement and emergency sewer main replacement in the alley between 6th and 7th Avenues and 34th and 35th Streets.

c. Report from the Public Works Department regarding payment #5 in the amount of $78,967.35 to General Constructors, Inc., Davenport, IA for construction on the Schwiebert Park Marina Dock Renovations (Project 2828).

d. Report from the Public Works Department regarding payment #2 in the amount of $333,604.85 to Langman Construction, Rock Island, IL for services performed as part of the 11th Street Water Main Replacement (Project 2736).

e. Report from the Public Works Department regarding payment #5 in the amount of $434,608.18 to Langman Construction, Inc., Rock Island, IL for services provided during the period of April 1 to April 30, 2023 as part of the Downtown Parking Garage and Parking Lot Project (Project 2847).

f. Report from the Public Works Department regarding payment in the amount of $88,185.03 to McClintock Trucking and Excavating, Inc., Silvis, IL for repairs performed at multiple locations as part of the Water Service Repair Program (WSRP) and Sewer Lateral Repair Program (SLRP).

Motion:	Motion whether or not to allow claims items a through f.
RC	Roll Call vote is needed.

MOTION:

Alderperson Hurt moved to allow claim items a through f; Alderperson Healy seconded.

Alderperson Parker abstained from the vote due to the nature of his employment.

VOTE:

Motion PASSED on a 6-0-0 roll call vote. Aye: Robinson, Hurt, Gilbert, Swanson, Poulos, Healy. Nay: None. Absent: None.

11. Contracts / Agreements

a. Report from the Public Works Department regarding bids for the Water Treatment Plant Roof Replacement Project (Project 2844), recommending the bid be awarded to Top Roofing, Wheaton, IL in the amount of $39,880.00.

Motion:	Motion whether or not to award the bid and authorize the City Manager to execute the contract documents.
RC	Roll Call vote is needed.

This item was removed from the agenda.

b. Report from the Public Works Department regarding contracts for engineering and design services at Sunset Marina with IMEG Corporation, Rock Island, IL in the amount of $19,700.00, and Edgewater Resources LLC, Madison, WI in the amount of $230,100.00.

Motion:	Motion whether or not to award the contracts to IMEG Corporation and Edgewater Resources; and authorize the City Manager to execute the contract documents.
RC	Roll Call vote is needed.

MOTION:

Alderperson Hurt moved to award the contracts to IMEG Corporation and Edgewater Resources and authorize the City Manager to execute the contract documents; Alderperson Poulos seconded.

VOTE:

Motion PASSED on a 6-1-0 roll call vote. Aye: Robinson, Hurt, Swanson, Parker, Poulos, Healy. Nay: Gilbert. Absent: None.

c. Report from the Public Works Department regarding an extension of the lease agreement with USCOC of Greater Iowa, LLC for the water tower located at 1405 36th Street.

Motion:	Motion whether or not to direct the City Manager to sign the attached amendment to extend the lease agreement with USCOC of Greater Iowa.
RC	Roll Call vote is needed.

MOTION:

Alderperson Healy moved to direct the City Manager to sign the attached amendment to extend the lease agreement with USCOC of Greater Iowa; Alderperson Poulos seconded.

VOTE:

Motion PASSED on a 7-0-0 roll call vote. Aye: Robinson, Hurt, Gilbert, Swanson, Parker, Poulos, Healy. Nay: None. Absent: None.

12. Ordinances with Reports from Departments

a. Report from the Community & Economic Development Department regarding the sale of City-owned property located at 1423 6th Street (PIN 1603232007) to Christina & Giovanni Crouch for

$421.25 plus closing costs. (First Reading)

Motion:	Motion whether or not to approve the sale of 1423 6th Street to Christina & Giovanni Crouch for $421.25 plus closing costs; authorize the City Manager to execute the sale agreement; and consider the ordinance.
RC	Roll Call vote is needed.

MOTION:

Alderperson Robinson moved to approve the sale of 1423 6th Street for $421.25 plus closing costs; authorize the City Manager to execute the sale agreement; and consider the ordinance; Alderperson Hurt seconded.

VOTE:

Motion PASSED on a 7-0-0 roll call vote. Aye: Robinson, Hurt, Gilbert, Swanson, Parker, Poulos, Healy. Nay: None. Absent: None.

13. Budget/Finance Items

a. Report from the Finance Department regarding an adjustment to the CY 2023 budget, increasing the Parks and Recreation Fund (555) revenue and expense budgets by $70,200.00.

MOTION:

Alderperson Robinson moved to approve the budget adjustment; Alderperson Swanson seconded.

VOTE:

Motion PASSED on a 7-0-0 roll call vote. Aye: Robinson, Hurt, Gilbert, Swanson, Parker, Poulos, Healy. Nay: None. Absent: None.

b. Report from the Finance Department regarding an adjustment to the CY 2023 budget, increasing revenues for the Martin Luther King, Jr. Community Center (Fund 901) by $25,000.00 and expenditures by $65,000.00 to cover personnel and supply costs.

Motion:	Motion whether or not to approve budget adjustments a and b.
RC	Roll Call vote is needed.

This item was removed from the agenda.

14. Department Reports

a. Report from the Community & Economic Development Department regarding approval of the 2023 CDBG Annual Action Plan.

Motion:	Motion whether or not to approve the 2023 Annual Action Plan and direct staff to submit it to HUD.
RC	Roll Call vote is needed.

MOTION:

Alderperson Swanson moved to approve the 2023 Annual Action Plan and direct staff to submit it to HUD; Alderperson Parker seconded.

VOTE:

Motion PASSED on a 7-0-0 roll call vote. Aye: Robinson, Hurt, Gilbert, Swanson, Parker, Poulos, Healy. Nay: None. Absent: None.

15. Appointments to Boards/Commissions/Committees

a. Report from the Mayor's Office regarding the appointment of Anamaria Rocha to the Illinois Quad Cities Civic Center Authority for a 3-year term expiring June 2026.

Motion:	Motion whether or not to approve the appointment as recommended.
RC	Roll Call vote is needed.

MOTION:

Alderperson Parker moved to approve the appointment as recommended; Alderperson Healy seconded.

VOTE:

Motion PASSED on a 7-0-0 roll call vote. Aye: Robinson, Hurt, Gilbert, Swanson, Parker, Poulos, Healy. Nay: None. Absent:None.

16. Events/Misc Requests

a. Report from the City Clerk's office regarding a request from Bally's Quad Cities to use sound amplification on Friday, July 7, 2023 from 7:00 p.m. to 10:30 p.m. at the Bally's campus for an outdoor concert.

Motion:	Motion whether or not to approve the request as recommended.
RC	Roll Call vote is needed.

MOTION:

Alderperson Hurt moved to approve the request as recommended; Alderperson Poulos seconded.

VOTE:

Motion PASSED on a 7-0-0 roll call vote. Aye: Robinson, Hurt, Gilbert, Swanson, Parker, Poulos, Healy. Nay: None. Absent: None.

17. Other Business/New Business

Alderperson Parker said now that the public health emergency declaration has ended, the Council has the ability to implement a voice vote on certain items such as a motion to adjourn. Alderperson Gilbert said it would be helpful to itemize what is required to be a roll call vote and what could be a voice vote. It was the consensus of Council members to reimplement the voice vote.

Alderperson Swanson commented on several wonderful events that took place over the past week in Rock Island including the Pride Fest held in Schwiebert Park, the Common Chords concerts in downtown, as well as the Flowers on the River celebration for domestic violence survivors.

Alderperson Healy asked Community Engagement Manager Sarah Hayden to push out the Red, White and Boom event as early as possible.

Mayor Thoms said he had the opportunity to be part of the grand opening for a new driving school in Rock Island that focuses on providing driving classes to refugees and immigrants who may face a language barrier. He noted the event was well attended and it was great to see so many people eager to learn. Mayor Thoms said he also attended the Quad Cities American Heart Association Heart Walk held at Schwiebert Park and the Denkmann Park event and celebration, which were also great events and well attended.

Alderperson Gilbert remarked on the Poverty Roundtable held by Project Now and said there were some great ideas and information that came out of the discussion. She said she has been asked to serve on the NAACP Housing Committee and noted this group has many great ideas on affordable housing and housing for the homeless.

18. Adjourn

a. Motion to Adjourn.

Motion:	Motion to adjourn to June 26, 2023.
RC	Roll Call vote is needed.

MOTION:

Alderperson Hurt moved to adjourn; Alderperson Gilbert seconded.

VOTE:

Motion PASSED on a 7-0-0 roll call vote. Aye: Robinson, Hurt, Gilbert, Swanson, Parker, Poulos, Healy. Nay: None. Absent: None.

The meeting was adjourned at 7:36 p.m.

_____
Samantha Gange, City Clerk

© 2022 LAUTERBACH & AMEN, LLP

Lauterbach & Amen, LLP

CERTIFIED PUBLIC ACCOUNTANTS

Rock Island, Illinois

Review of 12/31/2022 Audit and Related Reports

ROCK ISLAND
ILLINOIS

Actuarial | Audit | Financial Services | Payroll | Pension | Tax

© 2022 LAUTERBACH & AMEN, LLP

December 31, 2022
Annual Comprehensive Financial Report (ACFR)

- Thanks to the Finance Department for their efforts in preparing for a successful audit
- Very clean audit process resulting in an Unmodified Opinion, the highest-level opinion the City can receive
- Receipt of the Certificate of Achievement for Excellence in Financial Reporting (ACFR) for the 12/31/2021 Audit
- No internal control findings

© 2022 LAUTERBACH & AMEN, LLP

December 31, 2022
Annual Comprehensive Financial Report (ACFR)

- One new GASB Statement implemented this year – GASB 87 Leases
- Two new GASB Statements noted in Management Letter –
  - GASB 96 Subscription-Based Information Technology Arrangements
  - GASB 94 Private-Public and Public-Public Partnerships
  - Both to be implemented at 12/31/2023

© 2022 LAUTERBACH & AMEN, LLP

December 31, 2022
Annual Comprehensive Financial Report (ACFR)

- Goals of the financial statement audit
- Pages 3 – Transmittal Letter
- Page 10 – Certificate of Achievement for Excellence in Financial Reporting (ACFR Award) 12/31/2021
- Pages 13 – Independent Auditors' Report (Unmodified)

© 2022 LAUTERBACH & AMEN, LLP

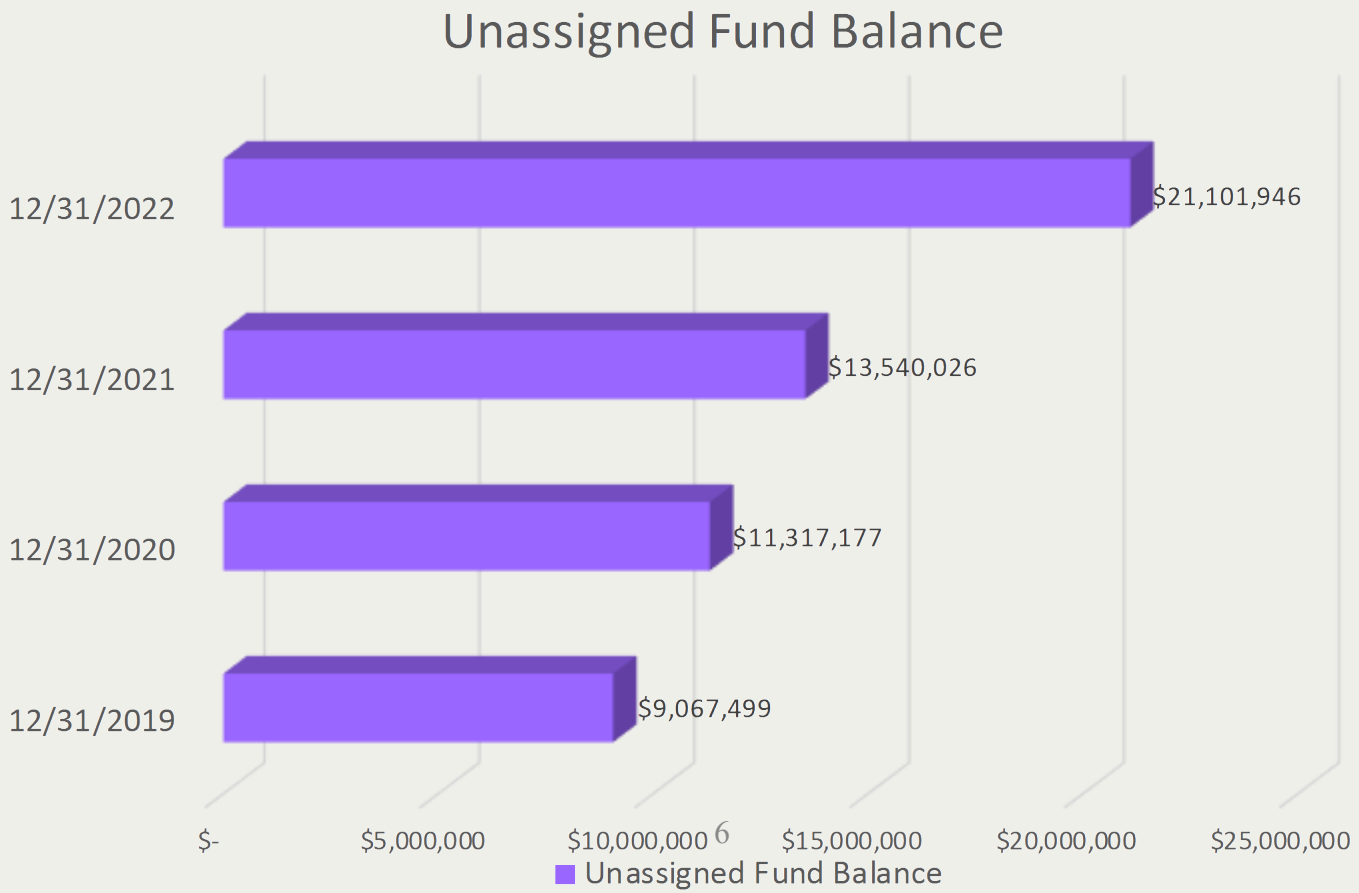
December 31, 2022
Annual Comprehensive Financial Report (ACFR)

- Pages 16 – Management's Discussion and Analysis (Executive Summary)
- Pages 30 – Basic Financial Statements
- Pages 210 – Statistical Section (10 Year Trend Information)

© 2022 LAUTERBACH & AMEN, LLP

December 31, 2022
Annual Comprehensive Financial Report (ACFR)

- General Fund Results



© 2022 LAUTERBACH & AMEN, LLP

December 31, 2022
Management Letter/SAS 114 Letter

- No internal control related issues
- Two new GASB Statements –
  - GASB 96 Subscription-Based Information Technology Arrangements (SBITA)
    - Will change the way the City reports SBITAs on the balance sheet
  - GASB 94 Public-Private and Public-Public Partnerships and Availability Payment Arrangements
    - Will apply to the City's transfer of the use or operation of a capital asset by contract
  - Both effective for 12/31/2023 Fiscal Year

© 2022 LAUTERBACH & AMEN, LLP

Contact Information

Lauterbach & Amen, LLP
668 N. River Road
Naperville, IL 60563
Phone: 630.393.1483
Fax: 630.393.2516
lauterbachamen.com

Jamie L. Wilkey, Partner
jwilkey@lauterbachamen.com

Memorandum

To: Rock Island City Council

From: Melissa Holderfield, Administrative Assistant, Tanner Osing, Miles Brainard, Director

Subject: An ordinance regarding the sale of City-owned property located at 1423 6th Street (PIN 1603232007) to Christina & Giovanni Crouch for $421.25 plus closing costs. (Second Reading)

Motion:	Motion whether or not to pass the ordinance.
RC	Roll Call vote is needed.

Date: June 26, 2023

Introduction and Background Information:

Christina & Giovanni Crouch of 1421 6th Street have applied to purchase 1423 6th Street (PIN 1603232007) from the City for $421.25 plus closing costs. The property was acquired by the City in 2012 via tax auction for $421.25. The applicants own the property adjacent to this vacant lot and plan to use the lot as extra yard space. Based on its current condition, the annual property tax revenue that would be generated by the property if sold is estimated to be $70.00. The subject property is approximately 2,356 square feet and zoned R2. A map of the parcel is attached.

The following things are true or will be achieved by this sale.

1. The property is not currently used by a City department and/or does not have a municipal function.
2. The property is vacant and/or has no foreseeable use by the City.
3. The property is a non-performing or under-performing asset and value can be generated by its sale.
4. Economic development opportunities can be generated by selling the property.
5. The City will be relieved of potential liabilities and/or costs associated with maintaining a non-income generating property or one that does not provide a public benefit.
6. The proposed use of the property complies with the Comprehensive Plan and other relevant City plans.
7. The sale of the property will result in returning the property to the tax rolls.

Previous Council Action (if any):

N/A

Budget Impact:

The action will reduce property maintenance costs and increase property tax revenue.

Additional Information as applicable (i.e. provide alternative options, community or staff

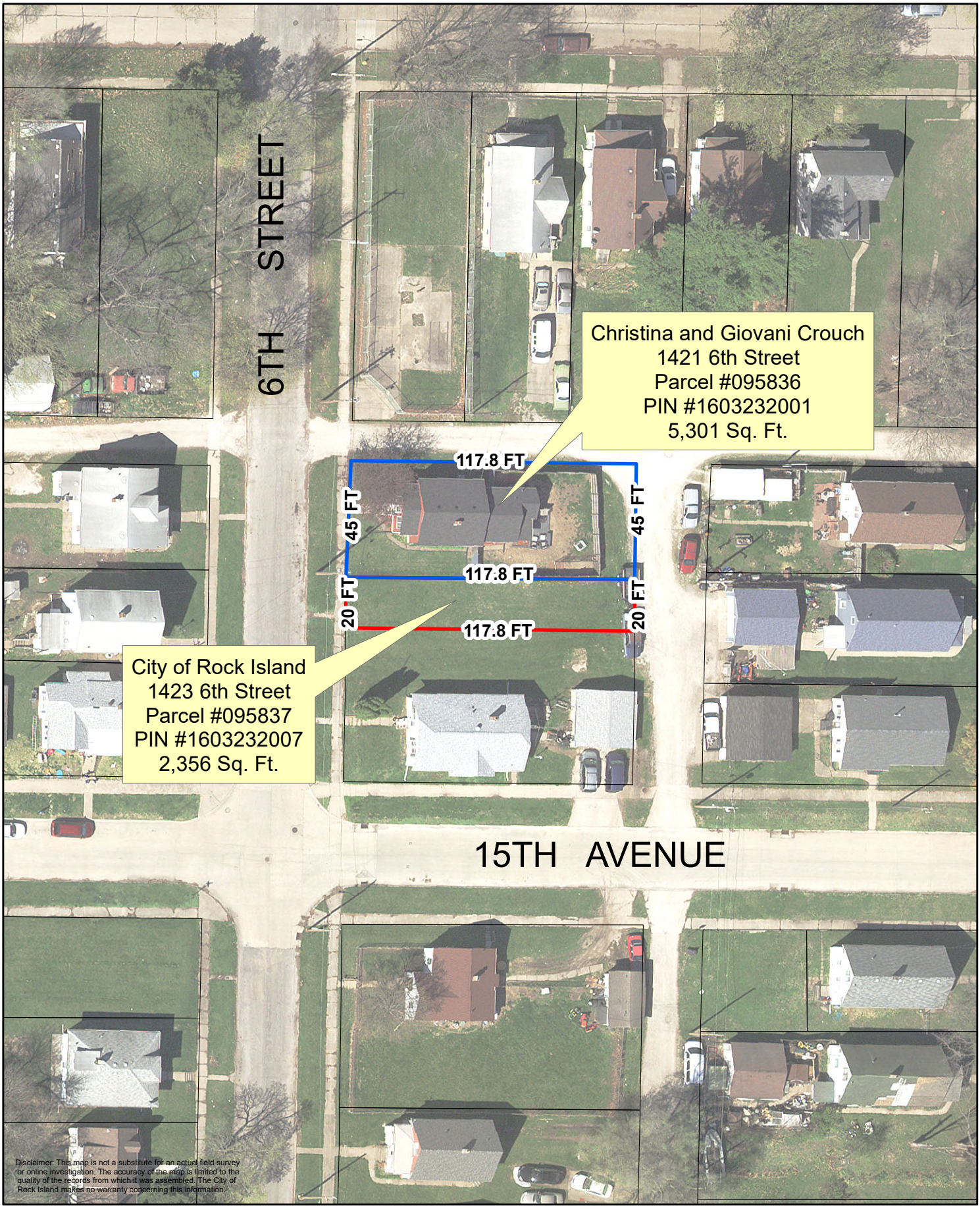
input, staffing impact; resident impact; etc.):
N/A

Council Goal (if applicable):
Goal #1: Financial Sustainability; Objective #4: Expand and strengthen the tax base and increase city revenues; Action: Sell-off underperforming city assets.

Recommendation:
The Community and Economic Development Department recommends that the City Council approve the sale of 1423 6th Street to Christina & Giovanni Crouch for $421.25 plus closing costs; authorize the City Manager to execute the sale agreement; and consider the ordinance.

Submitted by: Joshua Adams

Approved by: Joshua Adams



Location Map

City Owned Lot, 1423 6th Street
PIN #1603232007

Potenial Buyer
City Owned Lot

ROCK ISLAND ILLINOIS

N W E S

City of Rock Island,
Community and Economic Development Department

Drawn By: K. Douglass

Date Created: May 2023

0 5 10 20 30 40 Feet

AGREEMENT FOR THE SALE OF CITY-OWNED REAL ESTATE AT 1423 6TH STREET

A.	Date of Agreement	5/15/23
B.	Seller(s) Address	City of Rock Island 1528 3rd Avenue Rock Island, IL 61201
C.	Purchaser(s) Address	Christina Crouch Giovanni Crouch 1421 6th Street
D.	Address of Property Legal Description	1423 6th Street PIN 1603232007 The North Half (N ½) of Lot Number Five (5) in Block Number One (1) in that of the City of Rock Island known as and called John G. Scheuermann's Fifth Addition to said City, Situated in the County of Rock Island and State of Illinois.
E.	Purchase Price Earnest Money	$421.25 Purchaser also pays all closing costs.
F.	Amount of % of Financing Type of Loan Days to Obtain Commitment	N/A
G.	Closing Date	Within 90 days of City Council approval.
H.	Possession After Closing Days After Closing Per Diem Liquidated Damages	At Closing
I.	Personal Property to Stay	N/A
J.	Condition of Premises	As-Is
K.	Wood Infestation Report	N/A
L.	Riders Attached	N/A
M.	Acceptance On or Before Counter Offer	At Presentation

Purchase Agreement for Commercial Real Estate ("Agreement") is entered into on the above date, between Christina and Giovanni Crouch, ("Purchaser"), and THE CITY OF ROCK ISLAND, ILLINOIS, ("Seller"). In consideration of the mutual covenants set forth in this Agreement and

P: CC GC S: _____

other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Seller and Purchaser agree as detailed on the following pages.

TERMS: The Purchaser agrees to purchase from the Seller and the Seller agrees to sell to the Purchaser the real estate described on the attached Exhibit A for the total sum of four hundred twenty-one dollars and twenty-five cents ($421.25) to be paid as follows:

$0	EARNEST MONEY held in escrow by Meridian Title Company as a part of the cash at closing, the receipt of which by said title company shall be evidenced to Seller with delivery of this Offer.
$421.25	CASH PAYMENT at the time of closing.

POSSESSION: Possession shall be at the time of closing.

EVIDENCE OF TITLE: Within a reasonable time, Seller shall deliver a commitment for title insurance issued by a title insurance company regularly doing business in the county where the subject property is located, committing the company to issue an owner's policy in the usual form insuring merchantable title to the subject property in the Purchaser for the amount equal to the purchase price. If title evidence discloses exceptions other than those permitted under the rules for examination for abstracts of title adopted by the local County Bar Association, Purchaser or Purchaser's attorney shall give written notice of such exceptions to Seller within a reasonable time. Seller shall have a reasonable time to have such title exceptions removed, or, any such exception which may be removed by the payment of money may be cured by deduction from the purchase price at the time of closing. If Seller is unable to cure such exception, then Purchaser shall have the option to terminate this Agreement in which case Purchaser shall be entitled to a refund of the earnest money. Furnishing a title insurance policy insuring over an exception shall constitute a cure of such exception.

CLOSING: The Parties acknowledge that time is of the essence to this agreement. Closing shall take place within ninety (90) days following the approval of this agreement by the Rock Island City Council. Parties agree to close at the offices of the City Attorney. The purchaser agrees to pay all closing fees associated with the transaction including all legal, title, and recording fees. Failure by the purchaser to close within ninety (90) days without a written extension issued by the City shall render this agreement null and void. Any closing costs incurred prior to the agreement being rendered null and void shall be paid by the Purchaser to the City.

CONVEYANCE OF TITLE AND DOCUMENTS OF SALE: The title to be conveyed shall be by Quit Claim Deed to Purchaser and free and clear of all liens and encumbrances not herein specifically waived or assumed by Purchaser. The parties agree to execute any transfer declarations or other documents required by the state, county or municipality in which the subject property is located, as well as any documents required by the title insurance company in order to issue title insurance. All parties agree to comply with the provisions of the Real Estate Settlement Procedures Act of 1974 (RESPA).

P: CC GC S: _____

PRORATIONS AND ADJUSTMENTS: The following items shall be prorated at closing as of the date of delivery of possession:

1. Real estate taxes, based on the most recent tax information available, which, in the absence of fraud, shall be final;
2. Rent, if any, (with transfer in full of any security/damage deposit);
3. Other income and operation expenses, if any;
4. Special assessments, if any.

EXPENSES OF TRANSFER:

Purchaser shall pay:

1. Broker's commission, if any;
2. Cost of owner's title insurance policy;
3. Revenue stamps and recording of any releases; and
4. Seller's Closing Protection Letter, as required.
5. Recording fee for deed;
6. Assumption fee if mortgage assumed;
7. Cost of Purchaser's mortgage title insurance policy as required by mortgagee; and
8. Purchaser's and Lender's Closing Protection Letters, as required.

Each party shall be responsible for their own attorney fees, if any.

DEFAULT: If Purchaser fails to make any payment or to perform any obligation imposed upon Purchaser by this Agreement, Seller may serve written notice of default upon Purchaser and if such specified default is not corrected within ten (10) days thereafter, Seller may accept the earnest money and any additional down payment as damages or may pursue any available legal remedy including specific performance. In the event Seller fails to perform any obligation imposed upon Seller by this Agreement, Purchaser may serve written notice of default upon Seller and if such default is not corrected within ten (10) days thereafter, earnest money and any additional down payment deposit shall be refunded to Purchaser without prejudicing the Purchaser's right to any available legal remedy including specific performance. In the event of default, the defaulting party shall be liable to the other party for reasonable attorney fees and expenses incurred by reason of the default.

CASUALTY CLAUSE: Seller shall cause to be kept in force the existing insurance, including fire and other extended coverage, on improvements, if any, on the subject property until title has passed to Purchaser or possession is delivered to Purchaser, whichever first occurs. Purchaser shall be responsible for insurance coverage upon taking title or possession of the subject property, whichever first occurs.

ESCROW: This Agreement will be closed through an escrow with Meridian Title Company, in accordance with the general custom of the community and in conformity with this

P: CC GC S: _____

Agreement. The funds held in escrow shall be paid out upon recording of the necessary documents and the vesting of merchantable title in the Purchaser.

ASSESSMENTS: Seller shall pay all special assessments which are a lien on the subject property as of the date of closing. Seller acknowledges that prior to the execution of this Agreement, Seller has no knowledge of or no notice has been received from any municipal authority concerning improvements which could result in a special assessment on the subject property. Tap on fees, if any, which exist for municipal services to the property shall be paid by Purchaser.

GENERAL CONDITIONS: This Agreement shall be binding upon the parties and their successors and assigns. Time is of the essence of this Agreement. This Agreement shall be governed by the enforced in accordance with the laws of the state in which the subject property is located. This Agreement contains the entire Agreement of the parties and no representations, warranties, or Agreements have been made by either party as set forth herein. No modification, waiver, or amendment of the Agreement shall be effective unless made in writing and signed by the parties. All representations, warranties and covenants made by the parties shall survive closing. Paragraph headings are for the convenience of reference and shall not limit or affect the meaning of the Agreement.

NOTICES: All notices required hereunder shall be in writing and shall be served upon the parties at the addresses designated herein by personal service, certified mail (return receipt requested), or Federal Express or other overnight mail.

Seller
City of Rock Island
City Manager
1528 3rd Avenue
Rock Island, IL 61201

Copy To
Dave Morrison, City Attorney
1515 4th Avenue, Suite 301
Rock Island, IL 61201

Purchaser
Christina and Giovanni Crouch
1421 6th Street
Rock Island, IL 61201

Copy To

LEGAL ASSISTANCE: The Seller and Purchaser are aware that when fully signed, this is a legally binding Agreement for the sale and purchase of real estate and that in order to protect their respective interests, Seller and Purchaser are advised to consult legal counsel before this Agreement is signed.

APPROVAL: This Offer to Purchase shall be subject to and not binding upon Purchaser pending submission and approval by the City Council of The City of Rock Island, Illinois.

ACCEPTANCE BY SELLER: Until accepted by Seller this document constitutes an offer by Purchaser on the terms stated above. This Agreement must be accepted by Seller within two (2)

P: CC GC S: _____

business days from date shown next to Purchaser's signatures below. If not so accepted, the offer shall be void and the earnest money returned to Purchaser. This Agreement has been read and executed on the dates beside our signatures.

	Executed by Purchaser:	**Executed by Seller:**
Name	Christina Crouch Giovanni Crouch	City of Rock Island
Signature	Christy Crouch Gio Crouch	
Date	5/15/23	

P: CC GC S: _____

A SPECIAL ORDINANCE PROVIDING FOR THE SALE OF CERTAIN REAL ESTATE OWNED BY THE CITY OF ROCK ISLAND, ILLINOIS

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF ROCK ISLAND, ILLINOIS:

Section One: Christina & Giovanni Crouch of 1421 6th Street have applied to purchase 1423 6th Street (PIN 1603232007) from the City. The applicants own the property next to this vacant lot and plan to use the lot as extra yard space.

Section Two: It is hereby determined that the retention of the title to the following real estate owned by the City of Rock Island, Illinois is no longer necessary, appropriate, required for the use of, profitable to, or for the best interests of the City of Rock Island, Illinois:

Commonly known as 1423 6th Street
PIN 1603232007
Legal Description:

The North Half (N ½) of Lot Number Five (5) in Block Number One (1) in that of the City of Rock Island known as and called John G. Scheuermann's Fifth Addition to said City, Situated in the County of Rock Island and State of Illinois.

Section Three: The City of Rock Island, Illinois has received an offer to purchase the aforementioned described real estate and it is hereby determined that the purchase price is fair and equitable between the parties and it is in the best interest that said real estate be sold for that purchase price.

Section Four: The Mayor and City Clerk are hereby authorized and directed to execute on behalf of the City of Rock Island, Illinois a Quit Claim Deed conveying the above-described real estate to Christina & Giovanni Crouch, for the sum of $421.25, plus closing costs.

Section Five: All ordinances and part of ordinances in conflict herewith are hereby repealed insofar as they do so conflict.

Section Six: This ordinance shall be in full force and effect after its passage and approval, as required by law.

_____
Mayor of the City of Rock Island

Passed: _____

Approved: _____

Attest: _____
City Clerk

Memorandum

To: Rock Island City Council

From: Tameka Toney, Accountant

Subject: Claims for the weeks of June 2 through June 8, 2023 in the amount of $524,748.65; for the weeks of June 9 through June 15, 2023 in the amount of $1,170,187.00; and payroll for the weeks of May 29 through June 11, 2023 in the amount of $1,719,544.02.

Date: June 26, 2023

Introduction and Background Information:

N/A

Previous Council Action (if any):

N/A

Budget Impact:

N/A

Additional Information as applicable (i.e. provide alternative options, community or staff input, staffing impact; resident impact; etc.):

N/A

Council Goal (if applicable):

N/A

Recommendation:

N/A

Submitted by: Tameka Toney, Accountant

Approved by: Joshua Adams

CITY OF ROCK ISLAND
CHART OF ACCOUNTS

June 02, 2023 through
June 08, 2023
TOTAL: $ 524,748.65

FUNDS	FUND NAME
101	General Fund
201	TIF #1 Downtown
202	TIF #2 South 11th Street
203	TIF #3 North 11th Street
204	TIF #4 Jumer's Casino Rock Island
205	TIF #5 Columbia Park
206	TIF #6 NE I280/Parkway
207	Community/Economic Development
208	TIF #7 The Locks
209	TIF #8 Watchtower
210	Public Benefit
211	Martin Luther King Center
212	MLK Facility Improvement
213	TIF #9 1st Street
221	Motor Fuel Tax
222	Foreign Fire Insurance
223	Riverboat Gaming
224	State Drug Prevention
225	DUI Fine Law
226	Court Supervision
227	Crime Laboratory
241	US Dept of Justice Grant
242	Community Development Block Grant
243	Federal Drug Prevention
244	Neighborhood Stabilization ARRA
245	Schwiebert Park Boat Dock
246	Ridgewood Business Park
251	Public Library
252	Volunteers of the RI Library
271	Honor Guard Contributions
272	DARE
273	Police Contributions
274	Elderly Service Contributions
275	RI Auxiliary Police
276	RI Labor Day Parade
277	ESO Christmas Tour
278	Adopt A School
279	Fire Donations
282	Lead Grant
301	Capital Improvements
302	Capital Improvements - Streets
405	Debt Service
501	Water Operation & Maintenance
502	Water Capital 2010A BAB'S
506	Wastewater Operations & Maintenance
507	Stormwater Utility
508	Wastewater Capital 2010A BAB'S
510	Solid Waste
511	Centennial Bridge
541	Sunset Marina
555	Parks & Recreation
581	CDBG Loan Programs
582	State Affordable Housing
583	Community/Economic Development Loans
584	CIRLF Loan Fund
585	MPF Endowment Loans
586	Brownfield Revolving Loan Fund
595	Public Housing
601	Fleet Services
602	Fleet Amortization
606	Engineering
609	Hydroelectric Plant
621	Self-Insurance
626	Employee Health Plan
701	Fire Pension
706	Police Pension
711	Cafeteria Plan
712	Loan Escrow
831	GASB 34
901	MLK Activity
905	IL DCFS
906	Dept of Human Services
907	MLK Capital Contributions
950	Public Library Foundation

DEPT	DEPARTMENT NAME
111	1st Ward
112	2nd Ward
113	3rd Ward
114	4th Ward
115	5th Ward
116	6th Ward
117	7th Ward
118	Mayor
119	Mayor & Council Administration
122	General Administration
123	Legal Services
131	City Clerk
155	Human Resources Administration
156	Human Resources Services
157	Insurance
211	Finance Administration
212	Customer Service
213	Accounting Services
214	Budget and Grants Management
256	Information Technology
311	Community/Economic Development Administration
312	Economic Development
313	Planning/Redevelopment
314	Inspection
356	Martin Luther King Jr Community Center
411	Police Administration
412	Field Operations Bureau
413	Criminal Investigation Bureau
414	Administration/Technical Services Bureau
415	Tactical Operations
451	Fire Administration November 5, 2021 through
452	Fire Emergency Services
453	Fire Protective Inspect
454	Ambulance
611	Public Works Administration
612	Motor Vehicle Parking System
613	Water Meter Services
615	Engineering
616	Municipal Services
617	Fleet Services
618	Utilities Service
619	Utilities Maintenance
711	Library Administration
712	Library Info Services
713	Library Circulation
714	Library Extension
811	Park/Recreation Administration
813	Recreation
818	Whitewater Aquatic Center
819	Schwiebert Riverfront Park
822	Parks
834	Highland Golf Maintenance
835	Highland Clubhouse
846	Golf Pro Shop
854	Saukie Golf Maintenance
855	Saukie Clubhouse
867	RIFAC
891	Donations P/R Admin
892	Donations Parks
893	Donations Recreation Programs
894	Donations Golf Maintenance
895	Donations Highland/Saukie Clubhouse
896	Donations Golf Pro Shop
897	Donations RIFAC
898	Donations Longview Aquatic Center
899	Donations Riverfront Park
910	Police Fire Commission
920	Fire Pension
930	Police Pension
940	Cafeteria Plan

REPORT PARAMETERS

ORGANIZATION	: 010
BANK	: 1
PRINT BY	: CHECK DATE
SORT OPTION	: VENDOR NAME
PRINT DETAILS	: Y
BEGINNING CHECK DATE	: 06/08/23
ENDING CHECK DATE	: 06/08/23
ORG NAME FOR EXTRACT FILE	: APPP060823

010 CITY OF ROCK ISLAND
CHECK REGISTER
DATE RANGE: 06/08/23 - 06/08/23

BANK	CHECK #	CHECK AMT	CHECK DATE	VENDOR #	ADDRS #	VENDOR NAME	TYPE	CHECK STATUS
WO #		AMOUNT	G/L ACCT #			DESCRIPTION	INVOICE #	INV VEND
1	45268	$175.00	06/08/23	01274	0	A & A AC & REFRIGERATION INC	T	CLEARED
		175.00	555-813521-53902-0000000			plex ice machine rent		
1	45269	$168.39	06/08/23	00056	0	ALEXIS FIRE EQUIPMENT CO	T	CLEARED
		168.39	601-617364-52305-0000000			FLEET-2023-0001631		
1	45270	$1990.00	06/08/23	02300	0	ALTORFER INC	T	CLEARED
		1990.00	101-617120-53801-6514000			Generator/insp/testing		
1	174890	$300.00	06/08/23	18487	0	ALTUS RECEIVABLES MANAGEMENT	S	OUTSTANDING
		60.00	510-616041-51404-0000000			Sonneville,M.Weeks		
		30.00	101-616041-51404-0000000			Jacobs		
		150.00	510-616041-51404-0000000			J. Houk Boots		
		60.00	510-616041-51404-0000000			Collection agency fee		
1	45271	$99.71	06/08/23	15725	0	ARNOLD MOTOR SUPPLY LLP	T	CLEARED
		15.19	601-617364-52204-0000000			FLEET-2023-0001674		
		7.59	601-617364-52204-0000000			FLEET-2023-0001674		
		76.93	601-617364-52302-0000000			FLEET-2023-0001637		
1	174891	$200.00	06/08/23	17385	2	ATHLETICO LTD	S	OUTSTANDING
		200.00	621-157131-53602-0520000			Kerri Besse job analysis		
1	174892	$33.98	06/08/23	00109	0	AUTOZONE STORES LLC	S	OUTSTANDING
		33.98	601-617364-51402-0000000			Nitrile gloves		
1	174893	$2774.12	06/08/23	18482	0	AVAILED TECHNOLOGIES CORP	S	OUTSTANDING
		2774.12	101-617371-52304-0000000			rrfb 20w solar engine w/mount		
1	45272	$242.50	06/08/23	00285	0	BEST DISTRIBUTING INC	T	CLEARED
		140.94	601-617364-52305-0000000			FLEET-2023-0001632		
		50.78	601-617364-52305-0000000			FLEET-2023-0001633		
		50.78	601-617364-52305-0000000			FLEET-2023-0001633		
1	45273	$3750.00	06/08/23	14122	0	BI-STATE BARRICADE AND FLAGGING, INC	T	CLEARED
		400.00	101-617121-52301-0000000			Barricade pick up		
		1000.00	101-616601-52301-0000000			Barricade pick up		
		2350.00	101-616301-52306-0000000			Barricade pick up		
1	174894	$32.18	06/08/23	00288	0	BI-STATE REGIONAL COMMISSION	S	OUTSTANDING
		32.18	101-122041-54401-0000000			city manager and mayor lunch		
1	174895	$362.60	06/08/23	16598	0	BLANK PARK ZOO	S	OUTSTANDING
		362.60	251-713471-53110-0000000			RIPL ENTERTAINMENT BLANK PARK		
1	45274	$24327.96	06/08/23	00297	0	BLICK & BLICK OIL INC	T	CLEARED
		11925.80	601-617364-52203-0000000			4000 Gals Gasohol		
		12402.16	601-617364-52203-0000000			4000 Gals Diesel Fuel		
1	45275	$12955.00	06/08/23	05065	1	CDS OFFICE TECHNOLOGIES INC	T	CLEARED

010 CITY OF ROCK ISLAND
CHECK REGISTER
DATE RANGE: 06/08/23 - 06/08/23

BANK	CHECK #	CHECK AMT	CHECK DATE	VENDOR #	ADDRS #	VENDOR NAME		TYPE	CHECK STATUS
WO #		AMOUNT	G/L ACCT #			DESCRIPTION	INVOICE #	INV	VEND
		9000.00	101-256081-52406-0000000			3 FIRE TABLETS&BARCODE SCANNER			
		3955.00	101-256081-52406-0000000			2 CRADLEPOINT ROUTERS/ANTENNAS			
1	174896	$10793.72	06/08/23	18468	0	CHEMRITE, INC		S	OUTSTANDING
		10793.72	501-618352-52217-0000000			Potasium Permanganate			
1	174897	$48.89	06/08/23	15674	0	CINTAS CORPORATION NO. 2		S	OUTSTANDING
		48.89	211-356941-53801-0000000			building and grounds			
1	174898	$730.79	06/08/23	01309	2	CITY OF DAVENPORT PUBLIC LIBRARY		S	OUTSTANDING
		730.79	251-712421-53823-0000000			RIPL CONTENTDM			
1	45276	$885.68	06/08/23	03309	0	COE EQUIPMENT INC		T	CLEARED
		885.68	601-617364-53804-0000000			FLEET-2023-0001626			
1	174899	$5130.79	06/08/23	15001	0	CONFERENCE TECHNOLOGIES INC		S	OUTSTANDING
		5130.79	251-711401-53801-0000000			RIPL WM AV SYSTEM			
1	174900	$374.50	06/08/23	00451	0	COOPMAN TRUCKING EXCAVATING		S	OUTSTANDING
		374.50	101-617112-52301-0000000			top soil			
1	45277	$351.38	06/08/23	00468	0	CRAWFORD HEATING & COOLING INC		T	CLEARED
		351.38	555-855702-53801-0000000			saukie replace faucet			
1	174901	$920.00	06/08/23	18432	0	CRAWFORD, MURPHY & TILLY INC		S	OUTSTANDING
		920.00	606-615091-53102-2240000			Prof service 2/25 to 4/28/23			
1	174902	$186.00	06/08/23	14088	0	DATA SOLUTIONS INC		S	OUTSTANDING
		186.00	224-413215-52406-0000000			MONTHLY			
1	45278	$2990.84	06/08/23	00514	0	DAVENPORT ELECTRIC CONTRACT COMPANY		T	CLEARED
		1311.27	248-256041-53822-8521663			ARPA-CITY CAMERA-24 ST/7 AV			
		1679.57	248-256041-53822-8521663			APRA-CITY CAMERA-11ST\31AV			
1	45279	$32832.56	06/08/23	01511	0	DEMCO INC		T	CLEARED
		25979.53	251-714404-53801-0000000			WM TERRACE FURNITURE			
		6853.03	251-711401-53801-0000000			RIPL WM TERRACE FURNITURE			
1	174886	$75000.00	06/08/23	00540	0	DEVELOPMENT ASSOCIATION OF ROCK ISLAND		S	OUTSTANDING
		75000.00	207-312801-54101-0000000			City Agreement - 2023 Extensio			
1	174903	$337.50	06/08/23	06336	0	DINGELDEIN PHILMS INC		S	OUTSTANDING
		337.50	251-711041-53401-0000000			RIPL 2023 GENERAL ADVERTISING			
1	45280	$640.05	06/08/23	01261	0	DOORS INC		T	CLEARED
		640.05	251-711401-53801-0000000			DOOR REPAIRS			
1	45281	$159.60	06/08/23	07653	0	EASTERN IOWA TIRE		T	CLEARED
		159.60	601-617364-53804-0000000			FLEET-2023-0001643			

010 CITY OF ROCK ISLAND
CHECK REGISTER
DATE RANGE: 06/08/23 - 06/08/23

BANK	CHECK #	CHECK AMT	CHECK DATE	VENDOR #	ADDRS #	VENDOR NAME		TYPE	CHECK STATUS
WO #		AMOUNT	G/L ACCT #			DESCRIPTION	INVOICE #	INV	VEND
1	174904	$163.46	06/08/23	08128	0	ECOLAB INC		S	OUTSTANDING
		163.46	101-451041-52207-0000000			detergent			
1	174905	$800.00	06/08/23	11754	0	ELIZABETH RUSSELL		S	OUTSTANDING
		800.00	251-713471-53110-0000000			RIPL ENTERTAINMENT SUMMER MATH			
1	45282	$6562.82	06/08/23	00602	0	ELLIOTT EQUIPMENT CO		T	CLEARED
		679.79	601-617364-52305-0000000			FLEET-2023-0001677			
		2451.79	601-617364-52305-0000000			FLEET-2023-0001677			
		2659.68	601-617364-52305-0000000			FLEET-2023-0001677			
		162.16	601-617364-52305-0000000			FLEET-2023-0001677			
		102.40	601-617364-52305-0000000			Bolts (returned)			
		609.40	601-617364-52305-0000000			Weldment parts for refuse trks			
		102.40-	601-617364-52305-0000000			Credit for returned bolts			
1	174906	$5653.75	06/08/23	17369	0	ENTERPRISE COMMUNITY PARTNERS INC		S	OUTSTANDING
		5653.75	901-356921-53112-0000041			PROGRAM CONSULTANTS			
1	174887	$287.68	06/08/23	04866	0	ENVIRONMENTAL HAZARDS SERVICES LLC		S	OUTSTANDING
		149.04	242-311041-53112-6196230			1630 8th Avenue			
		138.64	242-311041-53112-6196230			1630 8th Avenue			
1	45283	$142733.37	06/08/23	11313	0	ESTES CONSTRUCTION		T	CLEARED
		142733.37	555-835753-56201-6488000			Highland Springs clubhouse con			
1	174907	$527.85	06/08/23	09929	0	EUCLID BEVERAGE OF GALESBURG		S	OUTSTANDING
		527.85	555-835753-52503-0000000			highland beer			
1	45284	$4064.00	06/08/23	00692	0	FBG SERVICE CORP		T	CLEARED
		539.00	501-618352-53801-0000000			May 2023 monthly cleaning			
		967.00	251-714403-53822-0000000			RIPL SW MONTHLY CLNG SERVICE			
		575.00	251-714404-53822-0000000			RIPL WM MONTHLY CLEANING SER			
		1983.00	211-356941-53801-0000000			building and grounds			
1	45285	$830.45	06/08/23	16141	0	FIRST AID CORP		T	CLEARED
		240.65	601-617364-52305-0000000			WS Wipers			
		589.80	601-617364-52305-0000000			WS Wipers			
1	174908	$32.00	06/08/23	17790	0	FRANCIS A PROCHASKA		S	OUTSTANDING
		16.00	101-411041-54501-0000000			DIMAANO-LOPEZ NAME TAGS			
		16.00	101-411041-54501-0000000			ROBINSON-KUHLMAN ERT PLATES			
1	174909	$150.00	06/08/23	16056	0	FRANK R SLABY		S	OUTSTANDING
		150.00	555-892611-52201-0000000			memorial bricks			
1	174910	$268.54	06/08/23	00199	0	GIBSON LTD		S	OUTSTANDING
		268.54	601-617364-52305-0000000			FLEET-2023-0001610			
1	174911	$95.00	06/08/23	18486	0	GINA BLOCK		S	OUTSTANDING
		95.00	555-000000-21411-0000000			refund shelter			

010 CITY OF ROCK ISLAND
CHECK REGISTER
DATE RANGE: 06/08/23 - 06/08/23

BANK	CHECK #	CHECK AMT	CHECK DATE	VENDOR #	ADDRS #	VENDOR NAME		TYPE	CHECK STATUS
WO #		AMOUNT	G/L ACCT #			DESCRIPTION	INVOICE #	INV	VEND
1	45286	$12786.62	06/08/23	18091	0	GLOBAL SECURITY SERVICES-IA		T	CLEARED
		70.02	251-711401-53822-0000000			RIPL MONTHLY ACCESS DOOR SERV			
		1882.67	251-714404-53801-0000000			RIPL WM ACCESS CONTROL SYSTEM			
		9998.91	251-711401-53801-0000000			RIPL ACCESS CONTROL SYSTEM			
		240.00	251-714403-53822-0000000			RIPL SW ALARM MONITORING			
		115.02	251-711401-53822-0000000			RIPL MONTHLY ACCESS DOOR SERV			
		240.00	251-711401-53822-0000000			RIPL MAIN ALARM MONITORING			
		240.00	251-714403-53822-0000000			RIPL SW ALARM MONITORING			
1	45287	$749.60	06/08/23	15043	0	GOLD MEDAL PRODUCTS COMPANY		T	CLEARED
		188.75	555-813501-52501-5288000			dougals food			
		560.85	555-813521-52501-0000000			plex food			
1	45288	$630.00	06/08/23	15561	0	GPS TECHNOLOGIES, INC.		T	CLEARED
		630.00	555-835753-53905-0000000			highland gps on carts			
1	45289	$182.44	06/08/23	00365	0	GRAINGER		T	CLEARED
		68.60	101-616601-52303-0000000			bubbler elkay pipe			
		23.66	101-616601-52301-0000000			supplies			
		15.21	101-616601-52303-0000000			supplies			
		20.15	101-616601-52301-0000000			waterkey,fourway,steel vinyl p			
		54.82	101-616601-52303-0000000			supplies			
1	45290	$192.48	06/08/23	12721	0	HARRIS MOTOR SPORTS		T	CLEARED
		192.48	555-855702-53905-0000000			saukie yam clear hinged			
1	45291	$4710.20	06/08/23	06030	0	HAWKINS INC		T	CLEARED
		4710.20	555-818551-52218-0000000			accu tab blue si			
1	45292	$3686.36	06/08/23	04970	0	HD SUPPLY FACILITIES MAINTENANCE		T	CLEARED
		688.18	501-618352-52205-0000000			supplies			
		766.85	501-618121-52205-0000000			orion ross ultra ph triode ref			
		111.16	501-618121-52205-0000000			hach total chlorine chemkey re			
		284.23	501-618352-52205-0000000			supplies			
		1400.47	501-618352-52205-0000000			orion ross ultra ph electrode			
		248.20	501-618121-52205-0000000			lab supplies			
		187.27	501-618352-52205-0000000			sulfuric acid 0.02N,N50 5 gal			
1	174912	$621.65	06/08/23	15517	0	HI-LINE ELECTRIC CO., INC.		S	OUTSTANDING
		12.40	601-617364-52305-0000000			FLEET-2023-0001629			
		12.31	601-617364-52305-0000000			FLEET-2023-0001629			
		12.31	601-617364-52305-0000000			FLEET-2023-0001629			
		12.31	601-617364-52305-0000000			FLEET-2023-0001629			
		12.31	601-617364-52305-0000000			FLEET-2023-0001629			
		12.31	601-617364-52305-0000000			FLEET-2023-0001629			
		12.31	601-617364-52305-0000000			FLEET-2023-0001629			
		12.31	601-617364-52305-0000000			FLEET-2023-0001629			
		12.31	601-617364-52305-0000000			FLEET-2023-0001629			

010 CITY OF ROCK ISLAND
CHECK REGISTER
DATE RANGE: 06/08/23 - 06/08/23

BANK WO #	CHECK #	CHECK AMT / AMOUNT	CHECK DATE / G/L ACCT #	VENDOR #	ADDRS #	VENDOR NAME / DESCRIPTION	INVOICE #	TYPE INV	VEND	CHECK STATUS
		12.31	601-617364-52305-0000000			FLEET-2023-0001629				
		12.31	601-617364-52305-0000000			FLEET-2023-0001629				
		12.31	601-617364-52305-0000000			FLEET-2023-0001629				
		12.31	601-617364-52305-0000000			FLEET-2023-0001629				
		12.31	601-617364-52305-0000000			FLEET-2023-0001629				
		12.31	601-617364-52305-0000000			FLEET-2023-0001629				
		12.31	601-617364-52305-0000000			FLEET-2023-0001629				
		12.31	601-617364-52305-0000000			FLEET-2023-0001629				
		12.31	601-617364-52305-0000000			FLEET-2023-0001629				
		12.80	601-617364-52305-0000000			FLEET-2023-0001620				
		12.80	601-617364-52305-0000000			FLEET-2023-0001620				
		19.20	601-617364-52305-0000000			FLEET-2023-0001620				
		6.40	601-617364-52305-0000000			FLEET-2023-0001620				
		6.40	601-617364-52305-0000000			FLEET-2023-0001620				
		6.40	601-617364-52305-0000000			FLEET-2023-0001620				
		12.80	601-617364-52305-0000000			FLEET-2023-0001620				
		16.50	601-617364-52305-0000000			FLEET-2023-0001620				
		9.90	601-617364-52305-0000000			FLEET-2023-0001620				
		12.12	601-617364-52305-0000000			FLEET-2023-0001620				
		29.80	601-617364-52305-0000000			FLEET-2023-0001620				
		12.80	601-617364-52305-0000000			FLEET-2023-0001620				
		16.25	601-617364-52305-0000000			FLEET-2023-0001620				
		16.08	601-617364-52305-0000000			FLEET-2023-0001620				
		11.16	601-617364-52305-0000000			FLEET-2023-0001620				
		32.30	601-617364-52305-0000000			FLEET-2023-0001620				
		6.50	601-617364-52305-0000000			FLEET-2023-0001620				
		42.80	601-617364-52305-0000000			FLEET-2023-0001620				
		24.75	601-617364-52305-0000000			FLEET-2023-0001620				
		16.50	601-617364-52305-0000000			FLEET-2023-0001620				
		8.25	601-617364-52305-0000000			FLEET-2023-0001620				
		16.50	601-617364-52305-0000000			FLEET-2023-0001620				
		26.35	601-617364-52305-0000000			FLEET-2023-0001644				
1	174913	$1101.87	06/08/23	02905	0	HIGHLAND PACKING CO INC				S OUTSTANDING
		323.75	555-835753-52501-0000000			highland food				
		614.03	555-835753-52501-0000000			highland food				
		164.09	555-813521-52501-0000000			plex food				
1	174914	$26567.04	06/08/23	16977	0	HUTCHISON ENGINEERING INC				S OUTSTANDING
		26567.04	301-616311-53102-2831000			Eng services 4/1 to 4/30/23				
1	174915	$450.00	06/08/23	02403	0	ILLINOIS FIRE CHIEFS ASSOC				S OUTSTANDING
		450.00	101-451041-54402-0000000			membersip renewal				
1	174916	$1461.72	06/08/23	01520	0	ILLINOIS LIBRARY ASSN				S OUTSTANDING
		690.80	251-713471-52211-0000000			RIPL CHILDRENS SUPPLIES				
		770.92	251-711401-51401-0000000			RIPL UNIFORMS				
1	174917	$75.00	06/08/23	07531	1	ILLINOIS OFFICE OF STATE FIRE MARSHALL				S OUTSTANDING

010 CITY OF ROCK ISLAND
CHECK REGISTER
DATE RANGE: 06/08/23 - 06/08/23

BANK	CHECK #	CHECK AMT	CHECK DATE	VENDOR #	ADDRS #	VENDOR NAME	TYPE	CHECK STATUS
WO #		AMOUNT	G/L ACCT #			DESCRIPTION	INVOICE #	INV VEND
		75.00	501-618352-53801-0000000			Convey cert of oper annual ren		
1	174918	$453.64	06/08/23	18489	0	ILRO LAKEVIEW MHP, LLC	S	OUTSTANDING
		199.70	501-000000-44170-0000000			water charges refund		
		253.94	506-000000-44150-0000000			wastewater charges refund		
1	174919	$383.80	06/08/23	10783	0	INQUIREHIRE INC	S	OUTSTANDING
		383.80	101-155102-53112-0000000			New hire background checks		
1	174920	$1420.00	06/08/23	08664	0	INTEGRITY CLEANING SYSTEMS INC.	S	OUTSTANDING
		1420.00	555-867564-53801-0000000			rifac cleaning		
1	45293	$700.00	06/08/23	13512	0	INTERNATIONAL TECHNOLOGY & SECURITY LTD	T	CLEARED
		700.00	248-813511-53806-8235647			hauberg knoxbox		
1	45294	$506.50	06/08/23	00201	0	INTERSTATE POWER SYSTEMS INC	T	CLEARED
		93.84	601-617364-52305-0000000			FLEET-2023-0001665		
		412.66	601-617364-53804-0000000			FLEET-2023-0001622		
1	45295	$450.00	06/08/23	14433	0	JEFFREY LEE LARUE	T	CLEARED
		450.00	555-835753-53112-0000000			highland golf teacher		
1	174921	$120.00	06/08/23	18192	0	JEFFREY STOLZE	S	OUTSTANDING
		120.00	555-813521-53112-0000000			plex slow pitch ump		
1	45296	$594.14	06/08/23	18303	0	JSLK MANAGEMENT IOWA LLC	T	CLEARED
		594.14	101-414223-53822-0000000			MAY DRY CLEANING		
1	45297	$49.95	06/08/23	00488	0	K & S H2O INC	T	CLEARED
		49.95	211-356941-53801-0000000			building and grounds		
1	174922	$650.00	06/08/23	18469	0	KAREN BURRIS	S	OUTSTANDING
		650.00	251-713471-53110-0000000			RIPL ENTERTAINMENT MACARONI		
1	174923	$120.00	06/08/23	17104	0	KENNETH L CHARD	S	OUTSTANDING
		120.00	555-813521-53112-0000000			plex slow pitch ump		
1	174924	$255.00	06/08/23	15672	0	KENNEYS PEST CONTROL INC	S	OUTSTANDING
		120.00	251-711401-53822-0000000			RIPL MAIN QUARTERLY PEST CONT		
		60.00	251-714403-53822-0000000			RIPL SW QUARTERLY PEST CONT		
		75.00	251-714404-53822-0000000			RIPL WM QUARTERLY PEST CONTROL		
1	45298	$114.94	06/08/23	15433	1	KIMBALL MIDWEST	T	CLEARED
		114.94	601-617364-52206-0000000			Absorbent		
1	45299	$845.00	06/08/23	07348	0	KYMBYL KOMPLETE KARE INC	T	CLEARED
		110.00	251-711401-53802-0000000			RIPL LAWN CARE SERVICE		
		225.00	251-714404-53802-0000000			RIPL WM LAWN CARE SERVICE		
		180.00	251-714404-53802-0000000			RIPL WM LAWN CARE SERVICE		
		110.00	251-714403-53802-0000000			RIPL LAWN CARE SERVICE		

010 CITY OF ROCK ISLAND
CHECK REGISTER
DATE RANGE: 06/08/23 - 06/08/23

BANK WO #	CHECK #	CHECK AMT AMOUNT	CHECK DATE G/L ACCT #	VENDOR #	ADDRS #	VENDOR NAME DESCRIPTION	INVOICE #	TYPE INV	CHECK STATUS VEND
		110.00	251-714403-53802-0000000			RIPL LAWN CARE SERVICE			
		110.00	251-711401-53802-0000000			RIPL LAWN CARE SERVICE			
1	45300	$1159.92	06/08/23	00307	0	LAND TREATMENT ALTERNATIVES INC		T	CLEARED
		1159.92	506-618341-53704-0000000			sludge to farm			
1	45301	$424.36	06/08/23	17260	0	LAWMEN'S & SHOOTERS SUPPLY INC		T	CLEARED
		424.36	101-414223-51401-0000000			SAFETY CATCH CSO			
1	45302	$527.60	06/08/23	00795	1	LINDE GAS & EQUIPMENT INC		T	CLEARED
		527.60	601-617364-52203-0000000			Welding gas			
1	45303	$1715.49	06/08/23	14679	0	LOGOPRO LLC		T	CLEARED
		382.01	251-711041-54501-0000000			RIPL PROMO ITEMS - GENERAL			
		531.36	251-713471-52211-5651000			RIPL SUPPLIES/EDUCATION			
		802.12	251-713471-52211-5651000			RIPL SUPPLIES/SUMMER			
1	174925	$584.01	06/08/23	15077	0	LUKE SERRA		S	OUTSTANDING
		584.01	101-413215-51405-0000000			CLOTHING REIMBURSEMENT			
1	45304	$30.00	06/08/23	15000	0	MAKING FRIENDS WELCOME SERVICE INC		T	CLEARED
		30.00	251-711041-53401-0000000			RIPL 2023 GENERAL ADVERTISING			
1	174926	$101.98	06/08/23	07972	0	MARCUS DeMARLIE		S	OUTSTANDING
		101.98	555-822611-51401-0000000			hort work shorts			
1	45305	$5198.88	06/08/23	00482	0	MARTIN EQUIPMENT OF ILLINOIS INC		T	CLEARED
		648.46	601-617364-52305-0000000			FLEET-2023-0001607			
		2462.08	601-617364-52305-0000000			FLEET-2023-0001607			
		1639.90	601-617364-52305-0000000			FLEET-2023-0001607			
		23.88	601-617364-52305-0000000			FLEET-2023-0001605			
		67.65	601-617364-52305-0000000			FLEET-2023-0001605			
		13.67	601-617364-52305-0000000			FLEET-2023-0001676			
		343.24	601-617364-52305-0000000			FLEET-2023-0001675			
1	174927	$294.90	06/08/23	05685	0	MEDIACOM		S	OUTSTANDING
		294.90	101-256081-53803-0000000			INTERNET SERVICES			
1	45306	$168.00	06/08/23	00939	0	MELYX INC		T	CLEARED
		168.00	101-616601-52201-0000000			Mulch			
1	45307	$578.08	06/08/23	00528	0	MENARD INC		T	CLEARED
		500.91	101-616601-52301-0000000			4x8 privacy/tapcon hex,bit etc			
		29.20	555-854701-52209-0000000			saukie pothole patch			
		26.99	555-854701-52401-0000000			saukie gear puller			
		20.98	555-854701-51402-0000000			saukie coolflow valve			
1	174928	$358.94	06/08/23	16094	0	MICHAEL PHILHOWER		S	OUTSTANDING
		358.94	555-835753-53303-0000000			highland gas mileage			

010 CITY OF ROCK ISLAND
CHECK REGISTER
DATE RANGE: 06/08/23 - 06/08/23

BANK	CHECK #	CHECK AMT	CHECK DATE	VENDOR #	ADDRS #	VENDOR NAME		TYPE	CHECK STATUS
WO #		AMOUNT	G/L ACCT #			DESCRIPTION	INVOICE #	INV	VEND
1	45308	$1204.41	06/08/23	00560	0	MIDAMERICAN ENERGY CO		T	CLEARED
		25.46	251-711401-53703-0000000			RIPL MAIN MONTHLY LIGHT SERVIC			
		126.02	251-714403-53703-0000000			RIPL SW MONTHLY ELECTRIC			
		20.02	242-313851-55305-6523210			1830 32nd Street			
		34.90	101-617120-53703-0000000			MAY ELECTRIC			
		34.46	101-617120-53702-0000000			PD Storage Bldg natural gas			
		7.29	101-617120-53703-0000000			PD Storage Bldg elec			
		87.78	101-617114-53702-0000000			MSD natural gas			
		829.88	101-617114-53703-0000000			MSD elec			
		38.60	501-619356-53703-0000000			14 St Water Tower elec			
1	45309	$515.42	06/08/23	02440	0	MIDWEST MAILWORKS INC		T	CLEARED
		515.42	101-155041-53203-0000000			Mail 5-15-23 to 5-19-23			
1	174929	$1129.27	06/08/23	01781	0	MILLENNIUM WASTE INC		S	OUTSTANDING
		1129.27	501-618121-53704-0000000			waste to landfill May 2023			
1	45310	$836.99	06/08/23	04206	0	MISSISSIPPI TRUCK AND TRAILER		T	CLEARED
		419.49	601-617364-52305-0000000			FLEET-2023-0001624			
		46.00	601-617364-53804-0000000			FLEET-2023-0001624			
		325.50	601-617364-52305-0000000			FLEET-2023-0001624			
		46.00	601-617364-53804-0000000			FLEET-2023-0001624			
1	174930	$6035.00	06/08/23	00600	0	MOBILE TEAM TRAINING UNIT IV		S	OUTSTANDING
		6035.00	101-414223-54402-0000000			FY24 MEMBERSHIP DUES			
1	45311	$61.92	06/08/23	15816	0	MOTOR PARTS AND EQUIPMENT CORPORATION		T	CLEARED
		61.92	601-617364-52305-0000000			FLEET-2023-0001609			
1	45312	$2332.30	06/08/23	17690	0	MULGREW OIL COMPANY		T	CLEARED
		1306.59	555-813521-52203-0000000			plex fuel			
		1025.71	555-835753-52203-0000000			highland fuel			
1	45313	$1877.50	06/08/23	00669	0	MUTUAL WHEEL COMPANY INC		T	CLEARED
		130.46	601-617364-52305-0000000			FLEET-2023-0001464			
		373.00	601-617364-52305-0000000			FLEET-2023-0001464			
		916.26	601-617364-52305-0000000			FLEET-2023-0001464			
		97.90	601-617364-52305-0000000			FLEET-2023-0001662			
		295.30	601-617364-52305-0000000			FLEET-2023-0001662			
		52.06	601-617364-52305-0000000			FLEET-2023-0001681			
		12.52	601-617364-52305-0000000			FLEET-2023-0001681			
1	45314	$2309.90	06/08/23	12284	0	MYERS COX CO		T	CLEARED
		275.50	555-835753-52509-0000000			highland nap, tyle, plates, et			
		679.19	555-835753-52501-0000000			highland food			
		83.97	555-813501-52501-5288000			douglas snacks			
		484.34	555-813521-52501-0000000			plex snacks			
		393.45	555-813501-52501-5288000			douglas food			
		393.45	555-813521-52501-0000000			plex food			

010 CITY OF ROCK ISLAND
CHECK REGISTER
DATE RANGE: 06/08/23 - 06/08/23

BANK	CHECK #	CHECK AMT	CHECK DATE	VENDOR #	ADDRS #	VENDOR NAME		TYPE	CHECK STATUS
WO #		AMOUNT	G/L ACCT #			DESCRIPTION	INVOICE #	INV	VEND
1	174888	$1292.50	06/08/23	17034	0	NIYONGABIRE PROSPER		S	OUTSTANDING
		577.50	242-311041-53112-6196230			February Invoice			
		715.00	242-311041-53112-6196230			January 2023 Invoice			
1	174931	$435.00	06/08/23	17637	0	NUB GAMES INC		S	OUTSTANDING
		435.00	251-712421-53823-0000000			RIPL DATABASES			
1	174932	$651.88	06/08/23	18201	0	ODP BUSINESS SOLUTIONS LLC		S	OUTSTANDING
		14.99	555-867564-52101-0000000			rifac pens			
		386.89	555-867564-52101-0000000			rifac thermal, pads, pens			
		250.00	555-867564-52102-0000000			rifac thermal receipt paper			
1	174933	$850.00	06/08/23	18070	1	ONMEDIA AD SALES		S	OUTSTANDING
		850.00	555-855702-53401-0000000			saukie ads			
1	45315	$111.90	06/08/23	04242	0	OREILLY AUTOMOTIVE STORES INC		T	CLEARED
		61.90	601-617364-52305-0000000			FLEET-2023-0001619			
		8.86	601-617364-52305-0000000			FLEET-2023-0001618			
		20.66	601-617364-52305-0000000			FLEET-2023-0001647			
		10.49	601-617364-52209-0000000			FLEET-2023-0001651			
		9.99	601-617364-52209-0000000			FLEET-2023-0001652			
1	174934	$28520.00	06/08/23	18363	0	P&M HOLDING GROUP, LLP		S	OUTSTANDING
		28520.00	101-256081-53112-0000297			ERP PROJECT CONSULTING			
1	45316	$216.50	06/08/23	18086	1	PACE ANALYTICAL SERVICES LLC		T	CLEARED
		216.50	501-618121-53112-0000000			nitrateas n by ic,dis byproduc			
1	45317	$15.95	06/08/23	00753	0	PANTHER UNIFORMS INC		T	CLEARED
		15.95	101-412206-51401-0000000			MORRIS BADGE HOLDER SHIED			
1	45318	$2.40	06/08/23	18027	0	PARTS AUTHORITY LLC		T	CLEARED
		2.40	601-617364-52305-0000000			FLEET-2023-0001608			
1	174935	$2008.78	06/08/23	01067	0	PERFORMANCE FOOD GROUP TPC		S	OUTSTANDING
		54.68	555-813501-52501-5288000			douglas food			
		505.68	555-813521-52501-0000000			plex food			
		202.24	555-813501-52501-5288000			douglas food			
		1029.67	555-813521-52501-0000000			plex food			
		182.49	555-813521-52501-0000000			plex food			
		34.02	555-813521-52501-0000000			plex food			
1	174889	$12000.00	06/08/23	08880	0	PETERSEN PLUMBING & HEATING		S	OUTSTANDING
		12000.00	207-313851-55305-0000228			City of Rock Island 1830 32nd			
1	45319	$2343.04	06/08/23	04257	0	PHELPS UNIFORM SPECIALISTS INC		T	CLEARED
		38.92	251-711401-53801-0000000			RIPL MAIN WEEKLY MAT SERVICE			
		38.92	251-711401-53801-0000000			RIPL MAIN WEEKLY MAT SERVICE			
		38.92	251-711401-53801-0000000			RIPL MAIN WEEKLY MAT SERVICE			
		38.92	251-711401-53801-0000000			RIPL MAIN WEEKLY MAT SERVICE			

010 CITY OF ROCK ISLAND
CHECK REGISTER
DATE RANGE: 06/08/23 - 06/08/23

BANK / WO #	CHECK #	CHECK AMT / AMOUNT	CHECK DATE / G/L ACCT #	VENDOR #	ADDRS #	VENDOR NAME / DESCRIPTION	INVOICE #	TYPE / INV	CHECK STATUS / VEND
		18.22	101-616041-53901-0000000			Uniforms			
		18.22	101-616041-53901-0000000			Uniforms			
		18.22	101-616041-53901-0000000			Uniforms			
		18.22	101-616041-53901-0000000			Uniforms			
		30.85	101-616041-53822-0000000			Mats/etc			
		471.32	101-616041-53901-0000000			Uniforms			
		30.85	101-616041-53822-0000000			Mats/etc			
		171.32	101-616041-53901-0000000			Uniforms			
		30.85	101-616041-53822-0000000			Mats/etc			
		166.70	101-616041-53901-0000000			Uniforms			
		30.85	101-616041-53822-0000000			Mats/etc			
		166.94	101-616041-53901-0000000			Uniforms			
		10.04	501-618121-53822-0000000			Mats,etc			
		21.05	501-618121-53901-0000000			Uniforms			
		10.04	501-618121-53822-0000000			Mats,etc			
		21.05	501-618121-53901-0000000			Uniforms			
		10.04	501-618121-53822-0000000			Mats,etc			
		21.05	501-618121-53901-0000000			Uniforms			
		10.04	501-618121-53822-0000000			Mats,etc			
		21.05	501-618121-53901-0000000			Uniforms			
		14.57	506-618341-53822-0000000			Mats/etc			
		14.57	506-618341-53822-0000000			Mats/etc			
		14.57	506-618341-53822-0000000			Mats/etc			
		14.57	506-618341-53822-0000000			Mats/etc			
		38.85	501-618352-53822-0000000			Mats/etc			
		59.23	501-618352-53901-0000000			Uniforms			
		38.85	501-618352-53822-0000000			Mats/etc			
		59.23	501-618352-53901-0000000			Uniforms			
		38.85	501-618352-53822-0000000			Mats/etc			
		59.23	501-618352-53901-0000000			Uniforms			
		38.85	501-618352-53822-0000000			Mats/etc			
		59.23	501-618352-53901-0000000			Uniforms			
		17.49	506-618341-53822-0000000			Mats,etc			
		92.47	506-618341-53901-0000000			Uniforms			
		17.49	506-618341-53822-0000000			Mats,etc			
		92.47	506-618341-53901-0000000			Uniforms			
		17.49	506-618341-53822-0000000			Mats,etc			
		92.47	506-618341-53901-0000000			Uniforms			
		17.49	506-618341-53822-0000000			Mats,etc			
		92.47	506-618341-53901-0000000			Uniforms			
1	45320	$502.52	06/08/23	00775	0	PLANT EQUIPMENT CO INC		T	CLEARED
		47.66	601-617364-52305-0000000			FLEET-2023-0001616			
		86.26	601-617364-52305-0000000			FLEET-2023-0001616			
		50.06	601-617364-52305-0000000			FLEET-2023-0001616			
		49.82	601-617364-52305-0000000			FLEET-2023-0001616			
		53.46	601-617364-52305-0000000			FLEET-2023-0001616			
		109.34	601-617364-52305-0000000			FLEET-2023-0001616			
		105.92	601-617364-52305-0000000			FLEET-2023-0001616			

010 CITY OF ROCK ISLAND
CHECK REGISTER
DATE RANGE: 06/08/23 - 06/08/23

BANK	CHECK #	CHECK AMT	CHECK DATE	VENDOR #	ADDRS #	VENDOR NAME		TYPE	CHECK STATUS
WO #		AMOUNT	G/L ACCT #			DESCRIPTION	INVOICE #	INV	VEND
1	45321	$2310.37	06/08/23	18088	0	PROMOTION SUPPORT SERVICES INC		T	CLEARED
		166.75	101-213063-53203-6518000			Mail AP Checks + AP Fee			
		318.18	101-212051-53203-6518000			Mailing of past due utility bi			
		335.00	101-213062-53203-6518000			Payroll Checks Processing			
		1490.44	101-212051-53203-6518000			Mailing of utility bills			
1	174936	$531.60	06/08/23	18065	0	PS3 ENTERPRISES INC		S	OUTSTANDING
		65.00	555-822601-53822-0000000			mel mckay portapots			
		65.00	555-813521-53822-0000000			plex portapots			
		130.00	555-835753-53822-0000000			highland portapots			
		65.00	555-822601-53822-0000000			dog park portapot			
		130.00	555-855702-53822-0000000			saukie portapots			
		65.00	555-822601-53822-0000000			hauberg park portapot			
		11.60	555-813501-53822-0000000			ridgewood field portapot			
1	174937	$100.00	06/08/23	18481	0	QUAD CITIES PRIDE ALLIANCE		S	OUTSTANDING
		100.00	906-356921-51502-6163306			professional development			
1	45322	$120.00	06/08/23	00834	2	QUAD CITY SAFETY INC		T	CLEARED
		120.00	101-616041-51404-0000000			boots/Graham			
1	45323	$2623.74	06/08/23	09892	0	QUALITY CONTROLLED STAFFING		T	CLEARED
		835.34	510-616332-53111-0000000			Overton 5/21/23 to 5/27/23			
		329.12	101-616601-53111-0000000			Kavanaugh 5/21 to 5/27/23			
		1459.28	101-616601-53111-0000000			Cervantes,Hauer 5/21 to 5/27/2			
1	45324	$20.30	06/08/23	17332	0	RACHEL HANNAH IPPOLITO		T	CLEARED
		20.30	251-711041-53303-0000000			RIPL MILEAGE REIMB IPPOLITO			
1	174938	$100.00	06/08/23	18423	0	RANDY MAY		S	OUTSTANDING
		100.00	101-414223-51502-0000000			SIGSAUER ARMORER COURSE			
1	45325	$1514.00	06/08/23	00728	0	RAY OHERRON COMPANY INC		T	CLEARED
		57.00	601-617364-52305-0000000			FLEET-2023-0001553			
		288.08	601-617364-52305-0000000			FLEET-2023-0001553			
		139.00	601-617364-52305-0000000			FLEET-2023-0001553			
		138.00	601-617364-52305-0000000			FLEET-2023-0001553			
		70.00	601-617364-52305-0000000			FLEET-2023-0001683			
		250.00	601-617364-52305-0000000			FLEET-2023-0001683			
		120.00	101-412206-51401-0000000			RADIO POUCHES			
		451.92	101-412206-51401-0000000			SS-LS SHIRTS			
1	174939	$127.64	06/08/23	18036	1	RDO TRUCK CENTER CO		S	OUTSTANDING
		27.88	601-617364-52305-0000000			Relays			
		99.76	601-617364-52305-0000000			Side marking lamps			
1	174940	$41.99	06/08/23	16761	0	REBECCA ARNOLD		S	OUTSTANDING
		41.99	901-356041-53303-6302000			mileage reibursement			
1	45326	$6568.00	06/08/23	00899	0	REPUBLIC COMPANIES		T	CLEARED

010 CITY OF ROCK ISLAND
CHECK REGISTER
DATE RANGE: 06/08/23 - 06/08/23

BANK / WO #	CHECK #	CHECK AMT / AMOUNT	CHECK DATE / G/L ACCT #	VENDOR #	ADDRS #	VENDOR NAME / DESCRIPTION	INVOICE #	TYPE / INV	CHECK STATUS / VEND
		6568.00	621-157133-53602-0000000			General liability 18st/7av			
1	174941	$750.00	06/08/23	01622	0	RICK BRAMMER		S	OUTSTANDING
		750.00	251-713471-53110-0000000			RIPL ENTERTAINMENT SCIENCE			
1	45327	$660.00	06/08/23	01409	0	RILCO INC		T	CLEARED
		685.00	601-617364-52204-0000000			Lubricant			
		25.00-	601-617364-52204-0000000			Drum deposit credit for oil			
1	45328	$1860.31	06/08/23	00607	0	RIVERSTONE GROUP INC		T	CLEARED
		843.06	101-616301-52306-0000000			ST38HMASC			
		1017.25	101-616301-52306-0000000			ST38HMASC			
1	174942	$500.00	06/08/23	18343	0	ROCK ISLAND CENTER BUILDING LLC		S	OUTSTANDING
		500.00	901-356921-52207-6162019			RI Bocing Club			
1	174943	$410.75	06/08/23	00967	1	ROCK ISLAND COUNTY RECORDER		S	OUTSTANDING
		400.25	101-256081-53822-0000000			LAREDO-MAY 2023			
		3.57	101-314882-53505-0000000			LAREDO COPY CHGS-MAY 2023			
		3.57	242-314882-53505-6199230			LAREDO COPY CHGS-MAY 2023			
		3.36	242-313851-53505-6197230			LAREDO COPY CHGS-MAY 2023			
1	45329	$586.72	06/08/23	01408	0	ROCK ISLAND ELECTRIC MOTOR REPAIR INC		T	CLEARED
		586.72	506-618341-53804-0000000			bad bearings			
1	174944	$484.50	06/08/23	16776	0	ROYALE INTERNATIONAL BEVERAGE COMPANY		S	OUTSTANDING
		484.50	555-813521-52502-0000000			plex drink			
1	45330	$327.39	06/08/23	00992	0	SADLER POWER TRAIN INC		T	CLEARED
		327.39	601-617364-52305-0000000			FLEET-2023-0001671			
1	174945	$5750.00	06/08/23	18040	0	SAMUEL MCCULLUM		S	OUTSTANDING
		4000.00	904-356921-54102-0000341			office programs			
		1750.00	904-356921-54102-0000341			office programs			
1	174946	$100.00	06/08/23	18155	0	SARA MISFELDT		S	OUTSTANDING
		100.00	101-414223-51502-0000000			SIGSAUER ARMORER COURSE			
1	174947	$122.96	06/08/23	18480	1	SHOES FOR CREWS LLC		S	OUTSTANDING
		122.96	251-711401-51404-0000000			RIPL FOOTWARE - MAINTENANCE			
1	174948	$319.28	06/08/23	15634	0	SHOTTENKIRK INC		S	OUTSTANDING
		73.94	601-617364-52305-0000000			FLEET-2023-0001635			
		28.47	601-617364-52305-0000000			FLEET-2023-0001654			
		7.68	601-617364-52305-0000000			FLEET-2023-0001654			
		7.68	601-617364-52305-0000000			FLEET-2023-0001656			
		10.95	601-617364-52305-0000000			FLEET-2023-0001685			
		19.83	601-617364-52305-0000000			FLEET-2023-0001685			
		6.84	601-617364-52305-0000000			FLEET-2023-0001664			
		5.74	601-617364-52305-0000000			FLEET-2023-0001684			

010 CITY OF ROCK ISLAND
CHECK REGISTER
DATE RANGE: 06/08/23 - 06/08/23

BANK / WO #	CHECK # / AMOUNT	CHECK AMT / G/L ACCT #	CHECK DATE	VENDOR #	ADDRS #	VENDOR NAME / DESCRIPTION	INVOICE #	TYPE / INV	CHECK STATUS / VEND
		288.11		601-617364-52305-0000000		Cover for #139 (returned)			
		234.52		601-617364-52305-0000000		Lever (returned)			
		561.10		601-617364-52305-0000000		Panels (returned)			
		30.78		601-617364-52305-0000000		Seals, cover for #2423			
		476.94-		601-617364-52305-0000000		Credit/returned panels			
		244.90-		601-617364-52305-0000000		Credit/returned cover			
		234.52-		601-617364-52305-0000000		Credit/returned lever			
1	45331	$1289.05	06/08/23	01174		0 STERN BEVERAGE INC		T	CLEARED
		526.70		555-835753-52503-0000000		highland beer			
		52.10		555-813501-52503-5288000		douglas drinks			
		186.05		555-813521-52503-0000000		plex beer			
		480.10		555-813521-52503-0000000		plex beer			
		44.10		555-813501-52503-5288000		douglas drinks			
1	174949	$200.00	06/08/23	18483		0 SYLVIA JEAN BANES		S	OUTSTANDING
		200.00		251-713451-53110-0000000		RIPL ENTERTAINMENT QUILTING			
1	174950	$3680.00	06/08/23	14522		0 TAYLOR RIDGE PAVING & CONSTRUCTION CO		S	OUTSTANDING
		3680.00		101-616301-52306-0000000		PW Seal front parking lot			
1	45332	$53.00	06/08/23	05600		0 THE PRINTERS MARK		T	CLEARED
		53.00		101-611041-53501-0000000		Bus Cards/Sonneville			
1	45333	$1021.63	06/08/23	01057		0 THE SHERWIN WILLIAMS COMPANY		T	CLEARED
		61.88		601-617364-52302-0000000		FLEET-2023-0001639			
		131.00		601-617364-52302-0000000		FLEET-2023-0001639			
		47.46		601-617364-52305-0000000		FLEET-2023-0001639			
		40.76		601-617364-52302-0000000		FLEET-2023-0001639			
		54.06		601-617364-52302-0000000		FLEET-2023-0001639			
		36.10		601-617364-52302-0000000		FLEET-2023-0001639			
		80.82		601-617364-52302-0000000		FLEET-2023-0001641			
		38.26		601-617364-52302-0000000		FLEET-2023-0001641			
		36.10		601-617364-52302-0000000		FLEET-2023-0001673			
		78.50		601-617364-52302-0000000		FLEET-2023-0001673			
		280.06		601-617364-52302-0000000		FLEET-2023-0001667			
		136.63		601-617364-52302-0000000		FLEET-2023-0001667			
1	174951	$120.00	06/08/23	16531		1 THEISENS INC		S	OUTSTANDING
		120.00		506-618341-51404-0000000		Boots/M. Weeks			
1	174952	$4757.76	06/08/23	09713		0 THINC MANAGEMENT LLC		S	OUTSTANDING
		4429.25		501-618041-53112-0000000		May 2023 Settlement payment			
		328.51		506-618041-53112-0000000		May 2023 Settlement payment			
1	174953	$57.00	06/08/23	17054		0 THOMPSON TIRE & RETREAD		S	OUTSTANDING
		57.00		601-617364-53804-0000000		FLEET-2023-0001649			
1	174954	$1555.00	06/08/23	14930		1 TOWNSQUARE MEDIA QUAD CITIES		S	OUTSTANDING
		777.50		555-835753-53401-0000000		highland ads			

010 CITY OF ROCK ISLAND
CHECK REGISTER
DATE RANGE: 06/08/23 - 06/08/23

BANK WO #	CHECK #	CHECK AMT AMOUNT	CHECK DATE G/L ACCT #	VENDOR #	ADDRS #	VENDOR NAME DESCRIPTION	INVOICE #	TYPE INV	CHECK STATUS VEND
		777.50	555-855702-53401-0000000			saukie ads			
1	45334	$180.00	06/08/23	00639	0	TRI STATE FIRE CONTROL INC		T	CLEARED
		180.00	555-813511-53822-0000000			hauberg fire ext services			
1	45335	$87.88	06/08/23	02631	0	TRUCK COUNTRY OF IOWA INC		T	CLEARED
		66.35	601-617364-52305-0000000			FLEET-2023-0001611			
		21.53	601-617364-52305-0000000			FLEET-2023-0001611			
1	174955	$160.00	06/08/23	16536	0	TURNOUT RENTAL LLC		S	OUTSTANDING
		160.00	101-452271-53822-0000000			turnout gear rental			
1	174956	$737.57	06/08/23	04918	0	ULINE INC		S	OUTSTANDING
		364.30	251-711401-52301-0000000			RIPL BLDG MATERIALS/SUPPLIES			
		373.27	251-711401-52301-0000000			RIPL BLDG MATERIALS/SUPPLIES			
1	174957	$122.77	06/08/23	00792	0	UNITED PARCEL SERVICE		S	OUTSTANDING
		36.56	101-414223-53302-0000000			UPS billing			
		16.00	501-613358-53301-0000000			UPS billing weekly serv charge			
		16.00	501-618352-53301-0000000			UPS weekly serv charge			
		17.28	506-618041-53301-0000000			UPS weekly serv charge			
		18.01	606-615091-53301-0000000			UPS weekly serv fee			
		18.92	606-615091-53301-0000000			UPS weekly serv fee			
1	45336	$136.97	06/08/23	12965	0	VAN WALL EQUIPMENT INC		T	CLEARED
		136.97	601-617364-52305-0000000			FLEET-2023-0001660			
1	174958	$1828.31	06/08/23	11026	2	VERIZON CONNECT FLEET USA LLC		S	OUTSTANDING
		1828.31	601-617041-53205-0000000			REVEAL AVL-MAY 2023			
1	45337	$690.77	06/08/23	00146	0	VOTOUBEK INVESTMENTS		T	CLEARED
		31.98	506-618341-52219-0000000			kleenup			
		8.99	506-618341-52302-0000000			paint spry gloss white			
		18.98	507-616322-52301-0000000			flt alu bar/duct tape			
		11.99	507-616322-52301-0000000			uni edger blade			
		29.48	507-616322-52301-0000000			univ hose kit/coupling			
		19.72	507-616322-52301-0000000			bungee cord/eye bolts,ubolts			
		24.42	101-616601-52301-0000000			supplies			
		2.78	101-616601-52301-0000000			Nut/bolts etc			
		2.38	101-616601-52301-0000000			nuts/bolts/etc			
		47.99	101-616601-52401-0000000			gt alum scoop			
		11.99	101-616601-52301-0000000			10lb quik set cement			
		24.94	101-616601-52301-0000000			quik set cement/tapcon/j-bolt			
		50.48	101-616601-52302-0000000			paint/etc			
		86.97	501-618121-52305-0000000			hose/spinkler/connector			
		128.78	501-618121-52301-0000000			mulch,etc			
		52.97-	501-618121-52301-0000000			credit invoice paid twice			
		13.99	601-617364-52305-0000000			FLEET-2023-0001658			
		227.88	601-617362-52401-0000000			Padlocks for shop			

010 CITY OF ROCK ISLAND
CHECK REGISTER
DATE RANGE: 06/08/23 - 06/08/23

BANK / WO #	CHECK #	CHECK AMT / AMOUNT	CHECK DATE / G/L ACCT #	VENDOR #	ADDRS #	VENDOR NAME / DESCRIPTION	INVOICE #	TYPE / INV	CHECK STATUS / VEND
1	45338	$1000.00	06/08/23	12115	0	WARREN CHEVROLET INC		T	CLEARED
		1000.00	243-413216-53903-0000000			MAY LEASE			
1	174959	$260.00	06/08/23	18484	0	WILD ONES NATURAL LANDSCAPERS LTD		S	OUTSTANDING
		260.00	251-714403-52301-0000000			RIPL BLDG MATERIALS/SUPPLIES			
1	174960	$62.10	06/08/23	04358	0	WOLSELEY INVESTMENTS INC-POLLARDWATER		S	OUTSTANDING
		26.58	501-619041-51402-0000000			Sfty pants, rain jacket			
		35.52	501-619356-52404-0000000			8oz pp autoclavable btl			
1	45339	$2899.09	06/08/23	17008	1	WP BEVERAGE LLC		T	CLEARED
		525.00	555-855702-52502-0000000			saukie drinks			
		592.72	555-835753-52502-0000000			highland drink			
		236.51	555-813501-52502-5288000			douglas drinks			
		275.08	555-813501-52502-5288000			douglas drinks			
		471.92	555-813521-52502-0000000			plex drinks			
		797.86	555-813521-52502-0000000			plex drinks			
1	45340	$370.25	06/08/23	00797	0	ZALKS INC		T	CLEARED
		370.25	101-256081-53804-0000000			CAT6 CABLING IN PUBLIC WORKS			
1	45341	$314.00	06/08/23	16947	0	ZURCHER TIRE INC		T	CLEARED
		314.00	601-617364-52305-0000000			FLEET-2023-0001615			

TOTAL # OF ISSUED CHECKS:	75	TOTAL AMOUNT:	216,024.56
TOTAL # OF WIRES:	0	TOTAL AMOUNT:	0.00
TOTAL # OF VOIDED/REISSUED/UNCLAIMED CHECKS:	0	TOTAL AMOUNT:	0.00
TOTAL # OF ACH CHECKS:	74	TOTAL AMOUNT:	308,724.09
TOTAL # OF UNISSUED CHECKS:	0		

FUND TOTALS

FUND	FUND NAME	ISSUED TOTAL	VOIDED/REISSUED TOTAL
101	GENERAL FUND	74,656.67	0.00
207	COMMUNITY/ECONOMIC DEVELOPMENT	87,000.00	0.00
211	M L KING CENTER	2,081.84	0.00
224	STATE DRUG PREVENTION	186.00	0.00
242	COMMDEVBLOCKGRANT CFDA 14.218	1,607.13	0.00
243	FEDERAL DRUG PREVENTION	1,000.00	0.00
248	American Rescue Plan Act (ARPA	3,690.84	0.00
251	PUBLIC LIBRARY	62,953.11	0.00
301	CAPITAL IMPROVEMENTS	26,567.04	0.00
501	WATER OPERATIONS/MAINTENANCE	21,880.96	0.00
506	WASTEWATER OPER & MAINTENANCE	3,005.46	0.00
507	STORMWATER UTILITY	80.17	0.00
510	SOLID WASTE	1,105.34	0.00
555	PARK & RECREATION	169,156.94	0.00
601	FLEET SERVICES	50,006.48	0.00
606	ENGINEERING	956.93	0.00
621	SELF-INSURANCE	6,768.00	0.00
901	MLK ACTIVITY	6,195.74	0.00
904	IL CJIA	5,750.00	0.00
906	DEPT OF HUMAN SERVICES	100.00	0.00
	TOTAL -	524,748.65	0.00

Tameka L. Toney

CITY OF ROCK ISLAND
CHART OF ACCOUNTS

June 09, 2023 through
June 15, 2023
TOTAL: $ 1,170,187.00

FUNDS	FUND NAME
101	General Fund
201	TIF #1 Downtown
202	TIF #2 South 11th Street
203	TIF #3 North 11th Street
204	TIF #4 Jumer's Casino Rock Island
205	TIF #5 Columbia Park
206	TIF #6 NE I280/Parkway
207	Community/Economic Development
208	TIF #7 The Locks
209	TIF #8 Watchtower
210	Public Benefit
211	Martin Luther King Center
212	MLK Facility Improvement
213	TIF #9 1st Street
221	Motor Fuel Tax
222	Foreign Fire Insurance
223	Riverboat Gaming
224	State Drug Prevention
225	DUI Fine Law
226	Court Supervision
227	Crime Laboratory
241	US Dept of Justice Grant
242	Community Development Block Grant
243	Federal Drug Prevention
244	Neighborhood Stabilization ARRA
245	Schwiebert Park Boat Dock
246	Ridgewood Business Park
251	Public Library
252	Volunteers of the RI Library
271	Honor Guard Contributions
272	DARE
273	Police Contributions
274	Elderly Service Contributions
275	RI Auxiliary Police
276	RI Labor Day Parade
277	ESO Christmas Tour
278	Adopt A School
279	Fire Donations
282	Lead Grant
301	Capital Improvements
302	Capital Improvements - Streets
405	Debt Service
501	Water Operation & Maintenance
502	Water Capital 2010A BAB'S
506	Wastewater Operations & Maintenance
507	Stormwater Utility
508	Wastewater Capital 2010A BAB'S
510	Solid Waste
511	Centennial Bridge
541	Sunset Marina
555	Parks & Recreation
581	CDBG Loan Programs
582	State Affordable Housing
583	Community/Economic Development Loans
584	CIRLF Loan Fund
585	MPF Endowment Loans
586	Brownfield Revolving Loan Fund
595	Public Housing
601	Fleet Services
602	Fleet Amortization
606	Engineering
609	Hydroelectric Plant
621	Self-Insurance
626	Employee Health Plan
701	Fire Pension
706	Police Pension
711	Cafeteria Plan
712	Loan Escrow
831	GASB 34
901	MLK Activity
905	IL DCFS
906	Dept of Human Services
907	MLK Capital Contributions
950	Public Library Foundation

DEPT	DEPARTMENT NAME
111	1st Ward
112	2nd Ward
113	3rd Ward
114	4th Ward
115	5th Ward
116	6th Ward
117	7th Ward
118	Mayor
119	Mayor & Council Administration
122	General Administration
123	Legal Services
131	City Clerk
155	Human Resources Administration
156	Human Resources Services
157	Insurance
211	Finance Administration
212	Customer Service
213	Accounting Services
214	Budget and Grants Management
256	Information Technology
311	Community/Economic Development Administration
312	Economic Development
313	Planning/Redevelopment
314	Inspection
356	Martin Luther King Jr Community Center
411	Police Administration
412	Field Operations Bureau
413	Criminal Investigation Bureau
414	Administration/Technical Services Bureau
415	Tactical Operations
451	Fire Administration November 5, 2021 through
452	Fire Emergency Services
453	Fire Protective Inspect
454	Ambulance
611	Public Works Administration
612	Motor Vehicle Parking System
613	Water Meter Services
615	Engineering
616	Municipal Services
617	Fleet Services
618	Utilities Service
619	Utilities Maintenance
711	Library Administration
712	Library Info Services
713	Library Circulation
714	Library Extension
811	Park/Recreation Administration
813	Recreation
818	Whitewater Aquatic Center
819	Schwiebert Riverfront Park
822	Parks
834	Highland Golf Maintenance
835	Highland Clubhouse
846	Golf Pro Shop
854	Saukie Golf Maintenance
855	Saukie Clubhouse
867	RIFAC
891	Donations P/R Admin
892	Donations Parks
893	Donations Recreation Programs
894	Donations Golf Maintenance
895	Donations Highland/Saukie Clubhouse
896	Donations Golf Pro Shop
897	Donations RIFAC
898	Donations Longview Aquatic Center
899	Donations Riverfront Park
910	Police Fire Commission
920	Fire Pension
930	Police Pension
940	Cafeteria Plan

REPORT PARAMETERS

ORGANIZATION	: 010
BANK	: 1
PRINT BY	: CHECK DATE
SORT OPTION	: VENDOR NAME
PRINT DETAILS	: Y
BEGINNING CHECK DATE	: 06/15/23
ENDING CHECK DATE	: 06/15/23
ORG NAME FOR EXTRACT FILE	: APPP061623

010 CITY OF ROCK ISLAND
CHECK REGISTER
DATE RANGE: 06/15/23 - 06/15/23

BANK	CHECK #	CHECK AMT	CHECK DATE	VENDOR #	ADDRS #	VENDOR NAME		TYPE	CHECK STATUS
WO #		AMOUNT	G/L ACCT #			DESCRIPTION	INVOICE #	INV	VEND
1	174968	$120.00	06/15/23	07054	0	ANDERSONS REPAIR SERVICE		S	OUTSTANDING
		120.00	601-617364-54206-0000000			Safety Inspections			
1	45342	$332.75	06/15/23	15725	0	ARNOLD MOTOR SUPPLY LLP		T	CLEARED
		65.28	601-617364-52305-0000000			FLEET-2023-0001690			
		58.85	601-617364-52305-0000000			FLEET-2023-0001706			
		83.50	601-617364-52305-0000000			FLEET-2023-0001704			
		91.20	601-617364-52305-0000000			FLEET-2023-0001758			
		18.56	601-617364-52302-0000000			FLEET-2023-0001712			
		15.36	601-617364-52302-0000000			FLEET-2023-0001712			
1	174969	$59.39	06/15/23	00109	0	AUTOZONE STORES LLC		S	OUTSTANDING
		59.39	601-617364-52305-0000000			FLEET-2023-0001710			
1	174970	$153.18	06/15/23	02537	2	BLACKSTONE AUDIO INC		S	OUTSTANDING
		153.18	251-713451-54305-0000000			RIP AV			
1	45343	$17626.73	06/15/23	18099	0	BMO HARRIS - FIRE PENSION		T	CLEARED
		17626.73	701-000000-10121-0000000			PAYROLL FOR - 061623			
1	45344	$21511.91	06/15/23	18100	0	BMO HARRIS - POLICE PENSION		T	CLEARED
		21511.91	706-000000-10121-0000000			PAYROLL FOR - 061623			
1	174971	$759.15	06/15/23	16232	0	BONNIE HOWARD		S	OUTSTANDING
		759.15	905-356921-53303-0000440			mileage reimbursement			
1	174972	$273.82	06/15/23	12148	24	BROOKS LAW FIRM, P.C.		S	OUTSTANDING
		273.82	051-000000-21403-0000000			PAYROLL FOR - 061623			
1	45345	$598.92	06/15/23	01602	0	BTAC ACQUISITION CORP		T	CLEARED
		598.92	251-712421-54305-0000000			RIP REFERENCE			
1	174973	$620.00	06/15/23	18479	0	CAHALAN ENTERPRISES INC		S	OUTSTANDING
		620.00	101-616601-53801-0000000			Blocking at Lincoln Park			
1	174974	$1820.00	06/15/23	17697	0	CAMPION BARROW AND ASSOCIATES INC		S	OUTSTANDING
		1820.00	101-910041-53105-0000000			CAULKINS-HEENE-KINGSBURY-ZAZZE			
1	174975	$186.03	06/15/23	14456	0	CAVENDISH SQUARE PUBLISHING, LLC.		S	OUTSTANDING
		186.03	251-713471-54305-0000000			CR BOOK			
1	174976	$85.50	06/15/23	18485	0	CAYLEA SEABERG		S	OUTSTANDING
		85.50	555-813501-53112-6085000			coach pitch field monitor			
1	174977	$213.88	06/15/23	17489	0	CDL ELECTRIC CO INC		S	OUTSTANDING
		213.88	101-617375-53804-0000000			May 2023 RR Maintenance			
1	45346	$9541.00	06/15/23	14329	1	CDM SMITH		T	CLEARED
		9541.00	506-618341-53112-0000000			Phosphorus Study Engin Service			

010 CITY OF ROCK ISLAND
CHECK REGISTER
DATE RANGE: 06/15/23 - 06/15/23

BANK	CHECK #	CHECK AMT	CHECK DATE	VENDOR #	ADDRS #	VENDOR NAME	TYPE	CHECK STATUS
WO #		AMOUNT	G/L ACCT #			DESCRIPTION	INVOICE #	INV VEND
1	45347	$14531.44	06/15/23	14329	0	CDM SMITH INC	T	CLEARED
		14531.44	506-618341-53112-0000000			Mill ST Digester Project		
1	45348	$72143.95	06/15/23	06405	0	CENTENNIAL CONTRACTORS OF THE QUAD CITIES INCT		CLEARED
		43286.37	501-619356-53806-0000000			Emerg. watermain 6-7 AV - 34-3		
		28857.58	506-619346-53806-2158000			Emerg. sewermain 6-7 AV - 34 -		
1	45349	$12604.00	06/15/23	17328	0	CHEMWATER INC	T	CLEARED
		6302.00	501-618352-52217-0000000			Polymer		
		6302.00	501-618352-52217-0000000			Polymer		
1	174978	$110.00	06/15/23	18243	0	CHRIS ONTIVEROS	S	OUTSTANDING
		110.00	555-813501-53112-6270000			tennis lesson		
1	174979	$48.89	06/15/23	15674	0	CINTAS CORPORATION NO. 2	S	OUTSTANDING
		48.89	211-356941-53801-0000000			building and grounds		
1	174980	$1.00	06/15/23	14396	0	CITY OF MOLINE-MOLINE PUBLIC LIBRARY	S	OUTSTANDING
		1.00	251-000000-44187-5646000			REIMB MPL MISSING BARCODE		
1	45350	$510.01	06/15/23	03309	0	COE EQUIPMENT INC	T	CLEARED
		510.01	601-617364-52305-0000000			FLEET-2023-0001761		
1	45351	$11278.00	06/15/23	00468	0	CRAWFORD HEATING & COOLING INC	T	CLEARED
		7783.00	101-616601-53801-0000000			Lincoln Pk band shell		
		3495.00	101-617112-53801-0000000			New trench drain		
1	45352	$230.00	06/15/23	00514	0	DAVENPORT ELECTRIC CONTRACT COMPANY	T	CLEARED
		230.00	101-617371-53804-0000000			Blkhwk/Valley View DR		
1	174981	$900.00	06/15/23	09814	0	DIVE RESCUE INTERNATIONAL INC	S	OUTSTANDING
		900.00	101-452271-51502-0000000			Humminbird Sonar Tech		
1	45353	$95.25	06/15/23	07653	0	EASTERN IOWA TIRE	T	CLEARED
		30.00-	601-617364-52305-0000000			Tire credit		
		125.25	601-617364-53804-0000000			S/Call, repair tire #8906		
1	174982	$163.46	06/15/23	08128	0	ECOLAB INC	S	OUTSTANDING
		163.46	101-451041-52207-0000000			Turnout gear detergent		
1	45354	$3088.16	06/15/23	00602	0	ELLIOTT EQUIPMENT CO	T	CLEARED
		397.78	601-617364-52305-0000000			FLEET-2023-0001755		
		30.70	601-617364-52305-0000000			FLEET-2023-0001755		
		2659.68	601-617364-52305-0000000			FLEET-2023-0001755		
1	174983	$20970.42	06/15/23	17369	0	ENTERPRISE COMMUNITY PARTNERS INC	S	OUTSTANDING
		8324.50	901-356921-53112-0000041			consultants		
		12645.92	901-356921-53112-0000041			MISC ACCOUNT RECEIVABLES		
1	45355	$10961.00	06/15/23	00692	0	FBG SERVICE CORP	T	CLEARED

010 CITY OF ROCK ISLAND
CHECK REGISTER
DATE RANGE: 06/15/23 - 06/15/23

BANK	CHECK #	CHECK AMT	CHECK DATE	VENDOR #	ADDRS #	VENDOR NAME		TYPE	CHECK STATUS
WO #		AMOUNT	G/L ACCT #			DESCRIPTION	INVOICE #	INV	VEND
		4909.00	101-617120-53801-6512000			May 2023 monthly cleaning			
		1106.00	101-617114-53801-6512000			May 2023 monthly cleaning			
		1117.00	101-617112-53801-6512000			May 2023 monthly cleaning			
		2560.00	101-617111-53801-6512000			May 2023 monthly cleaning			
		63.00	101-312118-53801-0000000			May 2023 monthly cleaning			
		1206.00	101-617111-53801-6512000			May 2023 monthly cleaning			
1	45356	$9100.00	06/15/23	14850	0	FINER FINISH GROUNDS CARE LLC		T	CLEARED
		9100.00	555-822601-53822-0000000			parks monthly mowing			
1	45357	$163.14	06/15/23	17262	0	FIRE UNION SUPPORT FUND		T	CLEARED
		163.14	051-000000-21403-0000000			PAYROLL FOR - 061623			
1	45358	$186845.35	06/15/23	18306	0	FIVE CITIES CONSTRUCTION COMPANY		T	CLEARED
		186845.35	231-616311-53806-2606000			37 AVE/46 ST Reconstruction			
1	174984	$32.00	06/15/23	16186	0	FLAGG-ROCHELLE PUBLIC LIBRARY DISTRICT		S	OUTSTANDING
		32.00	251-000000-44187-5646000			REIMB FRPLD L&P ITEM			
1	45359	$17626.65	06/15/23	05125	0	GAS & ELECTRIC CREDIT UNION		T	CLEARED
		17626.65	051-000000-21403-0000000			PAYROLL FOR - 061623			
1	45360	$395.00	06/15/23	15118	0	GENESEO COMMUNICATIONS INC		T	CLEARED
		395.00	251-711041-53204-0000000			BROADBAND SERVICE JUNE 2023			
1	174985	$360.20	06/15/23	00199	0	GIBSON LTD		S	OUTSTANDING
		360.20	601-617364-52305-0000000			FLEET-2023-0001737			
1	45361	$80.60	06/15/23	00125	0	GIERKE ROBINSON COMPANY INC		T	CLEARED
		80.60	601-617364-52305-0000000			FLEET-2023-0001697			
1	174986	$4269.49	06/15/23	16204	0	GLOBAL WIRELESS LTD		S	OUTSTANDING
		3861.99	248-256041-53822-8521663			CAMERAS-24 ST/7 AVE			
		407.50	101-211041-53804-0000000			FIN Dept New Camera			
1	45362	$536.43	06/15/23	00365	0	GRAINGER		T	CLEARED
		37.23	506-618341-52305-0000000			Roller chain			
		398.48	501-618121-52402-0000000			stud and joist drill			
		16.44	601-617364-52305-0000000			Couplers (returned)			
		16.44-	601-617364-52305-0000000			Credit/returned couplers			
		100.72	601-617041-52216-0000000			Sports drink/freezer pops			
1	45363	$785.00	06/15/23	03057	0	GRAVES ENVIRONMENTAL & SAFETY INC		T	CLEARED
		225.00	101-616601-53801-0000000			Asbestos insp Linc PK restroom			
		560.00	101-617111-53801-0000000			Asbestos insp Cent bridge offi			
1	45364	$14220.72	06/15/23	06030	0	HAWKINS INC		T	CLEARED
		3602.42	555-818551-52218-0000000			Azone 15/ sulfuric acid			
		10618.30	501-618121-52217-0000000			alum sulfate/chlorine/calcium			

010 CITY OF ROCK ISLAND
CHECK REGISTER
DATE RANGE: 06/15/23 - 06/15/23

BANK / WO #	CHECK # / AMOUNT	CHECK AMT / G/L ACCT #	CHECK DATE	VENDOR #	ADDRS #	VENDOR NAME / DESCRIPTION	INVOICE #	TYPE / INV	CHECK STATUS / VEND
1	45365	$707.77	06/15/23	04970	0	HD SUPPLY FACILITIES MAINTENANCE		T	CLEARED
		707.77	501-618352-52205-0000000			Orion ross ultra			
1	174987	$26.20	06/15/23	15517	0	HI-LINE ELECTRIC CO., INC.		S	OUTSTANDING
		26.20	601-617364-52305-0000000			FLEET-2023-0001753			
1	174988	$176.25	06/15/23	07758	0	HR GREEN INC		S	OUTSTANDING
		176.25	501-618041-53112-0000000			Prof serv thr 5/31/23			
1	174989	$86.00	06/15/23	02308	0	IA IL TERMITE & PEST CTL INC		S	OUTSTANDING
		86.00	101-617112-53801-6506000			Pest control			
1	174990	$2150.00	06/15/23	01343	0	IL ENVIRONMENTAL PROTECTION AGENCY		S	OUTSTANDING
		2150.00	506-618041-54206-0000000			FESOP site fee 161065AHC			
1	174961	$137.50	06/15/23	02895	0	IL/IA CENTER FOR INDEPENDENT LIVING		S	OUTSTANDING
		137.50	242-311041-53112-6196230			Interpreting at CDC Meetings			
1	174962	$1560.00	06/15/23	01839	0	ILLINOIS FOP LABOR COUNCIL		S	OUTSTANDING
		1560.00	051-000000-21403-0000000			PAYROLL FOR - 061623			
1	174991	$197.75	06/15/23	00184	0	ILLINOIS STATE POLICE		S	OUTSTANDING
		197.75	101-414223-53112-6253000			MAY PRINTS			
1	174992	$215.00	06/15/23	15668	0	INDUSTRIAL ORGANIZATIONAL SOLUTIONS INC		S	OUTSTANDING
		215.00	101-910041-53112-0000000			FIREFIGHTER SELECTION INV EXAM			
1	45366	$198.75	06/15/23	13512	0	INTERNATIONAL TECHNOLOGY & SECURITY LTD		T	CLEARED
		185.00	101-617112-53801-0000000			Serv call push paddle			
		13.75	101-616601-52301-0000000			kustom key			
1	174993	$1252.17	06/15/23	13426	1	IOWA HEALTH SYSTEM		S	OUTSTANDING
		1252.17	101-454273-52214-0000000			amb supplies			
1	45367	$2467.00	06/15/23	16057	1	ITSAVVY LLC		T	CLEARED
		2467.00	101-256081-52406-0000000			10 MONITORS			
1	45368	$450.00	06/15/23	14433	0	JEFFREY LEE LARUE		T	CLEARED
		450.00	555-835753-53112-0000000			highland golf			
1	174994	$120.00	06/15/23	18192	0	JEFFREY STOLZE		S	OUTSTANDING
		120.00	555-813521-53112-0000000			plex slow pitch ump			
1	174995	$520.24	06/15/23	14515	0	JOHNSON CONTROLS		S	OUTSTANDING
		520.24	101-451291-53801-0000000			repair air conditioning			
1	45369	$55.10	06/15/23	00488	0	K & S H2O INC		T	CLEARED
		55.10	501-618352-53902-0000000			DI Rental 6/1 to 6/20/23			
1	174996	$900.00	06/15/23	17178	0	K AND D CUTTING AND CORING INC		S	OUTSTANDING

010 CITY OF ROCK ISLAND
CHECK REGISTER
DATE RANGE: 06/15/23 - 06/15/23

BANK	CHECK #	CHECK AMT	CHECK DATE	VENDOR #	ADDRS #	VENDOR NAME		TYPE	CHECK STATUS
WO #		AMOUNT	G/L ACCT #			DESCRIPTION	INVOICE #	INV	VEND
		900.00	555-818551-53801-0000000			Hand sawing/white water junc			
1	174997	$1760.72	06/15/23	16003	0	K&M TIRE INC		S	OUTSTANDING
		385.58	601-617364-52305-0000000			Tire			
		479.10-	601-617364-52305-0000000			Credit/tire			
		1854.24	601-617364-52305-0000000			Eagle Enforcer Tires			
1	174998	$120.00	06/15/23	17104	0	KENNETH L CHARD		S	OUTSTANDING
		120.00	555-813521-53112-0000000			plex slow pitch ump			
1	45370	$1246.80	06/15/23	00240	0	KEYSTONE AUTOMOTIVE INDUSTRIES INC		T	CLEARED
		1246.80	601-617364-52305-0000000			FLEET-2023-0001628			
1	45371	$4302.53	06/15/23	16049	0	KRAFT POWER CORPORATION		T	CLEARED
		4302.53	506-618341-52305-0000000			supplies			
1	45372	$333604.85	06/15/23	00411	0	LANGMAN CONSTRUCTION INC		T	CLEARED
		333604.85	501-619356-53806-2736000			11 ST Water Main Replacement P			
1	174963	$771.92	06/15/23	16401	1	LEE ENTERPRISES INCORPORATED		S	OUTSTANDING
		103.76	101-313811-53402-0000000			3008 7th Avenue			
		118.52	101-313811-53402-0000000			2703-2705 5 1/2 Avenue			
		106.44	101-313811-53402-0000000			2140 23rd Avenue			
		113.14	101-313811-53402-0000000			1325 30th Street			
		114.49	101-313811-53402-0000000			1340 31st Street			
		105.10	101-313811-53402-0000000			Skylight Luxury Lounge			
		110.47	101-313811-53402-0000000			Solomon Townhomes			
1	174999	$85.04	06/15/23	16401	5	LEE ENTERPRISES INCORPORATED		S	OUTSTANDING
		43.76	101-616041-53402-0000000			Demolition bid			
		41.28	506-618041-53402-0000000			May 23 meeting notice			
1	174964	$229.26	06/15/23	15243	0	LEGAL SHIELD		S	OUTSTANDING
		229.26	051-000000-21403-0000000			PAYROLL FOR - 061623			
1	45373	$28.21	06/15/23	00795	1	LINDE GAS & EQUIPMENT INC		T	CLEARED
		28.21	506-618341-52305-0000000			electr ms 6013			
1	45374	$78.10	06/15/23	00434	0	LOGAN CONTRACTORS SUPPLY INC		T	CLEARED
		78.10	101-616301-52401-0000000			alum conc placer wo/hook			
1	175000	$2500.00	06/15/23	07776	0	MABAS DIV 43 RI ARSENAL FIRE SERVICES		S	OUTSTANDING
		2500.00	101-452271-54402-0000000			MABAS dues			
1	45375	$554.00	06/15/23	06860	0	MAD DOG CONCRETE LLC		T	CLEARED
		268.00	501-619356-52306-0000000			1216 20 ST			
		286.00	501-619356-52306-0000000			15 ST - Blackhawk RD			
1	45376	$361.41	06/15/23	00482	0	MARTIN EQUIPMENT OF ILLINOIS INC		T	CLEARED
		10.44	601-617364-52305-0000000			FLEET-2023-0001729			

010 CITY OF ROCK ISLAND
CHECK REGISTER
DATE RANGE: 06/15/23 - 06/15/23

BANK	CHECK #	CHECK AMT	CHECK DATE	VENDOR #	ADDRS #	VENDOR NAME		TYPE	CHECK STATUS
WO #		AMOUNT	G/L ACCT #			DESCRIPTION	INVOICE #	INV	VEND
		24.32	601-617364-52305-0000000			FLEET-2023-0001729			
		24.72	601-617364-52305-0000000			FLEET-2023-0001729			
		62.02	601-617364-52305-0000000			FLEET-2023-0001729			
		163.20	601-617364-52305-0000000			FLEET-2023-0001729			
		34.60	601-617364-52305-0000000			FLEET-2023-0001725			
		42.11	601-617364-52305-0000000			FLEET-2023-0001736			
1	45377	$88185.03	06/15/23	17063	0	MCCLINTOCK TRUCKING & EXCAVATING INC		T	CLEARED
		30052.17	501-619359-53806-2526000			WSRP			
		58132.86	506-619359-53806-2564000			SLRP			
1	175001	$40.00	06/15/23	18492	0	MELISSA MOODY		S	OUTSTANDING
		40.00	101-411041-51401-0000000			EMBROIDERY DIGITIZE AND SET UP			
1	45378	$119.66	06/15/23	00528	0	MENARD INC		T	CLEARED
		119.66	101-451292-52301-0000000			caulk, patch primer, trim			
1	45379	$19637.96	06/15/23	00560	0	MIDAMERICAN ENERGY CO		T	CLEARED
		1642.26	211-356941-53703-0000000			electric			
		113.04	211-356941-53703-0000000			Gas			
		962.80	101-451291-53703-0000000			Elect St 1			
		1048.64	101-451291-53702-0000000			Gas St 1			
		451.76	101-451292-53703-0000000			Elect St 2			
		1058.99	101-451295-53702-0000000			Gas St 5			
		291.08	101-451292-53702-0000000			Gas St 2			
		765.74	101-451293-53702-0000000			Gas St 3			
		432.29	101-452271-53703-0000000			Elect Sirens			
		4702.48	501-618352-53703-0000000			16 Ave Clarification Bldg			
		389.25	506-618341-53702-0000000			WWTP natural gas			
		29.78	101-617372-53703-0000000			1108 37 St Trail light			
		686.28	501-619356-53703-0000000			24 St Head House elec			
		6923.78	501-618352-53703-0000000			2301 16 Ave elec			
		124.48	506-618341-53703-0000000			1110 Mill St elec			
		15.31	101-617119-53703-0000000			Watts Bldg lighting			
1	175002	$29289.90	06/15/23	01781	0	MILLENNIUM WASTE INC		S	OUTSTANDING
		109.19	510-616331-53805-0000000			Kaukie Lane/ 6/1 to 6/30/23			
		556.81	506-618343-53704-0000000			May 2023 landfill charges			
		2248.17	510-616332-53704-0000000			May landfill charges			
		13656.00	510-616331-53704-0000314			May 2023 landfill charges			
		12454.24	510-616331-53704-0000000			May 2023 landfill charges			
		265.49	507-619348-53704-2874000			C&D			
1	45380	$49.99	06/15/23	04206	0	MISSISSIPPI TRUCK AND TRAILER		T	CLEARED
		49.99	601-617364-53804-0000000			FLEET-2023-0001717			
1	45381	$213.41	06/15/23	15816	0	MOTOR PARTS AND EQUIPMENT CORPORATION		T	CLEARED
		27.20	601-617364-52305-0000000			FLEET-2023-0001713			
		25.45	601-617364-52305-0000000			FLEET-2023-0001713			
		42.69	601-617364-52305-0000000			FLEET-2023-0001713			

010 CITY OF ROCK ISLAND
CHECK REGISTER
DATE RANGE: 06/15/23 - 06/15/23

BANK	CHECK #	CHECK AMT	CHECK DATE	VENDOR #	ADDRS #	VENDOR NAME		TYPE	CHECK STATUS
WO #		AMOUNT	G/L ACCT #			DESCRIPTION	INVOICE #	INV	VEND
		35.07	601-617364-52305-0000000			FLEET-2023-0001724			
		5.31	601-617364-52305-0000000			FLEET-2023-0001724			
		23.48	601-617364-52305-0000000			FLEET-2023-0001724			
		13.77	601-617364-52305-0000000			FLEET-2023-0001724			
		40.44	601-617364-52305-0000000			FLEET-2023-0001749			
1	175003	$8.33	06/15/23	16077	0	MOTOROLA SOLUTIONS INC		S	OUTSTANDING
		8.33	101-452271-53803-0000000			radio service			
1	45382	$710.99	06/15/23	00669	0	MUTUAL WHEEL COMPANY INC		T	CLEARED
		92.45	601-617364-52305-0000000			FLEET-2023-0001727			
		34.95	601-617364-52305-0000000			FLEET-2023-0001727			
		19.70	601-617364-52305-0000000			FLEET-2023-0001727			
		69.49	601-617364-52305-0000000			FLEET-2023-0001727			
		27.12	601-617364-52305-0000000			FLEET-2023-0001727			
		233.64	601-617364-52305-0000000			FLEET-2023-0001765			
		233.64	601-617364-52305-0000000			FLEET-2023-0001765			
1	45383	$941.47	06/15/23	04242	0	OREILLY AUTOMOTIVE STORES INC		T	CLEARED
		19.98	555-818551-52301-0000000			supplies			
		196.44	601-617364-52305-0000000			FLEET-2023-0001702			
		7.99	601-617364-52204-0000000			FLEET-2023-0001756			
		7.64	601-617364-52206-0000000			FLEET-2023-0001750			
		597.81	601-617364-52305-0000000			Brake parts for #3354			
		86.51	601-617364-52305-0000000			Caliper (returned)			
		25.00-	601-617364-52305-0000000			Core credit			
		240.98	601-617364-52305-0000000			sway bar/mod asm for #2394			
		190.88-	601-617364-52305-0000000			Credit/returned mod asm			
1	45384	$6848.01	06/15/23	12871	0	OVERDRIVE INC		T	CLEARED
		18.99	251-713451-54305-0000000			OVERDRIVE E-CONTENT			
		707.42	251-713451-54305-0000000			OVERDRIVE E-CONTENT			
		1121.60	251-713451-54305-0000000			OVERDRIVE E-CONTENT			
		5000.00	251-712421-53823-0000000			OVERDRIVE DIG MAG SUBS RENWL			
1	45385	$80.00	06/15/23	18086	1	PACE ANALYTICAL SERVICES LLC		T	CLEARED
		80.00	501-618121-53112-0000000			Toca			
1	45386	$62.42	06/15/23	18027	0	PARTS AUTHORITY LLC		T	CLEARED
		62.42	601-617364-52305-0000000			FLEET-2023-0001744			
1	45387	$899.48	06/15/23	04257	0	PHELPS UNIFORM SPECIALISTS INC		T	CLEARED
		47.41	101-617112-53822-0000000			Mats/etc			
		47.41	101-617112-53822-0000000			Mats/etc			
		47.41	101-617112-53822-0000000			Mats/etc			
		47.41	101-617112-53822-0000000			Mats/etc			
		63.70	101-617111-53822-0000000			Mats/etc			
		63.70	101-617111-53822-0000000			Mats/etc			
		63.70	101-617111-53822-0000000			Mats/etc			
		63.70	101-617111-53822-0000000			mats/etc			

010 CITY OF ROCK ISLAND
CHECK REGISTER
DATE RANGE: 06/15/23 - 06/15/23

BANK / WO #	CHECK #	CHECK AMT / AMOUNT	CHECK DATE / G/L ACCT #	VENDOR #	ADDRS #	VENDOR NAME / DESCRIPTION	INVOICE #	TYPE / INV	CHECK STATUS / VEND
		30.52	101-616601-53901-0000000			Parks uniforms			
		30.52	101-616601-53901-0000000			Parks uniforms			
		30.52	101-616601-53901-0000000			Parks uniforms			
		30.52	101-616601-53901-0000000			Parks uniforms			
		83.24	101-617120-53822-0000000			mats/etc			
		83.24	101-617120-53822-0000000			Mats/etc			
		83.24	101-617120-53822-0000000			Mats/etc			
		83.24	101-617120-53822-0000000			Mats/etc			
1	45388	$134.06	06/15/23	00775	0	PLANT EQUIPMENT CO INC		T	CLEARED
		134.06	601-617364-52305-0000000			FLEET-2023-0001732			
1	175004	$61.74	06/15/23	10460	0	PLAYAWAY PRODUCTS LLC		S	OUTSTANDING
		61.74	251-714404-54305-0000000			RIZ J AV			
1	175005	$6024.50	06/15/23	12084	0	PLEASANT VALLEY REDI-MIX INC		S	OUTSTANDING
		1681.00	101-616301-52306-0000000			4206 27 AVE			
		2587.00	101-616301-52306-0000000			4141 27 AVE			
		1756.50	101-616301-52306-0000000			4141 27 AVE			
1	174965	$1832.22	06/15/23	01834	0	POLICE & FIREMENS INSURANCE ASSN		S	OUTSTANDING
		1832.22	051-000000-21403-0000000			PAYROLL FOR - 061623			
1	45389	$188.00	06/15/23	08643	0	POLICE BENEVOLENT		T	CLEARED
		188.00	051-000000-21403-0000000			PAYROLL FOR - 061623			
1	45390	$10723.46	06/15/23	07345	0	PROFESSIONAL BILLING SERVICE		T	CLEARED
		10723.46	101-454273-53106-0000000			Amb Billing Cntrct May 2023			
1	175006	$118.39	06/15/23	18065	0	PS3 ENTERPRISES INC		S	OUTSTANDING
		53.39	555-813501-53822-0000000			reservoir park portapot			
		65.00	555-822601-53822-0000000			skafidas portapot			
1	45391	$1939.00	06/15/23	01400	0	QC ANALYTICAL SERVICES LLC		T	CLEARED
		564.00	506-618121-53112-0000000			testing			
		945.00	506-618121-53112-0000000			testing			
		430.00	506-618341-53112-0000000			testing			
1	174966	$115600.10	06/15/23	17089	0	QUAD CITIES GOLF CLASSIC CHARITABLE FOUNDATIOS		S	OUTSTANDING
		6100.39	901-000000-11501-0000000			Misc Accounts Receivables			
		109499.71	901-000000-11501-0000000			MISC ACCOUNT RECEIVABLES			
1	45392	$1525.00	06/15/23	08272	0	QUAD CITY TOWING		T	CLEARED
		175.00	101-414222-53822-0000000			23-2397 FORD F150			
		125.00	101-414222-53822-0000000			23-2646 LEXUS NX350			
		225.00	101-414222-53822-0000000			CHEV MALIBU			
		150.00	101-414222-53822-0000000			23-2393 JEEP CHEROKEE			
		200.00	101-414222-53822-0000000			23-2254 CHRYSLER 300			
		350.00	101-414222-53822-0000000			23-2362 FORD TAURUS			
		75.00	101-414222-53822-0000000			23-2425 DODGE JOURNEY			

010 CITY OF ROCK ISLAND
CHECK REGISTER
DATE RANGE: 06/15/23 - 06/15/23

BANK	CHECK #	CHECK AMT	CHECK DATE	VENDOR #	ADDRS #	VENDOR NAME	TYPE	CHECK STATUS
WO #		AMOUNT	G/L ACCT #			DESCRIPTION	INVOICE #	INV VEND
		225.00	101-414222-53822-0000000			23-2251 NISSAN KICKS		
1	45393	$382.38	06/15/23	06980	0	QUAD CORPORATION	T	CLEARED
		122.89	101-212056-53106-0000000			Acct # 826 / Inv # 074185		
		259.49	101-212056-53106-0000000			Acct # 847 / Inv # 074186		
1	45394	$2607.98	06/15/23	09892	0	QUALITY CONTROLLED STAFFING	T	CLEARED
		329.16	501-618121-53111-0000000			White 5/28 to 6/3/23		
		1327.68	510-616332-53111-0000000			5/28 to 6/3/23 seasonas		
		951.14	101-616601-53111-0000000			seasonal 5/28 to 6/3/23		
1	45395	$1262.05	06/15/23	03063	0	RAGAN MECHANICAL	T	CLEARED
		879.19	101-617120-53801-0000000			Repair restroom sink/PD statio		
		382.86	101-617120-53801-0000000			Mens locker room/repair toilet		
1	45396	$145.99	06/15/23	00728	0	RAY OHERRON COMPANY INC	T	CLEARED
		96.00	101-412206-51401-6252000			FITTED CAPS		
		49.99	101-412206-51401-6252000			LOPEZ LS SHIRT		
1	45397	$218.90	06/15/23	00892	0	REGALIA MANUFACTURING CO	T	CLEARED
		218.90	101-617111-52301-0000000			Flags		
1	45398	$529.15	06/15/23	00899	0	REPUBLIC COMPANIES	T	CLEARED
		347.60	101-617374-52304-0000000			supplies/poto control		
		57.78	101-617374-52304-0000000			42W fluor dulux t4 te triple a		
		123.77	101-617374-52304-0000000			supplies		
1	45399	$1079.00	06/15/23	01409	0	RILCO INC	T	CLEARED
		1079.00	101-616322-52201-0000000			oil dry		
1	45400	$17.00	06/15/23	15528	0	RIPD COMMAND OFFICERS ASSOC	T	CLEARED
		17.00	051-000000-21403-0000000			PAYROLL FOR - 061623		
1	45401	$524.79	06/15/23	00607	0	RIVERSTONE GROUP INC	T	CLEARED
		524.79	101-616301-52306-0000000			ST38HMASC		
1	174967	$8320.00	06/15/23	18493	0	ROBERT BROCK	S	OUTSTANDING
		8320.00	207-313851-55305-0000228			Project House #2		
1	175007	$775.36	06/15/23	02275	0	ROCK ISLAND FITNESS AND ACTIVITY CENTER	S	OUTSTANDING
		775.36	051-000000-21403-0000000			PAYROLL FOR - 061623		
1	175008	$3220.67	06/15/23	00977	2	ROCK ISLAND POSTMASTER	S	OUTSTANDING
		3220.67	501-618352-53201-0000000			Permit #122 postage reimbursem		
1	175009	$5433.33	06/15/23	18170	0	SEAN MCNAIR	S	OUTSTANDING
		5433.33	101-616334-53822-6505000			Mulching contract 2023		
1	45402	$573.80	06/15/23	01034	0	SEXTON FORD	T	CLEARED
		31.00	601-617364-52305-0000000			FLEET-2023-0001599		

010 CITY OF ROCK ISLAND
CHECK REGISTER
DATE RANGE: 06/15/23 - 06/15/23

BANK	CHECK #	CHECK AMT	CHECK DATE	VENDOR #	ADDRS #	VENDOR NAME		TYPE	CHECK STATUS
WO #		AMOUNT	G/L ACCT #			DESCRIPTION	INVOICE #	INV	VEND
		73.63	601-617364-52305-0000000			FLEET-2023-0001700			
		425.00	601-617364-52305-0000000			FLEET-2023-0001734			
		44.17	601-617364-52305-0000000			FLEET-2023-0001746			
1	175010	$325.00	06/15/23	15482	0	SHAWN M MAZZAROLLO		S	OUTSTANDING
		325.00	601-617364-53804-0000000			FLEET-2023-0001694			
1	175011	$2079.00	06/15/23	18388	1	SHAWNEE MISSION TREE SERVICE INC		S	OUTSTANDING
		630.00	101-616321-53802-0000000			1820 42 ST stump grinding			
		1008.00	101-616601-53802-0000000			Sunset park debris removal/hau			
		441.00	101-616321-53802-0000000			Denkmann park stump grinding			
1	175012	$111.23	06/15/23	17865	0	SIGMA-ALDRICH INC		S	OUTSTANDING
		111.23	506-618341-52205-0000000			reidue-wp			
1	175013	$1754.65	06/15/23	07179	0	STANDARD EQUIPMENT COMPANY		S	OUTSTANDING
		1767.05	601-617364-52305-0000000			Seals/brake parts #8922			
		12.40-	601-617364-52305-0000000			Credit/returned seal			
1	45403	$6750.00	06/15/23	04688	0	STANLEY CONSULTANTS INC		T	CLEARED
		337.50	501-618041-53112-0000000			Prof service period ending 10/			
		337.50	506-618041-53112-0000000			Prof serv period ending 10/1/2			
		1350.00	501-618041-53112-0000000			Prof serv ending 10/29/22			
		1350.00	506-618041-53112-0000000			Prof serv ending 10/29/22			
		1687.50	501-618041-53112-0000000			Prof serv ending 12/3/22			
		1687.50	506-618041-53112-0000000			Prof serv ending 12/3/22			
1	45404	$182.86	06/15/23	01119	0	STECKER GRAPHICS INC		T	CLEARED
		182.86	101-414223-53502-0000000			TRESPASS WARNING #171			
1	175014	$64.98	06/15/23	04467	0	SYNCHRONY BANK JCP		S	OUTSTANDING
		64.98	101-411041-51401-0000000			LANDI PANTS			
1	45405	$2467.20	06/15/23	01074	1	TANNER INDUSTRIES INC		T	CLEARED
		2467.20	501-618352-52217-0000000			Ammonia			
1	175015	$74.00	06/15/23	01058	0	TERMINIX INTERNATIONAL		S	OUTSTANDING
		74.00	211-356941-53801-0000000			building and grounds			
1	175016	$250.57	06/15/23	17054	0	THOMPSON TIRE & RETREAD		S	OUTSTANDING
		45.00	601-617364-53804-0000000			FLEET-2023-0001715			
		205.57	601-617364-52305-0000000			FLEET-2023-0001715			
1	45406	$269.99	06/15/23	15010	0	THOMPSON TRUCK & TRAILER LLC		T	CLEARED
		269.99	601-617364-52202-0000000			FLEET-2023-0001731			
1	175017	$524.66	06/15/23	16330	0	THURGOOD M A BROOKS		S	OUTSTANDING
		524.66	905-356921-53303-0000340			Mileage Reimbursement			
1	45407	$2132.48	06/15/23	04354	0	TICKLE ASPHALT CO LTD		T	CLEARED

010 CITY OF ROCK ISLAND
CHECK REGISTER
DATE RANGE: 06/15/23 - 06/15/23

BANK WO #	CHECK #	CHECK AMT / AMOUNT	CHECK DATE / G/L ACCT #	VENDOR #	ADDRS #	VENDOR NAME / DESCRIPTION	INVOICE #	TYPE / INV	CHECK STATUS / VEND
		419.56	101-616301-52306-0000000			HMA S			
		658.92	101-616301-52306-0000000			HMA S			
		429.08	101-616301-52306-0000000			HMA SC			
		624.92	101-616301-52306-0000000			HMA sc			
1	45408	$7861.00	06/15/23	00638	0	TRI CITY ELECTRIC COMPANY		T	CLEARED
		7861.00	101-451291-53801-0000000			Drop ceiling light fixtures			
1	45409	$59.00	06/15/23	02631	0	TRUCK COUNTRY OF IOWA INC		T	CLEARED
		22.94	601-617364-52305-0000000			FLEET-2023-0001742			
		36.06	601-617364-52305-0000000			FLEET-2023-0001754			
1	45410	$1666.66	06/15/23	17883	0	TWO RIVERS AND ASSOCIATES INC		T	CLEARED
		1666.66	207-312801-53112-0000629			06/01/23 - 06/31/23			
1	175018	$88.32	06/15/23	06363	0	TWO RIVERS YOUNG MENS CHRISTIAN ASSOCIATION		S	OUTSTANDING
		88.32	904-356921-52207-0000341			supplies			
1	45411	$333.16	06/15/23	02347	0	U A W LOCAL 2282		T	CLEARED
		333.16	051-000000-21403-0000000			PAYROLL FOR - 061623			
1	45412	$212.95	06/15/23	09557	0	UNIQUE MANAGEMENT SERVICES INC.		T	CLEARED
		3.25	251-711041-53106-0000000			FIN SERV COLLECT MAY 2023			
		209.70	251-711041-53106-0000000			FIN SERV COLLECT MAY 2023			
1	45413	$273.00	06/15/23	00802	0	UNITED WAY OF THE QUAD CITIES		T	CLEARED
		273.00	051-000000-21403-0000000			PAYROLL FOR - 061623			
1	45414	$25.99	06/15/23	12965	0	VAN WALL EQUIPMENT INC		T	CLEARED
		25.99	101-616321-52202-0000000			2.5 gal no spill			
1	175019	$868.70	06/15/23	16594	1	VERIZON CONNECT NWF INC		S	OUTSTANDING
		19.19	601-617041-53205-0000000			VEHICLE-4466 - 6 TON			
		19.19	601-617041-53205-0000000			VEHICLE-4467 - 6 TON			
		18.57	601-617041-53205-0000000			VEHICLE-5563 - TANDEM			
		19.19	601-617041-53205-0000000			VEHICLE-3335 - HOT BOX			
		19.19	601-617041-53205-0000000			VEHICLE-4462 - 6 TON			
		19.19	601-617041-53205-0000000			VEHICLE-4465 - 6 TON			
		16.19	601-617041-53205-0000000			VEHICLE-8922 - SWEEPER			
		19.19	601-617041-53205-0000000			VEHICLE-3342 - 1 TON			
		10.53	601-617041-53205-0000000			VEHICLE-8919			
		19.19	601-617041-53205-0000000			VEHICLE 8914			
		19.19	601-617041-53205-0000000			VEHICLE - 2393 -STREET CLEANER			
		19.19	601-617041-53205-0000000			VEHICLE-2421 - RANGER			
		19.19	601-617041-53205-0000000			VEHICLE 2486			
		11.14	601-617041-53205-0000000			VEHICLE - 3363			
		19.19	601-617041-53205-0000000			VEHICLE-5565			
		19.19	601-617041-53205-0000000			VEHICLE - 2395 - TSA PICKUP			
		16.19	601-617041-53205-0000000			VEHICLE-6629 - AUTOMATED			
		9.91	601-617041-53205-0000000			VEHICLE - 3354 - SIGN TRUCK			

010 CITY OF ROCK ISLAND
CHECK REGISTER
DATE RANGE: 06/15/23 - 06/15/23

BANK / WO #	CHECK #	CHECK AMT / AMOUNT	CHECK DATE / G/L ACCT #	VENDOR #	ADDRS #	VENDOR NAME / DESCRIPTION	INVOICE #	TYPE / INV	CHECK STATUS / VEND
		19.19	601-617041-53205-0000000			VEHICLE-6632 - AUTOMATED			
		19.19	601-617041-53205-0000000			VEHICLE - 3362			
		19.19	601-617041-53205-0000000			VEHICLE - 8928			
		19.19	601-617041-53205-0000000			VEHICEL - 3329			
		19.19	601-617041-53205-0000000			VEHICLE - 3341			
		19.19	601-617041-53205-0000000			VEHICLE - 3350			
		19.19	601-617041-53205-0000000			VEHICLE-6627 - AUTOMATED			
		19.19	601-617041-53205-0000000			VEHICLE - 2379			
		19.19	601-617041-53205-0000000			VEHICLE - 3353			
		19.19	601-617041-53205-0000000			VEHICLE - 3351			
		19.19	601-617041-53205-0000000			VEHICLE - 3343			
		19.19	601-617041-53205-0000000			VEHICLE - 2487			
		19.19	601-617041-53205-0000000			VEHICLE - 3352			
		19.19	601-617041-53205-0000000			VEHICLE - 2444			
		19.19	601-617041-53205-0000000			VEHICLE - 3361			
		19.19	601-617041-53205-0000000			VEHICLE - 2391 - ELECTRICAL			
		19.19	601-617041-53205-0000000			VEHICLE - 2330			
		19.19	601-617041-53205-0000000			VEHICLE-6623 - REAR LOADER			
		19.19	601-617041-53205-0000000			VEHICLE-2460 - JULIE			
		19.19	601-617041-53205-0000000			VEHICLE-8932			
		19.19	601-617041-53205-0000000			VEHICLE-8913			
		19.19	601-617041-53205-0000000			VEHICLE - 4464			
		19.19	601-617041-53205-0000000			VEHICLE-3334 - 1 TON			
		19.19	601-617041-53205-0000000			VEHICLE-3336 - 1 TON			
		19.19	601-617041-53205-0000000			VEHICLE-3332 - CONCRETE TRUCK			
		19.19	601-617041-53205-0000000			VEHICLE-3338			
		18.57	601-617041-53205-0000000			VEHICLE-5562 - TANDEM			
		19.19	601-617041-53205-0000000			VEHICLE-4468 - 6 TON (UMD)			
		19.19	601-617041-53205-0000000			VEHICLE-3337 - 1 TON			
1	45415	$3.90	06/15/23	02423	0	VERMEER SALES & SERVICE OF CENTRAL IL INC		T	CLEARED
		3.90	601-617364-52305-0000000			FLEET-2023-0001695			
1	45416	$368.26	06/15/23	00146	0	VOTOUBEK INVESTMENTS		T	CLEARED
		4.99	101-617374-52304-0000000			switch box			
		1.58	101-616601-52301-0000000			1/2 wht 90deg sxs ell			
		11.99	101-616601-52301-0000000			lb 2x8 deck screw			
		48.09	101-616601-52301-0000000			nuts/bolts/connector etc			
		44.74	101-616601-52301-0000000			supplies			
		99.59	101-616601-52301-0000000			supplies			
		7.98	101-617111-52301-0000000			4.75" scrn dr pull			
		31.93	101-616601-52301-0000000			supplies			
		12.98	101-617374-52304-0000000			3x3 1/2 gang swit box			
		12.98	101-616601-52301-0000000			lb tsp hd cleaner			
		13.98	101-617374-52304-0000000			wall plate/gorilla tape			
		23.99	101-616601-52401-0000000			lev style blow gun kit			
		15.99	101-617374-52304-0000000			power strip			
		22.29	101-616601-52301-0000000			supplies			
		15.16	501-618121-52301-0000000			prem top soil			

010 CITY OF ROCK ISLAND
CHECK REGISTER
DATE RANGE: 06/15/23 - 06/15/23

BANK / WO #	CHECK #	CHECK AMT / AMOUNT	CHECK DATE / G/L ACCT #	VENDOR #	ADDRS #	VENDOR NAME / DESCRIPTION	INVOICE #	TYPE / INV	CHECK STATUS / VEND
1	175020	$1620.00	06/15/23	06568	0	W.F. SCOTT DECORATING INC.		S	OUTSTANDING
		1620.00	101-617125-53801-0000000			Prep/paint Centennial bldg sig			
1	175021	$2256.15	06/15/23	18467	0	WESTERN OILFIELDS SUPPLY COMPANY		S	OUTSTANDING
		2256.15	506-618343-53804-0000000			Service to pumps			
1	175022	$124.33	06/15/23	00762	0	WESTERN STRUCTURAL COMPANY		S	OUTSTANDING
		62.17	601-617364-52305-0000000			FLEET-2023-0001692			
		62.16	601-617364-52305-0000000			FLEET-2023-0001692			
1	175023	$140.74	06/15/23	17018	0	WEX INC		S	OUTSTANDING
		140.74	601-617364-52203-0000000			Fuel purchases			
1	175024	$277.85	06/15/23	17703	0	WHITE CAP LP		S	OUTSTANDING
		277.85	506-618341-52305-0000000			supplies			
1	45417	$29514.30	06/15/23	01325	1	XYLEM DEWATERING SOLUTIONS INC.		T	CLEARED
		29514.30	507-619348-53902-2874000			Pump rentals 4/19 to 5/16/23			
1	45418	$1297.20	06/15/23	03067	0	ZARNOTH BRUSH WORKS INC		T	CLEARED
		574.00	601-617364-52305-0000000			FLEET-2023-0001730			
		723.20	601-617364-52305-0000000			FLEET-2023-0001730			
1	175025	$2718.36	06/15/23	14419	1	ZOLL MEDICAL CORP		S	OUTSTANDING
		2718.36	101-454273-52214-0000000			amb supplies			
1	45419	$352.00	06/15/23	16947	0	ZURCHER TIRE INC		T	CLEARED
		352.00	601-617364-52305-0000000			FLEET-2023-0001760			

TOTAL # OF ISSUED CHECKS:	65	TOTAL AMOUNT:	227,957.54
TOTAL # OF WIRES:	0	TOTAL AMOUNT:	0.00
TOTAL # OF VOIDED/REISSUED/UNCLAIMED CHECKS:	0	TOTAL AMOUNT:	0.00
TOTAL # OF ACH CHECKS:	78	TOTAL AMOUNT:	942,229.46
TOTAL # OF UNISSUED CHECKS:	0		

FUND TOTALS

FUND	FUND NAME	ISSUED TOTAL	VOIDED/REISSUED TOTAL
051	PAYROLL CLEARING FUND	23,271.61	0.00
101	GENERAL FUND	87,670.85	0.00
207	COMMUNITY/ECONOMIC DEVELOPMENT	9,986.66	0.00
211	M L KING CENTER	1,878.19	0.00
231	MFT Rebuild Illinois Grant	186,845.35	0.00
242	COMMDEVBLOCKGRANT CFDA 14.218	137.50	0.00
248	American Rescue Plan Act (ARPA	3,861.99	0.00
251	PUBLIC LIBRARY	8,488.83	0.00
501	WATER OPERATIONS/MAINTENANCE	453,857.02	0.00
506	WASTEWATER OPER & MAINTENANCE	126,651.90	0.00
507	STORMWATER UTILITY	29,779.79	0.00
510	SOLID WASTE	29,795.28	0.00
555	PARK & RECREATION	14,626.29	0.00
601	FLEET SERVICES	16,254.45	0.00
701	FIRE PENSION	17,626.73	0.00
706	POLICE PENSION	21,511.91	0.00
901	MLK ACTIVITY	136,570.52	0.00
904	IL CJIA	88.32	0.00
905	IL DCFS	1,283.81	0.00
	TOTAL -	1,170,187.00	0.00

Tameka L. Toney

Payroll Expense Posting Report
Period Covering: 05/29/23-06/11/23
Pay Date: 06/16/23

FUND	Fund Name		AMOUNT
101	General Fund	$	1,144,770.50
203	TIF District #3 N 11 St	$	1,986.78
204	TIF Jumers Casino RI	$	1,286.18
205	TIF Columbia Park	$	1,248.12
211	ML King Center	$	6,018.47
242	Comm Dev Block Grant	$	10,133.45
248	ARPA Program	$	6,157.85
251	Library	$	68,199.68
501	Water	$	79,261.29
506	Wastewater	$	69,842.91
507	Stormwater	$	21,206.60
510	Refuse	$	26,301.80
541	Sunset Marina	$	3,479.69
555	Park & Recreation	$	163,496.35
601	Fleet Services	$	39,855.58
606	Engineering	$	28,856.13
621	Self-Insurance	$	1,561.24
626	Employee Health Ins	$	2,135.17
901	MLK Activity Fund	$	18,860.60
903	MLK - IPHA Grant	$	1,956.59
904	MLK Youth Srv	$	2,904.22
905	MLK DCFS Fund	$	7,132.76
906	MLK DHS Fund	$	12,892.06
		$	1,719,544.02

Memorandum

To: Rock Island City Council

From: Tameka Toney, Accountant

Subject: International City/County Management Association (ICMA) claims for the week of June 9 through June 15, 2023 in the amount of $33,834.20.

Date: June 26, 2023

Introduction and Background Information:

N/A

Previous Council Action (if any):

N/A

Budget Impact:

N/A

Additional Information as applicable (i.e. provide alternative options, community or staff input, staffing impact; resident impact; etc.):

N/A

Council Goal (if applicable):

N/A

Recommendation:

N/A

Submitted by: Tameka Toney, Accountant

Approved by: Joshua Adams

CITY OF ROCK ISLAND
CHART OF ACCOUNTS

June 09, 2023 through
June 15, 2023
TOTAL: $ 33,834.20

FUNDS	FUND NAME
101	General Fund
201	TIF #1 Downtown
202	TIF #2 South 11th Street
203	TIF #3 North 11th Street
204	TIF #4 Jumer's Casino Rock Island
205	TIF #5 Columbia Park
206	TIF #6 NE I280/Parkway
207	Community/Economic Development
208	TIF #7 The Locks
209	TIF #8 Watchtower
210	Public Benefit
211	Martin Luther King Center
212	MLK Facility Improvement
213	TIF #9 1st Street
221	Motor Fuel Tax
222	Foreign Fire Insurance
223	Riverboat Gaming
224	State Drug Prevention
225	DUI Fine Law
226	Court Supervision
227	Crime Laboratory
241	US Dept of Justice Grant
242	Community Development Block Grant
243	Federal Drug Prevention
244	Neighborhood Stabilization ARRA
245	Schwiebert Park Boat Dock
246	Ridgewood Business Park
251	Public Library
252	Volunteers of the RI Library
271	Honor Guard Contributions
272	DARE
273	Police Contributions
274	Elderly Service Contributions
275	RI Auxiliary Police
276	RI Labor Day Parade
277	ESO Christmas Tour
278	Adopt A School
279	Fire Donations
282	Lead Grant
301	Capital Improvements
302	Capital Improvements - Streets
405	Debt Service
501	Water Operation & Maintenance
502	Water Capital 2010A BAB'S
506	Wastewater Operations & Maintenance
507	Stormwater Utility
508	Wastewater Capital 2010A BAB'S
510	Solid Waste
511	Centennial Bridge
541	Sunset Marina
555	Parks & Recreation
581	CDBG Loan Programs
582	State Affordable Housing
583	Community/Economic Development Loans
584	CIRLF Loan Fund
585	MPF Endowment Loans
586	Brownfield Revolving Loan Fund
595	Public Housing
601	Fleet Services
602	Fleet Amortization
606	Engineering
609	Hydroelectric Plant
621	Self-Insurance
626	Employee Health Plan
701	Fire Pension
706	Police Pension
711	Cafeteria Plan
712	Loan Escrow
831	GASB 34
901	MLK Activity
905	IL DCFS
906	Dept of Human Services
907	MLK Capital Contributions
950	Public Library Foundation

DEPT	DEPARTMENT NAME
111	1st Ward
112	2nd Ward
113	3rd Ward
114	4th Ward
115	5th Ward
116	6th Ward
117	7th Ward
118	Mayor
119	Mayor & Council Administration
122	General Administration
123	Legal Services
131	City Clerk
155	Human Resources Administration
156	Human Resources Services
157	Insurance
211	Finance Administration
212	Customer Service
213	Accounting Services
214	Budget and Grants Management
256	Information Technology
311	Community/Economic Development Administration
312	Economic Development
313	Planning/Redevelopment
314	Inspection
356	Martin Luther King Jr Community Center
411	Police Administration
412	Field Operations Bureau
413	Criminal Investigation Bureau
414	Administration/Technical Services Bureau
415	Tactical Operations
451	Fire Administration November 5, 2021 through
452	Fire Emergency Services
453	Fire Protective Inspect
454	Ambulance
611	Public Works Administration
612	Motor Vehicle Parking System
613	Water Meter Services
615	Engineering
616	Municipal Services
617	Fleet Services
618	Utilities Service
619	Utilities Maintenance
711	Library Administration
712	Library Info Services
713	Library Circulation
714	Library Extension
811	Park/Recreation Administration
813	Recreation
818	Whitewater Aquatic Center
819	Schwiebert Riverfront Park
822	Parks
834	Highland Golf Maintenance
835	Highland Clubhouse
846	Golf Pro Shop
854	Saukie Golf Maintenance
855	Saukie Clubhouse
867	RIFAC
891	Donations P/R Admin
892	Donations Parks
893	Donations Recreation Programs
894	Donations Golf Maintenance
895	Donations Highland/Saukie Clubhouse
896	Donations Golf Pro Shop
897	Donations RIFAC
898	Donations Longview Aquatic Center
899	Donations Riverfront Park
910	Police Fire Commission
920	Fire Pension
930	Police Pension
940	Cafeteria Plan

REPORT PARAMETERS

ORGANIZATION	: 010
BANK	: 2
PRINT BY	: CHECK DATE
SORT OPTION	: VENDOR NAME
PRINT DETAILS	: Y
BEGINNING CHECK DATE	: 06/16/23
ENDING CHECK DATE	: 06/16/23
ORG NAME FOR EXTRACT FILE	: APPP061623

010 CITY OF ROCK ISLAND
CHECK REGISTER
DATE RANGE: 06/16/23 - 06/16/23

BANK / WO #	CHECK #	CHECK AMT / AMOUNT	CHECK DATE / G/L ACCT #	VENDOR #	ADDRS #	VENDOR NAME / DESCRIPTION	INVOICE #	TYPE / INV	CHECK STATUS / VEND
2	6162023	$33834.20 33834.20	06/16/23 051-000000-21403-0000000	07532	0	ICMA RETIREMENT CORP PAYROLL FOR - 061623		M	OUTSTANDING

TOTAL # OF ISSUED CHECKS:	1	TOTAL AMOUNT:	33,834.20
TOTAL # OF WIRES:	0	TOTAL AMOUNT:	0.00
TOTAL # OF VOIDED/REISSUED/UNCLAIMED CHECKS:	0	TOTAL AMOUNT:	0.00
TOTAL # OF ACH CHECKS:	0	TOTAL AMOUNT:	0.00
TOTAL # OF UNISSUED CHECKS:	0		

FUND TOTALS

FUND	FUND NAME	ISSUED TOTAL	VOIDED/REISSUED TOTAL
051	PAYROLL CLEARING FUND	33,834.20	0.00
	TOTAL -	33,834.20	0.00

Memorandum

To: Rock Island City Council

From:

Subject: Report from the Human Resources Department regarding payment in the amount of $16,309.08 to David G. Morrison, City Attorney, for services rendered during the month of May 2023.

Date: June 26, 2023

Introduction and Background Information:

Previous Council Action (if any):

Budget Impact:

Additional Information as applicable (i.e. provide alternative options, community or staff input, staffing impact; resident impact; etc.):

Council Goal (if applicable):

Recommendation:

Submitted by: Joshua Adams

Approved by: Joshua Adams

INVOICE

Invoice # 716
Date: 06/01/2023
Due On: 06/15/2023

Morrison, Lareau & Weng

1600 - 5th Avenue
Rock Island, IL 61201
United States

City of Rock Island
1528 3rd Avenue
Rock Island, IL 61201

00001-City of Rock Island

FOIA & Subpoena

Type	Date	Notes	Quantity	Rate	Total
Service	05/03/2023	Receive and review request regarding liquor license application documents; conference with DGM regarding same.	0.40	$140.78	$56.31
Service	05/25/2023	Draft response to FOIA request; brief legal research regarding same.	1.80	$225.00	$405.00
Service	05/26/2023	Telephone conferences regarding code violations and other infractions; finalize response; ; assemble responsive documents; forward to client representative for review and transmittal.	0.80	$225.00	$180.00
			Quantity Subtotal		**3.0**
			Subtotal		**$641.31**

00002-City of Rock Island

Chavez wrongful deatht

Type	Date	Notes	Quantity	Rate	Total
Service	05/01/2023	Conference with DGM regarding remaining discovery matters and trial preparation.	0.50	$140.78	$70.39
Service	05/17/2023	Communications with excess counsel regarding upcoming hearing	0.40	$140.78	$56.31

Service	05/18/2023	Communications from judge regarding rescheduling hearing because of other judge's funeral; communications with counsel regarding same.	0.80	$140.78	$112.62
Service	05/19/2023	Continue work on re-scheduling MSJ hearing.	0.80	$140.78	$112.62
Service	05/22/2023	Conference with DGM regarding MSJ argument strategy; document review regarding same.	1.00	$140.78	$140.78
Service	05/30/2023	Detailed review of pending motions and countless exhibits in preparation for summary judgment hearing.	3.00	$225.00	$675.00
Service	05/31/2023	Conference call with DGM and excess counsel regarding strategies for MSJ hearing; identify applicable documents.	1.80	$225.00	$405.00
Service	06/01/2023	Prepared for Motion for Summary Judgment. Appeared for Motion for Summary Judgment.	2.00	$225.00	$450.00
			Quantity Subtotal		**10.3**
			Subtotal		**$2,022.72**

00005-City of Rock Island

CED matters

Type	Date	Notes	Quantity	Rate	Total
Service	05/22/2023	Research Bankruptcy Court for three difference names and businesses for CIRLIF Loans	0.60	$71.44	$42.86
Expense	05/22/2023	Pacer Charges: Pull Information from Bankruptcy Court. Three CIRLIF Loans	1.00	$6.40	$6.40
			Quantity Subtotal		**0.6**
			Subtotal		**$49.26**

00011-City of Rock Island

MUNICES

Type	Date	Notes	Quantity	Rate	Total
Service	05/23/2023	Prepare Release of Judgment 920 11th Avenue.	0.30	$95.00	$28.50
Service	05/23/2023	Prepare Release of Municies Judgment 912 11th Avenue	0.30	$95.00	$28.50

Service	05/26/2023	special set hearing trial on merits Swords Venear Property t	3.00	$225.00	$675.00
			Quantity Subtotal		**3.6**
			Subtotal		**$732.00**

00018-City of Rock Island

Rock Island Realty

Type	Date	Notes	Quantity	Rate	Total
Service	05/19/2023	Communications regarding settlement agreement and variations from specifications	0.60	$140.78	$84.47
Service	05/22/2023	Meeting at Katz, Nowinski with John Doak and Aaron Curry, regarding Rock Island Reality Clean up.	1.00	$140.78	$140.78
Service	05/24/2023	Begin draft of letter to counsel regarding compliance with ordinances	0.40	$225.00	$90.00
			Quantity Subtotal		**2.0**
			Subtotal		**$315.25**

00025-City of Rock Island

Estrada & Joy

Type	Date	Notes	Quantity	Rate	Total
Service	04/28/2023	Conference with co-defendant's counsel regarding expert deposition; assemble and forward documents regarding same.	0.60	$140.78	$84.47
Service	05/08/2023	Communications with counsel regarding expert disclosure deadline	0.50	$140.78	$70.39
Service	05/10/2023	Receive and review plaintiff's expert witness file.	0.60	$140.78	$84.47
Service	05/15/2023	Prepare for and deposition of plaintiff's expert's deposition	5.40	$140.78	$760.21
Service	05/17/2023	Communications with all counsel regarding upcoming case management conference and scheduling for co-defendant's motion for summary judgment	0.80	$140.78	$112.62
Service	05/26/2023	Receive and review transcript of plaintiff's expert deposition; communications with retained expert	0.40	$225.00	$90.00

		regarding same.			
			Quantity Subtotal		**8.3**
			Subtotal		**$1,202.16**

00021-City of Rock Island

Danielle Herber slip and fall on ped mall

Type	Date	Notes	Quantity	Rate	Total
Service	04/27/2023	Gathered all material for supplemental production; combined into PDF; provided via email. filed notice with Clerk.	2.50	$140.78	$351.95
Expense	05/01/2023	Urbanski Reporting Company, Inc. Depositions of Hitchcok and Saunders	1.00	$270.00	$270.00
Expense	05/01/2023	Depositions of Jorge Ambriz	1.00	$159.00	$159.00
Service	05/02/2023	Communications with all counsel regarding failure to serve subpoenas and need to reschedule depositions and available dates for same.	0.60	$140.78	$84.47
Service	05/03/2023	Communications regarding non-party depositions and subpoenas for same.	0.40	$140.78	$56.31
Service	05/04/2023	Communications with client representative regarding zoom information; communications with counsel regarding subpoena witnesses.	0.60	$140.78	$84.47
Expense	05/08/2023	Depositions of Vanlandegen	1.00	$195.00	$195.00
Service	05/10/2023	Communications regarding several depositions; communications with witness regarding upcoming testimony.	0.60	$140.78	$84.47
Service	05/11/2023	Communications with witness in preparation for deposition; prepare for same; appear and present witness for deposition.	3.40	$140.78	$478.65
Service	05/12/2023	Receive and review Luke VanLandegan transcript	0.40	$140.78	$56.31
Service	05/15/2023	Ongoing problems with scheduling; communications with plaintiff's counsel regarding settlement.	0.80	$140.78	$112.62
Service	05/16/2023	Communications with plaintiff's counsel regarding proposal for global settlement; communications with client representative regarding same.	0.80	$140.78	$112.62
Service	05/18/2023	communications with all counsel regarding depositions still to be scheduled.	0.60	$140.78	$84.47

Service	05/19/2023	Work with counsel to identify further depositions and dates for same.	0.60	$140.78	$84.47
Service	05/30/2023	Communications with client representative and counsel regarding retirement witness's from City employment.	0.60	$225.00	$135.00
Expense	06/01/2023	Deposition Transcripts Herber vs. Born deposition of Michael Bartels	1.00	$168.00	$168.00
			Quantity Subtotal		**11.9**
			Subtotal		**$2,517.81**

00697-City of Rock Island

Governance matters

Type	Date	Notes	Quantity	Rate	Total
Service	04/28/2023	Employee Discussion - Baugous Office	1.00	$140.78	$140.78
Service	05/01/2023	letter to Dave De' Hansel Illinois Human Rights	0.50	$140.78	$70.39
Service	05/01/2023	Discussion regarding employment matter city human resources	1.00	$140.78	$140.78
Service	05/03/2023	Directors Meeting	2.00	$140.78	$281.56
Service	05/03/2023	Director's Meeting	1.50	$140.78	$211.17
Service	05/04/2023	Receive and review communications regarding audit letter.	0.20	$140.78	$28.16
Service	05/15/2023	Legal Services Update	1.00	$140.78	$140.78
Service	05/15/2023	Office conference with client representatives regarding succession planning for legal services.	1.00	$140.78	$140.78
Service	05/17/2023	Director's Meeting	1.50	$140.78	$211.17
Service	05/19/2023	Communications with client representatives regarding remote attendance at meetings	0.20	$140.78	$28.16
			Quantity Subtotal		**9.9**
			Subtotal		**$1,393.73**

00703-City of Rock Island

Bankruptcy Proceedings:

Type	Date	Notes	Quantity	Rate	Total
Service	06/01/2023	Review Phill Scott Bankruptcy and prepare Ballot. Deliver Ballot to Attorney Haake,	0.75	$225.00	$168.75
			Quantity Subtotal		**0.75**
			Subtotal		**$168.75**

00718-City of Rock Island Foreclosures

Foreclosures

Type	Date	Notes	Quantity	Rate	Total
Service	05/02/2023	Received Foreclosure 1509 39th Street. Searched Laredo and Email to City Staff	0.30	$71.44	$21.43
Service	05/02/2023	Received Foreclosure 2531 30th Street. Search Laredo and email to City Staff.	0.03	$71.44	$2.14
Service	05/30/2023	Victor Hale 2022 FC 192 on 5/30/23 review Complaint and answer to complaint and made amendments 1.0 hours	1.00	$225.00	$225.00
Service	05/30/2023	Prepare Answer to Foreclosure. Gave to Dave for review and signature.	0.50	$95.00	$47.50
			Quantity Subtotal		**1.83**
			Subtotal		**$296.07**

00723-City of Rock Island

Library matters

Type	Date	Notes	Quantity	Rate	Total
Service	05/03/2023	Site visit with seller's counsel regarding desired revisions to purchase and sale agreement	1.00	$140.78	$140.78
Service	05/04/2023	Follow-up communications with client representative and seller's counsel regarding revisions to PSA	0.40	$140.78	$56.31
Service	05/09/2023	Communications with counsel regarding revisions to PSA; communications with client representatives regarding same.	0.50	$140.78	$70.39
Service	05/24/2023	Communications with client representative regarding	0.50	$225.00	$112.50

		parking lot re-negotiation; communications with counsel for seller regarding same.			
			Quantity Subtotal		**2.4**
			Subtotal		**$379.98**

00732-City of Rock Island

Liquor Commission matters

Type	Date	Notes	Quantity	Rate	Total
Service	05/01/2023	follow up with Irene and Rick on playmakers letter sent last Friday	0.50	$140.78	$70.39
Service	05/16/2023	Communications with client representative regarding upcoming hearings and difficulty locating court reporters	0.60	$140.78	$84.47
Service	05/19/2023	Telephone conferences with client representatives regarding court reporters for liquor hearings.	0.50	$140.78	$70.39
Service	05/22/2023	Communications with client representative and court reporter regarding upcoming hearings.	0.40	$140.78	$56.31
Service	05/24/2023	Communications with court reporter regarding availability; communications with counsel regarding same; follow-up communications with court reporter regarding same.	0.60	$225.00	$135.00
Service	05/25/2023	Telephone conferences with court reporters regarding unwillingness to report liquor hearings; legal research regarding availability of alternatives to court reporters.	1.60	$225.00	$360.00
Service	05/26/2023	Further communications with court reporters trying to set hearing.	0.40	$225.00	$90.00
Service	05/30/2023	Review Filed of Kenneth Allen at home	2.00	$225.00	$450.00
Service	05/30/2023	Communications with court reporter and client representative regarding scheduling hearing; research regarding procedures on violation occurring during pendency of appeal.	1.60	$225.00	$360.00
Service	05/31/2023	Liquor Commission Received email from Samantha, reviewed and organized and compiled for filing with state liquor commission for K Allen. Emails to Sean O'leary, Attorney Pretrial Memorandum and Record Docs.	2.50	$95.00	$237.50
Service	05/31/2023	Worked on Liquor Commission Appeals K Allen, prepared Pretrial Memorandum, Meeting at City Hall, received and reviewed various documents from	5.50	$225.00	$1,237.50

		Samantha.			
Service	05/31/2023	Telephone Conference Chavez Case with Hector and Mark Wolfe.	0.50	$225.00	$112.50
Service	05/31/2023	Received and reviewed Swords Veneer Order from Municies Hearing. Forward the same.	0.20	$225.00	$45.00
Service	05/31/2023	Meeting with CED to discuss various matters, Rock Island Reality, General Inspections and other matters.	1.00	$225.00	$225.00
Service	05/31/2023	meeting with City Manager and City Clerk regarding Special meeting on open meetings act. Liquor Commission and June 8th Liquor Hearings.	1.50	$225.00	$337.50
Service	06/01/2023	Review and Prepare Liquor Notices for Hearings on June 8, 2023. Sent to Marsha for email to City Staff.	2.50	$225.00	$562.50
Service	06/01/2023	Review Liquor Notice and Emails Notice to City Staff,	0.30	$95.00	$28.50
Service	06/01/2023	Telephone Conference with Attorney for Playmakers.	0.30	$225.00	$67.50
			Quantity Subtotal		**22.5**
			Subtotal		**$4,530.06**

00737-City of Rock Island -Take Notices

Take Notices to be split between CED and Finance.

Type	Date	Notes	Quantity	Rate	Total
Service	05/31/2023	Received Take Notice from Josh. Searched Property and found a Lien from Water and Sewer in the sum of $973.98. Email to City Staff. No Tax deed filed at this time. Will continue to check.	0.60	$95.00	$57.00
			Quantity Subtotal		**0.6**
			Subtotal		**$57.00**

00770-City of Rock Island

RIPD matters

Type	Date	Notes	Quantity	Rate	Total
Service	05/16/2023	Review latest changes to intergovernmental service agreement; communications with client representative regarding same.	0.80	$140.38	$112.30

Quantity Subtotal	**0.8**
Subtotal	**$112.30**

00785-City of Rock Island

Bolden IDHR complaint

Type	Date	Notes	Quantity	Rate	Total
Service	05/30/2023	Met with Chris Brown to pick up Bolden file for property located at 2845 and 2847 7th Ave. Human Rights complaint, prepared position paper, prepared witness list, reviewed and prepared 12 Exhibits. Reviewed 14 page prior decision, letters from Italo Milani, Notes from Bruce Crowe and timeline and filed response with Human Rights Commission Chicago and Investigator DHansel	7.50	$225.00	$1,687.50
			Quantity Subtotal		**7.5**
			Subtotal		**$1,687.50**

00783-City of Rock Island

Ravelingeen drowning 210407W012-0001

Type	Date	Notes	Quantity	Rate	Total
Service	05/03/2023	Receive and review communications regarding status from supervising counsel	0.20	$140.78	$28.16
Service	05/11/2023	Communications with supervising counsel regarding status	0.40	$140.78	$56.31
			Quantity Subtotal		**0.6**
			Subtotal		**$84.47**

00809-City of Rock Island: Anchor Properties, LLC

Anchor Properties, LLC vs. City of Rock Island 2021CH74

Type	Date	Notes	Quantity	Rate	Total
Expense	05/12/2023	Transcript Depositions of Larry Cook.	1.00	$62.40	$62.40

Service	05/12/2023	Receive and review transcript of Larry Cook deposition	0.40	$140.78	$56.31

Quantity Subtotal	**0.4**
Subtotal	**$118.71**
Quantity Total	**86.98**
Total	**$16,309.08**

Account	Balance
Dave Illinois IOLTA Trust Account Balance	$0.00
Total Account Balance	**$0.00**

Please make all amounts payable to: David G. Morrison

Please pay within 14 days.

Memorandum

To: Rock Island City Council

From: Bob Graff, Fire Chief

Subject: Report from the Fire Department regarding payment in the amount of $13,200.00 to Builders Sales & Service Company (BSSC) for the installation of a suspended ceiling at the Fire Department's Central House.

Date: June 26, 2023

Introduction and Background Information:

BSSC is due payment for the installation of a suspended ceiling on the first floor of Central House. The ceiling was budgeted to be replaced due to a water leak.

Previous Council Action (if any):

NA

Budget Impact:

Vendor:	Builders Sales & Service Company (BSSC)
Payment amount:	$13,200.00

Fund:	101	General fund
Department	451	Fire Department Administration
Cost Center	291	Central House
Object Code	53801	Buildings & Grounds Services & Contracts

Additional Information as applicable (i.e. provide alternative options, community or staff input, staffing impact; resident impact; etc.):

NA

Council Goal (if applicable):

NA

Recommendation:

The Fire Department recommends that the City Council approve the payment to BSSC in the amount of $13,200.00.

Submitted by: Bob Graff, Fire Chief

Approved by: Joshua Adams

INVOICE

BUILDERS SALES & SERVICE COMPANY
P.O. BOX 890, MOLINE, IL 61266-0890 • (309) 764-7445 • Fax (309) 764-7448
www.bsscompany.com

INVOICE NO. 27042
INVOICE DATE March 23, 2023

SOLD TO

City of Rock Island
Fire Department
1313 5th Avenue
Rock Island, IL 61201-8523

Job: Central Fire Station

PLEASE PAY FROM THIS INVOICE - NO STATEMENT RENDERED EXCEPT FOR PAST DUE ACCOUNTS.

CUST. ORDER NO.	DATE OF ORDER	DATE SHIPPED	SHIPPED VIA	PPD.	COL.
signed proposal					

SALESMAN	DATE COMPLETED	W.O. NO.	TERMS: Net 10 days/	Net on Completion of Work
MPW		40635		

QUANTITY	DESCRIPTION	UNIT PRICE	AMOUNT DUE
	Labor and materials for demolition of existing ceilings and installation of new 2'x2' class "A" suspended acoustic ceilings with intermediate duty grid system and white ARM #756 tile, as per our proposal dated 2-17-22.		
	13,200.00		
	Amount due this billing		13,200.00
	101-451291-53801-0000000		
	Amount of contract billed to date		13,200.00

RECEIVED BY:

Sales Tax Permits: Illinois 482-774 E 99936909 Iowa Use Tax 101706

[ ] Lump-Sum Contract [ ] Resale [x] Tax Exempt
[ ] Labor [x] Affidavit on file

A

AN EQUAL OPPORTUNITY EMPLOYER

ORIGINAL INVOICE

Memorandum

To: Rock Island City Council

From: Mike Bartels, Director

Subject: Report from the Public Works Department requesting approval to purchase a replacement backwash pump for the Southwest Wastewater Treatment Plant from Zimmer & Francescon, Moline, IL in the amount of $21,700.00.

Date: June 26, 2023

Introduction and Background Information:

The Southwest Wastewater Treatment Plant (WWTP) has sand filters for the final stage of the wastewater treatment process. These filters need to be backwashed to remove the filtered residue from the sand to maintain their functionality. The backwash process requires pumps to pump filtered water back up through the sand to remove the residue that has accumulated. The backwash pumps have been in continuous service since the plant was built in 1977.

At the beginning of May, one of the pumps failed and was removed for repair. The pump was taken to Rock Island Electrical Motor (RIEMR), who estimated the repair to the pump would be $15,000. Due to the advanced age of the pump and the estimated repair cost, bids for a replacement pump were solicited. The bids received are as follows:

RIEMR, Rock Island IL	$34,187.84 Plus Freight	24-28 week delivery
Zimmer & Francescon, Moline, IL	$21,700.00 Including Freight	15-16 week delivery
ABBA Pump Parts & Service Ontario, Canada	$20,632.00 Plus $500 Freight	18-20 week delivery

Previous Council Action (if any):

Budget Impact:

Vendor: Zimmer & Francescon, Moline, IL

Payment Amount: $21,700.00
Account Chargeable:

Fund:	506	Wastewater Operation and Maintenance
Division:	618	Utilities Service
Cost Center:	343	Southwest Wastewater Treatment Plant
Object Code:	52305	Auto/Equip Supplies

Additional Information as applicable (i.e. provide alternative options, community or staff input, staffing impact; resident impact; etc.):

Council Goal (if applicable):

Recommendation:

The Public Works Department recommends that the City Council approve the purchase from Zimmer & Francescon, Moline IL in the amount of $21,700.00, because Zimmer & Francescon is a local company and has the shortest lead time.

Submitted by: Michelle Martin, Manager

Approved by: Joshua Adams

JOB ESTIMATE

ROCK ISLAND ELECTRIC MOTOR
211 31st AVE.
ROCK ISLAND, IL 61201
UNITED STATES
(309)-788-9517

JOB NO	00096861
RECEIVED DATE	3/17/2023
PAGE	2

SOLD TO
000046
City of Rock Island-Admin.
Attn: Accounts Payable
1309 Mills St.
Rock Island, IL 61201

SHIP TO
000002
City of Rock Island - Sewer
Lisa Perry
EMAIL INVOICES
1299 Mill St. Dept. 520
Rock Island, IL 61201

CUSTOMER PO #	PO RELEASE #	MISC NUMBER

TEST

TEST RUN

PAINT

REPAIR = 4-6 WEEK DELIVERY PLUS FREIGHT

NEW = $34,187.84 PLUS FREIGHT. 24-28 WEEK DELIVERY

TOTAL	**15,750.00**

Repair Estimate

Valid for 30 calendar days from the above date
Estimate does not include Sales Tax if applicable.
Estimate does not include Freight if applicable.
Based upon our Standard Terms and Conditions

Received By: _____ **Date:** _____

ZIMMER & FRANCESCON, INC.

6200 65th Avenue
Moline, IL 61265
1-800-621-1118
309-797-1117 tel
877-244-2508 fax

QUOTATION

TO: City of Rock Island
Ms. Lisa Perry
1299 Mill Street
Rock Island, Illinois 61201

QUOTATION NO: **230538GG**
DATE: 5/24/23

SUBJECT: **Replacement Backwash Pump**
Fairbanks Vertical Solids Handling Pump
(Replaces Serial Number K2X1-079847-1)

We are proposing to furnish the following equipment at the prices indicated and in accordance with the terms set forth herein.

ONE 1 Fairbanks 6" B5433 10HP 1185 RPM
Vertical "Biltogether" Solids Handling Pump
Design Point: 1134 GPM @ 25 Ft TDH
6" Discharge, 8" x 6" Suction Elbow
Cast Iron Frame, Cast Iron Vertical Base, Dynamically Balanced Cast Iron Impeller, Car/Cer Mechanical Seal
15 HP, 1185 RPM, ODP, 230/460 Volt 3-Phase

TOTAL DELIVERED PRICE (Includes Freight) **$21,700.00**

Delivery: Approx. 15 - 16 weeks after receipt of order

Attachments:

Pump Performance Datasheet
Multi-Speed Landscape Curve
Technical Offer
Dimensional Drawing

Parts Quotation

ABBA PUMP PARTS & SERVICE
www.abbaparts.com

Date: June 1, 2023
Quote Number: R-FMNA-32565-1
ABBA Job #
Customer Order #
Order Date:

Customer: ROCK ISLAND, CITY OF
Contact: Lisa Perry
E-Mail: perry.lisa@irgov.org
Reference:

Phone # : 309-732-2300
Cell # : -
Address: -
City: Rock Island State: IL

Genuine ABBA Performance +™ Parts to Fit:

Make: FAIRBANKS MORSE
Model: B5433 **Size:** 8X6
Capacity: 1134 GPM
Head: 25 Feet
Speed: 1185 RPM
Imp Dia.: 10 Inches

Serial #/Year: K2X1-079847-1
Power Frame #:
Rotation: **CW** When Viewed From Driver End
Wear Rings: ***
Stuffing Box: MECHANICAL SEAL
Motor: HP: 10 Frame:

***** Please Confirm When Placing Order**

QTY Required	Part #/Name	Material	ABBA #	OEM #		Net Price (Each)	Extended Net Price
1	**Complete ABBA Replacement Complete Pump Model FMN0633/10HP 1200RPM** **Includes:** Base, 8 x 6 Elbow, Volute, Fronthead, CW-Impeller, Wear Rings (Impeller & Fronthead), Stuffing Box with Double Mechanical Seal (Type 21 - Carbon/Ceramic) and 10HP 1200RPM 3/60/230-460V Motor. All parts and components are in standard material and construction. Replacement complete pump is a direct drop in replacement bolting into existing piping. **No Piping Modification Required**					$20,632.00	$20,632.00

Total Net Price: $20,632.00

Freight: **Extra ($500 EST.)**
Taxes: Extra if Applicable

Shipment: 18 - 20 Weeks
Subject to change based on availability of material, supplies & labor at time of order.
Terms & Conditions: See attached - APS-Schedule C, Rev. 5 05/17/20.
FOB: Burlington, ON, Canada

Price Valid For 30 Days. After 30 days we will have to requote due to rapidly rising material costs.

Payment Terms: Net 30 Days (O.A.C.).
**For first time customers, ABBA Parts requires payment prior to shipping first order.*

Quoted by: Kamal Mohanadas Saina
kamal_s@abbaparts.com

Memorandum

To: Rock Island City Council

From: Mike Bartels, Director

Subject: Report from the Public Works Department regarding payment in the amount of $14,532.29 to Xylem Dewatering Solutions, Inc. Chicago, IL, for the rental of flood pumps.

Motion:	Motion whether or not to approve Consent Agenda items a through f.
RC	Roll Call vote is needed.

Date: June 26, 2023

Introduction and Background Information:

Xylem Dewatering Solutions, Inc. is entitled to payment in the amount of $14,532.29 for the rental of pumps used from April 25 through May 11, 2023 during the flood along the Mississippi River.

Previous Council Action (if any):

Budget Impact:

Vendor: Xylem Dewatering Solutions, Inc, Chicago, Illinois

Payment Amount: $14,532.29

Fund:	507	Stormwater Utility
Department:	619	Utilities Maintenance
Cost Center:	348	South West Collection Maintenance
Object Code:	53902	Equipment Rental
Project:	2874	2023 Flood

Purchase Order: R009766

Additional Information as applicable (i.e. provide alternative options, community or staff input, staffing impact; resident impact; etc.):

Council Goal (if applicable):

Recommendation:

The Public Works Department recommends that the City Council approve the payment to Xylem Dewatering Solutions, Inc. Chicago, IL in the amount of $14,532.29.

Submitted by: Michelle Martin, Manager

Approved by: Joshua Adams

xylem
Let's Solve Water

godwin FLYGT

Sold by:

Invoice

Branch 006
9661 194th Street
Mokena, IL 60448
Tel: 708-889-1560
Fax: 708-889-1561

Remit to:
26717 Network Place
Chicago, IL 60673-1267
Phone: 1.855.278.2248 (Opt 1)

NOTE: Valued customers, please note the NEW remit address change included on this invoice.

SOLD TO
City of Rock Island
Attn: Public Works Department
1309 Mill Street
Rock Island, IL 61201

SHIP TO
City of Rock Island
Attn: Public Works Department
1309 Mill Street
Rock Island, IL 61201

Cust. No.	Invoice Date	Invoice No.
00012172	05-16-2023	401252053

Customer PO	Ordered By	Contract Date	Rental Contract #	Sales Representative	Order Taken By	Payment Terms
603-Levee Closure Pumps	Alan Vanderheyden	04-19-2023	206013224	Jacqueline Donnelly	Jacqueline Donnelly	Net 30

QTY	ITEM	DESCRIPTION	PER	D/W/M	RATE	AMOUNT
		Rental 04/25/2023 Thru 05/11/2023 *Return*				
1	D-62874	CD150M 6" 4045T290-iT4 RGT	1	M	1,995.03	1,995.03
		Rental 04/26/2023 Thru 05/11/2023 *Return*				
1	B-1034	DPC300 12" 6068T-PG SB 100G	2 2	D W	764.11 2,292.33	6,112.88
6	HSWS120010QDDR	12" x 10' Black Water Suction Hose W/QD	2 2	D W	49.22 147.66	2,362.56
18	PPQP120010QD00R	12" x 10' Godwin QD Pipe	2 2	D W	11.11 33.33	1,599.84
11	SCMS120NA000R	12" Suction Screen	2 2	D W	13.56 40.68	108.48
1	PZONE04ROLLBACK	Pickup Zone 4 - Rollback			740.00	740.00
2	DZONE06ROLLBACK	Delivery Zone 6 - Rollback			585.00	1,170.00

ALL PAST DUE INVOICES ARE SUBJECT TO
1 1/2% PER MONTH SERVICE CHARGE

Important Information: Due to fraud attempts any communication for changes of bank account details have to be confirmed by a call-back with your respective Xylem contact person.

xylem
Let's Solve Water

godwin PUMP

Sold by:

Invoice

Branch 006
9661 194th Street
Mokena, IL 60448
Tel: 708-889-1560
Fax: 708-889-1561

Remit to: Xylem Dewatering Solutions, Inc.
26717 Network Place
Chicago, IL 60673-1267
Phone: 1.855.278.2248 (Opt 1)

NOTE: Valued customers, please note the NEW remit address change included on this invoice.

SOLD TO
City of Rock Island
Attn: Public Works Department
1309 Mill Street
Rock Island, IL 61201

SHIP TO
City of Rock Island
Attn: Public Works Department
1309 Mill Street
Rock Island, IL 61201

Cust. No.	Invoice Date	Invoice No.
00012172	05-16-2023	401252053

Customer PO	Ordered By	Contract Date	Rental Contract #	Sales Representative	Order Taken By	Payment Terms
603-Levee Closure Pumps	Alan Vanderheyden	04-19-2023	206013224	Jacqueline Donnelly	Jacqueline Donnelly	Net 30

QTY	ITEM	DESCRIPTION	PER	D/W/M	RATE	AMOUNT
556	FUELSURCHARGE	Fuel Surcharge by the Mile			0.60	333.60
1	ENVFEE	Environmental Fee				109.90

R009766

507-619348-53902-2874000

ALL PAST DUE INVOICES ARE SUBJECT TO 1 1/2% PER MONTH SERVICE CHARGE

Rental	Labor	Shipping	Misc. Charges	Taxes
$ 12,178.79	$ 0.00	$ 2,243.60	$ 109.90	$ 0.00

Important Information: Due to fraud attempts any communication for changes of bank account details have to be confirmed by a call-back with your respective Xylem contact person.

Total Invoice **$ 14,532.29**

Memorandum

To: Rock Island City Council

From: Mike Bartels, Director

Subject: Report from the Public Works Department recommending city staff negotiate a contract with Hanson Professional Service, Springfield, IL, for the purpose of developing a Capital Asset Management Plan.

Motion:	Motion whether or not to authorize staff to negotiate a contract with Hanson Professional Service.
RC	Roll Call vote is needed.

Date: June 26, 2023

Introduction and Background Information:

The City of Rock Island solicited proposals from qualified firms for the identification of capital assets, life cycle analysis and development of amortization schedules for assets at City facilities. Examples of capital assets included roofs, boilers, structures, swimming pools pumps etc.

The RFQ was listed on the City's website on April 24, 2023 with a bid opening date of May 12, 2023. At that time, proposals were received and opened from:

- Hanson Professional Services, Springfield, IL
- HDR Inc, Davenport, IA

A committee composed of Public Works along with the Building Official evaluated the firms. Hanson Professional Services stood out as the ideal choice due to their deep expertise, extensive experience, and unique qualifications.

Their expertise in asset management encompasses a wide range of industries, and they have a proven ability to adapt their knowledge to different sectors. Their significant experience working with the Department of Defense was particularly relevant due to the City of Rock Island providing services to the Rock Island Arsenal.

Their approach emphasizes proactive maintenance planning and budgeting. They leverage the asset management software DOT to develop budgeting recommendations based on minimally acceptable conditions. This will enable us to allocate resources effectively, ensuring that maintenance activities are prioritized appropriately and replacement costs are effectively planned and budgeted.

Hanson Professional Services emerged as the top choice for development of a capital asset management plan due to their deep expertise, extensive experience, and particularly their experience working with the Department of Defense. Their superior budgeting recommendations, focused on maintenance, were also influential in their selection. We are confident that their involvement will contribute significantly to the success of our capital asset management efforts.

Previous Council Action (if any):

Budget Impact:

Additional Information as applicable (i.e. provide alternative options, community or staff input, staffing impact; resident impact; etc.):

Council Goal (if applicable):

Recommendation:

It is recommended that the City Council authorize city staff to negotiate a contract with Hanson Professional Service for the purpose of developing a capital asset management plan.

Submitted by: Michelle Martin, Manager

Approved by: Joshua Adams

Memorandum

To: Rock Island City Council

From: Miles Brainard, Director

Subject: Report from the Community & Economic Development Department regarding an Amendment to the Sala Flats Redevelopment Agreement.

Motion:	Motion whether or not to approve the amendment to the redevelopment agreement.
RC	Roll Call vote is needed.

Date: June 26, 2023

Introduction and Background Information:

Rock Island Economic Growth Corporation (Growth) has been working with the Illinois Housing Development Authority (IHDA) over the past two years to refinance the Sala Flats at 330 19th Street. The purpose of the nearly $4.6 million refinance is to undertake substantial capital improvements to the building and maintain it as high-quality, mixed-income rental housing. Normally, the turnaround time for this process would be a few months. Like many agencies during the pandemic, however, IHDA has been preoccupied with administering a host of emergency programs that have required a substantial amount of staff bandwidth. As a result, the IHDA board only just approved the refinancing in September 2022 and then the closing did not occur until March 2023.

This delay has pushed back the project timeline. In doing so, it has made it impossible for Growth to meet the original deadlines set forth in its January 2022 redevelopment agreement with the City. That agreement provided $230,056 toward the project from the now-defunct downtown TIF district. The agreement required that the project begin before July 31, 2022 and be completed before July 31, 2023. Achieving that timeline is no longer possible due to the delays in refinancing with IHDA. In light of that, Growth is requesting that the dates in the agreement be amended. They are requesting that the work begin no later than July 31, 2023 and work be completed no later than December 31, 2023.

Understanding that no other terms of the agreement would be changed, including the amount of assistance being offered, staff fully support this adjusted timeline. Construction permits were pulled and work began in April. It is in the City's interest to see the project completed and Growth is a reliable partner.

Previous Council Action (if any):

The City Council approved the original redevelopment agreement in January 2022.

Budget Impact:

The TIF funds allocated to this project remain unchanged.

Additional Information as applicable (i.e. provide alternative options, community or staff input, staffing impact; resident impact; etc.):

Council Goal (if applicable):

Recommendation:

The Community & Economic Development Department recommends that the City Council approve the amendment to the agreement.

Submitted by: Miles Brainard, Director

Approved by: Joshua Adams

REDEVELOPMENT AGREEMENT BY AND AMONG THE CITY OF ROCK ISLAND AND SALA FLATS GP, LLC AND ROCK ISLAND ECONOMIC GROWTH CORPORATION

THIS REDEVELOPMENT AGREEMENT ("*Agreement*") is entered into as of the _____ day of _____, 2023 ("*Effective Date*") by and among the City of Rock Island, Rock Island County, Illinois, a home rule municipality of the State of Illinois ("*City*"), and Sala Flats L.P., an Illinois limited partnership (the "Owner") and Rock Island Economic Growth Corporation, an Illinois corporation ("Growth") (collectively, the "*Developer*"). The City and the Developer sometimes are referred to individually as a "*Party*" and collectively as the "*Parties*".

In consideration of the mutual covenants and agreements set forth in this Agreement, the City and Developer hereby agree as follows:

ARTICLE 1: RECITALS

1.1 The City is engaged in the revitalization of certain commercial properties in an area which is commonly known as the Rock Island Downtown TIF and includes property commonly known as 320 19th Street and 1829 4th Avenue (the "*Subject Property*").

1.2 The City has the authority pursuant to the laws of the State of Illinois, to promote the health, safety, and welfare of its inhabitants, to prevent the spread of blight, to encourage private development in order to enhance the local tax base, to increase job opportunities, and to enter into contractual agreements with third Parties for the purpose of achieving these purposes.

1.3 Pursuant to the Tax Increment Allocation Redevelopment Act of the State of Illinois, 65 ILCS 5/11-74.4-1, *et seq*., as from time to time amended (the "*TIF Act*"), the Mayor and City Council of the City (collectively, the "*Corporate Authorities*") are empowered to undertake the redevelopment of a designated area within its municipal limits in which existing conditions permit such area to be classified as a "blighted area", or a "conservation area" as such terms are defined in the TIF Act.

1.4 To stimulate and induce redevelopment pursuant to the TIF Act, the Corporate Authorities, after giving all required notices, conducting a public hearing and making all findings required by law, on the 11th day of February, 1985, pursuant to Ordinance Nos. 84-77, 84-78 and 84-79 approved a Redevelopment Plan and Project (the "*Redevelopment Plan*") for an area designated as the Rock Island Downtown Redevelopment Project Area (the "*Project Area*") (which Project Area included the Subject Property), and adopted tax increment financing for the payment and financing of "redevelopment project costs" incurred within the Project Area as authorized by the TIF Act.

1.5 The Owner owns and manages a thirty-three (33) unit mixed income residential development and has submitted a proposal to the City to rehabilitate the Subject Property with brick replacement, tuck-pointing, cleaning and caulking, steel lintel repair, stone patching, painting and repair of walk-way panels (the "*Project*") requiring an investment by the Developer of $4,076,600 which includes actual construction costs of $1,080,272. Growth is the sole member of Sala Flats GP, LLC, an Illinois limited company, the sole general partner ("General Partner") of the Owner, and the developer of the Project.

1.6 The Developer has advised the City that it is not economically feasible for the Developer to undertake the Project without financial assistance and the City is prepared to financially assist the Developer in twenty-five percent (25%) increments, as hereinafter provided, for a total amount not to exceed $230,056 in order to accomplish the improvements to the Subject Property.

1.7 The City desires the Developer to proceed with the Project in accordance with this Agreement in order to eliminate the blight factors and characteristics found at the Subject Property and continue to provide an important service to the City and, therefore, is prepared to reimburse the Developer for certain eligible costs of the Project, subject to the terms of this Agreement, the TIF Act and all other applicable provisions of law.

ARTICLE 2: DEVELOPER'S OBLIGATIONS

2.1 The Developer shall provide the City with proof of financing using resources from the Illinois Housing Development Authority ("IHDA"), among other sources, for an amount sufficient to conduct and complete the Project within 3 months of the execution of this Agreement. Items constituting proof of financing hereunder include, but are not limited to, board resolutions, commitment letters, reservation letters, and letters of intent, as applicable.

2.2 The Developer agrees to obtain any and all permits as required from the City to construct the Project and each component thereof in accordance with all applicable codes and ordinances of the City.

2.3 On or before July 31, 2023, the Developer shall have commenced the Project and shall have completed the Project in accordance with the requirements of Section 2.2 above, on or before December 31, 2023.

ARTICLE 3: CITY'S OBLIGATION'S

3.1 The City has established a Special Tax Allocation Fund (the "*STAF Account*") pursuant to Ordinance No. 84-79 into which the City annually deposits all "Incremental Taxes", as hereinafter defined, derived from the Project Area. For purposes of this Agreement, "Incremental Taxes" shall mean the amount in the STAF Account equal to the amount of ad valorem taxes, if any, paid in respect of the Project Area which are attributable to the increase in the equalized assessed value of the Project Area and its improvements over the initial equalized assessed value of the Project Area as of the date of the adoption of Ordinance No. 84-79 adopting tax increment financing pursuant to the TIF Act. The City shall make certain payments to Growth for the benefit of the Project from the STAF Account as provided in Article 4.

3.2 THE CITY'S OBLIGATION TO REIMBURSE THE DEVELOPER UNDER THIS AGREEMENT IS A LIMITED OBLIGATION PAYABLE SOLELY FROM INCREMENTAL TAXES DEPOSITED IN THE STAF ACCOUNT AS HEREINAFTER PROVIDED AND SHALL NOT BE SECURED BY THE FULL FAITH AND CREDIT OF THE CITY.

ARTICLE 4: PAYMENT OF PROJECT COSTS

4.1 In consideration of the improvements to the Subject Property and the construction of the Project in accordance with the requirements of Section 2.2 of this Agreement, so long as no event described in Section 5 hereof shall have occurred and be continuing, the City shall reimburse the Developer from Incremental Taxes for Redevelopment Project Costs, as hereinafter defined, as follows:

(a) Upon closing of all of the required financing as provided in Section 2.1 for the costs of the Project, the City shall reimburse Growth for the benefit of the Project in the amount of $57,514 upon submission of paid invoices or receipts for Redevelopment Project Costs in said amount;

(b) Upon completion of the exterior tuck-pointing of the entire development at the Subject Property the City shall reimburse the Growth for the benefit of the Project in the amount of $115,028 upon submission of paid invoices or receipts for Redevelopment Project Costs in said amount; and,

(c) Upon completion of the Project in accordance with the requirements of Section 2.2 and submission of paid invoices or receipts for payment of Redevelopment Project Costs, the City shall pay Growth for the benefit of the Project an amount equal to the lesser or (i) twenty-five percent (25%) of the total costs of the Project; or, (ii) $57,514.

4.2 For purposes of this Agreement, "Redevelopment Project Costs" shall mean and include all costs and expenses as defined as "redevelopment project costs" in Section 11-74.4-3(q) of the TIF Act.

ARTICLE 5: ENFORCEMENT AND REMEDIES

5.1 The City may enforce or compel the performance of this Agreement, in law or in equity, by suit, action, mandamus, or any other proceeding, including specific performance. Notwithstanding the foregoing, the Developer agrees that it shall never seek, and does not have the right to seek, to recover a judgment for monetary damages against the City or any elected or appointed officials, officers, employees, agents, representatives, engineers, consultants, or attorneys thereof, on account of the negotiation, execution, or breach of any of the terms and conditions of this Agreement other than payments due to the Developer under Article 4 hereof.

5.2 In the event of a breach of this Agreement by the Developer, the City agrees that the Developer shall have thirty (30) days after notice of any breach delivered in accordance with Article 8 hereof to correct such breach prior to the Party's pursuit of any remedy provided for in Section 5.3; provided, however, that the 30-day period; but only if the alleged default is not reasonably susceptible to being cured within the 30-day period; the Developer has promptly initiated the cure of the default; and, the Developer diligently and continuously pursues the cure of the breach until its completion. If the Developer fails to cure the default, the City shall have the right (but not the obligation) to take any action in its discretion and judgment as shall be deemed necessary to cure the default. In any event, the Developer hereby agrees to pay the City for all

costs and expenses reasonably incurred by it in connection with any action taken to cure the default.

5.3 Any of the following events or circumstances shall be an event of default by Developer with respect to this Agreement:

(a) If any material representation made by Developer in this Agreement, or in any certificate; notice, demand or request made by the City for any of documents relating to the Project, shall prove to be untrue or incorrect in any material respect as of the date made.

(b) Developer's default in the performance or breach of any material covenant, warranty, or obligation contained in this Agreement.

(c) The entry of a decree or order for relief by a court having jurisdiction in the premises in respect of either Developer in an involuntary case under the federal bankruptcy laws, as now or hereafter constituted, or any other applicable federal or state bankruptcy, insolvency, or other similar law, or appointing a receiver, liquidator, assignee, custodian, trustee, sequestrator, or similar official of Developer for any substantial part of its property, or ordering the winding-up or liquidation of its affairs and the continuance of any such decree or order un-stayed and in effect for a period of 60 consecutive days. There shall be no cure period for this event of default.

(d) The commencement by either Developer of a voluntary case under the federal bankruptcy laws, as now or hereafter constituted, or any other applicable federal or state bankruptcy, insolvency, or other similar law, or the consent by Developer to the appointment of or taking possession, by a receiver, liquidator, assignee, trustee, custodian, sequestrator, or similar official of Developer or of any substantial part of Developer' s property, or the making by any such entity of any assignment for the benefit of creditors or the failure of Developer generally to pay such entity's debts as such debts become due or the taking of action by Developer in furtherance of any of the foregoing. There shall be no cure period for this event of default.

(e) Developer's failure to pay all permit fees, fines, taxes (including real estate taxes), licenses, water bill or any other amount due and owing to the City.

(f) The Developer ceases to continue the full operation of the Business at the Subject Property.

5.4 In the event of default by the Developer, the City may:

(a) Subject to the provisions of this Agreement, in the case of an event of default by Developer, the City, pursuant to this Section 5.3, may institute such proceedings as may be necessary or desirable in its opinion to cure or remedy such default or breach, including proceedings to compel specific performance of Developer of its obligations under this Agreement.

(b) In case the City shall have proceeded to enforce its rights under this Agreement and such proceedings shall have been discontinued or abandoned for any reason or shall have been determined adversely to the City, then, and in every such case, Developer and the City shall be restored respectively to their several positions and rights hereunder, and all rights, remedies and powers of Developer and the City shall continue as though no such proceedings had been taken.

ARTICLE 6: MUTUAL UNDERSTANDINGS

6.1 The Developer agrees to indemnify the City, and all of its elected and appointed officials, officers, employees, agents, representatives, engineers, consultants, and attorneys, against any and all claims that may be asserted at any time against any of such persons in connection with or as a result of (i) the Developer's development, construction, maintenance, or use the Project (ii) Developer's default under the provisions of this Agreement. Such indemnification obligation, however, shall not extend to claims asserted against the City or any of the aforesaid persons in connection with or as a result of: (i) the performance of the City's obligations under this Agreement; or, (ii) the act, omission, negligence or misconduct of the City or any of the aforesaid persons. If the Developer shall commit an event of default and the City should employ an attorney or attorneys or incur other expenses for the collection of the payments due under this Agreement or the enforcement of performance or observance of any obligation or agreement on the part of the Developer herein contained, the Developer, on the City's demand, shall pay to the City the reasonable fees of such attorneys and such other reasonable expenses so incurred by the City.

6.2 Developer shall maintain the Subject Property in reasonably good and clean condition at all times during the construction of the Project by the Developer.

6.3 The Developer acknowledges and agrees that (i) the City is not, and shall not be, in any way liable for any damages or injuries that may be sustained as the result of the City's review and approval of any plans or improvements or as a result of the issuance of any approvals, permits, certificates, or acceptances for the development or use of any portion of the Subject Property or the improvements and (ii) the City's review and approval of any plans and the issuance of any approvals, permits, certificates, or acceptances does not, and shall not, in any way be deemed to insure Developer, or any of its successors, assigns, tenants, or licensees, or any third Party, against violations or damage or injury of any kind at any time. In addition:

(a) The Developer shall hold harmless the City, and all of its elected and appointed officials, employees, agents, representatives, engineers, consultants, and attorneys from any and all claims that may asserted at any time against any of such Parties in connection with (i) the City’s review and approval of any plans or improvements; or, (ii) the City’s issuance of any approval, permit or certificate. The foregoing provision, however, shall not apply to claims made against the City as a result of a City event of

default under this Agreement and claims that the City, either pursuant to the terms of this Agreement or otherwise explicitly has agreed to assume.

(b) Developer shall pay all expenses, including legal fees and administrative expenses, incurred by the City in defending itself with regard to any and all of the claims identified in the first sentence of Subsection (a) above.

6.4 Time is of the essence in the performance of all terms and provisions of this Agreement. However, the time for a Party's performance of any obligation hereunder shall be extended on a day-for-day basis by reason of Force Majeure, as hereinafter provided, and the time for performance of any obligation hereunder the Developer may be extended without having to amend this Agreement. The Parties shall cooperate with one another on an ongoing basis and make every reasonable effort (including, with respect to the City, the convening of meetings and, when necessary, public hearings, within reasonable periods, and the adoption of ordinances) to further the implementation of the provisions of this Agreement and the intentions of the Parties as reflected by those Provisions. The Developer agrees to execute such application and other documents and to otherwise cooperate as may be necessary, proper and appropriate to obtain approvals and authorizations from other government and administrative entities. Whenever a Party is required to obtain the approval or consent of the other Party, or of any of its employees, agents, or attorneys, under the provisions of this Agreement, such approval or consent shall not be unreasonably withheld or delayed.

6.5 Notwithstanding that time is of the essence; provided a party shall not be deemed in material default of this Agreement with respect to any obligations of this Agreement on such Party's part to be performed if such Party fails to timely perform the same and such failure is due in whole or in part to any civil disorder, inability to procure materials, weather conditions, wet soil conditions, failure or interruptions of power, restrictive governmental laws and regulations, condemnations, riots, insurrections, war, fuel shortages, accidents, casualties, floods, earthquakes, fires, acts of God, epidemics, quarantine restrictions, freight embargoes, acts caused directly or indirectly by the other Party (or the other Party's agents, employees or invitees) or similar causes beyond the reasonable control of such Party ("Force Majeure"). If one of the foregoing events shall occur or either Party shall claim that such an event shall have occurred, the Party to whom such claim is made shall investigate the same and consult with the Party making such claim regarding the same and the Party to whom such claim is made shall grant any extension for the performance of the unsatisfied obligation equal to the period of the delay, which period shall commence to run from the time of the commencement of the Force Majeure; provided that the failure of performance was reasonably caused by such Force Majeure.

6.6 The Developer may not assign its rights or obligations under this Agreement without the express written consent of the City.

6.7 The Developer shall not discriminate against any employee or applicant for employment because of race, color, religion, sex or national origin. To the fullest extent permitted by law, the Developer shall take affirmative action to require that applicants are employed and that employees are treated during employment, without regard to their race, creed, color, religion, sex or national origin. There shall be no discrimination against or segregation of any person or group of persons on account of sex, race, color, creed, national origin or ancestry in the construction of

the Project. Neither the Developer nor any person claiming under or through the Developer shall establish or permit any such practice or practices of discrimination or segregation with reference to the selection, location, number, use or occupancy of tenants, lessees, subtenants, sublessees, or vendees of any portion of the Subject Property.

ARTICLE 7. TERM

This Agreement shall be in full force and effect upon its execution by the Parties and terminate upon receipt by the Developer of a total of $230,056 (Two Hundred Thirty Thousand and Fifty-Six Dollars) or December 31, 2023 (the "*Term*").

ARTICLE 8. NOTICES

8.1 All notices and other communications in connection with this Agreement shall be in writing and shall be deemed delivered to the addressee thereof (a) when delivered in person on a business day at the address set forth below, or (b) on the third business day after being deposited in any main or branch United States post office, for delivery by properly addressed, postage prepaid, certified or registered mail, return receipt requested, at the address set forth below, or (c) by facsimile or email transmission, when transmitted to either the facsimile telephone number or email address set forth below, when actually received.

Notices and communications to Developer shall be addressed to, and delivered at, the following addresses:

Sala Flats L.P.
100 19th Street
Rock Island, Illinois 61201

Rock Island Economic Growth Corporation
100 19th Street
Rock Island, Illinois 61201

Notices and communications to the City shall be addressed to and delivered at these addresses:

City of Rock Island
1528 Third Avenue
Rock Island, Illinois 61201
Attn: City Manager

With a copy to:

Kathleen Field Orr
2024 Hickory Road
Suite 205
Homewood, Illinois 60430

By notice complying with the requirements of this Section, each Party shall have the right to change the address or addressee, or both, for all future notices and communications to such Party, but no notice of a change of address or addressee shall be effective until actually received.

8.2 No modification, addition, deletion, revision, alteration, amendment or other change to this Agreement shall be effective unless and until the change is reduced to writing and executed and delivered by the City and the Developer. No term or condition of this Agreement shall be deemed waived by any Party unless the term or condition to be waived, the circumstances giving rise to the waiver and, where applicable, the conditions and limitations on the waiver are set forth specifically in a duly authorized and written waiver of such Party. No waiver by any Party of any term or condition of this Agreement shall be deemed or construed as a waiver of any other term or condition of this Agreement, nor shall waiver of any breach be deemed to constitute a waiver of any subsequent breach whether of the same or different provisions of this Agreement.

8.3 No claim as a third-Party beneficiary under this Agreement by any person, firm, or corporation shall be made, or be valid, against the City or Developer.

8.4 This Agreement shall constitute the entire agreement of the Parties; all prior agreements between the Parties, whether written or oral, are merged into this Agreement and shall be of no force and effect.

8.5 This Agreement may be executed in several counterparts, each of which shall be deemed an original and all of which together shall constitute but one and the same instrument.

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed by their duly authorized officers on the above date at Rock Island, Illinois.

City of Rock Island, an Illinois municipal corporation

By: _____
City Manager

Attest: _____
City Clerk

Sala Flats L.P., an Illinois limited partnership

By: Sala Flats GP, LLC, an Illinois limited company, its General Partner
By: Rock Island Economic Growth Corporation, its sole member

By: _____

Attest: _____

Rock Island Growth Corporation, an Illinois corporation

By: _____

Attest: _____

Memorandum

To: Rock Island City Council

From: Miles Brainard, Director

Subject: Report from the Community & Economic Development Department regarding the assignment of the LRC Redevelopment Agreement.

Motion:	Motion whether or not to approve the assignment of the redevelopment agreement to LRC Equity, LLC.
RC	Roll Call vote is needed.

Date: June 26, 2023

Introduction and Background Information:

Staff have received a request from LRC Developers, Inc. to approve an assignment of a development agreement to LRC Equity, LLC. The two entities are both controlled by Scott Christiansen and his partners. The group is reorganizing as an LLC to continue with its development efforts and is seeking the assignment as part of that transition. Nothing about the development agreement itself will change and the City's TIF attorney has no concerns with the assignment.

Previous Council Action (if any):

The City Council approved the original development agreement in March 2021. Subsequently, the Council approved an assignment of the agreement to Fortress Bank in October 2021 but that was released in April 2023.

Budget Impact:

There will be no impact on the budget.

Additional Information as applicable (i.e. provide alternative options, community or staff input, staffing impact; resident impact; etc.):

NA

Council Goal (if applicable):

NA

Recommendation:

The Community and Economic Development Department recommends that the City Council approve the assignment of the redevelopment agreement to LRC Equity, LLC.

Submitted by: Miles Brainard, Director

Approved by: Joshua Adams

Prepared by: Fortress Bank, 3260 E 53rd St, Davenport, IA 52807
Mail to: Fortress Bank, 3260 E 53rd St, Davenport, IA 52807

RELEASE OF ASSIGNMENT OF REDEVELOPMENT

Know All Men by These presents, that **Fortress Bank**, a Corporation created and existing under and by virtue of the laws of the **State of Illinois**, for and in consideration of one dollar, and for other good and valuable consideration, the receipt whereof is hereby confessed, do hereby remise, convey, release, discharge and quit claim unto **L.R.C. Developers, an Illinois Corporation**, all right, title, interest, claim or demand, whatsoever it may have acquired in, through or by certain **ASSIGNMENT OF REDEVELOPMENT AGREEMENT** bearing date of **October 14, 2021.**

In testimony whereof, the said Corporation has caused its corporate seal to be affixed, and these presents to be signed by its Executive Vice President, and attested by its Commercial Loan Officer on April 21, 2023.

By _____
Keith Worner, Executive Vice President

STATE OF IOWA

SS

SCOTT COUNTY

I, SARAH WOOD, in and for said County, in the State aforesaid, do hereby certify that Keith Worner, personally known to me to be the Executive Vice President of **Fortress Bank**, a Corporation, and Nate McConnell, personally known to me to be the Commercial Loan Officer of said Corporation, whose names are subscribed to the foregoing instrument, appeared before me this day in person and severally acknowledged that as such respective officers, they signed and delivered the said instrument of writing of said Corporation and caused the corporate seal of said Corporation to be affixed thereto, pursuant to authority given by the Board of

Directors of said Corporation as their free and voluntary act, and as the free and voluntary act and deed of said Corporation.

Given under my hand and notary seal this **28th** day of **April 2023.**

Sarah Wood
Notary Public

NOTARIAL SEAL IOWA
SARAH WOOD
Commission Number 824255
My Commission Expires
March 12, 2024

ASSIGNMENT OF REDEVELOPMENT AGREEMENT

THIS ASSIGNMENT OF REDEVELOPMENT AGREEMENT ("Assignment") is made and entered into as of the 21st day of June, 2023, by and among **L.R.C. DEVELOPERS, INC.**, an Illinois corporation ("Assignor"), **THE CITY OF ROCK ISLAND**, a home rule municipality of the State of Illinois ("City"), and L.R.C. Equity, LLC an Illinois limited liability company ("Assignee").

Recitals

WHEREAS, Assignor and Assignee have entered into an Agreement to Sell Real Estate and Improvements dated as of _____ ("Agreement"), pursuant to which transfers the real estate located at 350 44th Street, Rock Island, Illinois 61201; and

WHEREAS, the City and Assignor have entered into that certain Redevelopment Agreement dated as of March 8, 2021 (as the same may be amended, modified, and/or supplemented from time to time, the "Redevelopment Agreement"), pursuant to which the City has agreed to provide certain tax increment financing in connection with the Project; and

WHEREAS, the City has required, as an express condition of the Redevelopment Agreement, that Assignor may assign its rights under the Redevelopment Agreement to another party only upon express written consent of the City.

NOW, THEREFORE, in consideration of the recitals set forth above and incorporated herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Assignor hereby agrees as follows:

1. Assignment. Assignor hereby assigns to Assignee all of its right, title and interest in and to the Redevelopment Agreement, including but not limited to Assignor's right to receive all amounts due from the City under Article 3 of the Redevelopment Agreement, together with all documents and agreements attached as exhibits thereto, and all amendments, addenda and modifications thereof, whether made now or hereafter, and all proceeds from any of the foregoing, to secure the obligations of Assignor under the Note and the Loan Agreement. Lender acknowledges that this Assignment is subject to the terms and conditions of the Redevelopment Agreement. Assignee assumes all rights, duties and obligations under the Redevelopment Agreement. Assignor is hereby released and forever discharged from all duties and obligations upon acceptance and execution of this Assignment.

2. Assignor Representations and Warranties. Assignor represents and warrants that there are no prior assignments of its rights under the Redevelopment Agreement which have not been released, that the Redevelopment Agreement is a valid and enforceable agreement, that neither the City nor Assignor is in default thereunder and that all covenants, conditions and agreements have been performed as required therein, except those not to be performed until after the date hereof. Assignor hereby irrevocably constitutes and appoints Assignee as its attorney-in-fact to demand, receive and enforce Assignor's rights under the Redevelopment Agreement for and on behalf of and in the name of Assignor or, at the option of Assignee, in the name of Assignee, with the same force effect as Assignor could do if this Assignment had not been made.

3. Present Assignment. This Agreement shall constitute a perfected, absolute and present Assignment. All payments due under the Redevelopment Agreement shall be paid to Assignee.

4. City Consent. The City hereby consents and agrees to the terms and conditions of this Assignment. The City further represents and warrants to Assignee that the Redevelopment Agreement is a valid agreement enforceable in accordance with its terms, that the City is not in default under the Redevelopment Agreement and that all of the City's covenants, conditions and agreements have been performed as required therein, except those not to be performed until after the date thereof. To the best knowledge of the City, (a) Assignor is not in default under the Redevelopment Agreement, and (b) all of Assignor's covenants, conditions and agreements have been performed as required therein.

5. City Notice. The City agrees to provide Assignee with copies of any prior notice of default given under the Redevelopment Agreement, and that Assignee shall have the right, but not the obligation, to cure such default within the time period set forth in the Redevelopment Agreement.

6. No Assignment. Assignee hereby agrees that there shall be no further assignment of the Redevelopment Agreement without the prior written consent of the City or except in accordance with the Redevelopment Agreement.

7. No Waiver. This Assignment can be waived, modified, amended, terminated or discharged only explicitly in a writing signed by Assignee. A waiver by Assignee shall be effective only in the specific instance and for the specific purpose given.

8. Continuing Obligations. No provision of this Assignment shall be deemed or construed to alter, amend or modify, in any way, the rights and obligations of the City contained in the Redevelopment Agreement.

9. Notice. Any notice, request, demand or other communication hereunder shall be deemed duly given if delivered or postage prepaid, certified or registered, addressed to the party as set forth below:

If to the City:

City of Rock Island
1528 Third Avenue
Rock Island, Illinois 61201
Attn: City Manager

With a copy to:

Kathleen Field Orr
53 W. Jackson Blvd., #15
Chicago, Illinois 60604

If to Assignor:

L.R.C. Developers, Inc.
350 44th Street
Rock Island, Illinois 61201
Attn: Scott Christiansen

With a copy to:

John S. Callas
McCarthy, Callas & Feeney, PC
329 18th Street
Rock Island, Illinois 61201

If to

Assignee:

L.R.C. Equity, LLC
350 44th Street
Rock Island, Illinois 61201
Attn: Scott Christiansen

10. This Agreement shall be governed by and construed in accordance with the laws of the State of Illinois.

[THE REMAINDER OF THIS PAGE HAS BEEN LEFT INTENTIONALLY BLANK.]

ASSIGNOR:

L.R.C. DEVELOPERS, INC., an Illinois corporation

By:_____
Scott Christiansen
President

STATE OF ILLINOIS)
) ss:
COUNTY OF ROCK ISLAND)

The foregoing instrument was acknowledged before me this _____ day of _____, 2023, by Scott Christiansen, President of L.R.C. Developers, Inc., an Illinois corporation, on behalf of said corporation.

_____
Signature of notarial officer

My commission expires: _____

CITY:

CITY OF ROCK ISLAND, an Illinois Municipal Corporation

By:_____
Name:_____
Its:_____

STATE OF ILLINOIS)
) ss:
COUNTY OF ROCK ISLAND)

The foregoing instrument was acknowledged before me this _____ day of _____, 2023, by Todd Thompson, City Manager of the City of Rock Island.

_____
Signature of notarial officer

My commission expires: _____

ASSIGNE:

L.R.C. Equity, LLC, an Illinois
Limited Liability Company

By:_____
Scott Christiansen
Manager

STATE OF ILLINOIS)
) ss:
COUNTY OF ROCK ISLAND)

The foregoing instrument was acknowledged before me this _____ day of _____, 2023, by Scott Christiansen, Manager of L.R.C. Equity, LLC, an Illinois Limited Liability Company for and on behalf of L.R.C. Equity, LLC.

_____
Signature of notarial officer

My commission expires: _____

Memorandum

To: Rock Island City Council

From:

Subject: Report from the Human Resources Department regarding bids for the former City Parks Office Demolition Project, recommending the contract be awarded to H. Coopman Truck & Excavation, Moline, IL in the amount of $38,908.00.

Motion:	Motion whether or not to award the bid and direct the City Manager to execute the contract documents.
RC	Roll Call vote is needed.

Date: June 26, 2023

Introduction and Background Information:

Previous Council Action (if any):

Budget Impact:

Additional Information as applicable (i.e. provide alternative options, community or staff input, staffing impact; resident impact; etc.):

Council Goal (if applicable):

Recommendation:

Submitted by: Joshua Adams

Approved by: Joshua Adams

Memorandum
Human Resources Department

To: Rock Island City Council
Subject: Parks Office Demolition
Date: 06/20/2023

ROCK ISLAND
ILLINOIS

The Human Resource Division received bids from 3 contractors for the Former City Parks Office demolition project. The address is listed below.

All bids were found to be responsive and responsible, and we recommend that the lowest bidder be awarded the contract. A summary of the responsive bids is as follows:

CONTRACTOR	BASE PROPOSAL AMOUNT
Valley Construction	$48,250.00
H. Coopman Trucking & Exc.	$38,908.00
Langman Construction	$54,713.00

Property Address: 1320 24th Street, Rock Island

Vendor: H. Coopman Trucking
Payment Amount: $38,908

Fund: Self Insurance
Department: Human Resources

RECOMMENDATION:

That Council accepts the responsive and responsible bid from H. Coopman Truck & Excavation Construction of Moline, Illinois, for the demolition of the Former City Parks Office property and directs the City Manager to award the contract.

Submitted by: Rob Baugous, Human Resources Director
Jerad Irvine, Building Official
Luke VanLandegen , Municipal Services Superintendent

Approved by: Todd Thompson, City Manager

Memorandum

To: Rock Island City Council

From: Tanner Osing, Miles Brainard, Director

Subject: Report from the Community & Economic Development Department regarding the Rezoning of the Solomon Site properties from a B-3 (community business) district to PUD (planned unit development) district for four (4) parcels. (First Reading)

Motion:	Motion whether or not to approve the rezoning of the Solomon Site properties and consider the ordinance.
RC	Roll Call vote is needed.

Date: June 26, 2023

Introduction and Background Information:

The City of Rock Island has submitted a rezoning request from B-3 (community business) district to PUD (planned unit development) district for four (4) parcels that include 1016 6th Avenue (PIN 0734451001), 602 11th Street (PIN 0734451002), 618 11th Street (PIN 0734451006), and 630 11th Street (PIN 0734451007). The parcels are part of the Solomon Site, which is a set of nineteen (19) city-owned parcels spread out across two blocks on the west side of 11th Street bounded by 5th Avenue and 7th Avenue (see attached map). The site is so named because of the former Solomon Temple located on one of the parcels.

A few years ago, staff began working with Gorman & Company LLC out of Wisconsin to develop the site into affordable townhomes and apartments. The approved site plan is a multi-family residential development with a total of ten (10), two-story townhouses with 49 dwelling units, which fits the Comprehensive Plan's designation of "Mixed Residential" land use. The Plan also identifies "Community Business" for the section of the Solomon Site between 6th Avenue and 7th Avenue.

Since the original letter of intent and the approval of the site plan, the City has acquired three parcels adjacent to the site. This acquisition completes site assembly and will allow Gorman to redesign the project to include either more units or provide a better layout. However, this rezoning is only for site assembly purposes, which will allow the newly acquired parcels to be combined with the other parcels that are part of the Solomon Site. The parcel combination will significantly reduce the administrative burden for site readiness activities (surveying, environmental remediation, grading work, etc.) and also Gorman's tax credit application. Any future changes to the site plan are subject to review by the Planning Commission and final approval by the City Council. Both staff and Gorman are committed to continuing collaboration on the project's development.

At their June 7th meeting, the Planning Commission voted unanimously to recommend the approval of the rezoning request.

Previous Council Action (if any):

In November 2019, the City Council approved an intent to sell letter to Gorman & Company, LLC, which was recently renewed in December 2022. Additionally, a PUD rezoning for the surrounding properties was approved by the City Council in 2020.

Budget Impact:

The rezoning helps further the City's commitment to sell the Solomon Site to Gorman & Company, LLC for a price of $60,000.

Additional Information as applicable (i.e. provide alternative options, community or staff input, staffing impact; resident impact; etc.):

N/A

Council Goal (if applicable):

N/A

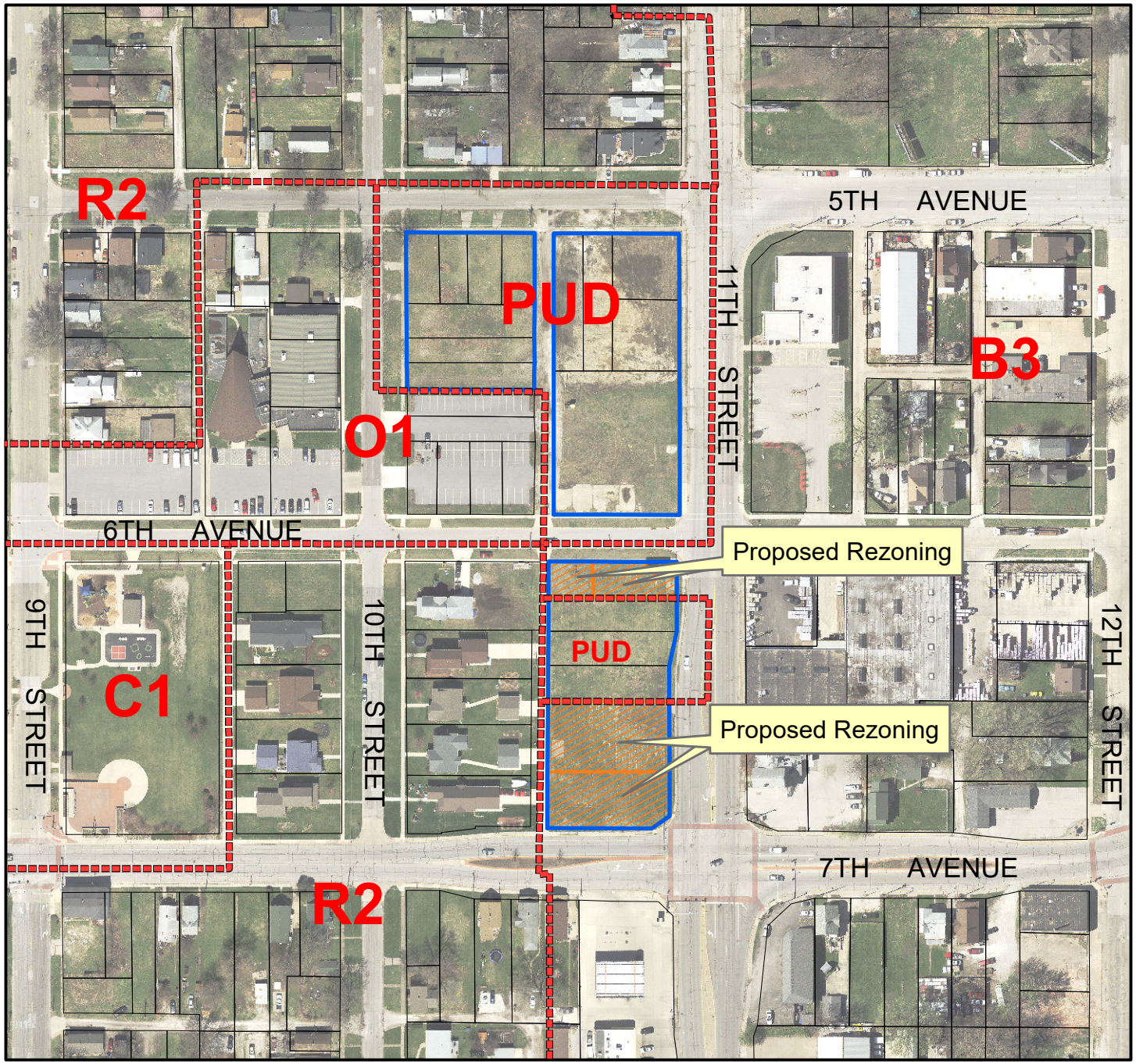
Recommendation:

The Community & Economic Development Department and Planning Commission recommend that the City Council approve the rezoning request and consider the ordinance.

Submitted by: Tanner Osing

Approved by: Joshua Adams

LOCATION MAP



Proposed Rezoning

2023-5 Aerial

- Solomon Properties
- Proposed Rezoning to PUD
- Parcels
- Zoning District

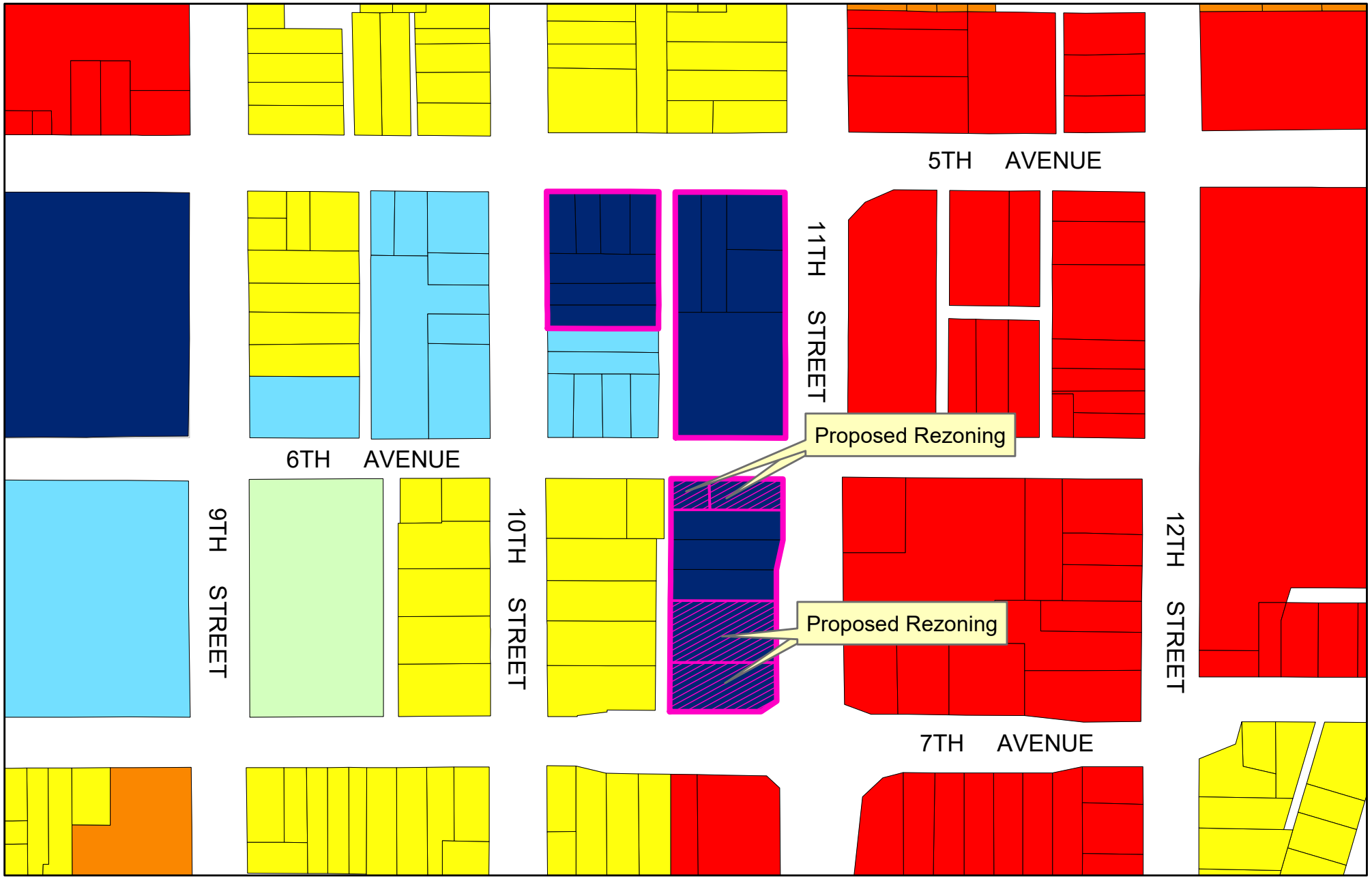
N

0 50 100 200 300 Feet

City of Rock Island

COMMUNITY AND ECONOMIC DEVELOPMENT DEPARTMENT
Planning and Redevelopment

ROCK ISLAND ILLINOIS



Proposed Property Rezoning with Zoning Districts

ROCK ISLAND ILLINOIS

Solomon Properties
Proposed Rezoning to PUD

B3 - Community Business
C1 - Park Conservation
O1 - Small Office
PUD - Planned Unit Development
R2 - Two Unit Residential
R4 - Multi-Unit Residential

Disclaimer: This map is not a substitute for an actual field survey or online investigation. The accuracy of the map is limited to the quality of the records from which it was assembled. The City of Rock Island makes no warranty concerning this information.

N W E S

City of Rock Island,
Community and Economic Development Department

Drawn By: K. Douglass

Date Created: April 2023
Aerial Flown April 2019

0 25 50 100 150 200 Feet

AN ORDINANCE AMENDING ZONING DISTRICTS
AND ZONING MAP OF
THE CITY OF ROCK ISLAND, ILLINOIS

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF ROCK ISLAND, ILLINOIS:

Section One: Under authority granted by Appendix A, Article IV, Section 4.1 of the Code of Ordinances of the City of Rock Island, Illinois, entitled "Zoning Map," the following described parcels of real estate located in the City of Rock Island, Illinois, are hereby changed from B-3 (community business) district to PUD (planned unit development) district as designated in the Zoning Ordinance:

PINs: 0734451002, 0734451006, 0734451007, 0734451001
Commonly known as 602 11th Street, 618 11th Street, 630 11th Street, and 1016 6th Avenue
Legal Description:
See Exhibit A

Section Two: All ordinances and parts of ordinances in conflict herewith are hereby repealed insofar as they do so conflict.

Section Three: This ordinance shall be in full force and effect from and after its passage and approval, as required by law.

_____
MAYOR OF THE CITY OF ROCK ISLAND

PASSED: _____

APPROVED: _____

ATTEST: _____
CITY CLERK

Exhibit A

Tract 1:
PIN 0734451002
Commonly known as 602 11th Street
Legal Description:

Lot One (1) except the West Forty-Five (45) feet in Block Sixty-four (64), Balch-Frazier's Subdivision Lots 1-2, 7-8, East 50 Chicago or Lower Addition, Situated in the County of Rock Island, in the State of Illinois.

Tract 2:
PIN 0734451006
Commonly known as 618 11th Street
Legal Description:

Lot Five (5) except the North Two (2) feet, all of Lot Six (6) and the North Five (5) feet of Lot Seven (7), Block Sixty-four (64), Balch-Frazier's Subdivision Lots 1-2, 7-8, East 50 Chicago or Lower Addition, situated in the County of Rock Island, in the State of Illinois, also excepting that part deeded to the State of Illinois for road purposes.

Tract 3:
PIN 0734451007
Commonly known as 630 11th Street
Legal Description:

Lot Eight (8) and the South Thirty-five (35) feet of Lot 7 in that part of the City of Rock Island known as and called Balch and Frazier's Subdivision of the East Half of Block Number Sixty-four (64) in the Chicago or Lower Addition to said City; situated in the County of Rock Island and State of Illinois

Tract 4:
PIN 0734451001
Commonly known as 1016 6th Avenue
Legal Description:

The West Forty-five (45) feet of Lot One (1) in Block Sixty-four (64), Balch-Frazier's Subdivision Lots 1-2, 7-8, East 50 Chicago or Lower Addition, situated in the County of Rock Island, in the State of Illinois

Memorandum

To: Rock Island City Council

From: Tanner Osing, Miles Brainard, Director

Subject: Report from the Community & Economic Development Department regarding a Special Use Permit at 1325 30th Street for Skylight Luxury Lounge, LLC. (First Reading)

Motion:	Motion whether or not to approve the Special Use Permit and consider the ordinance.
RC	Roll Call vote is needed.

Date: June 26, 2023

Introduction and Background Information:

Skylar Willingham of Skylight Luxury Lounge, LLC has filed an application for a Special Use Permit to continue operating a wine bar at 1325 30th Street, zoned B-1 (neighborhood business) district. The Comprehensive Plan identifies "neighborhood business" land use for the site. The Zoning Ordinance does not allow a bar without a restaurant element as a permitted use in a B-1 district. There is no B-3 (community business) zoning nearby as existing bars in the Hilltop area were established prior to current zoning regulations or have also received a Special Use Permit.

History & Nature of the Use:

The applicant proposes to continue the use of the existing wine bar, Skylight Luxury Lounge, at the location, but plans to limit the current menu of small plates which will make it so the business can no longer be considered a restaurant. Skylar Willingham originally approached staff in the Fall of 2022 when the business opened, and staff considered the menu to be substantial enough to be considered a restaurant. A Special Use Permit was not needed at that time. However, with the reduced menu, the wine bar will be without a restaurant element, which is not a permitted use in a B-1 district.

Skylight Luxury Lounge serves a variety of wine and other beverages. The wine bar will also continue serving a menu of small plates (see attached menu). The main entrance to the building faces 30th Street and there is also an entrance on the east side of the building. The building contains a bar area with table and lounge seating, a kitchen/prep space, two bathrooms, and storage space.

Parking:

The Zoning Ordinance requires one parking space for every 75 square feet of floor area or for every two persons allowed by fire code. The building has a maximum occupancy of 99 people, so 50 parking spaces would normally be required. There is an existing improved parking area on the east side of the building for a total of 5 parking spaces. There is on-street parking along

30th Street and 14th Avenue. The building has been an existing commercial space for many years, so parking being less than the minimum requirement is considered to be a legal nonconformity.

Signs:
Signage for the business includes an awning with the business name and logo that overhangs the main entrance and part of the sidewalk on 30th Street and 14th Avenue. The signage meets the requirements of the Sign Ordinance. Staff will use regulations in the Sign Ordinance to determine any proposals for future signage on the property.

Analysis:
Staff believe that the proposed use meets the seven conditions for approving a Special Use Permit identified in Section 6.5 (G) of the Zoning Ordinance. There are adequate utilities and other necessary public facilities, drainage and access to the site. The use will also not "impede the normal and orderly development and improvement of the surrounding property" as it has recently been a similar use and a commercial space for many years prior.

Legal Description of Property:
The South Forty (40) feet of Lot Number Nine (9) in that part of the City of Rock Island known as and called Peter Hays' Addition to said City, situated in the County of Rock Island, State of Illinois, also known as 1325 30th Street.

At their June 7th meeting, the Planning Commission voted unanimously to recommend the approval of the Special Use Permit.

Previous Council Action (if any):
N/A

Budget Impact:
N/A

Additional Information as applicable (i.e. provide alternative options, community or staff input, staffing impact; resident impact; etc.):
N/A

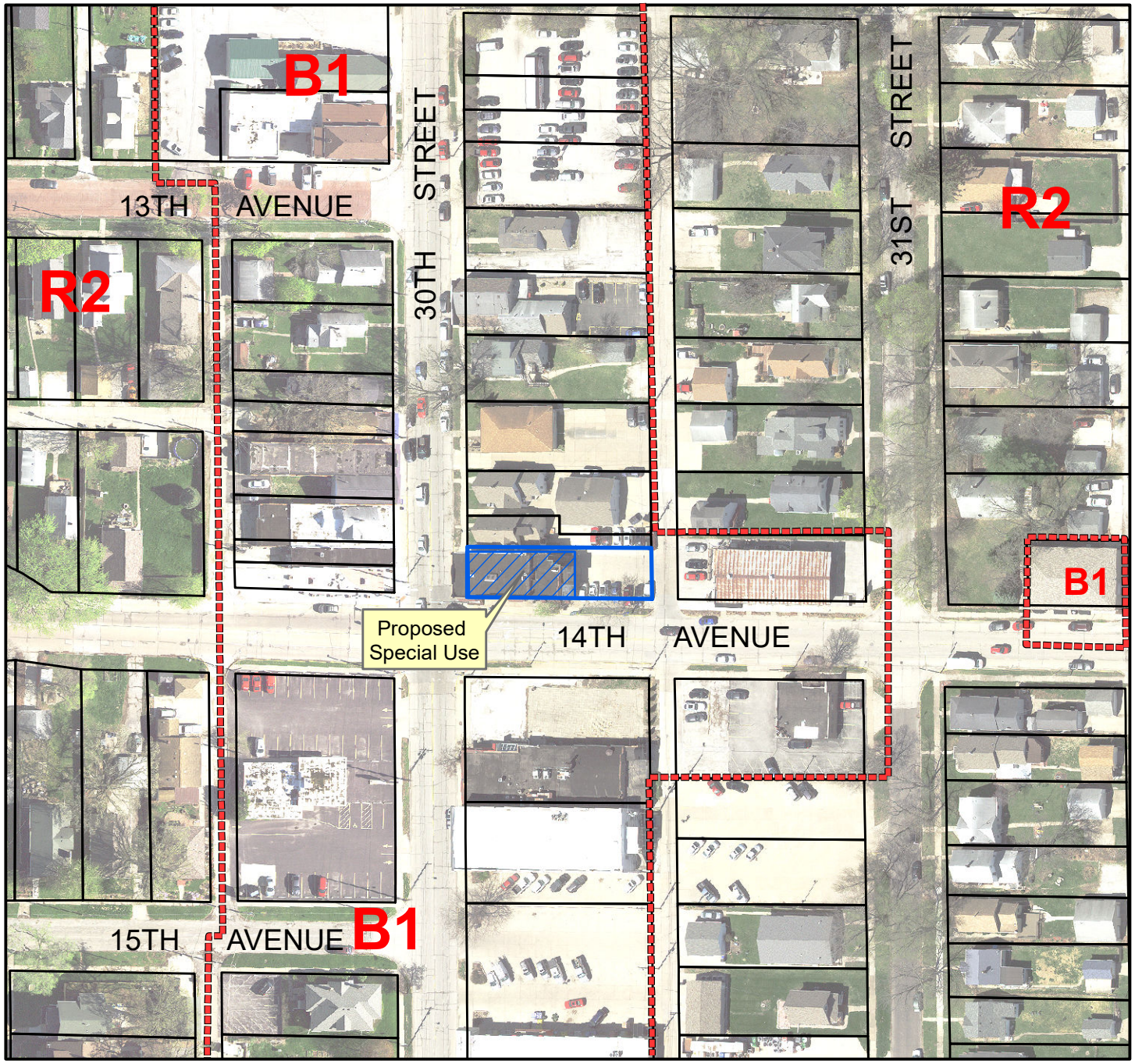
Council Goal (if applicable):
N/A

Recommendation:
The Community & Economic Development Department and Planning Commission recommend that the City Council approve the proposed Special Use Permit with the identified stipulations and consider the ordinance.

Submitted by: Tanner Osing

Approved by: Joshua Adams

LOCATION MAP



Proposed
Special Use Permit

2023-4 Aerial

Subject Property

Parcels

Zoning District Line

N

0 25 50 100 150
Feet

City of Rock Island

COMMUNITY AND ECONOMIC
DEVELOPMENT DEPARTMENT
Planning and Redevelopment

ROCK ISLAND
ILLINOIS

A SPECIAL ORDINANCE GRANTING A SPECIAL USE PERMIT IN THE CITY OF ROCK ISLAND, ILLINOIS

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF ROCK ISLAND, ILLINOIS:

Section One: This ordinance grants and serves as a special use permit to Skylar Willingham of Skylight Luxury Lounge, LLC to allow the operation of an existing bar use at the property known as 1325 30th Street, PIN 1601201011. The property is located in a B-1 (neighborhood business) zoning district. The property is legally described as:

> The South Forty (40) feet of Lot Number Nine (9) in that part of the City of Rock Island known as and called Peter Hays' Addition to said City, situated in the County of Rock Island, State of Illinois

Section Two: The two-building contains a ground floor commercial space with a bar area with table and lounge seating, a kitchen and food preparation space, two bathrooms, and storage space. The use granted by this special use permit shall correspond with the occupancy classification "Assembly Group A-2" as identified in the building code.

Section Three: This permit is subject to the following additional stipulations:

1. The use granted by the Special Use Permit shall only be for the ground floor space of the building at 1325 30th Street that is occupied by Skylight Luxury Lounge and shall exclude any other building space including but not limited to the ground floor commercial space in the southeast corner of the building and the second story.
2. A menu of small plates as presented by the applicant in Exhibit A or a similar menu, as determined by the Planning & Zoning Manager or designee, shall be available for food service for customers on the premise.
3. The use shall meet all other applicable codes and ordinances.

Section Four: All ordinances and parts of ordinances in conflict herewith are hereby repealed insofar as they do so conflict.

Section Five: This ordinance shall be in full force and effect after its passage and approval, as required by law.

_____
Mayor of the City of Rock Island

Passed: _____

_____

Approved: _____

Attest: _____
City Clerk

Exhibit A

Menu

Boards

- Charcuterie Boards S/M/L
- Veggie Boards S//M/L
- Fruits Boards S/M/L
- Skewers Fruit or Veggie choice

Pizza

- Cheese
- Sausage
- Pepperoni

Skylight

Memorandum

To: Rock Island City Council

From: Miles Brainard, Director

Subject: Report from the Community & Economic Development regarding amendments to the Nuisance, Weeds and Grass Penalties Ordinance. (First Reading)

Motion:	Motion whether or not to consider the amendments to the ordinance.
RC	Roll Call vote is needed.

Date: June 26, 2023

Introduction and Background Information:

Staff in both the Public Works and CED Departments have been collaborating on an improved and more streamlined process for addressing both nuisance violations as well as weeds & grass violations. The former commonly includes garbage and junk material in the yard and the latter refers to grassy vegetation over ten inches. At present, the enforcement process can take several weeks to complete. It involves potentially three different notices to a property owner before the City can undertake abatement. It also involves an ineffective and arbitrary fee structure. This process is different than those seen in neighboring communities which move more quickly to abate nuisances.

The new enforcement process is basically reorganized into two steps.

1. Upon detection of a nuisance, the CED Department will send a courtesy notice to the property owner asking them to abate the nuisance themselves within seven days. The notice will inform them that they can, in the case of junk, request a special pickup from the Public Works Department and doing so successfully, regardless of it taking place within the seven-day window, will be considered compliance. No penalty fee is charged with the courtesy notice.
2. If the property owner fails to abate the nuisance or request a special pick-up, then the Public Works Department is empowered to immediately abate the nuisance. This means clearing junk off the property and/or mowing the lawn. The cost of abatement and a penalty fee is billed to the property owner on their utility bill. The fee is one hundred dollars ($100) or ten percent (10%) of the cost of abatement, whichever is higher.

Grass citations may be appealed to the CED Director as has always been the case. Appeals of this kind usually involve the property owner claiming that the vegetation is native plantings or nature habitat. This can be substantiated by identifying appropriate species and a management plan. In the case of nuisance violations, property owners will be able to appeal their citation to MUNICES where a code hearing officer can make a determination. Staff in consultation with the legal team believe this appeals structure provides adequate due process

for property owners.

Previous Council Action (if any):

NA

Budget Impact:

NA

Additional Information as applicable (i.e. provide alternative options, community or staff input, staffing impact; resident impact; etc.):

NA

Council Goal (if applicable):

NA

Recommendation:

The Community & Economic Development Department, in consultation with the Public Works Department, recommends that the City Council approve the ordinance updating the respective penalties for nuisance violations as well as weeds & grass violations.

Submitted by: Miles Brainard, Director

Approved by: Joshua Adams

AN ORDINANCE AMENDING THE PENALTIES FOR NUISANCE VIOLATIONS IN CHAPTER 7 AS WELL AS WEEDS AND GRASS VIOLATIONS IN CHAPTER 13 OF THE CODE OF ORDINANCES OF THE CITY OF ROCK ISLAND, ILLINOIS

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF ROCK ISLAND, ILLINOIS:

Section One: The City Council finds that it is in the public's interest that all properties be maintained in good condition free of nuisances and overgrown vegetation. To that end, it is hereby determined that the penalties for said violations shall be amended so that they are more analogous to neighboring communities, ensure greater uniformity of enforcement, and allow for more rapid abatement by the City when required.

Section Two: Chapter 7, Section 234 of the Code of Ordinances of the City of Rock Island, Illinois is hereby removed and wholly replaced as follows.

SEC. 7-234. PENALTIES FOR NUISANCE VIOLATIONS. Any person violating the provisions of this article shall be subject to the following penalties.

1. Upon detection of a nuisance violation, the respective property owner shall be issued a courtesy notice directing them to abate the violation within seven (7) days of the date of the courtesy notice. No fine shall accompany the courtesy notice.
2. If the property owner fails to abate the nuisance within seven (7) days of the courtesy notice, the City shall be empowered to abate the nuisance. The Building Official and the Public Works Director, or their respective designees, shall direct the abatement by either City staff or a contractor. The costs incurred by the City to abate the nuisance shall be charged to the property owner on their municipal utility bill, in the form of a lien on the property, or in any other manner consistent with the Code of Ordinances. Further, the City Attorney is authorized and directed to initiate litigation in court to recover costs incurred. The cost of abatement will be accompanied by a fine of one hundred dollars ($100) or ten percent (10%) of the cost of abatement, whichever amount is greater.
3. A property owner who has been cited and had a nuisance abated on their property by the City three (3) or more times in a one (1) year period shall be considered a habitual violator. Habitual violators shall receive notice that they are so considered and said notice shall inform them that all subsequent violations shall result in immediate abatement by the City without additional courtesy notices. The costs incurred by the City to abate the nuisance and the associated fine shall be charged to the property owner in the same manner as above. Designation as a habitual violator may be discontinued when the property owner in question has not been cited for a minimum of one (1) year.
4. Property owners may appeal a nuisance citation to the Municipal Code Enforcement Service (MUNICES). Said appeal must be in writing and explain how there is not a nuisance violation present using photographic evidence. The appeal must be delivered to the Building Official prior to the end of the

seven (7) day period following the issuance of the courtesy notice. Appeals received late shall not be considered. The Building Official shall ensure that the appeal is heard at the next regularly scheduled MUNICES hearing. At said hearing, the Building Official or their designee shall present evidence that a nuisance violation is present. The property owner or their designee shall present evidence to the contrary. Should the presiding Code Hearing Officer decide that a nuisance does exist, the City may proceed with abatement immediately. Should the presiding Officer decide that no violation is present or that the violation is less severe, they may dismiss the citation in whole or in part. The respective parties shall retain, however, the right to take civil action in local court.

Section Three: Chapter 13, Section 38 of the Code of Ordinances of the City of Rock Island, Illinois is hereby removed and wholly replaced as follows.

SEC. 13-38. PENALTIES FOR WEEDS AND GRASS VIOLATIONS. The Building Official may provide for the removal of weeds and grass over ten inches (10") in height on private property within the City. The term “weeds and grass" shall be defined to include all annual and perennial vegetation other than trees and shrubs. This term shall not be defined to include cultivated flowers and gardens including but not limited to native plantings used as wildlife habitat; used to control soil erosion; and/or used to manage storm water. Any person violating the provisions of this article shall be subject to the following penalties.

1. Upon detection of a weeds and grass violation, the respective property owner shall be issued a courtesy notice directing them to abate the violation within seven (7) days of the date of the courtesy notice. No fine shall accompany the courtesy notice.
2. If the property owner fails to abate the nuisance within seven (7) days of the courtesy notice, the City shall be empowered to abate the nuisance. The Building Official and the Public Works Director, or their respective designees, shall direct the abatement by either City staff or a contractor. The costs incurred by the City to abate the nuisance shall be charged to the property owner on their municipal utility bill, in the form of a lien on the property, or in any other manner consistent with the Code of Ordinances. Further, the City Attorney is authorized and directed to initiate litigation in court to recover costs incurred. The cost of abatement will be accompanied by a fine of one hundred dollars ($100) or ten percent (10%) of the cost of abatement, whichever amount is greater.
3. A property owner who has been cited and had a nuisance abated on their property by the City three (3) or more times in a one (1) year period shall be considered a habitual violator. Habitual violators shall receive notice that they are so considered and said notice shall inform them that all subsequent violations shall result in immediate abatement by the City without additional courtesy notices. The costs incurred by the City to abate the nuisance and the associated fine shall be charged to the property owner in the same manner as above. Designation as a habitual violator may be discontinued when the property owner in question has not been cited for a minimum of one (1) year.

4. Property owners may appeal a weeds and grass citation to the Community & Economic Development Director. Said appeal must be in writing and explain how there is not a weeds and grass violation present using photographic evidence. The appeal must be delivered to the Director prior to the end of the seven (7) day period following the issuance of the courtesy notice. Appeals received late shall not be considered. The Director shall have seven (7) days to review the appeal during which time no abatement or further enforcement action by the City shall be taken. The Director may reject the appeal on the grounds that a weeds and grass violation is present or, if convinced that no violation is present, dismiss the citation. If the appeal is rejected and the nuisance violation remains present, the City may proceed with abatement immediately.

Section Four: All ordinances and parts of ordinances in conflict herewith are hereby repealed insofar as they do so conflict.

Section Five: This ordinance shall be in full force and effect from and after its passage and approval, as required by law.

_____
MAYOR OF THE CITY OF ROCK ISLAND

PASSED: _____

APPROVED: _____

ATTEST: _____
CITY CLERK

Memorandum

To: Rock Island City Council

From:

Subject: Report from the Finance Department regarding a budget adjustment increasing the Special Service Area Fund revenue and expense by $310,613.00 for the approved property tax levy.

Motion:	Motion whether or not to approve the budget adjustment.
RC	Roll Call vote is needed.

Date: June 26, 2023

Introduction and Background Information:

A budget adjustment is requested in the amount of $310,613 for the Downtown Special Service Area (SSA) Property Tax Levy. Due to the timing as outlined below, the original budget for the SSA property tax was not included for CY 2023. The final property tax levy was received in 2023 and a new fund (Fund 232 – SSA Fund) established in the general ledger system. This fund will include revenue and expenses related to SSA property tax only

Previous Council Action (if any):

August 22, 2022, the City Council passed an initiating ordinance for the proposed downtown special service area (SSA). The ordinance detailed the proposed boundary, services to be provided, and a proposed tax levy not exceeding 1.15% of equalized assessed value. The proposed SSA would be in effect for a period of five (5) years.

November 28, 2022, the City Council approved the first reading establishing the Downtown Special Service Area for designated properties within the boundary at a proposed tax levy representing 1.15% of equalized assessed value.

December 12, 2022, the second reading of the special ordinance establishing a Downtown Special Services Area was approved by the City Council; and the first reading to approve the SSA property tax levy was also approved.

December 19, 2022, the second reading to approve the SSA property tax levy was approved by City Council.

Budget Impact:

Account Numbers	Description	Amount
232-000000-41101-0000000	SSA Property Tax	$310,613
232-3XXXX-5XXXX-XXXXX	Expenses	$310,613

Additional Information as applicable (i.e. provide alternative options, community or staff input, staffing impact; resident impact; etc.):

Council Goal (if applicable):

Recommendation:

Council approve the budget adjustment increasing the Special Service Area Fund revenue and expense by $310,613 for the approved property tax levy.

Submitted by: Samantha Gange, City Clerk

Approved by: Joshua Adams

Memorandum

To: Rock Island City Council

From:

Subject: Report from the Finance Department regarding an adjustment to the CY 2023 budget, decreasing the General Fund (101) expenses by $35,500.00 and increasing the Sunset Marina (541) revenue and expense funds by $35,500.00.

Motion:	Motion whether or not to approve the budget adjustment as recommended.
RC	Roll Call vote is needed.

Date: June 26, 2023

Introduction and Background Information:

Previous Council Action (if any):

Budget Impact:

Additional Information as applicable (i.e. provide alternative options, community or staff input, staffing impact; resident impact; etc.):

Council Goal (if applicable):

Recommendation:

Submitted by: Joshua Adams

Approved by: Joshua Adams

MEMORANDUM
FINANCE DEPARTMENT

TO:	Todd Thompson, City Manager	**Number:**	**030-23**
SUBJECT:	Adjustment to the CY 2023 Budget	**Date:**	06/16/2023

The Parks & Recreation Department has requested a budget adjustment in the amount of $35,500 to pay Campground Consulting Group for a feasibility study at the Sunset Marina. Unrestricted ARPA revenue replacement funds will be used to pay for the study.

Account Numbers	Description	Amount
541-000000-49600-9101297	Transfer In	+$35,500
101-211041-58100-9541297	Transfer Out	-$35,500
541-617041-53112-0000297	Consultant Services	+$35,500

Recommendation: Council approve the CY 2023 budget adjustment decreasing the General Fund (101) expense and increasing Sunset Marina (541) revenue and expense by $35,500

Submitted by: Linda J Barnes, Finance Director

Approved: Todd Thompson, City Manager

Memorandum
Parks & Recreation Department

To: Linda Barnes, Finance Director
From: John Gripp, Director of Parks & Recreation
Subject: Budget Adjustment – Campground Feasibility Study
Date: 6/15/2023

Background:

The Parks & Recreation Department is requesting approval to use ARPA funds to pay Campground Consulting Group for a campground feasibility study for Sunset Park.

The Parks Department is requesting a total of $35,500 in ARPA funds.

Fund	541	
Department	617	
Cost Center	041	
Object Code	53112	
Project Code	0000	
Grant Code	297	

Recommendation:

The Parks & Recreation Department recommends that the City Council approve a budget adjustment of $30,500 in ARPA funding for the campground feasibility study at Sunset Park.

Submitted by: John Gripp, Director of Parks and Recreation

Memorandum

To: Rock Island City Council

From: Todd Thompson, City Manager

Subject: Report from the City Manager regarding the approval of the FY 2024 Rock Island Downtown Alliance (RIDA) budget.

Motion:	Motion whether or not to approve the RIDA budget and authorize the RIDA Board to make amendments with the exception of changes to add full-time positions or increase the overhead expense.
RC	Roll Call vote is needed

Date: June 26, 2023

Introduction and Background Information:

The agreement indicates RIDA is responsible for submitting to the Council a work plan, and budget for the remainder of 2023 no later than June 30. On June 1, the RIDA Board approved the proposed documents and forwarded them for Council consideration. The recommended budget includes revenue from the SSA tax, service overhead contribution as provided for in our agreement, and an additional $80,000 of support from the City. This additional amount is contingent upon the Council considering and approving an additional services agreement, which is to be negotiated.

Previous Council Action (if any):

Background:

August 22, 2022, the City Council passed an initiating ordinance for the proposed downtown special service area (SSA). The ordinance detailed the proposed boundary, services to be provided, and a proposed tax levy not exceeding 1.15% of equalized assessed value. The proposed SSA would be in effect for a period of five (5) years.

November 28, 2022, the City Council approved the first reading establishing the Downtown Special Service Area for designated properties within the boundary at a proposed tax levy representing 1.15% of equalized assessed value.

December 12, 2022, the second reading of the special ordinance establishing a Downtown Special Services Area was approved by the City Council; and the first reading to approve the SSA property tax levy was also approved.

December 19, 2022, the second reading to approve the SSA property tax levy was approved by City Council.

Budget Impact:
See attached.

Additional Information as applicable (i.e. provide alternative options, community or staff input, staffing impact; resident impact; etc.):
See attached budget notes.

Council Goal (if applicable):
Goal #3: Economic Development

Recommendation:
It is recommended that the City Council approve the FY 2024 RIDA budget.

Submitted by: Samantha Gange, City Clerk

Approved by: Samantha Gange, City Clerk

FY2024 – RIDA Budget Assumption Notes
June 2023

I. Governance

- The role of the RIDA Board is to set priorities, directions and strategic initiatives, so the staff can carry out day-to-day activities.
- A financial report, including budget performance, will be presented monthly at Board meetings.

II. Program Support

- City of Rock Island Support – assuming total of $80,000 to support RIDA's performance of enhanced services, including cleaning and safety.
- Other Donations & Sponsorships – secured total of $70,000 from Modern Woodmen of America, Bally's Quad Cities, Crawford Company and MetroLINK to support RIDA's performance of enhanced services and activities for the betterment of downtown.
- Special Service Area – Total of $310,613 to be generated by the Downtown Special Service Area to support RIDA's performance of enhanced services and activities for the betterment of downtown.
- Service Overhead Contribution (City of RI) – Total of $80,346, per RIDA's contract with the City of Rock Island for costs associated with RIDA's services.
    - $70,000 for expenses related to executive and administrative support (ex: Chamber leadership team's time and strategic guidance of RIDA); marketing support (ex: Chamber marketing team's time and execution of RIDA marketing initiatives); information technology resources and equipment; human relations and payroll management; financial management support (ex: Chamber finance team's time overseeing RIDA's budget), salary and requisite insurance.
    - $10,346 for State of Illinois grant management (0.0095 of $3.267 million over three years.) The Chamber is the recipient of these State of IL grant funds and is therefore held responsible for reporting progress and results each month in partnership with the City.

III. Expenses

- Infrastructure & Livability
    - Cleaning Ambassadors – Total of $100,000 to cover two full-time equivalent (FTE) workers for total of 80 hours/week. Wage is $16-$17/hour; total payment to staffing agency would be $24/hour to cover wages and insurance.
    - City of Rock Island – Safety Services – Total of $30,000 to cover up to 500 hours of enhanced police patrol downtown, equal to about 0.25 FTE. Average overtime pay in 2023 is $57.18/hour with an anticipated 3% increase in 2024.
    - Community Navigator – Total of $17,500 to cover up to 1,029 hours of a Community Navigator's service downtown, equal to about 0.5 FTE. Wage is $17/hour.

        - Operations Manager (approved 6.1.23) – Total of $62,610 to cover full-time Operations Manager. Starting salary at $45,000, plus benefits.
        - Supplies & Equipment – Total of $70,000 for all supplies and equipment. $35,000 for capital items, such as vehicles, and $35,000 for smaller items, such as handheld power tools, graffiti remover and PPE. The capital items depreciate at a monthly rate of roughly $583. The $35,000 plus $7,000 in depreciation total the $42,000 expense item. Cash out the door will be $70,000, but expenses will only be $42,000 because of how depreciation expenses are recognized.

    - Business & Economic Growth
        - Capital Improvement Program – Total of $45,000 to help fund interior and exterior commercial property improvements as well as streetscape improvements in the downtown. The Board has an opportunity to determine specific details of desired grant programs that could also leverage the citywide PEP and GRIT programs.

    - Advocacy & Promotions
        - Marketing & Promotion – Total of $25,000 to cover marketing & promotion initiatives, including $8,100 for RIDA logo and style guide with these deliverables:
            - A logo package containing all file format versions of selected logo.
            - Written guide laying out best practices for logo use, fonts, primary and secondary colors, subtle graphic treatments.

Rock Island Downtown Alliance 1-Year Work Plan

July 1, 2023 – June 30, 2024

Vision: Downtown Rock Island is a vibrant, welcoming and prosperous place to live, work, play, eat and shop.

Mission: The mission of the Rock Island Downtown Alliance (RIDA) is to deliver services and programs for the City of Rock Island's Downtown Special Service Area (SSA) that enhance public spaces, encourage private investment and improve quality of life in downtown Rock Island.

Place Management Pillars

- Business & Economic Growth
- Infrastructure & Livability
- Advocacy & Promotion

City of Rock Island Downtown Revitalization Plan Alignment
Annual work plan initiatives are guided by the Downtown Alliance Board of Directors, input from other downtown stakeholders and the City of Rock Island's 2015 Downtown Revitalization Plan.

Quad Cities Chamber Regional Work Plan Alignment
Quad Cities Community Partnership (QCCP) will foster regionalism through coordinated QC place management and collaborative placemaking projects.

Chamber 3-Year Strategic Plan Quality of Place Alignment

- Provide place management services to Business Improvement Districts
- Cultivate a vibrant regional culture through placemaking projects and programming to engage residents and visitors
- Promote and support community initiatives that bolster regional vibrancy
- Position the region to be an attractive location for businesses and talent

Downtown/RIDA Annual Key Performance Indicators (KPIs)	
• Net new/lost businesses • Total construction investment • Commercial storefront occupancy • Property assessed value • Sales tax revenue • Hotel occupancy/tax revenue • Minority-owned businesses	• Trash removed • Graffiti removals • Community Navigator assists • RIDA total event attendees • Website visitors • Social media engagement • RIDA grant dollars leveraged

Chamber Key Performance Indicators (KPIs)
• Net new businesses • Total invested in new construction and renovations • Commercial & residential occupancy rates

Pillar 1: Business & Economic Growth

- **Enhance Downtown Economic Ecosystem**
  - Provide technical assistance to developers, entrepreneurs and small businesses seeking downtown space or an improvement/expansion to their current space
  - Collaborate with City of Rock Island, DARI, Quad Cities Chamber, SCORE and SBDC to assist business development downtown
  - Connect prospective projects with new City of Rock Island financial assistance programs – PEP & GRIT
    - Metric: Assist 10 new or expanding business projects downtown
    - Lead staff: Jack

- **Launch Capital Improvement Program to Leverage Private Investment**
  - Create Capital Improvement Grant program to enhance curb appeal
  - Identify and fund prospective private capital improvement opportunities throughout downtown
  - Publicize programs and recruit business and property owners to apply
    - Metric: Leverage completion of at least 10 grant improvement projects
    - Metric: Leverage total new private investment of ≥ $90,000 through downtown grants
    - Lead staff: Jack

- **Strengthen Downtown Food and Dining Scene**
  - Advocate for inclusion of outdoor dining structures in final scope of work for City's Rebuild Downtown Rock Island project
  - Bolster business retention, expansion and attraction efforts
  - Enhance streetscape beautification and marketing efforts
    - Metric: 10 uniform dining parklets/patio fences purchased for established restaurants
    - Lead staff: Jack

Pillar 2: Infrastructure & Livability

- **Enhance Downtown Safety**
  - Work with RIPD to offer overtime hours to Police Officers to patrol downtown on bicycle, foot or in a small utility vehicle before and after second shift
  - Leverage Community Navigator(s) to enhance sense of safety downtown
  - Set up regular communication channels between RIDA, Community Navigator(s), RIPD and other relevant partners
  - Deter negative behaviors and improve safety perceptions through tactical urban design changes
    - Metric: 500 hours of patrol provided
    - Metric: Program results detailed in regular Board reports
    - Lead staff: Jack and Operations Manager

- **Break Ground on City's Rebuild Downtown Rock Island Project**
  - Assist Public Works and design/engineering consultants throughout remainder of planning and public input process
  - Finalize and publicize scope of work, budget and timeline for capital improvements
  - Create grant reporting relationship and process between Chamber and City finance teams
    - Metric: Updated State of Illinois grant agreements signed
    - Metric: Construction started

        - Lead staff: Jack

- **Launch Downtown Cleaning Ambassador Program**
    - Execute new enhanced services contract with City of Rock Island that outlines specific roles of Downtown Cleaning Ambassadors, Public Works and Parks & Rec
    - Work with staffing agency to recruit and hire two hourly FTEs dedicated to downtown cleaning, maintenance and beautification
    - Duties may include sweeping debris; trash/litter pickup; graffiti removal; weed removal; watering plants and flowers; and snow removal in parking lanes and sidewalk “boulevard” curb lines
        - Metric: Contract signed; two FTEs hired, onboarded and working in uniform; and expectations met
        - Metric: Program results detailed in regular Board reports
        - Lead staff: Jack and Operations Manager

- **Establish Downtown Community Navigator Partnership**
    - Execute new contract with social service provider(s) to hire 0.5 FTE dedicated to consistent street outreach and engagement with downtown vulnerable population experiencing homelessness, substance abuse and mental health issues
    - Set up regular communication channels between RIDA and RIPD
    - Deter negative behaviors and improve safety perceptions
        - Metric: Contract signed, expectations met and 0.5 FTE hired & onboarded
        - Metric: Program results detailed in regular Board reports
        - Lead staff: Jack and Operations Manager

- **Hire Operations Manager**
    - Work with Board and Chamber staff to recruit and hire salaried Operations Manager
    - Operations Manager would perform daily on-street cleaning & maintenance duties and manage Ambassadors & Community Navigators, including reporting program hours and results
    - Operations Manager would respond to calls for service from business and property owners within the SSA and communicate regularly with Public Works, Parks & Rec, Police and other partners
        - Metric: Position hired & onboarded, and expectations met
        - Metric: Program results detailed in regular Board reports
        - Lead staff: Jack

Pillar 3: Advocacy & Promotions

- **Promote Establishment and Goals of RIDA**
    - Work with third-party company to create a logo and brand style guide for RIDA
    - Take ownership of Downtown Rock Island social media and website
    - Invite downtown stakeholders and media partners to news conference and celebration at downtown business
        - Metric: New logo appears on RIDA materials and Downtown Rock Island website and social media
        - Metric: Positive earned media coverage about direction of downtown Rock Island
        - Lead staff: Jack

- **Secure Office and Equipment Storage Space**
  - Identify available commercial storefront office spaces and determine best location with input from Board
  - Work with City to explore potential use of Centennial Bridge Commission Building (201 15th Street) for office and garage
  - Support a downtown property owner and fill an available storefront
    - Metric: Executed lease(s) and working out of new office & garage spaces
    - Lead staff: Jack and Operations Manager

- **Produce Downtown Business Promotions and Stakeholder Communications**
  - Leverage RIDA audience and platforms to promote downtown as a safe and fun place to live, work, shop, eat and play
  - Create and maintain a complete and accurate stakeholder contact list in ChamberMaster database and email marketing platform
  - Convene retailers to participate in Deck the Downtowns promotions to create greater retail visibility during the holiday season
  - Participate in partner promotions, such as Visit Quad Cities' Destination Guide
    - Metric: Downtown stakeholders are informed by and engaged with RIDA
    - Metric: 30+ businesses participated in Deck the Downtowns
    - Lead staff: Chamber Marketing & Sales Team / Jack

- **Plan & Promote RIDA Events and Support Neighborhood Activations**
  - Work with partners to produce Alternating Currents Festival
  - Explore lunch and live music series to engage downtown workforce
  - Support/participate in partner events, such as Live At 5 and Rhythm on the River by Common Chord
    - Metric: Alternating Currents Festival meets budget
    - Metric: Employers on board with lunch and live music series
    - Lead staff: Jack

- **Advocate Improved Downtown Property Stewardship and Public Policy Initiatives**
  - Work with the City's Community and Economic Development and Public Works Departments to address deteriorated buildings, obsolete signs, graffiti, problem dumpsters and other nuisances
  - Address City Council, State and Federal lawmakers with downtown legislative issues as necessary
    - Metric: Internal process created with City for addressing issues
    - Metric: 5 nuisances abated
    - Lead staff: Jack and Operations Manager

Rock Island Downtown Alliance (RIDA)

FY 2023-24 Operating Budget

GL CODES		Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	FY 2024 Budget
PROGRAM SUPPORT														
46110	City of Rock Island Support	20,000			20,000			20,000			20,000			80,000
46200	Other Donations & Sponsorships	5,833	5,833	5,833	5,833	5,833	5,833	5,833	5,833	5,833	5,833	5,833	5,833	70,000
46410	Special Service Area	77,653			77,653			77,653			77,654			310,613
46700	Service Overhead Contribution (City of RI)	6,695	6,695	6,695	6,695	6,695	6,695	6,695	6,695	6,695	6,695	6,695	6,695	80,346
														-
	TOTAL Rock Island SUPPORT	**110,182**	**12,529**	**12,529**	**110,182**	**12,529**	**12,529**	**110,182**	**12,529**	**12,529**	**110,183**	**12,529**	**12,529**	**540,959**
EVENTS SUPPORT														
46315	Alternating Currents Sponsorship		20,000											20,000
46316	Alternating Currents Sponsorship InKind													-
46325	Event Sponsorship													-
46326	Event Sponsorship InKind													-
	Other Sponsorships													-
	TOTAL Rock Island Events	**-**	**20,000**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**20,000**
	Total Revenue	**110,182**	**32,529**	**12,529**	**110,182**	**12,529**	**12,529**	**110,182**	**12,529**	**12,529**	**110,183**	**12,529**	**12,529**	**560,959**
Expense														
56100	Marketing & Promotion	2,083	2,083	2,083	2,083	2,083	2,083	2,083	2,083	2,083	2,083	2,083	2,083	25,000
52545	Capital Improvement Program	3,750	3,750	3,750	3,750	3,750	3,750	3,750	3,750	3,750	3,750	3,750	3,750	45,000
56410	Office Rent	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	12,000
56500	Professional Development		1,000	1,000	1,000									3,000
56710	Cleaning Ambassadors	8,333	8,333	8,333	8,333	8,333	8,333	8,333	8,333	8,333	8,333	8,333	8,333	100,000
	City of Rock Island - Safety Services	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	30,000
56720	Community Navigator	1,458	1,458	1,458	1,458	1,458	1,458	1,458	1,458	1,458	1,458	1,458	1,458	17,500
56730	Supplies & Equipment	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	42,000
57709	Overhead Expense	6,695	6,695	6,695	6,695	6,695	6,695	6,695	6,695	6,695	6,695	6,695	6,695	80,346
		29,320	**30,320**	**30,320**	**30,320**	**29,320**	**29,320**	**29,320**	**29,320**	**29,320**	**29,320**	**29,320**	**29,320**	**354,845**
Event Expenses														
56310	Alternating Currents	-	20,000	-	-	-	-	-	-	-	-	-	-	20,000
56316	Alternating Currents Sponsorship InKind	-	-	-	-	-	-	-	-	-	-	-	-	-
56320	Event Expenses	-	-	-	-	-	-	-	-	-	-	-	-	-
56326	Event Sponsorship Exense InKind	-	-	-	-	-	-	-	-	-	-	-	-	-
	TOTAL PROGRAM / EVENT EXPENSE	**-**	**20,000**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**20,000**
EXPENSES - OPERATIONAL SUPPORT														
56901	Personnel - Program Specific	6,144	6,144	6,144	6,144	6,144	6,144	6,144	6,144	6,144	6,144	6,144	6,144	73,730
56902	Program - OASDI	381	381	381	381	381	381	381	381	381	381	381	381	4,571
56903	Program - Medicare	89	89	89	89	89	89	89	89	89	89	89	89	1,069
56904	Program - FUTA	4	4	4	4	4	4	4	4	4	4	4	4	42
56905	Program - SUTA	67	67	67	67	67	67	67	67	67	67	67	67	807
56906	Program - Life/LTD/STD/AD&D	45	45	45	45	45	45	45	45	45	45	45	45	539
56907	Program - 401K	307	307	307	307	307	307	307	307	307	307	307	307	3,686
56908	Program - Health Insurance	1,010	1,010	1,010	1,010	1,010	1,010	1,010	1,010	1,010	1,010	1,010	1,010	12,115
56909	Program - Dental Insurance	41	41	41	41	41	41	41	41	41	41	41	41	496
56911	Program - United Way	-	-	-	-	-	-	-	-	-	-	-	-	-
56912	Program - HSA	64	64	64	64	64	64	64	64	64	64	64	64	762
56913	Program - EAP	-	-	-	-	-	-	-	-	-	-	-	-	-
56914	Program - Cell Phone	50	50	50	50	50	50	50	50	50	50	50	50	600
56915	Program - Membership Commission	-	-	-	-	-	-	-	-	-	-	-	-	-
56916	Program - Work At Home Stipend	25	25	25	25	25	25	25	25	25	25	25	25	300
	Operations Manager (Approved 6/1/23)	5,218	5,218	5,218	5,218	5,218	5,218	5,218	5,218	5,218	5,218	5,218	5,218	62,610
	TOTAL OPERATIONAL SUPPORT	**13,444**	**13,444**	**13,444**	**13,444**	**13,444**	**13,444**	**13,444**	**13,444**	**13,444**	**13,444**	**13,444**	**13,444**	**161,327**
	TOTAL EXPENSES	**42,764**	**63,764**	**43,764**	**43,764**	**42,764**	**42,764**	**42,764**	**42,764**	**42,764**	**42,764**	**42,764**	**42,764**	**536,172**
	OPERATING INCOME (LOSS)	**67,417**	**(31,236)**	**(31,236)**	**66,417**	**(30,236)**	**(30,236)**	**67,417**	**(30,236)**	**(30,236)**	**67,418**	**(30,236)**	**(30,236)**	**24,786**

Memorandum

To: Rock Island City Council

From: Todd Thompson, City Manager, Samantha Gange, City Clerk

Subject: Report from the Mayor's Office and General Administration recommending the allocation of $125,000.00 in ARPA funds (unrestricted) to the Botanical Center.

Motion:	Motion whether or not to approve $125,000.00 in ARPA funds for the Botanical Center and authorize the City Manager to execute the agreement.
RC	Roll Call vote is needed.

Date: June 26, 2023

Introduction and Background Information:

In early September 2022, Mayor Thoms proposed allocating ARPA funds to 4 nonprofit organizations in an effort to assist them in recovering from the COVID-19 pandemic.

On September 26, 2022, the City Manager and ARPA Program Manager presented the proposed funding recommendations for these 4 nonprofits to members of the City Council. At that meeting, Council members requested additional information on how the funds would be used.

On January 23, 2023, the ARPA Program Manager provided Council members with additional details and information on the 4 nonprofits and how the ARPA funds would be expended.

Summary of services and impact to the City	The Quad City Botanical Center provides a wide variety of services out of our facility in the downtown area. Most notably, these include: a. Public visitation hours 7 days a week b. 50,000-60,000 (3-year range excluding 2020) on-site visitors, tourists, learners or private party guests annually. c. Evening private events, weddings, business meetings, celebrations, school district and municipal meetings, local sports conference banquets, fundraisers, proms, etc. d. Informal & Formal Youth and adult programming throughout the year, based on season. e. Special event plant sales twice per year, with a smaller variety of plants for sale daily. f. 8,000-10,000 school-year-aged children on-site for formal programming through school district.

	g. Community garden at the Martin Luther King Center, programmed throughout the year. h. Holiday Light Display, Winter Nights, Winter Lights attracting 15,000 people to downtown Rock Island in 5 weeks' time. i. Scholarships for Rock Island/Milan School youth for Title 1 schools. j. Partnerships with Arc of the Quad Cities, Hand-in-Hand, HDC, Tapestry Farms and World Relief to bring diverse plant education to the community.
What is the program or project to be funded and how will the impact be measured?	There are two programs/strategic plan goals that the requested funds will be used for. The top priority of our organization with these funds is to pay off our $91,000 mortgage balance that exists on our building. In turn, the money currently used for our mortgage payments will now be put into circulation for our gardens and be used for a wide variety of mission-driven expenses throughout our education and horticulture department, resulting in a more engaging experience for every visitor and tourist we see throughout the year. As our attendance continues to balance back to pre-COVID and grow forward, part of our strategic plan is to continually enhance our exhibits for the guests we are seeing. This includes seasonal displays, encouraging more guests and tourists to make 3-4 visits per year as opposed to 1-2. It also includes educating and encouraging locals to see/implement current trends in our industry, as the number of Millennials and Generation Z guests has significantly increased since we re-opened following COVID restrictions, and they are eager to beautify their homes and spaces. Investments into our general operation of our education and horticulture department creates long-term sustainability by generating unrestricted dollars through our gates from visitors and tourists. In last fiscal year, our exhibits attracted visitors that spent $197,000 with us, which was earned with a $27,000 investment into exhibit improvements per our annual budget. If we follow the same budgetary logic with our designated ARPA funds and invest $150,000 into our exhibits gradually over the course of 4-5 years with the dollars that are re-directed from our mortgage payments, it will in turn generate an additional $1,094,444 in revenue over the life of your ARPA investment into the Quad City Botanical Center. In terms of innovation, we are fortunate to occupy a facility that is always changing, growing or can improve in one way, shape or form on any given day. What this one-time funding will allow our organization to do is to be flexible with our approach to 'meeting people where they are' in a world that has changed a great deal in the last 2.5 years. There are so many opportunities to create engaging, seasonal displays and exhibits that in turn, drive more tourists to our gardens and impact to the City of Rock Island. One program/added exhibit that is a goal for 2023 is a 'Trending Garden'. The Trending Garden is a 1,700 (the size of a typical Rock

	Island yard) square foot area along a main pathway of our grounds that will feature trending and affordable designs in annual plantings, outdoor living, vertical gardening and in general, relevant outdoor beautification techniques that we will in turn use to inspire residents to do the same in their own yards at home. The requested ARPA funds will have a significant impact on our continued recovery from the negative impact that COVID-19 has had on our organization. We are lucky to see our attendance stabilize after our closures, and the focus we have now is to keep these tourists, guests and learners coming back more than 1 time per year, in turn generating more than our average of $61,000 of benefit to the City of Rock Island. Being able to accomplish that with your investment will alleviate the financial challenges we have experienced over the last 2.5 years.
How will use of these funds include programs or projects that will have an impact on or provide services to Disproportionately Impacted Communities?	We believe that assuring that our mission is available to anyone who wishes to experience is one of the top responsibilities we have as a Rock Island non-profit and have taken many steps recently to do our best to make that a reality. The invested ARPA funds will assist in supporting things like our partnership with the MLK Center, our free membership program for Big Brother, Big Sisters, our two 'Pay what you want' weeks each year during our most popular times that allows guest to name their own admission price and our goal to share the voices of refugees to the Illinois Quad Cities with our Plants of the World: People Behind the Plants exhibit launching in 2023- an exhibit featuring stories of people from around the world who now call the Quad Cities home and what the plants in our collection mean to them. We also have a scholarship program specifically designed to ensure that any Title 1 schools in Rock Island have affordable access to our field trip and programming offerings throughout the year.

Previous Council Action (if any):

None

Budget Impact:

$150,000 in ARPA Funds (unrestricted - City Lost Revenue)

Additional Information as applicable (i.e. provide alternative options, community or staff input, staffing impact; resident impact; etc.):

In 2020, the City Council approved an allocation of $75,000.00 to the Botanical Center per an agreement.

In 2021, the City Council approved an allocation of $30,000.00 to the Botanical Center for CIP Improvements.

Council Goal (if applicable):

Recommendation:

The Mayor's Office recommends approval of the $150,000 in ARPA funds for the Botanical Center.

Submitted by: Samantha Gange, City Clerk

Approved by: Joshua Adams

AMERICAN RESCUE PLAN ACT (ARPA) NON-PROFIT ORGANIZATION INFORMATION

During discussions on recommendations for ARPA allocations, the Mayor recommended four (4) non-profit organizations in the City of Rock Island (Quad City Arts, MLK Center, Botanical Center and Backwater Gamblers) be considered for ARPA funding. At the September 26, 2022 ARPA Study Session, members requested additional information and data be provided prior to consideration of funding. Based on City Council's request, the ARPA Program Manager solicited additional information and data from all four organizations. The chart below provides detailed information and data for each non-profit, including: a summarization of services and the impact to the City; a summary of the program(s) or project(s) that would be funded and how the impact to Rock Island would be measured; and whether any of the programs or projects would provide services to Disproportionately Impacted Communities.

Quad City Arts (Proposed amount $50,000)	
Summary of services and impact to the City	Quad City Arts is located in the heart of Rock Island at 1715 2nd Avenue. At this location is our gallery, retail space, and our offices. The following programs impact the City of Rock Island: • Gallery and retail space in Rock Island - sees an average of 5,000 visitors annually. • Public Sculpture Program – In 2022 we facilitated the installation of three rotating sculptures and the purchase of two sculptures. This is a program the City of RI pays for through the Arts Services Agreement. However, due to budget cuts, this service agreement does not cover the full cost of the program and Quad City Arts contributes the remaining expenses. • Visiting Artist Series – This program places performing artists in our schools and community sites. The amount of engagement in Rock Island varies year to year based on content and availability. In the 2021-2022 season, we had 25 outreach activities and one public concert in the City of Rock Island. Most of these activities were in the public-school system, but others happened in Schwiebert Park, Friendship Manor, MLK Center, and the public concert was in the Stern Center. These outreach activities reached roughly 3,000 people. • Metro Arts Youth Apprenticeship Program – Projects in the City of Rock Island vary based on funding, but every year the program includes students from Rock Island. In 2022, we had 14 students in the program, all of which were paid. • Arts Dollars – This program gives dollars to artists and arts organizations, including ones that reside in Rock Island. • Quad Cities Chalk Art Fest is an event that Quad City Arts hosts annually and in 2021 moved the event to its new home in Schwiebert Park. This event drew over 5,000 visitors in 2021 and over 7,000 in 2022. This event is also free to the community and to the artist who participate, who are still eligible for cash prizes. • Outside of our programming, Quad City Arts works with the Rock Island Arts Commission and works towards goals they have set forth through guidance from public input sessions. One key example of this is the soon to be announced Artist

	Index. The Artist Index will be an online registry of the artists in our region. A place where artists can showcase their work and the community can find artists. While this is not only for Rock Island artists, it was born out of conversations with the public in Rock Island facilitated by the Rock Island Arts Commission. Quad City Arts also continues to work with Visit Quad Cities to encourage visitors and residents alike to engage with public art. In 2022, we worked together to launch the QC Public Art Trail. • The QC Public Art Trail provides an incentive to go look at public art, but it also provides a convenient location to find locations of public art in our community. • Quad City Arts is also partnering with Americans for the Arts to participate in the Arts and Economic Prosperity Study. This study will measure the economic impact of the arts in the Quad Cities Region. Our region will be included in the national study and will be highlight our region at the Americans for the Arts National Convention in 2022. As part of this study, we will be able to provide an online "calculator" to measure the economic impact of arts events in our region using data collected in our region. • Quad City Arts is a regional organization. While we are headquartered and love Rock Island, we measure our organizational impact numbers as a region. Since we are a bi-state region we do track the percentages of our services split between state and in 2021 52% of our services were in the state of Illinois. This number fluctuates year to year but stays in the 48-52% range. According to the Americans for the Arts Economic Prosperity Calculator, Quad City Arts has an economic impact of $4.4 Million.
What is the program or project to be funded and how will the impact be measured?	Quad City Arts believes that public art and placemaking should be done with input from the community it is going into. For Rock Island, this would start with the Rock Island Arts Commission. We would work with the arts commission to determine the best use of the dollars in the end. Initially, we have three projects that we would like to see happen in Rock Island. **1.** The City of Rock Island has invested in public art, but as time passes the art needs repair, removed, or replaced. Quad City Arts would like to use ARPA dollars to not only accomplish some of those goals, but to work with the Arts Commission to create a plan moving forward to prevent murals and other public art from getting to that point, essentially an ongoing maintenance plan for public art. Public Art is proven to drive tourism and increase civic pride, however when left to deteriorate it can feel as if the area is "rundown." A prime example is the mural at 1820 4th Avenue, In Remembrance of Past Presidents, this mural is peeling and faded. This mural needs to be removed or painted over. Costs associated with this would vary based on the public art piece, the artist, and the choice to repair, remove, or replace. For most projects, Quad City Arts allocates 15% to admin with the remainder going towards the project. Using $50,000 as an example, $42,500 would be used for materials and artist fees. Depending on the direction the Arts Commission would like to take, $50,000 would pay 4-14 artists and address 4-6 public art pieces. **2**. Another project is a long-term investment into the community. The Quad Cities Region lacks spaces for artist studio space and artist retail space. Working with the Arts Commission, DARI, and the City's Economic Development Office we would like to explore the creation of an artist incubator space similar to the concept of Shoppes on Second. This would be the only space like it in the Quad Cities and has the potential to draw a number of artists to Rock Island. Quad City Arts is aware of numerous artists who are not only looking for space to create but are also interested in locating in Rock Island. The total

	cost of this project is currently unknown and would depend on numerous factors, but funds would be used to develop a plan and begin working the plan. **3.** The final project is a new event for Rock Island. A common request by the Arts Commission and feedback from public art forums is for the return of Gallery Hop. Gallery Hop only worked because there were more galleries in Rock Island. A new pop-up style event could be created to both showcase artists and to showcase available spaces in Downtown. Working with organizations who own space in Downtown (real estate agencies, DARI, etc.) we could open these spaces to artists to create pop-up galleries for a specific weekend. This would allow artists to showcase and sell their work, encourage visitors to come to Downtown Rock Island, and allow people to see spaces that have been closed creating an open house for these spaces. All of these projects increase dollars to artists, increase civic pride, and will draw visitors to Rock Island.
How will use of these funds include programs or projects that will have an impact on or provide services to Disproportionately Impacted Communities?	Quad City Arts has made a commitment to diversity, equity, and inclusion. Part of this commitment is to support more BIPOC artists through all our programming. This includes an increased effort to find and work with BIPOC artists in our public art programs (murals, sculptures, etc.). If the Rock Island Arts Commission and DARI were interested in working to create an artist incubator space, this could give preference to disproportionately impacted communities. Additionally, public art is for everyone. A project to refurbish, remove, or replace public art is not intended just for Downtown, but for RI as a whole. However, RI does have most public art that needs work located in the Downtown area.

MLK Center	
Summary of services and impact to the City	The King Center has proudly served as a community anchor in Rock Island since 1975. It is located and focused on provision of vital human services in a Disproportionately Impacted Community that is 57% black, facing exceedingly high poverty rates (per capita income of $13,000), significant educational challenges, high unemployment (14% pre COVID) and particularly high level of Department of Children and Family Services (DCFS) involvement to name a few of the challenges. Over time, the King Center has responded to these issues with a youth drug prevention program, after school youth services, workforce development, healthcare clinics, computer classes, tax return preparation for low income families and individuals, and information and referral services. Additionally, the King Center hosts five special events during the year to acknowledge excellence in the community, to celebrate holidays and to aid those in need. Finally, the King Center provides space for community meetings and events at a low or no fee. Annually, 20,000 people are served including over 2,300 youth demonstrating our relevance as an accepted, trusted, and integrated resource for a community in need.
What is the program or project to be funded and how will the impact be measured?	• Family Fun Day - $40,000 Family Fun Day in Rock Island is a 30+ year old event originally designed to celebrate the diversity of the community. It has evolved into a Quad City event attracting over 4,000 people annually due to the appeal of activities representing different cultures in our community. The event has enormous potential to increase attendance by incorporating a larger African, Burundi, Afghan etc. representation while also expanding participation in the parade with regional drill/dance teams and bands. Support will create and market a truly distinctive QC signature event located and branded in Rock Island aligned with City Council Goal #4. • West End Renaissance (request increase of ARPA from $50,000 to $100,000) In early 2022, Rock Island City Council approved and John Deere provided funding for a one-year phase to prioritize West End Community Assessment recommendations. To move from assessment to action to measurable change for the West End, we need to work together (collective impact). That's why the MLK Center is building a network of West End community members and supporters – nonprofits, funders, government, businesses, financial institutions, schools, and more – to align activities, implement innovative solutions, evaluate our progress, and learn and improve together.
How will use of these funds include programs or projects that will have an impact on or provide services to Disproportionately Impacted Communities?	The King Center has proudly served as a community anchor in Rock Island since 1975. It is located and focused on provision of vital human services in a Disproportionately Impacted Community that is 57% black, facing exceedingly high poverty rates (per capita income of $13,000), significant educational challenges, high unemployment (14% pre COVID) and particularly high level of Department of Children and Family Services (DCFS) involvement to name a few of the challenges. Over time, the King Center has responded to these issues with a youth drug prevention program, after school youth services, workforce development, healthcare clinics, computer classes, tax return preparation for low income families and individuals, and information and referral services. Additionally, the King Center hosts five special events during the year to acknowledge excellence in the community, to celebrate holidays and to aid those in need. Finally, the King Center provides space for community meetings and events at a low or no fee. Annually, 20,000 people are served including over 2,300 youth demonstrating our relevance as an accepted, trusted, and integrated resource for a community in need.

Botanical Center	
Summary of services and impact to the City	The Quad City Botanical Center provides a wide variety of services out of our facility in the downtown area. Most notably, these include: a. Public visitation hours 7 days a week b. 50,000-60,000 (3-year range excluding 2020) on-site visitors, tourists, learners or private party guests annually. c. Evening private events, weddings, business meetings, celebrations, school district and municipal meetings, local sports conference banquets, fundraisers, proms, etc. d. Informal & Formal Youth and adult programming throughout the year, based on season. e. Special event plant sales twice per year, with a smaller variety of plants for sale daily. f. 8,000-10,000 school aged children on-site for formal programming through school district. g. Community garden at the Martin Luther King Center, programmed throughout the year. h. Holiday Light Display, Winter Nights, Winter Lights attracting 15,000 people to downtown Rock Island in 5 weeks' time. i. Scholarships for Rock Island/Milan School youth for Title 1 schools. j. Partnerships with Arc of the Quad Cities, Hand-in-Hand, HDC, Tapestry Farms and World Relief to bring diverse plant education to the community.
What is the program or project to be funded and how will the impact be measured?	There are two programs/strategic plan goals that the requested funds will be used for. The top priority of our organization with these funds is to pay off our $91,000 mortgage balance that exists on our building. In turn, the money currently used for our mortgage payments will now be put into circulation for our gardens and be used for a wide variety of mission-driven expenses throughout our education and horticulture department, resulting in a more engaging experience for every visitor and tourist we see throughout the year. As our attendance continues to balance back to pre-COVID and grow forward, part of our strategic plan is to continually enhance our exhibits for the guests we are seeing. This includes seasonal displays, encouraging more guests and tourists to make 3-4 visits per year as opposed to 1-2. It also includes educating and encouraging locals to see/implement current trends in our industry, as the number of Millennials and Generation Z guests has significantly increased since we re-opened following COVID restrictions, and they are eager to beautify their homes and spaces. Investments into our general operation of our education and horticulture department creates long-term sustainability by generating unrestricted dollars through our gates from visitors and tourists. In last fiscal year, our exhibits attracted visitors that spent $197,000 with us, which was earned with a $27,000 investment into exhibit improvements per our annual budget. If we follow the same budgetary logic with our designated ARPA funds and invest $150,000 into our exhibits gradually over the course of 4-5 years with the dollars that are re-directed from our mortgage payments, it will in turn generate an additional $1,094,444 in revenue over the life of your ARPA investment into the Quad City Botanical Center. In terms of innovation, we are fortunate to occupy a facility that is always changing, growing or can improve in one way, shape or form on any given day. What this one-time funding will allow our organization to do is to be flexible with our approach to 'meeting people where they are' in a world that has changed a great deal in the last 2.5 years. There are so many opportunities to create engaging, seasonal displays and exhibits that in turn, drive more tourists to our gardens

	and impact to the City of Rock Island. One program/added exhibit that is a goal for 2023 is a 'Trending Garden'. The Trending Garden is a 1,700 (the size of a typical Rock Island yard) square foot area along a main pathway of our grounds that will feature trending and affordable designs in annual plantings, outdoor living, vertical gardening and in general, relevant outdoor beautification techniques that we will in turn use to inspire residents to do the same in their own yards at home. The requested ARPA funds will have a significant impact on our continued recovery from the negative impact that COVID-19 has had on our organization. We are lucky to see our attendance stabilize after our closures, and the focus we have now is to keep these tourists, guests and learners coming back more than 1 time per year, in turn generating more than our average of $61,000 of benefit to the City of Rock Island. Being able to accomplish that with your investment will alleviate the financial challenges we have experienced over the last 2.5 years.
How will use of these funds include programs or projects that will have an impact on or provide services to Disproportionately Impacted Communities?	We believe that assuring that our mission is available to anyone who wishes to experience is one of the top responsibilities we have as a Rock Island non-profit and have taken many steps recently to do our best to make that a reality. The invested ARPA funds will assist in supporting things like our partnership with the MLK Center, our free membership program for Big Brother, Big Sisters, our two 'Pay what you want' weeks each year during our most popular times that allows guest to name their own admission price and our goal to share the voices of refugees to the Illinois Quad Cities with our Plants of the World: People Behind the Plants exhibit launching in 2023- an exhibit featuring stories of people from around the world who now call the Quad Cities home and what the plants in our collection mean to them. We also have a scholarship program specifically designed to ensure that any Title 1 schools in Rock Island have affordable access to our field trip and programming offerings throughout the year.

Backwater Gamblers	
Summary of services and impact to the City	Our organization provides family friendly water ski shows to the citizens of Rock Island and the greater Quad Cities area free of charge to anyone to come in and enjoy an evening of summer entertainment. Our shows are larger (number of skiers and other participants) and longer than professional ski shows. Tommy Bartlett's Water Ski Show Spectacular (now closed) charged up to $40 per person to attend. Legoland in Florida, which still puts on a professional ski show, charges $85 per person for park admittance. We hold shows every Wednesday and Sunday from Memorial Day through Labor Day, which is approximately 30-35 shows per year. We do not track attendance, because we don't charge admission, but we estimate that we have around 1,000 spectators per show, so our overall number of visitors annually is approximately 30,000 to 35,000 people. We estimate our economic impact annually to be approximately $900,000 for the City of Rock Island, plus countless dollars in positive media exposure for adding such a unique experience to our City. This past year, we hosted our Central Regional Show Ski Tournament and the Division II National Tournament. The economic impact of hosting these tournaments (held over two days) is approximately $700,000. Our goal in the future is to host a Division I National Tournament, which would provide exposure to the City of Rock Island and have an economic impact of approximately $1,260,000 (other teams have provided data showing an economic impact up to $3,000,000). In addition to our regular shows, we also host water ski lessons, including disabled water ski clinics, which allow people who would otherwise not have access to the sport a chance to learn. Our disabled ski clinics are in partnership with St. Ambrose Occupational Therapy program and formerly in partnership with Genesis Health Systems. We serve the Rock Island Community, as well as the greater Quad Cities community. Our team members drive from as far as Cedar Rapids, Sabula, and Peoria to participate. Our audience members include people from all over the world, but for the most part, are from the Quad Cities region. We do not collect data on crowd demographics. Because we do not charge an admission and we make it a point to cater to families, anyone in any salary bracket and any age range can come and enjoy a show. The Quad City Chamber's mission is to create a region that is "cool, creative, connected, and prosperous." We add to that by bringing a unique attraction to the Quad Cities. There is literally nowhere else within 100 miles that offers the same form of entertainment! We are nationally ranked; and have consistently placed in the top five show ski teams in the country, which is a testament to the quality of entertainment you will see at a Backwater Gambler Water Ski Show. We have had three team members qualify to compete at the World Water Ski Tournament as part of Team USA, and we have had at least ten team members ski professionally at water ski shows around the world.
What is the program or project to be funded and how will the impact be measured?	We plan on partially funding two projects with ARPA dollars. The first project is updating two of our boats, including both hulls, trailers, and motors. In order to continue putting on the quality of shows for which we have become known, we have sizeable horsepower needs for our boats, and our oldest motors are reaching the end of their useful life. We are looking to purchase two new hulls, two new trailers, and six new motors (three motors for each hull). This will allow us to upgrade the two main triple rig boats seen in our shows. The total cost of this project is $253,994. We are requesting grants from several other organizations, including the Moline Foundation and the RDA, to help fund this project, and are anticipating making a request to the Carver Foundation for a portion of this project as well. If any of these avenues are unsuccessful, we have discussed working with a local bank for a loan for a portion of this project. If we are awarded

	ARPA funds, we anticipate spending up to $74,000 (the cost of two hulls and two trailers) of those funds on this project. Updating our boat fleet will allow our organization to continue to grow, and allow our audience to continue to enjoy spectacular waterski stunts with 40 plus person pyramids, 16 plus person barefoot lines, 25 plus person ballet lines, and other stunts. The impact of this project will be able to be measured through increased crowds at our shows going forward. The second project is site improvements. While the total cost to do everything we want to at the site would cost millions, we have a couple main areas of concern we wish to address with the ARPA funds. The first is the main dock at the ski site, where we take many of our acts from, as it is directly in front of the audience and our main starting platform. We have had the dock for almost 40 years, and it was built when we first built our site. It is worn out and past its useful life. The cost to replace it would be approximately $40,000. A new dock would assist in winning a bid for a larger tournament, as having a spacious starting platform to accommodate all teams is a plus for the selection committee. The second area of focus on site improvements is extending our bleacher seating area. We have been working to increase our spectator seating area, and to have an additional set of bleachers at the west side of the park would assist with allowing more people to see the shows (we are often near or at capacity for our shows, especially later in the season) and would assist with our efforts to win a bid for a larger tournament. A set of 15 row aluminum bleachers cost approximately $30,000 per set. The third area of focus for site improvements is a proper storage building for our boats. Currently, we cover the boats in the summer, and they are stored indoors in the winter offsite. Having our own storage facility would allow us to rely less on the hospitality of our members who store the boats. It will also allow us to better protect our club's largest investments. We estimate that the cost of a building large enough to house our boats would be approximately $100,000. We would complete much of the work ourselves, or use in kind donations from area business in return for advertisements in order to complete projects. The impact of the site improvement project can most easily be measured by a successful bid to host a larger tournament, thus increasing the economic impact to the city and to the region. Due to COVID-19 restrictions in Illinois, we were forced to suspend our 2020 season, and were unable to perform any shows that year. The largest sources of revenue for our team come from donations from audience members at our show, and ad revenue for our program, which are then distributed to our audience members during performances. Because we had no shows, we did not collect any revenue (revenue in 2021 donations was $57,312 plus $11,513.50 in gross concession sales). Further, we decided the right action to take was to allow our 2020 sponsors to roll their funds over to 2021 since we did not print a program or have spectators to the ski site in 2020. Sponsorships through our program account for approximately $11,000 of our budget each year. COVID-19 wiped out the majority of our operating income for 2020. We were able to quickly pivot, in order to limit spending, and also to make additional pleas to former members for support, but it was still a rough year, as it was for the entire community.
How will use of these funds include programs or projects that will have an impact on or provide services to Disproportionately Impacted Communities?	Our shows have an obvious positive impact on low income populations because it is one of the only places a low-income family can go in the Quad Cities area for free for an evening of entertainment. Baseball games, concerts, movies, plays – all are great attractions within the Quad Cities, but if you are a low-income family, these are often things that fall by the wayside because they simply aren't affordable for everyone. A night out at the movies for a family of four is almost $50 just for the movie tickets (not including the snacks and drinks). Our shows are free. If you want to bring your own food and drinks, we don't stop you. If you can't afford to donate at intermission, we smile, tell you "thanks for coming, we hope you are enjoying the show," and move on. We have a fan, Kevin, who is a low-income individual. Kevin is disabled and uses a walker. Kevin attends almost every show, and has done so for decades. He sits in the front row of the middle bleachers and cheers on all his favorite skiers. When he can

	afford to do so, he'll donate a couple dollars, but we don't expect him to do so. We try to gift him a club shirt each year, because the team means so much for him. If we charged an admission, Kevin probably wouldn't be able to attend our shows. There are many Kevin's in our audience, but his years of dedication have made him stand out. Our planned use of funds will allow us to continue to put on free, quality shows for disadvantaged individuals in the Quad Cities. We hope that the planned use of funds increases the potential to attract new audience members who come not only to enjoy the show, but enjoy the site itself, and have a wonderful evening by the river.

Memorandum

To: Rock Island City Council

From: Todd Thompson, City Manager, Samantha Gange, City Clerk

Subject: Report from the Mayor's Office and General Administration recommending the allocation of $125,000.00 in ARPA funds (unrestricted) to the Backwater Gamblers.

Motion:	Motion whether or not to approve $125,000.00 in ARPA funds for the Backwater Gamblers and authorize the City Manager to execute the agreement.
RC	Roll Call vote is needed.

Date: June 26, 2023

Introduction and Background Information:

In early September 2022, Mayor Thoms proposed allocating ARPA funds to 4 nonprofit organizations in an effort to assist them in recovering from the COVID-19 pandemic.

On September 26, 2022, the City Manager and ARPA Program Manager presented the proposed funding recommendations for these 4 nonprofits to members of the City Council. At that meeting, Council members requested additional information on how the funds would be used.

On January 23, 2023, the ARPA Program Manager provided Council members with additional details and information on the 4 nonprofits and how the ARPA funds would be expended.

Summary of services and impact to the City	Our organization provides family friendly water ski shows to the citizens of Rock Island and the greater Quad Cities area free of charge to anyone to come in and enjoy an evening of summer entertainment. Our shows are larger (number of skiers and other participants) and longer than professional ski shows. Tommy Bartlett's Water Ski Show Spectacular (now closed) charged up to $40 per person to attend. Legoland in Florida, which still puts on a professional ski show, charges $85 per person for park admittance. We hold shows every Wednesday and Sunday from Memorial Day through Labor Day, which is approximately 30-35 shows per year. We do not track attendance, because we don't charge admission, but we estimate that we have around 1,000 spectators per show, so our overall number of visitors annually is approximately 30,000 to 35,000 people. We estimate our economic impact annually to be approximately $900,000 for the City of Rock Island, plus countless dollars in positive

	media exposure for adding such a unique experience to our City. This past year, we hosted our Central Regional Show Ski Tournament and the Division II National Tournament. The economic impact of hosting these tournaments (held over two days) is approximately $700,000. Our goal in the future is to host a Division I National Tournament, which would provide exposure to the City of Rock Island and have an economic impact of approximately $1,260,000 (other teams have provided data showing an economic impact up to $3,000,000). In addition to our regular shows, we also host water ski lessons, including disabled water ski clinics, which allow people who would otherwise not have access to the sport a chance to learn. Our disabled ski clinics are in partnership with St. Ambrose Occupational Therapy program and formerly in partnership with Genesis Health Systems. We serve the Rock Island Community, as well as the greater Quad Cities community. Our team members drive from as far as Cedar Rapids, Sabula, and Peoria to participate. Our audience members include people from all over the world, but for the most part, are from the Quad Cities region. We do not collect data on crowd demographics. Because we do not charge an admission and we make it a point to cater to families, anyone in any salary bracket and any age range can come and enjoy a show. The Quad City Chamber's mission is to create a region that is "cool, creative, connected, and prosperous." We add to that by bringing a unique attraction to the Quad Cities. There is literally nowhere else within 100 miles that offers the same form of entertainment! We are nationally ranked; and have consistently placed in the top five show ski teams in the country, which is a testament to the quality of entertainment you will see at a Backwater Gambler Water Ski Show. We have had three team members qualify to compete at the World Water Ski Tournament as part of Team USA, and we have had at least ten team members ski professionally at water ski shows around the world.
What is the program or project to be funded and how will the impact be measured?	We plan on partially funding two projects with ARPA dollars. The first project is updating two of our boats, including both hulls, trailers, and motors. In order to continue putting on the quality of shows for which we have become known, we have sizeable horsepower needs for our boats, and our oldest motors are reaching the end of their useful life. We are looking to purchase two new hulls, two new trailers, and six new motors (three motors for each hull). This will allow us to upgrade the two main triple rig boats seen in our shows. The total cost of this project is $253,994. We are requesting grants from several other organizations, including the Moline Foundation and the RDA, to help fund this project, and are anticipating making a request to the Carver Foundation for a portion of this project as well. If any of these avenues are unsuccessful, we have discussed working with a local bank for a loan for a portion of this project. If we are awarded ARPA funds, we anticipate spending up to $74,000 (the cost of two hulls and two trailers) of those funds on this project. Updating our boat fleet will allow our

	organization to continue to grow, and allow our audience to continue to enjoy spectacular waterski stunts with 40 plus person pyramids, 16 plus person barefoot lines, 25 plus person ballet lines, and other stunts. The impact of this project will be able to be measured through increased crowds at our shows going forward. The second project is site improvements. While the total cost to do everything we want to at the site would cost millions, we have a couple main areas of concern we wish to address with the ARPA funds. The first is the main dock at the ski site, where we take many of our acts from, as it is directly in front of the audience and our main starting platform. We have had the dock for almost 40 years, and it was built when we first built our site. It is worn out and past its useful life. The cost to replace it would be approximately $40,000. A new dock would assist in winning a bid for a larger tournament, as having a spacious starting platform to accommodate all teams is a plus for the selection committee. The second area of focus on site improvements is extending our bleacher seating area. We have been working to increase our spectator seating area, and to have an additional set of bleachers at the west side of the park would assist with allowing more people to see the shows (we are often near or at capacity for our shows, especially later in the season) and would assist with our efforts to win a bid for a larger tournament. A set of 15 row aluminum bleachers cost approximately $30,000 per set. The third area of focus for site improvements is a proper storage building for our boats. Currently, we cover the boats in the summer, and they are stored indoors in the winter offsite. Having our own storage facility would allow us to rely less on the hospitality of our members who store the boats. It will also allow us to better protect our club's largest investments. We estimate that the cost of a building large enough to house our boats would be approximately $100,000. We would complete much of the work ourselves, or use in kind donations from area businesses in return for advertisements in order to complete projects. The impact of the site improvement project can most easily be measured by a successful bid to host a larger tournament, thus increasing the economic impact on the city and on the region. Due to COVID-19 restrictions in Illinois, we were forced to suspend our 2020 season, and were unable to perform any shows that year. The largest sources of revenue for our team come from donations from audience members at our show, and ad revenue for our program, which are then distributed to our audience members during performances. Because we had no shows, we did not collect any revenue (revenue in 2021 donations was $57,312 plus $11,513.50 in gross concession sales). Further, we decided the right action to take was to allow our 2020 sponsors to roll their funds over to 2021 since we did not print a program or have spectators to the ski site in 2020. Sponsorships through our program account for approximately $11,000 of our budget each year. COVID-19 wiped out the majority of our operating income for 2020. We were able to quickly pivot, in order to limit spending, and

	also to make additional pleas to former members for support, but it was still a rough year, as it was for the entire community.
How will use of these funds include programs or projects that will have an impact on or provide services to Disproportionately Impacted Communities?	Our shows have an obvious positive impact on low income populations because it is one of the only places a low-income family can go in the Quad Cities area for free for an evening of entertainment. Baseball games, concerts, movies, plays – all are great attractions within the Quad Cities, but if you are a low-income family, these are often things that fall by the wayside because they simply aren't affordable for everyone. A night out at the movies for a family of four is almost $50 just for the movie tickets (not including the snacks and drinks). Our shows are free. If you want to bring your own food and drinks, we won't stop you. If you can't afford to donate at intermission, we smile, tell you "thanks for coming, we hope you are enjoying the show," and move on. We have a fan, Kevin, who is a low-income individual. Kevin is disabled and uses a walker. Kevin attends almost every show, and has done so for decades. He sits in the front row of the middle bleachers and cheers on all his favorite skiers. When he can afford to do so, he'll donate a couple dollars, but we don't expect him to do so. We try to gift him a club shirt each year, because the team means so much to him. If we charged admission, Kevin probably wouldn't be able to attend our shows. There are many Kevin's in our audience, but his years of dedication have made him stand out. Our planned use of funds will allow us to continue to put on free, quality shows for disadvantaged individuals in the Quad Cities. We hope that the planned use of funds increases the potential to attract new audience members who come not only to enjoy the show, but enjoy the site itself, and have a wonderful evening by the river.

Previous Council Action (if any):

Budget Impact:

$100,000 in ARPA Funds (unrestricted - City Lost Revenue)

Additional Information as applicable (i.e. provide alternative options, community or staff input, staffing impact; resident impact; etc.):

Council Goal (if applicable):

Recommendation:

The Mayor's Office recommends approval of the $100,000 in ARPA funds for the Backwater Gamblers.

Submitted by: Samantha Gange, City Clerk

Approved by: Samantha Gange, City Clerk

Memorandum

To: Rock Island City Council

From: Todd Thompson, City Manager, Samantha Gange, City Clerk

Subject: Report from the Mayor's Office and General Administration recommending the allocation of $50,000.00 in ARPA funds (unrestricted) to the Quad City Arts.

Motion:	Motion whether or not to approve $50,000.00 in ARPA funds for the Quad City Arts and authorize the City Manager to execute the agreement.
RC	Roll Call vote is needed.

Date: June 26, 2023

Introduction and Background Information:

In early September 2022, Mayor Thoms proposed allocating ARPA funds to 4 nonprofit organizations in an effort to assist them in recovering from the COVID-19 pandemic.

On September 26, 2022, the City Manager and ARPA Program Manager presented the proposed funding recommendations for these 4 nonprofits to members of the City Council. At that meeting, Council members requested additional information on how the funds would be used.

On January 23, 2023, the ARPA Program Manager provided Council members with additional details and information on the 4 nonprofits and how the ARPA funds would be expended.

Summary of services and impact to the City	Quad City Arts is located in the heart of Rock Island at 1715 2nd Avenue. At this location is our gallery, retail space, and our offices. The following programs impact the City of Rock Island: • Gallery and retail space in Rock Island - sees an average of 5,000 visitors annually. • Public Sculpture Program – In 2022 we facilitated the installation of three rotating sculptures and the purchase of two sculptures. This is a program the City of RI pays for through the Arts Services Agreement. However, due to budget cuts, this service agreement does not cover the full cost of the program and Quad City Arts contributes the remaining expenses. • Visiting Artist Series – This program places performing artists in our schools and community sites. The amount of engagement in Rock Island varies year to year based on

	content and availability. In the 2021-2022 season, we had 25 outreach activities and one public concert in the City of Rock Island. Most of these activities were in the public-school system, but others happened in Schwiebert Park, Friendship Manor, MLK Center, and the public concert was in the Stern Center. These outreach activities reached roughly 3,000 people. • Metro Arts Youth Apprenticeship Program – Projects in the City of Rock Island vary based on funding, but every year the program includes students from Rock Island. In 2022, we had 14 students in the program, all of which were paid. • Arts Dollars – This program gives dollars to artists and arts organizations, including ones that reside in Rock Island. • Quad Cities Chalk Art Fest is an event that Quad City Arts hosts annually and in 2021 moved the event to its new home in Schwiebert Park. This event drew over 5,000 visitors in 2021 and over 7,000 in 2022. This event is also free to the community and to the artist who participate, who are still eligible for cash prizes. • Outside of our programming, Quad City Arts works with the Rock Island Arts Commission and works towards goals they have set forth through guidance from public input sessions. One key example of this is the soon to be announced Artist Index. The Artist Index will be an online registry of the artists in our region. A place where artists can showcase their work and the community can find artists. While this is not only for Rock Island artists, it was born out of conversations with the public in Rock Island facilitated by the Rock Island Arts Commission. Quad City Arts also continues to work with Visit Quad Cities to encourage visitors and residents alike to engage with public art. In 2022, we worked together to launch the QC Public Art Trail. • The QC Public Art Trail provides an incentive to go look at public art, but it also provides a convenient location to find locations of public art in our community. • Quad City Arts is also partnering with Americans for the Arts to participate in the Arts and Economic Prosperity Study. This study will measure the economic impact of the arts in the Quad Cities Region. Our region will be included in the national study and will be highlighted in our region at the Americans for the Arts National Convention in 2022. As part of this study, we will be able to provide an online “calculator” to measure the economic impact of arts events in our region using data collected in our region. Quad City Arts is a regional organization. While we are headquartered and love Rock Island, we measure our organizational impact numbers as a region. Since we are a bi-state

	region, we do track the percentages of our services split between states and in 2021 52% of our services were in the state of Illinois. This number fluctuates year to year but stays in the 48-52% range. According to the Americans for the Arts Economic Prosperity Calculator, Quad City Arts has an economic impact of $4.4 Million.
What is the program or project to be funded and how will the impact be measured?	Quad City Arts believes that public art and placemaking should be done with input from the community it is going into. For Rock Island, this would start with the Rock Island Arts Commission. We would work with the arts commission to determine the best use of the dollars in the end. Initially, we have three projects that we would like to see happen in Rock Island. 1. The City of Rock Island has invested in public art, but as time passes the art needs repair, removed, or replaced. Quad City Arts would like to use ARPA dollars to not only accomplish some of those goals, but to work with the Arts Commission to create a plan moving forward to prevent murals and other public art from getting to that point, essentially an ongoing maintenance plan for public art. Public Art is proven to drive tourism and increase civic pride, however when left to deteriorate it can feel as if the area is “rundown.” A prime example is the mural at 1820 4th Avenue, In Remembrance of Past Presidents, this mural is peeling and faded. This mural needs to be removed or painted over. Costs associated with this would vary based on the public art piece, the artist, and the choice to repair, remove, or replace. For most projects, Quad City Arts allocates 15% to admin with the remainder going towards the project. Using $50,000 as an example, $42,500 would be used for materials and artist fees. Depending on the direction the Arts Commission would like to take, $50,000 would pay 4-14 artists and address 4-6 public art pieces. 2. Another project is a long-term investment into the community. The Quad Cities Region lacks spaces for artist studio space and artist retail space. Working with the Arts Commission, DARI, and the City’s Economic Development Office we would like to explore the creation of an artist incubator space similar to the concept of Shoppes on Second. This would be the only space like it in the Quad Cities and has the potential to draw a number of artists to Rock Island. Quad City Arts is aware of numerous artists who are not only looking for space to create but are also interested in locating in Rock Island. The total cost of this project is currently unknown and would depend on numerous factors, but funds would be used to develop a plan and begin working the plan. 3. The final project is a new event for Rock Island. A common request by the Arts Commission and feedback from public art forums is for the return of Gallery Hop. Gallery Hop only worked because there were more galleries in Rock Island. A new pop-up style event could be created to both showcase artists and to showcase available spaces in Downtown. Working with

	organizations who own space in Downtown (real estate agencies, DARI, etc.) we could open these spaces to artists to create pop-up galleries for a specific weekend. This would allow artists to showcase and sell their work, encourage visitors to come to Downtown Rock Island, and allow people to see spaces that have been closed creating an open house for these spaces. All of these projects increase dollars to artists, increase civic pride, and will draw visitors to Rock Island.
How will use of these funds include programs or projects that will have an impact on or provide services to Disproportionately Impacted Communities?	Quad City Arts has made a commitment to diversity, equity, and inclusion. Part of this commitment is to support more BIPOC artists through all our programming. This includes an increased effort to find and work with BIPOC artists in our public art programs (murals, sculptures, etc.). If the Rock Island Arts Commission and DARI were interested in working to create an artist incubator space, this could give preference to disproportionately impacted communities. Additionally, public art is for everyone. A project to refurbish, remove, or replace public art is not intended just for Downtown, but for RI as a whole. However, RI does have most public art that needs work located in the Downtown area.

Previous Council Action (if any):

Budget Impact:
$50,000 in ARPA Funds (unrestricted - City Lost Revenue)

Additional Information as applicable (i.e. provide alternative options, community or staff input, staffing impact; resident impact; etc.):

Council Goal (if applicable):

Recommendation:
The Mayor's Office recommends approval of the $50,000 in ARPA funds for the Quad City Arts.

Submitted by: Samantha Gange, City Clerk

Approved by: Joshua Adams

Memorandum

To: Rock Island City Council

From: Melissa Holderfield, Administrative Assistant, Tarah Sipes, Miles Brainard, Director

Subject: Report from the Community & Economic Development Department regarding a Lease Agreement with Mr. Scott Doxstader to farm the City-owned parcels in the Ridgewood Business Park area.

Motion:	Motion whether or not to approve the lease agreement subject to minor attorney modifications and authorize the City Manager to execute the contract documents.
RC	Roll Call vote is needed.

Date: June 26, 2023

Introduction and Background Information:

Mr. Scot Doxstader has expressed interest in leasing City-owned property, parcel number 11-326 in Blackhawk Township, also known as the Ridgewood Business Park, in the City of Rock Island. Mr. Doxstader would like to arrange an annual lease agreement with the City to farm the site. The proposed lease rate for 2023 is $120.00 per tillable acre, which is consistent with the other City farm leases proposed for 2023. The tillable portion of this property will be determined upon planting as portions of the property have been un-tillable during the past three seasons. The lease agreement requires the operator to farm the land in an efficient and steward-like manner, including:

- Compliance with pollution control, water quality, and environmental protection requirements as required by local, state, and federal agencies;
- Compliance with all local, state, and federal laws and regulations governing activities related to the application of manure; and
- Control of weeds in fields, fence rows, road ditches, and all other areas of the farm utilizing conventional tillage practices.

Previous Council Action (if any):

The City Council has approved this lease agreement for several years.

Budget Impact:

The City will receive for 2023 $120.00 per tillable acre and Leasee will pay property taxes.

Additional Information as applicable (i.e. provide alternative options, community or staff input, staffing impact; resident impact; etc.):

Council Goal (if applicable):

Objective #4 – Expand and strengthen tax base and increase city revenues.

Recommendation:

The Community & Economic Development Department recommends that the City Council approve the lease agreement with Mr. Scot Doxstader subject to minor modifications by the City Attorney and authorize the City Manager to execute and contract documents.

Submitted by: Melissa Holderfield, Administrative Assistant

Approved by: Joshua Adams

CITY OF ROCK ISLAND
LEASE AGREEMENT

THIS LEASE AGREEMENT made and entered into the ____ day of _____, 2023, by and between the CITY OF ROCK ISLAND, ILLINOIS, a Municipal Corporation (hereinafter, CITY) and Scot Doxstader (hereinafter, TENANT).

In consideration of the mutual covenants and agreements set forth herein below, the CITY and TENANT agree as follows:

SECTION 1 — PREMISES

The CITY rents and leases to the TENANT approximately 35+/- acres, of which the parties agree approximately 9.0 acres are tillable, (hereinafter also referred to as "Premises"), Tax Parcel Number 11-326, particularly described in the legal description attached hereto and incorporated herein as Exhibit A.

SECTION 2 — TERM OF AGREEMENT

A. TERM — The term of this Agreement, hereafter called LEASE, shall be from April 1, 2023 through December 31, 2023 and the TENANT shall surrender possession of the Premises at the end of the term identified above.

B. RENEWAL — Should the TENANT desire to extend the LEASE in succeeding years, the term of the LEASE will be renegotiated at least thirty (30) days prior to the end of the Term of this lease. Any intent to extend the LEASE beyond the above-stated term shall be placed in writing and delivered to the CITY at least thirty (30) days prior to the end of the current term.

C. RIGHT TO TERMINATE — The CITY or TENANT shall have the right to terminate this LEASE before the end of the term upon giving a thirty (30) day written notice of such termination; provided, however, that CITY agrees to pay TENANT'S costs and expenses related to farming the Premises should termination occur prior to TENANT harvesting crops planted herein.

D. DEFAULT — If either party fails to carry out substantially the terms of the lease in due and proper time, the other party may serve a notice of default citing the instance(s) of default. If the default is not cured within 15 days after notice is sent as provided in Section 9 below, the lease may be terminated by sending notice of termination on or after the 16th day following the notice of default.

E. YIELDING POSSESSION — The TENANT agrees at the expiration or termination of this lease to yield possession of the Premises to the CITY without further demand or notice, in as good order and condition as when TENANT entered upon the lease, loss by fire, flood, or tornado, and ordinary wear excepted. If the TENANT fails to yield possession, the TENANT shall pay to the CITY an amount of rent per day that is equal to double rent based on payment made during the prior year for each day the TENANT remains in possession, in addition to court costs and attorney fees, and any damages caused by the TENANT to the CITY'S land, improvements, livestock or other related farm personal property. Payments made by the TENANT do not give the TENANT any interest in the land or to land and improvements.

SECTION 3 — RENT

A. RENT — The TENANT agrees to pay annual cash rent for the above-described Premises in the amount of One Hundred Twenty Dollars ($120.00) per tillable acre to the CITY. Said rent shall be due and payable in full to the CITY on or before December 31, 2023. Should the TENANT and CITY extend the LEASE for succeeding years, the annual cash rent shall be due and payable in full to the CITY on or before December 31 of each year.

B. CITY'S LIEN — The CITY shall have a lien by operation of law, statute, and by agreement between the TENANT and CITY, on crops grown or growing on the above-described Premises as security for rent herein specified and for the faithful performance of the terms of the lease. Within ten days of being requested by the CITY, the TENANT shall provide the CITY with the names of persons or entities to whom TENANT intends to sell crops grown on the above-described Premises. Additionally, the TENANT agrees to cooperate fully in enabling the CITY'S timely perfection of its interest in any lien that may be provided by law, statute, and agreement such as now exists and as may be altered or amended in the future. The TENANT agrees to provide in a timely manner the CITY or the CITY'S attorney with the information that is considered necessary in order to protect and preserve the CITY'S right as provided by law, statue, and this agreement. If laws affecting this paragraph are changed in any manner, then the TENANT agrees to cooperate fully with any efforts of CITY to protect its interest.

C. ACCELERATION CLAUSE — If, during the term of this lease, any of the machinery, equipment, goods, and chattels of the TENANT shall be seized or taken by creditors of the TENANT or if the TENANT becomes bankrupt or insolvent, then the current year's rent shall become due and payable and the term shall immediately be forfeited and void at the option of the CITY, the CITY having full and unrestricted access to the land as though the lease had not been made.

SECTION 4 — USE OF PREMISES

TENANT may use the Premises for grain production only. Any other use shall be deemed a material breach of this lease, unless authorized in writing by the CITY.

SECTION 5 — CITY'S INVESTMENT AND EXPENSES

The CITY agrees to provide the property.

SECTION 6 — TENANT'S INVESTMENT AND EXPENSES

The TENANTS agree to furnish the property and to pay the items of expense listed below:

1. All property taxes assessed for the Premises.

2. All the machinery, equipment, labor, fuel, and power necessary to farm the Premises properly.

3. All seed, inoculation, disease-treatment materials, and fertilizers.

4. Before commencing any operations on the Premises, the TENANT shall procure and provide to the City a certificate of insurance naming the CITY as an Additional Insured on TENANT'S farm liability or general liability insurance policy, which shall have limits not less than $1,000,000.00.

SECTION 7—TENANT'S DUTIES IN FARM OPERATION

The TENANT further agrees to perform and carry out the stipulations below:

1. To cultivate the farm faithfully and in a timely, thorough, and workmanlike manner.

2. To inoculate all alfalfa and soybean seed sown on land not known to be thoroughly inoculated for the crop planted.

3. To prevent noxious weeds from going to seed on said Premises and destroying same and keeping the weeds and grass cut. This maintenance work to include all non-tillable surfaces of the leased properties in addition to the maintenance of the tillable acreage.

4. To keep open ditches, tile drains, tile outlets, grass waterways, and terraces in good repair.

5. To preserve established watercourses or ditches and to refrain from any operation that would injure them.

6. To take proper care of all trees, vines, and shrubs, and to prevent injury to the same.

7. To keep the Premises neat and orderly.

8. To prevent all unnecessary waste, loss, or damage to the property of the CITY.

9. To comply with pollution control and environmental protection requirements, to implement soil erosion control practices, and to comply with soil loss standards mandated by the state.

10. To practice fire protection, follow safety rules, and abide by restrictions in any applicable insurance contracts.

11. To use prudence and care in transporting, storing, handling, and applying all fertilizers, pesticides, herbicides, and other chemicals and similar substances; to read and follow label instructions for the use of such materials in order to avoid injury or damages to persons or property or both on the leased Premises and adjoining areas; and to comply with state pesticide training, licensing, storing and usage.

12. Any chemicals for weed or insect control or other use, when used, should be applied at levels not to exceed the manufacturer's recommendation for the soil types involved. The TENANT agrees to provide to the CITY, annually, a written report indicating the product name, amount, date of application and location of application

of all pesticides, fertilizers, and seed used on the farm, within 30 days of a written request.

13. No chemicals will be stored on the property for more than one year. When chemicals or petroleum products are stored on the Premises, they will be only those planned to be used for farming purposes and will be in closed, tight containers above ground, clearly marked. No chemicals or chemical containers will be disposed of on the Premises.

14. To generally follow Natural Resource Conservation Service and Farm Service Agency recommendations and to maintain all other requirements necessary to qualify current and future farm operators to participate in federal farm programs.

15. Not to assign this LEASE to any person or persons or sublet any part of the Premises herein leased.

16. Not to displace any property pins, grading or utilities installed upon the Premises.

17. Not to erect or permit to be erected any structure or building or to incur any expense to the CITY for such purposes.

18. Not to permit, encourage, or invite other persons to use any part of the Premises for any purpose or activity (including hunting) not directly related to its use for agricultural production.

19. Not to plow any permanent pasture or meadowland.

20. Not to allow any stock on any part of the Premises.

21. Not to burn or remove cornstalks, straw, or other crop residues grown upon the farm.

22. Not to cut live trees for resale purposes or personal uses.

23. Not to erect or permit to be erected any commercial advertising signs on the farm.

24. To comply with all state and federal laws, rules and regulations relating to the Premises.

SECTION 8 — ADDITIONAL PROVISIONS AND AGREEMENTS

A. CITY'S RIGHT OF ENTRY — The CITY reserves the right personally or by agents, employees, or assigns, to enter upon the Premises at any reasonable time to view them, to work or make repairs or improvements thereon, to have access to any portion of the Premises or improvements that have been excepted from this lease, to develop mineral resources, or, after notice of termination has been given and following severance of the crops, to prepare the land for the next year's crop and for any other operation necessary in good farming by a succeeding operator. Prior to any default by the TENANT, the CITY shall not interfere with the TENANT'S carrying out of the regular farming operation.

B. MINERAL RIGHTS — Nothing in the LEASE shall confer upon the TENANT any right to mineral rights underlying the land. All mineral rights and interests, if any, remain the sole property of the CITY.

C. TREE TRIMMING — TENANT may trim the trees that interfere with farming. Tree harvesting is not permitted, however, and firewood shall not be removed from the Premises.

D. EXTENT OF AGREEMENT — The terms of this LEASE shall be binding on the heirs, executors, administrators, and assigns of both CITY and TENANT in like manner as upon the original Parties.

E. CITY LIABILITY — The TENANT takes possession of the leased Premises subject to the hazards of operating a farm, and assumes all risk of accidents personally as well as for family, employees, independent contractors, or agents in pursuance of farming operations, or in performing repairs on buildings, fences, tile, and other improvements. Furthermore, TENANT shall indemnify and hold the CITY harmless from any and all acts in connection with use or misuse of Premises and from any and all accidents on the Premises.

F. INTEGRATION CLAUSE — This document, when fully executed, shall represent the entire agreement between the Parties, and no party may rely upon any other written or oral representation concerning this matter.

G. ALIENATION CLAUSE — City shall have the right to alienate any or all of its rights in the Premises during the Term of this lease upon thirty (30) days written notice to Tenants.

SECTION 9 — NOTICE

All notices required under this lease shall be deemed to be properly served when delivered in writing personally or sent certified mail as follows:

To the Tenant:	To the City:
Mr. Scot Doxstader 2385 North 1800 Avenue Coal Valley, IL 61240	David G. Morrison City Attorney 1515 4th Avenue Rock Island, IL 61201

IN WITNESS THEREOF, the Parties have hereunto set their hands and seal and have caused these presents to be signed.

_____	_____
Tenant	City Manager
_____	_____
Witness	City Clerk

Memorandum

To: Rock Island City Council

From: Tanner Osing, Miles Brainard, Director

Subject: Report from the Community & Economic Development Department regarding an Updated National Register of Historic Places (HRHP) Nomination for the Broadway Historic District.

Motion:	Motion whether or not to endorse the updated NRHP nomination for the Broadway Historic District subject to minor consultant revisions.
RC	Roll Call vote is needed.

Date: June 26, 2023

Introduction and Background Information:

In 2021, the City received a Certified Local Government (CLG) grant to undertake an update to the National Register of Historic Places (NRHP) nomination for the Broadway Historic District. The district was previously named to the NRHP in 1998. Since that time, the district has experienced change, with many buildings being restored and also some contributing structures being lost to demolition. The scope of work for the project included the following:

- Adjust the district boundaries to account for demolished buildings
- Update what buildings are contributing or non-contributing given more recent "unveilings" and rehabilitations.
- Account for missing buildings in the nomination
- Extend the period of significance to 1971 so that mid-century styles are included
- Add current, higher quality images and maps of the district.

The consultant for the project, McGuire Igleski & Associates, Inc, has now provided a full draft of the updated nomination that fulfills the original scope of work with the exception of adjusting the district's boundary. After discussions with the State Historic Preservation Office (SHPO) and the consultant, it was advised not to pursue a boundary change due to the potential for opening the district up to increased scrutiny. There was concern that the district's boundary could be dramatically reduced given issues regarding continuity and some loss of integrity. Despite this hurdle, the project has been successful overall and has highlighted changes in the district over the past 25 years. The majority of contributing resources lost is attributable to secondary structures (i.e. garages and outbuildings) being demolished or heavily altered, although primary structures have also been lost to demolition. Additionally, the update captured 22 new contributing structures that were either not in the original inventory or have gained integrity. 21 new contributing structures are also included due to the extended period of significance. These additions allow property owners to be eligible for the State's Historic Property Tax Assessment Freeze if undertaking historically sensitive rehabilitation work.

At their May 31st meeting, the Preservation Commission voted unanimously to recommend that the City Council endorse the updated NRHP nomination. No formal approval is needed for amendments to NRHP nominations, although staff appreciate the Council's review and endorsement. Staff expect the updated nomination to officially be approved sometime in early Fall 2023 after it is reviewed by all necessary parties.

Previous Council Action (if any):

Budget Impact:

N/A

Additional Information as applicable (i.e. provide alternative options, community or staff input, staffing impact; resident impact; etc.):

N/A

Council Goal (if applicable):

Goal #3: Economic Development; Objective #5: Expand programs and activities that improve existing housing and promote the development of new housing.

Goal #4: Placemaking.

Recommendation:

The Community & Economic Development Department and Preservation Commission recommend that the City Council endorse the updated NRHP nomination for the Broadway Historic District subject to minor consultant revisions.

Submitted by: Tanner Osing

Approved by: Joshua Adams

United States Department of the Interior
National Park Service

National Register of Historic Places Registration Form

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in National Register Bulletin, *How to Complete the National Register of Historic Places Registration Form.* If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. **Place additional certification comments, entries, and narrative items on continuation sheets if needed (NPS Form 10-900a).**

1. Name of Property

historic name Broadway Historic District (Additional Documentation)

other names/site number

Name of Multiple Property Listing

(Enter "N/A" if property is not part of a multiple property listing)

2. Location

street & number 700-1400 Blocks of 17th Street, 700 Block of 18th Street, 700-1200 Blocks of 19th Street, 700-1400 Blocks of 20th Street, 700-1200 Blocks of 21st Street, 700-1200 Blocks of 22nd Street, 500-1000 Blocks of 23rd Street, 1700-2200 Blocks of 7th Avenue, 1700-1900 Blocks of 8th Avenue, 1530 and the 1700-2200 Blocks of 9th Avenue, 1539 and the 1700-2200 Blocks of 10th Avenue, 1619 and the 1700-2100 Blocks of 12th Avenue, 1627 and the 1700-1900 Blocks of 13th Avenue, and the 1700 Block of Lincoln Court.

☐ not for publication

city or town

☐ vicinity

state Illinois county Rock Island zip code 61201

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended,

I hereby certify that this ___ nomination ___ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60.

In my opinion, the property ___ meets ___ does not meet the National Register Criteria. I recommend that this property be considered significant at the following level(s) of significance: ___ **national** ___ **statewide** ___ **local**

Applicable National Register Criteria: ___ **A** ___ **B** ___ **C** ___ **D**

Signature of certifying official/Title: Deputy State Historic Preservation Officer Date

Illinois Historic Preservation Agency
State or Federal agency/bureau or Tribal Government

In my opinion, the property ___ meets ___ does not meet the National Register criteria.

Signature of commenting official Date

Title State or Federal agency/bureau or Tribal Government

Broadway Historic District | Rock Island, Illinois
Name of Property | County and State

4. National Park Service Certification

I hereby certify that this property is:

___ entered in the National Register
___ determined eligible for the National Register
___ determined not eligible for the National Register
___ removed from the National Register
___ other (explain:) _____

Signature of the Keeper | Date of Action

Broadway Historic District | Rock Island, Illinois
Name of Property | County and State

5. Classification

Ownership of Property
(Check as many boxes as apply.)

- [x] private
- [ ] public - Local
- [ ] public - State
- [ ] public - Federal

Category of Property
(Check only **one** box.)

- [ ] building(s)
- [x] district
- [ ] site
- [ ] structure
- [ ] object

Number of Resources within Property
(Do not include previously listed resources in the count.)

Contributing	Noncontributing	
504	12	buildings
		site
		structure
		object
654	180	**Total**

Number of contributing resources previously listed in the National Register

3

6. Function or Use

Historic Functions
(Enter categories from instructions.)

DOMESTIC
COMMERCE
RELIGION

Current Functions
(Enter categories from instructions.)

DOMESTIC
COMMERCE
RELIGION
RECREATION AND CULTURE

7. Description

Broadway Historic District | Rock Island, Illinois
Name of Property | County and State

Architectural Classification
(Enter categories from instructions.)

MID-19TH CENTURY/Gothic Revival
MID-19TH CENTURY/Exotic Revival
LATE VICTORIAN/Italianate
LATE VICTORIAN/Second Empire
LATE VICTORIAN/Stick and Eastlake
LATE VICTORIAN/Shingle
LATE VICTORIAN/Folk Victorian
LATE VICTORIAN/Queen Anne
LATE 19TH AND 20TH CENTURY REVIVALS/Colonial
LATE 19TH AND 20TH CENTURY REVIVALS/Italian Renaissance
LATE 19TH AND 20TH CENTURY REVIVALS/ Neoclassical
LATE 19TH AND 20TH CENTURY REVIVALS/French Eclectic
LATE 19TH AND 20TH CENTURY REVIVALS/Tudor Revival
LATE 19TH AND EARLY 20TH CENTURY AMERICAN MOVEMENTS/Craftsman
LATE 19TH AND EARLY 20TH CENTURY AMERICAN MOVEMENTS/Minimal Traditional
MODERN MOVEMENT/International
MODERN MOVEMENT/Modern
MODERN MOVEMENT/Ranch
MODERN MOVEMENT/Contemporary
OTHER/New Traditional

Materials
(Enter categories from instructions.)

WOOD
BRICK
STONE
METAL
STUCCO
GLASS
ASPHALT
SYNTHETICS

Broadway Historic District | Rock Island, Illinois
Name of Property | County and State

Narrative Description

(Describe the historic and current physical appearance and condition of the property. Describe contributing and noncontributing resources if applicable. Begin with **a summary paragraph** that briefly describes the general characteristics of the property, such as its location, type, style, method of construction, setting, size, and significant features. Indicate whether the property has historic integrity).

Summary Paragraph

SEE CONTINUATION SHEET

Narrative Description

SEE CONTINUATION SHEET

Broadway Historic District | Rock Island, Illinois
Name of Property | County and State

8. Statement of Significance

Applicable National Register Criteria
(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)
SEE CONTINUATION SHEET

- [ ] A Property is associated with events that have made a significant contribution to the broad patterns of our history.
- [ ] B Property is associated with the lives of persons significant in our past.
- [x] C Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- [ ] D Property has yielded, or is likely to yield, information important in prehistory or history.

Areas of Significance
(Enter categories from instructions.)
ARCHITECTURE

Period of Significance
Ca. 1854-1973

Significant Dates

Significant Person
(Complete only if Criterion B is marked above.)

Cultural Affiliation (if applicable)

Architect/Builder
See original nomination.

Criteria Considerations
(Mark "x" in all the boxes that apply.)

Property is:

- [ ] A Owned by a religious institution or used for religious purposes.
- [ ] B removed from its original location.
- [ ] C a birthplace or grave.
- [ ] D a cemetery.
- [ ] E a reconstructed building, object, or structure.
- [ ] F a commemorative property.
- [ ] G less than 50 years old or achieving significance within the past 50 years.

Broadway Historic District | Rock Island, Illinois
Name of Property | County and State

Statement of Significance Summary Paragraph (Provide a summary paragraph that includes level of significance, applicable criteria, justification for the period of significance, and any applicable criteria considerations).

SEE CONTINUATION SHEET

Narrative Statement of Significance (Provide at least **one** paragraph for each area of significance.)

SEE CONTINUATION SHEET

9. Major Bibliographical References

Bibliography (Cite the books, articles, and other sources used in preparing this form.)

Biographical Record of Rock Island County, Illinois: Illustrated. Chicago, IL: S.J. Clarke Publishing Company, 1897.

Black Hawk, S. chief., Patterson, J. B. (John Barton). *Autobiography of Ma-ka-tai-me-she-kia-kiak, or Black Hawk: embracing the traditions of his nation, various wars in which he has been engaged, and his account of the cause and general history of the Black Hawk war of 1832, his surrender, and travels through the United States.* [St. Louis: Press of Continental Printing Co.,1882.

Braunwart, Bob & Bob Carroll (1983). "The Rock Island Independents" (PDF). Coffin Corner. Professional Football Researchers Association. 5 (3): 1–7.

Braunwart, Bob & Bob Carroll (1981). "The First NFL Game(s)" (PDF). Coffin Corner. Professional Football Researchers Association. 3 (2): 1–4.

Calloway, Stephen, Elizabeth Cromley, and Alan Powers, eds. *The Elements of Style: An Encyclopedia of Domestic Architectural Detail*. Buffalo, NY: Firefly Books, 2005.

Carley, Rachel. *The Visual Dictionary of American Domestic Architecture*. New York, NY: Henry Holt and Co., 1994.

City of Rock Island. Rock Island History. Accessed December 18, 2018. https://www.rigov.org/99/Rock-Island-History.

Collins, David R., Rich Johnson, and Bessie J. Pierce. *Rock Island: All American City*. Charleston, SC: Arcadia, 1999.

Coopman, David. *Images of America: Rock Island County*. Charleston, SC: Arcadia Publishing, 2008.

Foster, Gerald. *American Houses: A Field Guide to the Architecture of the Home.* Boston, MA: Houghton Mifflin Co., 2004.

Gottfried, Herbert, and Jan Jennings. *American Vernacular Buildings and Interiors, 1870-1960*. New York: W.W. Norton & Company, 2009.

Harris, Cyril M. *American Architecture, An Illustrated Encyclopedia.* New York, W.W. Norton & Company, 1998.

Historic Rock Island County: History of the Settlement of Rock Island County from the ... Earliest Known Period to the Present Time. Rock Island, IL: Kramer & Company, 1908.

Illinois Sesquicentennial Committee and the Illinois Sesquicentennial Commission. *Historic Rock Island County*. Rock Island, IL: Rock Island County Illinois Sesquicentennial Committee and the Illinois Sesquicentennial Commission, 1968.

Longstreth, Richard W. *The Buildings of Main Street: A Guide to American Commercial Architecture*. Washington, D.C.: Preservation Press, 1987.

McAlester, Virginia, and A. Lee McAlester. *A Field Guide to American Houses*. 2nd Ed. ed. New York: Knopf, 2013.
Baker, John Milnes. *American House Styles, A Concise Guide.* New York: W. W. Norton & Company, 1994.

National Register Nomination Form, “Broadway Historic District”. Washington D.C.: National Park Service, 1998.

Seusy, Kathleen. *Rock Island History: A Companion to the Architectural Walking Tours*. PDF. Rock Island: Rock Island Preservation Commission, 1999.

"Styles of the Modern Era." Accessed February 13, 2019. https://docomomo-us.org/explore-modern/styles-of-the-modern-era?page=2.

Walker, Charles L. "History of the Title to Lands in Rock Island County, Illinois." *Journal of the Illinois State Historical Society (1908-1984)* 4, no. 4 (1912): 426-39. http://www.jstor.org/stable/40194416.

Whitney, Ellen M., ed. *The Black Hawk War, 1831–1832: Volume I, Illinois Volunteers*. Springfield, Illinois: Illinois State Historical Library, 1970.

———, ed. *The Black Hawk War, 1831–1832: Volume II, Letters & Papers, Part I, April 30, 1831 – June 23, 1832*. Springfield, Illinois: Illinois State Historical Library, 1973.

———, ed. *The Black Hawk War, 1831–1832: Volume II, Letters & Papers, Part II, June 24, 1832 – October 14, 1834*. Springfield, Illinois: Illinois State Historical Library, 1975.

———, ed. *The Black Hawk War, 1831–1832: Volume II, Letters and Papers, Part III, Appendices and Index*. Springfield, Illinois: Illinois State Historical Library, 1978.

Wilson, Mark (2005). " Chicago, Rock Island, & Pacific Railroad Co.". The Electronic Encyclopedia of Chicago. Chicago Historical Society. Accessed January 15, 2019.

OTHER SOURCES:

1. Sanborn Fire Insurance Maps: Apr. 1886, Jan. 1892, Oct. 1898, 1906, 1906-May 1950, 1906 - Republished 1957, and 1969.

Previous documentation on file (NPS):

____preliminary determination of individual listing (36 CFR 67 has been requested)
__X__ previously listed in the National Register
____previously determined eligible by the National Register
____designated a National Historic Landmark
____recorded by Historic American Buildings Survey #_____
____recorded by Historic American Engineering Record # _____
____recorded by Historic American Landscape Survey # _____

Primary location of additional data:

____State Historic Preservation Office
____Other State agency
____Federal agency
____Local government
____University
____Other
Name of repository: _____

Historic Resources Survey Number (if assigned):

Broadway Historic District | Rock Island, Illinois
Name of Property | County and State

10. Geographical Data

Acreage of Property 168 acres
(Do not include previously listed resource acreage; enter "Less than one" if the acreage is .99 or less)

Latitude/Longitude Coordinates
Datum if other than WGS84:
(enter coordinates to 6 decimal places)

1	41.505265°	-90.576655°		3	41.499494°	-90.567260°	
	Latitude	Longitude			Latitude	Longitude	
2	41.496780°	-90.573707°		4	41.507470°	-90.567211°	
	Latitude	Longitude			Latitude	Longitude	

Verbal Boundary Description (Describe the boundaries of the property.)

No changes. See original nomination.

Boundary Justification (Explain why the boundaries were selected.)

No changes. See original nomination.

11. Form Prepared By

name/title Erica Ruggiero date Xx xx, 2023
organization McGuire Igleski & Associates, Inc. telephone 847. 328. 5679 ext. 114
street & number 1330 Sherman Avenue, Suite A email erica@miarchitects.com
city or town Evanston state Illinois zip code 60201

Additional Documentation

Submit the following items with the completed form:

- **GIS Location Map (Google Earth or BING)**
- **Local Location Map**
- **Site Plan**
- **Floor Plans (As Applicable)**
- **Photo Location Map** (Include for historic districts and properties having large acreage or numerous resources. Key all photographs to this map and insert immediately after the photo log and before the list of figures).

Broadway Historic District | Rock Island, Illinois
Name of Property | County and State

Photographs:

Submit clear and descriptive photographs. The size of each image must be 3000x2000 pixels, at 300 ppi (pixels per inch) or larger. Key all photographs to the sketch map. Each photograph must be numbered and that number must correspond to the photograph number on the photo log. For simplicity, the name of the photographer, photo date, etc. may be listed once on the photograph log and doesn't need to be labeled on every photograph.

Photo Log

Name of Property: Broadway Historic District

City or Vicinity: Rock Island

County: Rock Island **State:** Illinois

Photographer: Erica Ruggiero

Date Photographed: June 11, 2022

Description of Photograph(s) and number, include description of view indicating direction of camera:
*Note: The following photographs are new to be included in the additional documentation.

Description of Photograph(s) and number, include description of view indicating direction of camera: View looking southwest at the west side of the 700-Block of 17th Street from 728 17th Street. 1 of 32.

Description of Photograph(s) and number, include description of view indicating direction of camera: View looking north at the southeast corner of the intersection of 17th Street and 8th Avenue. 2 of 32.

Description of Photograph(s) and number, include description of view indicating direction of camera: View looking southwest at the southeast corner of the intersection of 17th Street and 8th Avenue. 3 of 32.

Description of Photograph(s) and number, include description of view indicating direction of camera: View looking southwest at the west side of the 800-Block of 17th Street from 814 17th Street. 4 of 32.

Description of Photograph(s) and number, include description of view indicating direction of camera: View looking southeast at the east side of the 800-Block of 17th Street from 845 17th Street. 5 of 32.

Description of Photograph(s) and number, include description of view indicating direction of camera: View looking east at the south side of the 1700-Block of 9th Avenue from 17th Street. 6 of 32.

Description of Photograph(s) and number, include description of view indicating direction of camera: View looking southeast at the east side of the 1000-Block of 17th Street from 1041 17th Street. 7 of 32.

Description of Photograph(s) and number, include description of view indicating direction of camera: View looking southeast at the east side of the 1200-Block of 17th Street from 1215 17th Street. 8 of 32.

Description of Photograph(s) and number, include description of view indicating direction of camera: View looking southwest at the west side of the 1200-Block of 17th Street from 1216 17th Street. 9 of 32.

Description of Photograph(s) and number, include description of view indicating direction of camera: View looking northwest at the west side of the 1200-Block of 17th Street from the northeast corner of 17th Street and 13th Avenue.
10 of 32.

Description of Photograph(s) and number, include description of view indicating direction of camera: View looking southeast at the south side of Lincoln Court. 11 of 32.

Description of Photograph(s) and number, include description of view indicating direction of camera: View looking southwest at the west side of the 700-Block of 18th Street from the southeast corner of 18th Street and 7th Avenue. 12 of 32.

Description of Photograph(s) and number, include description of view indicating direction of camera: View looking southeast at the east side of the 700-Block of 19th Street from 725 19th Street. 13 of 32.

Description of Photograph(s) and number, include description of view indicating direction of camera: View looking southeast at the east side of the 900-Block of 19th Street from 925 19th Street. 14 of 32.

Description of Photograph(s) and number, include description of view indicating direction of camera: View looking east on 10th Avenue from the intersection of 19th Street and 10th Avenue. 15 of 32.

Description of Photograph(s) and number, include description of view indicating direction of camera: View of the south side of the 1700-Block of 13th Avenue looking southeast from 1715 13th Avenue. 16 of 32.

Description of Photograph(s) and number, include description of view indicating direction of camera: View looking southeast at the east side of the 700-Block of 20th Street from the southwest corner of 20th Street and 7th Avenue. 17 of 32.

Description of Photograph(s) and number, include description of view indicating direction of camera: View looking southeast at the east side of the 700-Block of 20th Street from 702 19th Street. 18 of 32.

Description of Photograph(s) and number, include description of view indicating direction of camera: View looking southwest at the west side of the 800-Block of 20th Street from the northeast corner of the intersection of 20th Street and 8th Avenue. 19 of 32.

Description of Photograph(s) and number, include description of view indicating direction of camera: View looking southwest at the west side of the 800-Block of 20th Street from 833 20th Avenue. 20 of 32.

Description of Photograph(s) and number, include description of view indicating direction of camera: View looking southwest at the west side of the 900-Block of 20th Street from the northeast corner of the intersection of 20th Street and 9th Avenue. 21 of 32.

Description of Photograph(s) and number, include description of view indicating direction of camera: View looking northwest at the west side of the 800-Block of 20th Street from the southeast corner of the intersection of 20th Street and 9th Avenue. 22 of 32.

Description of Photograph(s) and number, include description of view indicating direction of camera: View looking southeast at the east side of the 900-Block of 20th Street from the southwest corner of the intersection of 20th Street and 9th Avenue. 23 of 32.

Description of Photograph(s) and number, include description of view indicating direction of camera: View looking northeast at the east side of the 900-Block of 20th Street from the northwest corner of the intersection of 20th Street and 10th Avenue. 24 of 32.

Description of Photograph(s) and number, include description of view indicating direction of camera: View looking northwest at the west side of the 900-Block of 20th Street from the southeast corner of the intersection of 20th Street and 10th Avenue. 25 of 32.

Description of Photograph(s) and number, include description of view indicating direction of camera: View looking southeast at the east side of the 1000-Block of 20th Street from 1023 20th Street. 26 of 32.

Description of Photograph(s) and number, include description of view indicating direction of camera: View looking southeast at the east side of the 1400-Block of 20th Street from the intersection of 20th Street and Lincoln Court. 27 of 32.

Description of Photograph(s) and number, include description of view indicating direction of camera: View looking northeast at the east side of the 800-Block of 21st Street from the northwest corner of the intersection of 21st Street and 9th Avenue. 28 of 32.

Description of Photograph(s) and number, include description of view indicating direction of camera: View looking northeast at the east side of the 700-Block of 22nd Street from 742 22nd Street. 29 of 32.

Description of Photograph(s) and number, include description of view indicating direction of camera: View looking southwest at the west side of the 800-Block of 22nd Street from 817 22nd Street. 30 of 32.

Description of Photograph(s) and number, include description of view indicating direction of camera: View looking northeast at the east side of the 500-Block of 23rd Street from 524 23rd Street. 31 of 32.

Description of Photograph(s) and number, include description of view indicating direction of camera: View looking southwest at the west side of the 500-Block of 23rd Street from 529 23rd Street. 32 of 32.

Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C.460 et seq.).
Estimated Burden Statement: Public reporting burden for this form is estimated to average 100 hours per response including time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Office of Planning and Performance Management. U.S. Dept. of the Interior, 1849 C. Street, NW, Washington, DC.

Explanation of Amendment:

Section 7 of the Broadway Historic District is being amended with an updated resource inventory and identification of contributing and non-contributing resources. A revised narrative summary has been included in the amendment to document the minimal physical changes to the Broadway Historic District.

Amendment:

Summary Paragraph
The Broadway Historic District is roughly bounded by 17th Street on the west, 5th and 7th Avenues on the north, 23rd Street on the east, and Lincoln Court on the south. It is located immediately south of the original town center of Rock Island established as the town of Stephenson in 1835, and is one of Rock Island's earliest residential districts.

The district is comprised of approximately 168 acres with 504 contributing primary buildings, 162 contributing secondary buildings (e.g., garages, carriage barns), twelve non-contributing primary buildings, and 150 non-contributing secondary buildings. The existing 668 contributing buildings were constructed between ca. 1854 and 1973, while the non-contributing buildings are a mix of new construction and some historic resources that have been heavily altered and suffered a loss of integrity. There are also twenty-five vacant lots, which have been excluded from the resource count per National Register regulations. Sixteen of these vacant lots are the result of the demolition of a contributing building between the original nomination and this amendment. An additional eight of the vacant lots were the result of the demolition of a resource prior to the original nomination. The remaining one vacant lot was a historically undeveloped lot.

The District is composed largely of historic single-family residences with only four commercial properties interspersed throughout the interior of the district. The period of significance is from ca. 1854, the date of the oldest building in the district, to 1973, the fifty year cutoff for significance for the National Register.

Resources Inventory Database
For each of the existing contributing and non-contributing resources, the following database documents their address, date of construction, building form, primary architectural style, building type, secondary resources (e.g., carriage barn, garage, coach house), and any changes between the original nomination and this amendment. The ID provided in the database below corresponds to the "Building Key" located in the "Additional Documentation" section of this nomination. If a building is listed with two dates, the

later date is for an addition or remodeling. If a property, constructed during the period of significance, is listed as "non-contributing", it is listed as such due to unsympathetic and extensive alterations.

*Abbreviations Note: ARCH.: Architectural ST: Street; DIR: Direction; NO: Street Number; C: Contributing; NC: Non-Contributing; NRHP: Individually-Listed on the National Register; SEC: Secondary.

MAP ID	STREET NO.	STREET NAME	SUFFIX	HISTORIC NAME	FORM	ARCHITECTURAL STYLE OR DETAILS	DATE OF CONSTRUCTION	ORIGINAL EVALUATION	AMENDED EVALUATION	SECONDARY STRUCTURE (SS)	SS ORIGINAL EVALUATION	SS AMENDED EVALUATION	NOTES
1	708	17th	Street		Gable Front	Queen Anne - Free Classic	c. 1900	C	C	Garage – c. 1935	C	C	
2	710	17th	Street		Double House	Queen Anne - Free Classic	c. 1898	C	C				
3	715	17th	Street		Gable Front	Italianate	c. 1890	C	C	Carriage Barn – c. 1890	C	C	
4	718	17th	Street		Gable Front	Queen Anne	c. 1895	C	C				
5	721	17th	Street		Gable Front	N/A (Historically may have been Queen Anne)	c. 1890	C	C	Garage - c.1940	C	C	
6	726	17th	Street		Gable Front	N/A	c. 1898	C	C		C	Demolished	Contributing garage demolished.
7	728	17th	Street		Single-family Residence	N/A (Historically may have been Queen Anne or Folk Victorian)	c. 1898	C	C				
8	729	17th	Street		Multi-Unit Dwelling	Italian Renaissance Revival	c. 1928	C	C				
9	732	17th	Street		Single-family Residence	Queen Anne - Free Classic	c.1898	C	C	Garage	NC	NC	
10	733	17th	Street		Vacant Lot								Not counted in Section 5.
11	736	17th	Street		Single-family Residence	Queen Anne	c. 1890	C	C		C	Demolished	Contributing garage demolished.
12	737	17th	Street		Single-family Residence	Queen Anne - Free Classic	c. 1890	C	C				
13	744	17th	Street		Single-family Residence	Queen Anne	c. 1895	C	C		C	Demolished	Contributing garage demolished.
14	748	17th	Street		Single-family Residence	Queen Anne	c. 1900	C	C		C	Demolished	Contributing garage demolished.
15	754	17th	Street		American Foursquare	N/A	c. 1900	C	C	Garage	NC	NC	
16	760	17th	Street		Single-family Residence	Queen Anne	c. 1898	C	C	Carriage Barn - c. 1905	C	C	Originally 1519 8th Avenue was counted as an outbuilding to 760 17th Street. In this amendment it has been listed as a separate resource.
17	800	17th	Street		Single-family Residence	Queen Anne	c. 1900	C	C	Carriage Barn - c. 1890	C	C	

MAP ID	STREET NO.	STREET NAME	SUFFIX	HISTORIC NAME	FORM	ARCHITECTURAL STYLE OR DETAILS	DATE OF CONSTRUCTION	ORIGINAL EVALUATION	AMENDED EVALUATION	SECONDARY STRUCTURE (SS)	SS ORIGINAL EVALUATION	SS AMENDED EVALUATION	NOTES
18	806	17th	Street		Single-family Residence	Queen Anne	c. 1900	C	C	Garage - c. 1905	C	C	
19	809	17th	Street		Gable Front	N/A (Historically may have been Queen Anne or Folk Victorian)	c. 1885	C	C	Garage	NC	NC	
20	814	17th	Street		Gable Front	Queen Anne - Free Classic	c. 1895	C	C	Garage	NC	NC	
21	815	17th	Street		Gable Front T-Plan	Eastlake	c. 1890	C	C				
22	819	17th	Street		Single-family Residence	Folk Victorian	c. 1888	C	C				
23	820	17th			Single-family Residence	N/A	c. 1895	Not in Inventory	C	Garage (New)		NC	
24	823	17th	Street		Gable Front	Folk Victorian	c. 1890	C	C	Garage - c.1930	C	C	
25	824	17th	Street		Single-family Residence	Queen Anne - Free Classic	c. 1890	C	C	Garage - c.1915	C	C	
26	829	17th	Street		Gable Front	Queen Anne - Free Classic	c. 1885	C	C				
28	833	17th	Street		Gable Front - Side Hall Plan	Italianate	c. 1888	C	C				
29	845	17th	Street		Single-family Residence	Queen Anne	c. 1920	C	C	Garage	C	NC	
30	846	17th	Street		Single-family Residence	Queen Anne - Free Classic	c. 1890	C	C				
31	851	17th	Street		American Foursquare	Craftsman	c.1910	C	C		C	Demolished	Contributing garage demolished
32	855	17th	Street		Cottage	N/A	c. 1890	C	C	Garage - c.1945	C	C	
33	859	17th	Street		Gable Front	Queen Anne	c. 1890	C	C	Garage (New)		NC	
34	900-902	17th	Street		Multi-Unit Dwelling	New Traditional	2001	C	NC				Contributing resource demolished and replaced with existing building.
35	903	17th	Street		Gable Front T-Plan	Craftsman (Later Remodeling)	C. 1890	C	C	Garage - c.1925	C		
36	904	17th	Street		Single-family Residence	Queen Anne	c. 1898	C	C	Garage	NC	NC	
37	909	17th	Street		Single-family Residence	Queen Anne - Free Classic	c. 1905	C	C	Garage - c.1945	C	C	
38	915	17th	Street		Gable Front T-Plan	Folk Victorian	c. 1878	C	C	Garage – c.1965		C	
39	916	17th	Street		Single-family Residence	Queen Anne/French	c. 1904	C	C	Carriage Barn – c.1905	C; NC	NC	Contributing garage demolished.

MAP ID	STREET NO.	STREET NAME	SUFFIX	HISTORIC NAME	FORM	ARCHITECTURAL STYLE OR DETAILS	DATE OF CONSTRUCTION	ORIGINAL EVALUATION	AMENDED EVALUATION	SECONDARY STRUCTURE (SS)	SS ORIGINAL EVALUATION	SS AMENDED EVALUATION	NOTES
						Eclectic							
40	919	17th	Street		Gable Front	N/A	c. 1890/1925	C	C				
41	926	17th	Street		Single-family Residence	Queen Anne/French Eclectic	c. 1895	C	C				
42	930	17th	Street		American Foursquare	Craftsman	c. 1905	C	C				
43	931	17th	Street		Single-family Residence	Queen Anne - Free Classic	c. 1900	C	C				
44	933	17th	Street		Single-family Residence	Queen Anne - Free Classic	c. 1900	C	C	Garage - c.1920	C	C	
45	936	17th	Street		Single-family Residence	Queen Anne	c. 1890	C	C	Garage	C	NC	The garage appears to be new or heavily remodeled.
46	945	17th	Street		Double House	Queen Anne	c. 1890	C	C				
47	1000-1002	17th	Street		Multi-Unit Dwelling	New Traditional	2005	C	NC	Garage (New)		NC	Contributing resource demolished and replaced with the existing building.
48	1001	17th	Street		Single-family Residence	Queen Anne	c. 1890	C	C				
49	1002	17th	Street		Vacant Lot								Contributing resource demolished. Not counted in Section 5.
50	1007	17th	Street		Single-family Residence	Queen Anne	c. 1890	C	C	Garage	NC	NC	
51	1008	17th	Street		American Foursquare	Queen Anne - Free Classic	c. 1908	C	C	Garage	NC	NC	
52	1011	17th	Street		Single-family Residence	N/A	c. 1890	C	C	Garage - c.1925	C	NC	Garage has been altered.
53	1012	17th	Street		Single-family Residence	Queen Anne - Free Classic	c. 1895	C	C	Garage	NC	NC	
54	1014	17th	Street		Single-family Residence	Queen Anne	c. 1898	C	C				
55	1015	17th	Street		Single-family Residence	N/A	c. 1895	C	C	Garage (New)		NC	
56	1018	17th	Street		Double House	Queen Anne - Free Classic	c. 1900	C	C				
57	1019	17th	Street		Single-family Residence	N/A	c. 1895	C	C	Garage - c.1920	C	NC	Garage has been altered.
58	1024	17th	Street		Single-family Residence	Queen Anne - Free Classic	c. 1895	C	C				
59	1025	17th	Street		Gable Front T-Plan	Queen Anne	c. 1895	C	C	Garage (New)		NC	

MAP ID	STREET NO.	STREET NAME	SUFFIX	HISTORIC NAME	FORM	ARCHITECTURAL STYLE OR DETAILS	DATE OF CONSTRUCTION	ORIGINAL EVALUATION	AMENDED EVALUATION	SECONDARY STRUCTURE (SS)	SS ORIGINAL EVALUATION	SS AMENDED EVALUATION	NOTES
60	1029	17th	Street		Gable Front	N/A	c. 1900	C	C	Garage - c.1940	C	NC	Garage has been altered.
61	1035	17th	Street		Vacant Lot								Contributing resource demolished. Not counted in Section 5.
62	1038	17th	Street		Single-family Residence	Queen Anne	c. 1900	C	C				
63	1041	17th	Street		Single-family Residence	Queen Anne - Free Classic	C. 1895	C	C	Garage (New)		NC	
64	1042	17th	Street		Single-family Residence	New Traditional	2012	C	NC	Garage	NC	NC	Contributing Resource demolished and replaced with existing building.
65	1043	17th	Street		Single-family Residence - Side Hall Plan	N/A (Historically may have been Italianate)	c. 1885	C	C	Garage	NC	NC	
66	1046	17th	Street		Single-family Residence	Queen Anne	c. 1910	C	C	Garage (New)		NC	
67	1049	17th	Street		Single-family Residence	Queen Anne	c. 1895	C	C				
68	1202	17th	Street		Single-family Residence - Centered Gabled Plan	Gothic Revival	c. 1870	C	C	Garage	NC	NC	
69	1203	17th	Street		Double House	Queen Anne - Free Classic	c. 1894	C	C	Garage (New)		NC	
70	1206	17th	Street		Vacant Lot								Contributing resource demolished. Not counted in Section 5.
71	1207	17th	Street		Double House	Craftsman	1911	C	C				
72	1210	17th	Street		Single-family Residence	Queen Anne	c. 1895	C	C	Garage	NC	NC	
73	1215	17th	Street		Single-family Residence	Folk Victorian	c. 1910	Not included in original inventory.	C	Garage (New)		NC	
74	1216	17th	Street		Single-family Residence	Queen Anne	c. 1895	C	C	Garage	NC	NC	
75	1219	17th	Street		Cottage	N/A	c. 1890	C	C	Garage - c.1935	C	NC	Garage has been altered.
76	1220	17th	Street		American Foursquare	N/A	c. 1912	C	C	Garage	NC	NC	
77	1223	17th	Street		Gable Front T-Plan	Queen Anne - Free Classic	c. 1905	C	C				
78	1224	17th	Street		Single-family Residence	Craftsman	c. 1918	C	C	Garage	NC	NC	

MAP ID	STREET NO.	STREET NAME	SUFFIX	HISTORIC NAME	FORM	ARCHITECTURAL STYLE OR DETAILS	DATE OF CONSTRUCTION	ORIGINAL EVALUATION	AMENDED EVALUATION	SECONDARY STRUCTURE (SS)	SS ORIGINAL EVALUATION	SS AMENDED EVALUATION	NOTES
79	1229	17th	Street		American Foursquare	Queen Anne - Free Classic	c. 1910	C	C	Garage - c.1930	C	C	
80	1230	17th	Street		American Foursquare	Queen Anne - Free Classic	c. 1905	C	C	Garage - c.1915	C	C	
81	1233	17th	Street		Gable Front	Queen Anne - Free Classic	c. 1910	C	C				
82	1235	17th	Street		Multi-unit Dwelling	N/A	c. 1905	C	C	Garage (New)		NC	
83	1236	17th	Street		Single-family Residence	Colonial Revival	c. 1925	C	C				
84	1301	17th	Street		American Foursquare	Queen Anne/French Eclectic	c. 1915	C	C	Garage - c.1925	C	C	
85	1305	17th	Street		American Foursquare	Queen Anne/French Eclectic	c. 1915	C	C	Garage - c.1940	C	C	
86	1315	17th	Street		American Foursquare	N/A	c. 1910	C	C	Garage - c.1940	C	C	
87	1319	17th	Street		Double House	Ranch	c. 1960	NC	C				
88	1323	17th	Street		Gable Front T-Plan	Queen Anne - Free Classic	c. 1915	C	C	Garage – pre-1955	NC	C	
89	1329	17th	Street		American Foursquare	N/A	c. 1915	C	C	Garage - c.1925	C	C	
90	1403	17th	Street		American Foursquare	Queen Anne/French Eclectic	c. 1915	C	C				
91	1407	17th	Street		Single-family Residence	Craftsman	c. 1920	C	C	Garage - c.1940	C	C	
92	1411	17th	Street		Single-family Residence	Craftsman	c. 1925	C	C	Garage	NC	NC	
93	710	18th	Street		Gable Front - Side Hall Plan	N/A (Historically may have been Italianate)	c. 1875	C	C	Carport (New)		NC	
94	714	18th	Street		Vacant Lot								Resource demolished prior to original nomination. Not counted in Section 5.
95	718	18th	Street		Gabled Ell	N/A	c. 1880	C	C		C	Demolished	
96	722	18th	Street		Gable Front - Side Hall Plan	Italianate	c. 1880	C	C	Garage (New)		NC	
97	732	18th	Street		Gable Front	N/A	c. 1875	C	C				
98	736	18th	Street		Double House	Queen Anne	c. 1905	C	C				
99	709	19th	Street		Single-family Residence	Queen Anne	C. 1891	C	C	Garage - c.1920	C	C	

MAP ID	STREET NO.	STREET NAME	SUFFIX	HISTORIC NAME	FORM	ARCHITECTURAL STYLE OR DETAILS	DATE OF CONSTRUCTION	ORIGINAL EVALUATION	AMENDED EVALUATION	SECONDARY STRUCTURE (SS)	SS ORIGINAL EVALUATION	SS AMENDED EVALUATION	NOTES
100	717	19th	Street		Vacant Lot								Resource demolished prior to original nomination. Not counted in Section 5.
101	718	19th	Street		Single-family Residence	Queen Anne - Free Classic	c. 1880	C	C	Garage - c.1915	C	C	
102	724	19th	Street		Gable Front - Side Hall Plan	Italianate	c. 1880	C	C				
103	725	19th	Street		Side Hall Plan/Asymmetrical	Italianate	c. 1880	C	C	Garage	NC	NC	
104	727	19th	Street		Single-family Residence	Queen Anne	1894	C	C				
105	730	19th	Street		Single-family Residence	Italianate	c. 1865	C	C	Garage	NC	NC	
106	805	19th	Street		Single-family Residence	Queen Anne	c. 1880/c.1965 (Addition)	NC	C				
107	816	19th	Street		Single-family Residence	N/A	c. 1892	C	C				
108	820	19th	Street		Single-family Residence	N/A	c. 1892	C	C				
109	824	19th	Street		American Foursquare	N/A	c. 1892	C	C				
110	827	19th			Single-family Residence	Queen Anne	c. 1898-1906	C	C	Garage	NC	NC	
111	828	19th	Street		Single-family Residence	N/A	c. 1892	C	C	Garage	NC	NC	
112	831	19th	Street		Single-family Residence	Queen Anne - Free Classic	c. 1903	C	C				
113	832	19th			American Foursquare	Queen Anne - Free Classic	c. 1903	C	C	Garage - c. 1930	C	NC	Garage has been altered.
114	835	19th	Street		Cottage	Queen Anne	c. 1891	C	C				
115	838	19th	Street		Gable Front	Queen Anne - Free Classic	c. 1890	C	C	Garage	NC	NC	
116	841	19th	Street		Single-family Residence	Queen Anne	c. 1891	C	C	Two Garages - c.1925	C; C	Demolished	
117	842	19th	Street		Single-family Residence	Queen Anne - Free Classic	c. 1890	C	C	Garage (New)	NC	NC	
118	849	19th	Street		Bungalow	Craftsman	c. 1936	C	C	Garage - c.1925	C	C	
119	852	19th	Street		Side Hall Plan	Italianate	c. 1878	C	C		C	Demolished	
120	901	19th	Street		Single-family Residence	Queen Anne - Free Classic	c. 1905	C	C	Garage	NC	NC	
121	909	19th	Street		Cottage	Folk Victorian	c. 1885	C	C	Garage - c.1935	C	C	

MAP ID	STREET NO.	STREET NAME	SUFFIX	HISTORIC NAME	FORM	ARCHITECTURAL STYLE OR DETAILS	DATE OF CONSTRUCTION	ORIGINAL EVALUATION	AMENDED EVALUATION	SECONDARY STRUCTURE (SS)	SS ORIGINAL EVALUATION	SS AMENDED EVALUATION	NOTES
122	914	19th	Street		Gable Front	N/A	c. 1895	C	C				
123	916	19th	Street		Cottage	N/A	c. 1898	C	C		C	Demolished	
124	917	19th	Street		Single-family Residence	Queen Anne - Free Classic / Colonial Revival	c. 1905	C	C	Garage - c.1925	C	C	
125	920	19th	Street		Single-family Residence	Queen Anne - Free Classic	c. 1902	C	C				
126	921	19th	Street		Gable Front	N/A	c. 1905	NC	C				
127	925	19th	Street		Single-family Residence	Queen Anne - Free Classic	c. 1895	C	C	Garage - c.1920	C	C	
128	930	19th	Street		Side Hall Plan	Italianate	c. 1885	C	C				
129	931	19th	Street		Gabled Ell	Queen Anne - Free Classic	c. 1900	C	C	Garage	NC	NC	
130	934	19th	Street		Multi-Unit Dwelling	N/A	c. 1950-1956	NC	C	Garage	NC	C	Contributing with extended period of significance.
131	935	19th	Street		American Foursquare	Queen Anne - Free Classic	c. 1905	C	C	Garage - c.1915	C	C	
132	938	19th	Street		Single-family Residence	N/A (Historically may have been Tudor Revival)	c. 1928	C	C	Garage - c.1930	C	C	
133	940	19th	Street		Single-family Residence	N/A	c. 1898	C	C	Garage - c.1930	C	C	
134	1001	19th	Street		Cottage	Queen Anne	c. 1890	C	C				
135	1002	19th	Street		Single-family Residence	Queen Anne / Shingle	c. 1900	C	C				
136	1006	19th	Street		Gable Front	N/A	c. 1905	C	C	Garage	NC	NC	
137	1007	19th	Street		Gable Front	Queen Anne	c. 1890	C	C	Garage	NC	NC	
138	1012	19th	Street		Cottage	N/A	c. 1895	C	C	Garage - c.1940	C	NC	Garage has been altered.
139	1013	19th	Street		Cottage	Queen Anne - Free Classic	c. 1900	C	C	Garage	NC	NC	
140	1016	19th	Street		Gabled Ell	N/A	c. 1895	C	C	Garage (New)		NC	
141	1019	19th	Street		Double House	Queen Anne - Free Classic	c. 1900	C	C				
142	1020	19th	Street		Cottage	N/A	c. 1895	C	C	Garage (New)		NC	
143	1023	19th	Street		Single-family Residence	Queen Anne	c. 1900	C	C	Garage (New)		NC	
144	1027	19th	Street		Single-family Residence	Queen Anne - Free Classic	c. 1905	C	C	Garage	NC	NC	
145	1030	19th	Street		Cottage	Queen Anne -	c. 1900	C	C	Garage	NC	NC	

MAP ID	STREET NO.	STREET NAME	SUFFIX	HISTORIC NAME	FORM	ARCHITECTURAL STYLE OR DETAILS	DATE OF CONSTRUCTION	ORIGINAL EVALUATION	AMENDED EVALUATION	SECONDARY STRUCTURE (SS)	SS ORIGINAL EVALUATION	SS AMENDED EVALUATION	NOTES
						Free Classic							
146	1031	19th	Street		Single-family Residence	N/A (Historically may have been Queen Anne)	c. 1905	C	C				
147	1034	19th	Street		Single-family Residence	Queen Anne - Free Classic	c. 1905	C	C	Garage	NC	NC	
148	1037	19th	Street		Single-family Residence	N/A (Historically may have been Queen Anne)	c. 1900	C	C		C	Demolished	
149	1038	19th	Street		Single-family Residence	Dutch Colonial Revival	c. 1897	C	C	Garage – c.1905	C	C	
150	1042	19th	Street		Single-family Residence	Queen Anne - Free Classic	c. 1895	C	C	Garage	NC	C	
151	1043	19th	Street		Single-family Residence	Queen Anne	c. 1895	C	C	Garage (New)	C	NC	Contributing garage demolished or heavily altered.
152	1046	19th	Street		Single-family Residence	Queen Anne - Free Classic	C. 1895	C	C	Garage (New)		NC	
153	1047	19th	Street		Single-family Residence	N/A	c. 1945	C	NC	Garage - c.1940	C	NC	Garage gas been altered.
154	1207	19th	Street		Gabled Ell	Queen Anne - Free Classic	c. 1905	C	C	Garage - c.1935	C	C	
155	1208	19th	Street		Single-family Residence	New Traditional	2012	C	NC	Garage (New)		NC	Contributing resource demolished and replaced with existing building.
156	1211	19th	Street		Cottage	Queen Anne - Free Classic	c. 1900	C	C	Garage - c.1935	C	C	
157	1215	19th	Street		Gable Front	N/A	c. 1900	C	C	Garage	NC	C	
158	1216	19th	Street		Single-family Residence	N/A	c. 1898	C	C				
159	1221	19th	Street		Double House	Queen Anne - Free Classic	c. 1910	C	C	Garage - c.1935	C	C	
160	1222	19th	Street		Single-family Residence	Queen Anne - Free Classic	c. 1898	C	C	Garage - c.1920	C	C	
161	1225	19th	Street		Cottage	N/A (Historically, may have been Tudor Revival)	c. 1925	C	C	Garage - c.1925	C	C	
162	1226	19th	Street		Single-family Residence	Queen Anne	c. 1900	C	C				
163	1230-32	19th	Street		Double House	Queen Anne - Free Classic	c. 1895	C	C				
164	1231	19th	Street		Gable Front	N/A	c. 1910	C	C	Garage	NC	NC	

MAP ID	STREET NO.	STREET NAME	SUFFIX	HISTORIC NAME	FORM	ARCHITECTURAL STYLE OR DETAILS	DATE OF CONSTRUCTION	ORIGINAL EVALUATION	AMENDED EVALUATION	SECONDARY STRUCTURE (SS)	SS ORIGINAL EVALUATION	SS AMENDED EVALUATION	NOTES
165	702	20th	Street		Single-family Residence	Queen Anne	1888	C; NR	NR	Carriage Barn - c.1906; Garage - c.1915	C; C	C;C	
166	705	20th	Street		Paired Gables Plan	Gothic Revival	c. 1865	C	C				
167	709	20th	Street		Side Hall Plan	Second Empire	c. 1880	C	C		C	Demolished	Contributing outbuilding demolished.
168	715	20th	Street		Side Hall Plan	Italianate / Exotic Revival	c. 1867	C	C	Garage	NC	NC	
169	720	20th	Street		Single-family Residence	Italianate	c. 1870	C	C	Carriage Barn - c.1880; Garage – pre-1955	C; NC	NC	Contributing garage ruin demolished.
170	723	20th	Street		Breezeway Apartment Building	Modern	c. 1970	NC	C				
171	727	20th	Street		Single-family Residence	Queen Anne / French Eclectic	1901	C	C	Garage	NC	NC	
172	734	20th	Street		Non-residential building designed in the form of a historic Gable Front T-Plan	N/A	2006	Constructed after original nomination.	NC				
173	735	20th	Street		Multi-Unit Dwelling	Italian Renaissance Revival	1914	C	C				
174	803	20th	Street		Side Hall Plan	Italianate	c. 1870	C	C	Garage (New)		NC	
175	804	20th	Street		Side Hall Plan	Exotic Revival	c. 1875	C	C	Garage - c.1920	C	C	
176	808	20th	Street		Side Hall Plan	Italianate	1875/1926	C	C				
177	811	20th	Street		Side Hall Plan	Italianate	c. 1870	C	C	Garage (New)		NC	
178	815	20th	Street		Gabled Ell	N/A	c. 1875	C	C	Garage	NC	NC	
179	816	20th	Street		Side Hall Plan	Italianate - Eastlake	c. 1874	C	C	Garage (New)		NC	
180	823	20th	Street		Two-Part Commercial Block	N/A	c. 1890	NC	NC				
181	823	20th	Street		Parking Lot	N/A	C. 1975-1984	NC	NC				
182	824	20th	Street		Single-family Residence	Second Empire	c. 1874	C	C				
183	836	20th	Street		Single-family Residence	Queen Anne - Free Classic	c. 1895	C	C		C	Demolished	Contributing garage demolished.
184	839	20th	Street		Gable Front	N/A	c. 1870	C	C				
185	842	20th	Street		Gable Front	Eastlake	c. 1890	C	C	Garage - c.1913	C	C	
186	843	20th	Street		Gable Front - Side Hall	N/A (Historically	c. 1880	C	C	Garage	NC	NC	

MAP ID	STREET NO.	STREET NAME	SUFFIX	HISTORIC NAME	FORM	ARCHITECTURAL STYLE OR DETAILS	DATE OF CONSTRUCTION	ORIGINAL EVALUATION	AMENDED EVALUATION	SECONDARY STRUCTURE (SS)	SS ORIGINAL EVALUATION	SS AMENDED EVALUATION	NOTES
					Plan	may have been Stick or Queen Anne)							
187	848	20th	Street		Gable Front - Side Hall Plan	Italianate - Eastlake	1874	C	C	Garage - c.1930	C	C	
188	901	20th	Street		Single-family Residence	Queen Anne - Free Classic	1894	C	C	Garage - c.1940	C	NC	Garage has been altered.
189	902	20th	Street		Single-family Residence	N/A (Historically may have been Queen Anne)	c. 1885	C	C				
190	905	20th	Street		Single-family Residence	Queen Anne - Free Classic / Dutch Colonial Revival	1894	C	C	Garage	NC	NC	
191	908	20th	Street		Single-family Residence	Queen Anne - Free Classic	c. 1900	C	C	Garage (New or Heavily Altered); Garage (Non-historic)	C; NC	NC; NC	
192	909	20th	Street		Single-family Residence	Queen Anne - Free Classic / Dutch Colonial Revival	1894	C	C	Garage - c.1940	C	NC	
193	915	20th	Street		Single-family Residence	Queen Anne	c. 1895	C	C		C	Demolished	Contributing garage demolished.
194	918	20th	Street		Single-family Residence	Queen Anne - Stick	c. 1892	C	C		C	Demolished	Contributing garage demolished.
195	919-921	20th	Street		Double House	Queen Anne - Free Classic	c. 1892	C	C				
196	923	20th	Street		Single-family Residence	N/A (Historically may have been Queen Anne)	c. 1895	C	C			Demolished	Contributing garage demolished.
197	924	20th	Street		Single-family Residence	Queen Anne - Free Classic	c. 1891	C	C	Carriage Barn - c. 1890	C	C	
198	927	20th	Street		Single-family Residence	N/A (Historically may have been Queen Anne)	1899	C	C	Garage	NC	C	
199	928	20th	Street		Single-family Residence	N/A (Historically may have been Queen Anne)	c. 1898	C	C				
200	930	20th	Street		Single-family Residence	Queen Anne - Free Classic	c. 1901	C	C				

MAP ID	STREET NO.	STREET NAME	SUFFIX	HISTORIC NAME	FORM	ARCHITECTURAL STYLE OR DETAILS	DATE OF CONSTRUCTION	ORIGINAL EVALUATION	AMENDED EVALUATION	SECONDARY STRUCTURE (SS)	SS ORIGINAL EVALUATION	SS AMENDED EVALUATION	NOTES
201	931	20th	Street		Single-family Residence	Queen Anne - Free Classic	c. 1905	C	C	Garage - c.1925	C	NC	
202	934	20th	Street		Single-family Residence	Queen Anne - Free Classic	1899	C	C				
203	935	20th			Single-family Residence	Queen Anne - Free Classic	c. 1905	C	C	Garage - c. 1925	C	C	
204	937	20th	Street		Single-family Residence	Queen Anne - Free Classic	c. 1897	C	C	Garage - c.1935	C	C	
205	1001	20th	Street		Double House	Queen Anne - Free Classic	c. 1897	C	C	Garage	NC	NC	
206	1004	20th	Street		American Foursquare	N/A (Historically may have been Queen Anne - Free Classic)	c. 1899	C	C	Garage - c.1916	C	C	
207	1005	20th	Street		Single-family Residence	Queen Anne / Craftsman	1908	C	C			Demolished	Contributing garage demolished.
208	1010	20th	Street		Single-family Residence	Queen Anne - Free Classic	1903	C	C		C	Demolished	Contributing garage demolished.
209	1015	20th	Street		Single-family Residence	Modern	1968	NC	C				Contributing with the extended period of significance.
210	1020	20th	Street		Single-family Residence	Queen Anne	c. 1897	C	C	Garage	NC	NC	
211	1023	20th	Street		Single-family Residence	Colonial Revival	c. 1936	C	C	Garage - c.1936	C	C	
212	1025	20th	Street		Single-family Residence	N/A	c. 1930	C	C				
213	1026	20th	Street		Multi-unit dwelling	Queen Anne	c. 1897	C	C		C	Demolished	Contributing garage demolished.
214	1029	20th	Street		American Foursquare	Queen Anne - Free Classic	c. 1906	C	C	Garage	NC	C	
215	1030	20th	Street		American Foursquare	Queen Anne - Free Classic	1903	C	C				
216	1033	20th	Street		Single-family Residence	Queen Anne - Free Classic	c. 1897	C	C	Garage	NC	NC	
217	1034	20th	Street		Single-family Residence	N/A (Historically may have been Queen Anne)	c. 1894	C	C	Garage - c.1930	C	C	
218	1038	20th	Street		Multi-unit Dwelling	Modern	1962	NC	C	Garage	NC	NC	Contributing with the extended period of significance.

MAP ID	STREET NO.	STREET NAME	SUFFIX	HISTORIC NAME	FORM	ARCHITECTURAL STYLE OR DETAILS	DATE OF CONSTRUCTION	ORIGINAL EVALUATION	AMENDED EVALUATION	SECONDARY STRUCTURE (SS)	SS ORIGINAL EVALUATION	SS AMENDED EVALUATION	NOTES
219	1043	20th	Street		American Foursquare	Queen Anne - Free Classic	c. 1905	C	C	Garage (New)	C	NC	
220	1044	20th	Street		Multi-unit Dwelling	Craftsman	1910	C	C	Garage - c.1925	C	C	
221	1049	20th	Street		American Foursquare	N/A	1903	C	C	Garage (New or Heavily Remodeled)	C	C	
222	1200	20th	Street		Single-family Residence	Queen Anne - Free Classic	c. 1899	C	C				
223	1201	20th	Street		Double House	Queen Anne - Free Classic	1903	C	C	Garage	NC	NC	
224	1204	20th	Street		Multi-unit Dwelling	Ranch	1959	NC	C	Garage - c.1935	C	C	Contributing with the extended period of significance.
225	1205	20th	Street		American Foursquare	Queen Anne - Free Classic	1906	C	C	Garage	NC	C	
226	1210	20th	Street		Single-family Residence	Queen Anne - Free Classic	1905	C	C	Outbuilding - c. 1920	C	C	
227	1215	20th	Street		American Foursquare	Craftsman	1906	C	C		C	Demolished	Contributing garage demolished.
228	1216	20th	Street		Single-family Residence	N/A (Historically may have been Queen Anne)	1906	C	C	Garage - c.1935	C	C	
229	1219	20th	Street		Single-family Residence	N/A	c. 1901	C	C	Garage - c.1910	C	C	
230	1222	20th	Street		Single-family Residence	Queen Anne - Free Classic	c. 1899	C	C	Garage - c.1920	C	C	
231	1223	20th	Street		Single-family Residence	Queen Anne - Free Classic	1908	C	C	Garage	NC	NC	
232	1226	20th	Street		Single-family Residence	Queen Anne - Free Classic	1899	C	C				
233	1227	20th	Street		American Foursquare	Queen Anne - Free Classic	c. 1905	C	C	Garage	NC	NC	
234	1230	20th	Street		Single-family Residence	Queen Anne - Free Classic	c. 1899	C	C	Garage - c.1940	C	C	
235	1231	20th	Street		American Foursquare	Queen Anne - Free Classic	c. 1905	C	C	Garage - c.1935	C	C	
236	1302	20th	Street		Multi-unit Dwelling	International	1948	C	C				
237	1308	20th	Street		Multi-unit Dwelling	International	1948	C	C				
238	1314	20th	Street		Multi-unit Dwelling	International	1948	C	C				
239	1320	20th	Street		American Foursquare	N/A	c. 1915	C	C				

MAP ID	STREET NO.	STREET NAME	SUFFIX	HISTORIC NAME	FORM	ARCHITECTURAL STYLE OR DETAILS	DATE OF CONSTRUCTION	ORIGINAL EVALUATION	AMENDED EVALUATION	SECONDARY STRUCTURE (SS)	SS ORIGINAL EVALUATION	SS AMENDED EVALUATION	NOTES
240	1330	20th	Street		American Foursquare	Queen Anne/French Eclectic	1910	C	C	Garage - c.1930	C	C	
241	1408	20th	Street		Single-family Residence	Craftsman	1913	C	C				
242	1412	20th	Street		American Foursquare	Craftsman	1913	C	C	Garage - c.1915	C	C	
243	1416	20th	Street		American Foursquare	Craftsman	1913	C	C				
244	1418	20th	Street		Single-family Residence	N/A (Historically may have been Queen Anne)	c. 1905	C	C				Relocated to existing site prior to original nomination.
245	702	21st	Street		Single-family Residence	Queen Anne influence	c. 1880	C	C				
246	708	21st	Street		Gable Front	Folk Victorian	c. 1880	C	C				
247	714	21st	Street		Gabled Ell	N/A	c. 1890	C	C				
248	720	21st	Street		Single-family Residence	N/A (Historically may have been Queen Anne)	c. 1885	C	C				
249	728	21st	Street		Single-family Residence	Craftsman	c. 1880	C	C				
250	745	21st	Street		Single-family Residence	Craftsman	c. 1930	C	C	Garage - c.1930	C	C	
251	800	21st	Street		Single-family Residence	N/A (Historically may have been Queen Anne)	c. 1895	C	C	Garage	NC	C	
252	803	21st	Street		Gabled Ell	Queen Anne - Free Classic	C. 1890	C	C	Garage (New)		NC	
253	804	21st	Street		Single-family Residence	N/A (Historically may have been Queen Anne)	c. 1895	C	C		C	Demolished	Contributing garage demolished.
254	807	21st	Street		Gable Front	N/A	c. 1885	C	C	Garage (New)		NC	
255	808	21st	Street		Gable Front	N/A	c. 1910	C	C				
256	809	21st	Street		Gable Front	Italianate	c. 1885	C	C	Garage	NC	NC	
257	810	21st	Street		Gable Front	N/A (Historically may have been Queen Anne)	c. 1890	C	C	Garage	NC	NC	
258	813	21st	Street		Single-family Residence	Craftsman	c. 1925	C	C	Garage	C	NC	Garage is new or heavily altered.
259	816	21st	Street		Cottage	N/A (Historically may have been Queen Anne)	c. 1890	C	C	Garage	NC	NC	

MAP ID	STREET NO.	STREET NAME	SUFFIX	HISTORIC NAME	FORM	ARCHITECTURAL STYLE OR DETAILS	DATE OF CONSTRUCTION	ORIGINAL EVALUATION	AMENDED EVALUATION	SECONDARY STRUCTURE (SS)	SS ORIGINAL EVALUATION	SS AMENDED EVALUATION	NOTES
260	819	21st	Street		Gable Front - Side Hall Plan	N/A	c. 1890	C	C	Garage (New)		NC	
261	820	21st	Street		Vacant Lot								Contributing resource demolished. Not counted in Section 5.
262	821	21st	Street		Single-family Residence	Craftsman	c. 1925	C	C	Garage	NC	NC	
263	825	21st	Street		Gable Front	N/A (Historically may have been Queen Anne)	c. 1895	C	C	Garage (New)		NC	
264	828	21st	Street		Gable Front	N/A (Historically may have been Queen Anne)	c. 1880	C	C	Garage (New)		NC	
265	829	21st	Street		Gable Front	N/A (Historically may have been Queen Anne)	c. 1900	C	C				
266	830	21st	Street		Gable Front	Italianate	c. 1875	C	C	Garage - c.1925	C	C	
267	831	21st	Street		Gable Front	N/A (Historically may have been Queen Anne)	c. 1890	C	C				
268	832	21st	Street		Vacant Lot								Contributing resource demolished. Not counted in Section 5.
269	834	21st	Street		Single-family Residence	Queen Anne	c. 1895	C	C	Garage	NC	NC	
270	835	21st	Street		Single-family Residence	Queen Anne - Free Classic	c. 1910	C	C	Garage	NC	NC	
271	840	21st	Street		Multi-unit Dwelling (Fourplex)	Ranch	1968	NC	C				Contributing with the extended period of significance.
272	841	21st	Street		American Foursquare	Queen Anne - Free Classic	c. 1890	C	C	Garage; Outbuilding	NC; NC	C; C	
273	844	21st	Street		Single-family Residence	Craftsman	c. 1890/1910	C	C				
274	847	21st	Street		Gable Front - Side Hall Plan	Folk Victorian	c. 1905	C	C	Garage	NC	C	
275	848	21st	Street		Hall & Parlor	Craftsman (Later Remodeling)	C. 1890/1910	C	C				
276	900	21st	Street		Single-family Residence	N/A (Historically may have been Craftsman)	c. 1935	C	C				

MAP ID	STREET NO.	STREET NAME	SUFFIX	HISTORIC NAME	FORM	ARCHITECTURAL STYLE OR DETAILS	DATE OF CONSTRUCTION	ORIGINAL EVALUATION	AMENDED EVALUATION	SECONDARY STRUCTURE (SS)	SS ORIGINAL EVALUATION	SS AMENDED EVALUATION	NOTES
277	901	21st	Street		Single-family Residence	Queen Anne	c. 1895	C	C	Garage - c.1935	C	C	
278	905	21st	Street		Cottage	Queen Anne	c. 1890	C	C	Garage	NC	NC	
279	906	21st	Street		Single-family Residence	Minimal Traditional	c. 1940	C	C	Garage - c.1940	C	C	
280	909	21st	Street		Cottage	N/A (Historically may have been Queen Anne)	c. 1890/1915	C	C	Garage - c.1915	C	C	
281	910	21st	Street		Single-family Residence	N/A (Historically may have been Queen Anne)	c. 1895	C	C	Garage	NC	NC	
282	913	21st	Street		Cottage	N/A	c. 1880	C	C	Garage - c.1916	C	C	
283	916	21st	Street		Single-family Residence	Queen Anne - Free Classic	c.1900	C	C				
284	917	21st	Street		Cottage	N/A	c. 1890	C	C	Garage	NC	NC	
285	920	21st	Street		Single-family Residence	Queen Anne - Free Classic	c. 1890	C	C	Garage - c.1915	C	C	
286	921	21st	Street		Single-family Residence	Queen Anne	c. 1895	C	C	Garage - c.1925	C	C	
287	923	21st	Street		Single-family Residence	N/A (Appears to have been historically Queen Anne with a later Craftsman style porch)	c. 1895	C	C				
288	924	21st	Street		Single-family Residence	Craftsman	c. 1930	C	C	Garage - c.1930	C	C	
289	927	21st	Street		Single-family Residence	N/A	c. 1900	C	C				
290	928	21st	Street		Single-family Residence	Craftsman	c. 1930	C	C	Garage - c.1935	C	C	
291	932	21st	Street		Single-family Residence	Queen Anne - Dutch Colonial Revival	c. 1905	C	C	Garage	NC	NC	
292	937	21st	Street		Vacant Lot								Resource demolished prior to original nomination. Not counted in Section 5.
293	940	21st	Street		Single-family Residence	Queen Anne	c. 1895	C	C	Garage – c. 1970	NC	C	
294	941	21st	Street		Single-family Residence	Queen Anne - Free Classic	c. 1905	C	C	Garage - c.1935	C	C	

MAP ID	STREET NO.	STREET NAME	SUFFIX	HISTORIC NAME	FORM	ARCHITECTURAL STYLE OR DETAILS	DATE OF CONSTRUCTION	ORIGINAL EVALUATION	AMENDED EVALUATION	SECONDARY STRUCTURE (SS)	SS ORIGINAL EVALUATION	SS AMENDED EVALUATION	NOTES
295	945	21st	Street		Single-family Residence	Queen Anne - Free Classic	c. 1895	C	C	Garage - c.1925	C	C	
296	950	21st	Street		Single-family Residence	Queen Anne - Free Classic	c. 1898	C	C	Garage – c. 1970	NC	C	
297	1000	21st	Street		American Foursquare	Queen Anne - Free Classic	c. 1900	C	C				
298	1001	21st	Street		Multi-Unit Dwelling	Queen Anne - Free Classic	c. 1915	C	C	Garage - c.1930	C	C	
299	1009	21st	Street		American Foursquare	Queen Anne - Free Classic	c. 1915	C	C	Garage	NC	NC	
300	1010	21st	Street		Single-family Residence	N/A (Historically may have been Queen Anne)	c. 1895	C	C				
301	1014	21st	Street		Single-family Residence	Queen Anne - Free Classic	c. 1895	C	C	Garage	NC	C	
302	1015	21st	Street		American Foursquare	Queen Anne - Free Classic	c. 1920	C	C	Garage	NC	C	
303	1019	21st	Street		Double House	Queen Anne - Free Classic	c. 1910	C	C				
304	1022	21st	Street		Multi-Unit Dwelling	Contemporary	c. 1960	NC	C				Contributing with the extended period of significance.
305	1025	21st	Street		Single-family Residence	Queen Anne - Free Classic	c. 1895	C	C	Garage	NC	NC	
306	1026	21st	Street		Single-family Residence	Queen Anne	c. 1895	C	C	Carriage Barn - c. 1900 C	C	C	
307	1029	21st	Street		Single-family Residence	Queen Anne	1910	C	C	Garage - 1916	C	NC	Garage has been altered.
308	1030	21st			Single-family Residence	Queen Anne - Free Classic	c. 1895/c.1916	C	C	Garage - c. 1925	C	C	
309	1031	21st	Street		Cottage	N/A	c. 1900	C	C				
310	1032	21st	Street		Single-family Residence	Queen Anne - Free Classic	1903	C	C	Garage - c.1925	C	C	
311	1036	21st	Street		Single-family Residence	Queen Anne	c. 1900	C	C	Garage - c.1925; Garage (New)	C	C; NC	
312	1037	21st	Street		Single-family Residence	Queen Anne - Free Classic	1901/1916	C	C				
313	1038	21st	Street		Single-family Residence	Queen Anne	c. 1895	C	C	Garage - c.1920	C	C	
314	1202	21st	Street		Single-family Residence	Queen Anne	c. 1905	C	C	Garage - c.1925	C	NC	If original garage it has been altered.

MAP ID	STREET NO.	STREET NAME	SUFFIX	HISTORIC NAME	FORM	ARCHITECTURAL STYLE OR DETAILS	DATE OF CONSTRUCTION	ORIGINAL EVALUATION	AMENDED EVALUATION	SECONDARY STRUCTURE (SS)	SS ORIGINAL EVALUATION	SS AMENDED EVALUATION	NOTES
315	1203	21st	Street		Single-family Residence	Queen Anne - Free Classic	c. 1905	C	C	Garage - c.1925	C	C	
316	1206	21st	Street		Single-family Residence	N/A (Historically may have been Queen Anne)	c. 1895/1910	C	C	Garage - c.1920	C	NC	If original garage it has been altered.
317	1207	21st	Street		Single-family Residence	Queen Anne - Free Classic	c. 1905	C	C	Garage - c.1920; Garage - c.1930	C; C	C; NC	If c.1930 garage remains it has been altered.
318	1209	21st	Street		Single-family Residence	Queen Anne - Free Classic	c. 1895	C	C	Garage - c.1930	C	C	
319	1210	21st	Street		American Foursquare	Queen Anne - Free Classic	c. 1895	C	C	Garage - c.1925	C	C	
320	1216	21st			Single-family Residence	N/A (Historically may have been Queen Anne - Free Classic)	c. 1895	C	C	Garage	NC	C	
321	1217	21st	Street		Single-family Residence	Queen Anne - Free Classic	c. 1895	C	C	Garage - c.1925	C	C	
322	1220	21st	Street		Single-family Residence	Queen Anne	C. 1895	C	C	Garage - c.1945	C	C	
323	1223	21st	Street		American Foursquare	N/A	c. 1910	C	C	Garage	NC	NC	
324	1226	21st	Street		Single-family Residence	Queen Anne - Free Classic	c. 1895	C	C				
325	1227	21st	Street		Single-family Residence	Queen Anne - Free Classic	c. 1910	C	C				
326	1231	21st	Street		American Foursquare	Colonial Revival	c. 1920	C	C	Garage	NC	NC	
327	1234	21st	Street		Gable Front	Craftsman	c. 1910	C	C		C	Demolished	Contributing garage demolished.
328	700	22nd	Street		Church	Neoclassical	1915	C	C				
329	709	22nd	Street		Gable Front - Side Hall Plan	N/A	c. 1880	C	C	Garage	NC	NC	
330	715	22nd	Street		Single-family Residence	Queen Anne	c. 1894	C	C	Garage - c.1920	C	Demolished	Contributing garage demolished.
331	719	22nd	Street		Single-family Residence	Queen Anne	c. 1894	C	C				
332	721	22nd	Street		Single-family Residence	N/A	c. 1890	C	C	Garage (New)		NC	
333	725	22nd	Street		Single-family Residence	Craftsman	1912	C	C	Garage	NC	NC	
334	729	22nd	Street		Single-family Residence	Second Empire / Eastlake	c. 1875	C	C				

MAP ID	STREET NO.	STREET NAME	SUFFIX	HISTORIC NAME	FORM	ARCHITECTURAL STYLE OR DETAILS	DATE OF CONSTRUCTION	ORIGINAL EVALUATION	AMENDED EVALUATION	SECONDARY STRUCTURE (SS)	SS ORIGINAL EVALUATION	SS AMENDED EVALUATION	NOTES
335	735	22nd	Street		Single-family Residence	Queen Anne / Exotic Revival	c. 1880	C	C	Garage – c. 1970	C; NC	C	c. 1940 contributing garage demolished
336	736	22nd	Street		Single-family Residence	Craftsman	c. 1914	C	C	Garage (New)		NC	
337	740	22nd	Street		Single-family Residence	Craftsman	c. 1915	C	C	Garage	NC	NC	
338	741	22nd	Street		Single-family Residence	Queen Anne	c. 1891	C	C	Carriage Barn - c. 1891; Garage	C; NC	C; NC	
339	742	22nd	Street		Single-family Residence	Craftsman	c. 1900/1912	C	C	Garage	NC	NC	
340	743	22nd	Street		Gable Front	Queen Anne	c. 1891	C	C	Garage c.1910 C	C	C	
341	806	22nd	Street		Single-family Residence	Queen Anne - Free Classic	1905	C	C	Garage	NC	NC	
342	807	22nd	Street		Single-family Residence	Queen Anne	c. 1891	C	C	Garage - c.1920	C	C	
343	810	22nd	Street		Single-family Residence	Queen Anne - Free Classic	c. 1902	C	C	Garage - c.1920	C	C	
344	818	22nd	Street		Single-family Residence	Colonial Revival	1904	C	C	Garage	NC	NC	
345	817	22nd	Street		Single-family Residence	Queen Anne	c. 1890	C	C	Garage; Garage; Garage	NC; NC	C; NC; NC	
346	820	22nd	Street		Single-family Residence	Queen Anne	c. 1903	C	C	Garage - c.1920	C	C	
347	821	22nd	Street		Single-family Residence	Queen Anne	c. 1891	C	C				
348	830	22nd	Street		Single-family Residence	Colonial Revival	c. 1907	C	C	Garage	NC	NC	
349	835	22nd	Street		Single-family Residence	Queen Anne	c. 1894	C	C		C	Demolished	Contributing garage demolished.
350	836	22nd	Street		Single-family Residence	Craftsman	1905	C	C	Garage - c.1906	C	C	
351	840	22nd	Street		Single-family Residence	Queen Anne	1904	C	C	Garage	NC	NC	
352	843	22nd	Street		Vacant Lot								Contributing resource demolished. Not counted in Section 5.
353	845	22nd	Street		Vacant Lot								Contributing resource demolished. Not counted in Section 5.
354	847	22nd	Street		Single-family Residence	Queen Anne	c. 1893	C	C				The rear 1.5 story section expanded to connect with the

MAP ID	STREET NO.	STREET NAME	SUFFIX	HISTORIC NAME	FORM	ARCHITECTURAL STYLE OR DETAILS	DATE OF CONSTRUCTION	ORIGINAL EVALUATION	AMENDED EVALUATION	SECONDARY STRUCTURE (SS)	SS ORIGINAL EVALUATION	SS AMENDED EVALUATION	NOTES
													former garage with a second floor dwelling at 2209 9th Avenue.
355	850	22nd	Street		Single-family Residence	Queen Anne - Free Classic	c. 1902	C	C	Garage - c.1930	C	C	
356	902	22nd	Street		Single-family Residence	Folk Victorian / Eastlake	c. 1890	C	C	Garage	NC	NC	
357	903	22nd	Street		Vacant Lot								Contributing resource demolished. Not counted in Section 5.
358	908	22nd	Street		Single-family Residence	N/A (Historically may have been Queen Anne)	c. 1895	C	C	Garage	NC	NC	
359	909	22nd	Street		Gable Front	N/A (Historically may have been Queen Anne - Free Classic)	c. 1895	C	C	Garage	NC	NC	
360	913	22nd	Street		Double House - American Foursquare	N/A	c. 1915	C	C	Garage	NC	NC	
361	914	22nd	Street		Single-family Residence	N/A (Historically may have been Queen Anne)	c. 1895	C	C	Garage	NC	NC	
362	918	22nd	Street		Single-family Residence	Queen Anne	c. 1890	C	C	Garage	NC	C	
363	920	22nd	Street		Single-family Residence	Craftsman	c. 1925	C	C	Garage (New)		NC	
364	921	22nd	Street		Gabled Ell	Queen Anne	c. 1885	C	C	Garage	NC	NC	
365	925	22nd	Street		Gable Front	Queen Anne	c. 1880	C	C	Garage (New)		NC	
366	926	22nd	Street		Single-family Residence	Queen Anne - Free Classic	c. 1890	C	C	Garage	NC	NC	
367	927	22nd	Street		Gable Front	Queen Anne - Free Classic	c. 1890	C	C	Garage (New)		NC	
368	929	22nd	Street		Gable Front	N/A (Historically may have been Queen Anne)	c. 1890	C	C				
369	930	22nd			Single-family Residence	N/A (Historically may have been Queen Anne)	c. 1895	C	C	Garage	NC	NC	
370	931	22nd	Street		American Foursquare	N/A	c. 1904	C	C		C	Demolished	Contributing garage demolished.
371	934	22nd	Street		Single-family	N/A (Historically	c. 1890	C	C	Garage - c.1930	C	C	

MAP ID	STREET NO.	STREET NAME	SUFFIX	HISTORIC NAME	FORM	ARCHITECTURAL STYLE OR DETAILS	DATE OF CONSTRUCTION	ORIGINAL EVALUATION	AMENDED EVALUATION	SECONDARY STRUCTURE (SS)	SS ORIGINAL EVALUATION	SS AMENDED EVALUATION	NOTES
					Residence	may have been Queen Anne)							
372	936-944	22nd	Street		Multi-Unit Dwelling	New Traditional	2000	C	NC				Two original/historic buildings demolished for existing building.
373	937	22nd	Street		Gable Front	N/A (Historically may have been Queen Anne)	c. 1905	C	C				
374	943	22nd	Street		American Foursquare	Queen Anne - Free Classic	c. 1920	C	C	Garage - c. 1925	C	C	
375	947	22nd	Street		Gable Front	N/A (Historically may have been Queen Anne)	c. 1885	C	C	Garage - c.1920	C	C	
376	948	22nd	Street		Gable Front	N/A (Historically may have been Queen Anne)	c. 1895	C	C		C	Demolished	Contributing garage demolished.
377	1000	22nd	Street		Single-family Residence	Queen Anne	c. 1895	C	C	Garage - c.1915	C	C	
378	1001	22nd	Street		Single-family Residence	Queen Anne - Free Classic	c. 1895	C	C				
379	1004	22nd	Street		American Foursquare	Queen Anne - Free Classic	1908	C	C				
380	1005	22nd	Street		Single-family Residence	Queen Anne - Free Classic	c. 1895	C	C		C	Demolished	Contributing garage demolished.
381	1010	22nd	Street		Single-family Residence	N/A (Historically may have been Queen Anne)	c. 1895	C	C		C	Demolished	Contributing garage demolished.
382	1015	22nd	Street		Single-family Residence	N/A (Historically may have been Queen Anne)	c. 1895	C	C	Garage - c.1930	C	C	
383	1016	22nd	Street		Single-family Residence	Queen Anne	c. 1895	C	C	Carriage Barn - c. 1900	C	C	
384	1017	22nd	Street		Single-family Residence	N/A (Historically may have been Queen Anne)	c. 1895	C	C	Garage (New)		NC	
385	1020	22nd	Street		Single-family Residence	N/A (Historically may have been Queen Anne)	c. 1895	C	C		C	Demolished	Contributing garage demolished.
386	1021	22nd	Street		American Foursquare	Queen Anne - Free Classic	c. 1900	C	C	Garage - c.1900	C	NC	If original garage, it has been altered.
387	1024	22nd	Street		Single-family	Tudor Revival	c. 1925	C	C	Garage - c.1925	C	C	

MAP ID	STREET NO.	STREET NAME	SUFFIX	HISTORIC NAME	FORM	ARCHITECTURAL STYLE OR DETAILS	DATE OF CONSTRUCTION	ORIGINAL EVALUATION	AMENDED EVALUATION	SECONDARY STRUCTURE (SS)	SS ORIGINAL EVALUATION	SS AMENDED EVALUATION	NOTES
					Residence								
388	1025	22nd	Street		American Foursquare	Queen Anne - Free Classic	c. 1900	C	C	Garage	NC	NC	
389	1029	22nd	Street		American Foursquare	Craftsman	1910	C	C		C	Demolished	Contributing garage demolished.
390	1030	22nd	Street		American Foursquare	Queen Anne - Free Classic	c. 1915	C	C	Garage - c.1930	C	NC	Garage has been altered.
391	1036	22nd	Street		American Foursquare	Queen Anne - Free Classic	c. 1910	C	C				
392	1037	22nd	Street		Single-family Residence	N/A (Historically may have been Craftsman)	c. 1930	C	C	Garage - c.1930	C	C	
393	1040	22nd	Street		American Foursquare	Queen Anne - Free Classic	c. 1925	C	C	Carriage Barn - c. 1890	C	C	
394	1043	22nd	Street		American Foursquare	N/A	c. 1905	C	C	Garage	NC	NC	
395	1045	22nd	Street		Single-family Residence	Queen Anne - Free Classic	c. 1890	C	C	Garage; Garage - c. 1925	NC; C	NC; C	
396	1048	22nd	Street		Single-family Residence	Queen Anne	c. 1890	C	C	Garage	NC	NC	
397	1202	22nd	Street		American Foursquare	Queen Anne - Free Classic	c. 1900	C	C				
398	1206	22nd	Street		American Foursquare	Craftsman	c. 1915	C	C	Garage - c.1915 ; Garage - c.1930	C; C	C; C	
399	1212	22nd	Street		Single-family Residence	Queen Anne - Free Classic	c. 1905	C	C	Garage - c.1945	C	C	
400	1216	22nd	Street		American Foursquare	Colonial Revival	c. 1905	C	C	Garage - c.1925	C	C	
401	1220	22nd	Street		Single-family Residence	Ranch	1963	NC	NC	Garage	NC	NC	Constructed during the period of significance but lacks integrity.
402	1226	22nd	Street		Cottage	N/A	c. 1915	C	C	Garage	NC	NC	
403	1230	22nd	Street		American Foursquare	Craftsman	c. 1910	C	C	Garage (New)		NC	
404	512	23rd	Street		Vacant Lot								Contributing resource demolished. Not counted in Section 5.
405	514	23rd	Street		Single-family Residence	Queen Anne	c. 1892-1898		C				
406	516	23rd	Street		Gable Front - Side Hall Plan	Italianate	c. 1875	C	C	Garage - c.1930	C	C	
407	519	23rd	Street		American Foursquare	Queen Anne - Free Classic	c. 1900	C	C		C	Demolished	Contributing garage demolished.

MAP ID	STREET NO.	STREET NAME	SUFFIX	HISTORIC NAME	FORM	ARCHITECTURAL STYLE OR DETAILS	DATE OF CONSTRUCTION	ORIGINAL EVALUATION	AMENDED EVALUATION	SECONDARY STRUCTURE (SS)	SS ORIGINAL EVALUATION	SS AMENDED EVALUATION	NOTES
408	524	23rd	Street		Gable Front - Side Hall Plan	Italianate	c. 1870	C	C	Garage	NC	NC	
409	525	23rd	Street		Vacant Lot								Contributing resource demolished. Not counted in Section 5.
410	528	23rd	Street		Gable Front - Side Hall Plan	Queen Anne	c. 1880	C	C		C	Demolished	Contributing garage demolished.
411	529	23rd	Street		Single-family Residence	Queen Anne	c. 1890	C	C				
412	535	23rd	Street		Double House	Queen Anne	1904	C	C				
413	536	23rd	Street		Gable Front - Side Hall Plan	Second Empire	c. 1875	C	C	Garage	NC	NC	
414	541	23rd	Street		Single-family Residence	Queen Anne	c. 1892	C	C	Garage (New)		NC	
415	544	23rd	Street		Gable Front - Side Hall Plan	Italianate / Eastlake	c. 1870	C	C				
416	547	23rd	Street		Vacant Lot								Contributing resource demolished. Not counted in Section 5.
417	553	23rd	Street		Church	No Style	c. 1930	NC	NC				Constructed during the period of significance but lacks integrity.
418	600	23rd	Street		One-Part Commercial Block	N/A	c. 1940	C	C				
419	603	23rd	Street		Side Hall Plan	Italianate	c. 1872/1903	C	C	Outbuilding (house, 2308 6th Ave) c. 1890/c. 1948	NC; NC	NC	Non-contributing garage demolished.
420	604	23rd			Gable Front	N/A	c. 1891	C	C	Garage	NC	NC	
421	605	23rd	Street		Single-family Residence	Queen Anne - Free Classic	c. 1895	C	C	Garage – c. 1970	NC	C	
422	606	23rd	Street		Gable Front	Folk Victorian	c. 1891	C	C	Garage - c.1920	C	C	
423	613	23rd	Street		Vacant Lot								Resource demolished prior to original nomination. Not counted in Section 5.
424	619	23rd	Street		Double House	Queen Anne	c. 1900	C	C				
425	625	23rd	Street		Side Hall Plan	Italianate	c. 1868	C	C				
426	701	23rd	Street		Vacant Lot								Resource demolished prior to original nomination. Not counted in Section 5.

MAP ID	STREET NO.	STREET NAME	SUFFIX	HISTORIC NAME	FORM	ARCHITECTURAL STYLE OR DETAILS	DATE OF CONSTRUCTION	ORIGINAL EVALUATION	AMENDED EVALUATION	SECONDARY STRUCTURE (SS)	SS ORIGINAL EVALUATION	SS AMENDED EVALUATION	NOTES
427	707	23rd	Street		Side Hall Plan	N/A (Historically may have been Italianate)	c. 1875	C	C	Garage - c.1915	C	C	
428	710	23rd	Street		Church	Gothic Revival	c. 1900	C	C				
429	713	23rd	Street		Vacant Lot								Resource demolished prior to original nomination. Not counted in Section 5.
430	733	23rd	Street		Gable Front	Queen Anne	c. 1880	C	C	Garage - c.1925	C	C	
431	734	23rd	Street		Single-family Residence		c. 1876/1894	C	C				
432	738	23rd	Street		Single-family Residence	N/A (Historically may have been Queen Anne - Free Classic)	c. 1890	C	C	Garage	NC	NC	
433	741	23rd	Street		Single-family Residence	Queen Anne - Free Classic	c. 1892	C	C	Garage	NC	C	
434	742	23rd	Street		Single-family Residence	Queen Anne - Free Classic	c. 1890	C	C	Garage	NC	NC	
435	748	23rd	Street		Single-family Residence	Queen Anne - Free Classic	c. 1890	C	C	Garage – c.1970	NC	C	
436	749	23rd	Street		Single-family Residence	Queen Anne - Free Classic	c. 1892	C	C				
437	754	23rd	Street		Single-family Residence	Queen Anne - Free Classic	c. 1895	C	C	Garage - c.1930	C	C	
438	815	23rd	Street		Single-family Residence	Queen Anne	c. 1892	C	C	Garage - c.1920	C		
439	816	23rd	Street		Single-family Residence	Queen Anne	c. 1895	C	C	Garage - c.1925	C	C	
440	817	23rd	Street		Single-family Residence	Queen Anne - Free Classic / Shingle	c. 1897	C	C				
441	824	23rd	Street		Single-family Residence	Queen Anne	1894	C	C	Garage - c.1925	C	C	
442	832	23rd	Street		Single-family Residence	Queen Anne	c. 1898	C	C				
443	834	23rd	Street		Single-family Residence	Queen Anne - Free Classic	c. 1900	C	C	Garage	NC	NC	
444	835	23rd	Street		American Foursquare	N/A	c. 1905	C	C				
445	836	23rd	Street		Single-family Residence	Shingle	c. 1904	C	C	Garage - c.1940	C	C	

MAP ID	STREET NO.	STREET NAME	SUFFIX	HISTORIC NAME	FORM	ARCHITECTURAL STYLE OR DETAILS	DATE OF CONSTRUCTION	ORIGINAL EVALUATION	AMENDED EVALUATION	SECONDARY STRUCTURE (SS)	SS ORIGINAL EVALUATION	SS AMENDED EVALUATION	NOTES
446	837	23rd	Street		Single-family Residence	Queen Anne - Free Classic	c. 1896	C	C	Garage - c.1925	C	C	
447	838	23rd	Street		Single-family Residence	Queen Anne - Free Classic	c. 1896	C	C	Garage	NC	NC	
448	839	23rd	Street		Single-family Residence	Queen Anne - Free Classic	c. 1897	C	C	Garage – c. 1970	NC	C	
449	903	23rd	Street		Single-family Residence	Queen Anne - Free Classic	c. 1901	C	C	Garage (New)	C	NC	
450	904	23rd	Street		Single-family Residence	Neoclassical	1904	C; NR	NR	Garage - c. 1925	C	NR	
451	909	23rd	Street		Single-family Residence	N/A (Historically may have been Queen Anne)	c. 1907	C	C				
452	913	23rd	Street		Single-family Residence	Minimal Traditional	c. 1940	C	C				
453	914	23rd	Street		Single-family Residence	Queen Anne - Free Classic	c. 1905	C	C	Garage - c. 1925	C	C	
454	920	23rd	Street		Single-family Residence	Minimal Traditional	c. 1945	C	C	Garage - c. 1945	C	C	
455	923	23rd	Street		Single-family Residence	Craftsman	1914	C	C				
456	925	23rd	Street		American Foursquare	Queen Anne - Free Classic	c. 1904	C	C	Garage - c. 1925	C	C	
457	928	23rd	Street		Bungalow	Craftsman	c. 1937	C	C				
458	930	23rd	Street		American Foursquare	N/A	c. 1904	C	C				
459	931	23rd	Street		Bungalow	Craftsman	c. 1930	C	C	Garage - c. 1930	C	C	
460	935	23rd	Street		Single-family Residence (Possibly may have been an American Foursquare)	N/A (Historically may have been Craftsman)	c. 1917	C	C				
461	936	23rd	Street		Bungalow	Craftsman	c. 1929	C	C				
462	940	23rd	Street		Bungalow	Craftsman	c. 1929	C	C	Garage - c. 1930	C	C	
463	946	23rd	Street		American Foursquare	Queen Anne - Free Classic	c. 1911	C	C	Garage - c. 1940	C	NC	If original garage, it has been altered.
464	1000	23rd	Street		American Foursquare	Queen Anne - Free Classic	c. 1911	C	C				
465	1006	23rd	Street		American Foursquare	Queen Anne - Free Classic	1906	C	C				
466	1010	23rd	Street		American Foursquare	Queen Anne - Free Classic	1904	C	C	Garage - c. 1935	C	C	

MAP ID	STREET NO.	STREET NAME	SUFFIX	HISTORIC NAME	FORM	ARCHITECTURAL STYLE OR DETAILS	DATE OF CONSTRUCTION	ORIGINAL EVALUATION	AMENDED EVALUATION	SECONDARY STRUCTURE (SS)	SS ORIGINAL EVALUATION	SS AMENDED EVALUATION	NOTES
468	1016	23rd	Street		Single-family Residence	Queen Anne - Free Classic	c. 1895	C	C				Listed as 1018 in the original nomination.
469	1020	23rd	Street		American Foursquare	Queen Anne - Free Classic	1904	C	C	Garage	C	Demolished	Contributing garage demolished.
470	1025	23rd	Street		Single-family Residence	Colonial Revival	c. 1940	C	C	Garage - c. 1940; Carport	C; NC	C; NC	
471	1028	23rd	Street		Single-family Residence	Queen Anne - Free Classic	1904	C	C				
472	1029	23rd	Street		American Foursquare	Queen Anne - Free Classic	c. 1911	C	C	Garage	NC	NC	
473	1030	23rd	Street		Single-family Residence	N/A (Historically may have been Queen Anne)	c. 1904	NC	NC		C	Demolished	A fire approximately forty years ago destroyed the portions of the second floor and roof which resulted in a loss of integrity as the sections were not reconstructed to match the original. Contributing garage demolished.
474	1031	23rd	Street		American Foursquare	Queen Anne - Free Classic	c. 1906	C	C				
475	1034	23rd	Street		Single-family Residence	Craftsman	c. 1915	C	C				Listed as 1040 in the original nomination.
476	1035	23rd	Street		American Foursquare	Queen Anne - Free Classic	c. 1907	C	C	Garage – c. 1925	C	NC	If original garage, it has been altered.
477	1045	23rd	Street		American Foursquare	Queen Anne - Free Classic	c. 1907	C	C	Garage	NC	NC	
478	1046	23rd	Street		American Foursquare	Craftsman	c. 1911	C	C				
479	1700	7th	Avenue		Gable Front – T Plan	N/A	Pre-1892	Not in the original inventory.	C				
480	1720	7th	Avenue		Single-family Residence	Italianate / Eastlake	c. 1885	C	C	Carriage Barn - c. 1885	C	C	
481	1804	7th	Avenue		Synagogue	Neoclassical	c. 1884/1906	C	C	Garage (New)		NC	
482	1808	7th	Avenue		Single-family Residence (later converted to a church with an addition)	Italianate / Colonial Revival (Addition)	c. 1855/1940/c.1950-1957	C	C	Garage (New)		NC	
483	1906	7th	Avenue		Single-family Residence	Colonial Revival	1907	NR	NR				
484	1918	7th	Avenue		Workers Cottage	N/A	c. 1890	C	C	Carriage Barn -	C	C	

MAP ID	STREET NO.	STREET NAME	SUFFIX	HISTORIC NAME	FORM	ARCHITECTURAL STYLE OR DETAILS	DATE OF CONSTRUCTION	ORIGINAL EVALUATION	AMENDED EVALUATION	SECONDARY STRUCTURE (SS)	SS ORIGINAL EVALUATION	SS AMENDED EVALUATION	NOTES
										c. 1905			
485	2106	7th	Avenue		Single-family Residence (later converted to a funeral home with an undertaker and chapel)	Italianate / Italian Renaissance Revival	c. 1865/1935	C	C	Carriage Barn - c. 1890	C	C	
486	2125	7th	Avenue		Vacant Lot								Contributing resource demolished. Not counted in Section 5.
487	2203-09	7th	Avenue		Multi-unit Dwelling	Italianate / Eastlake	c. 1877/1914	C	C	Garage (New)		NC	This property was counted as four separate addresses in the original nomination, but is one building.
488	2208	7th	Avenue		Gable Front - Side Hall Plan	Italianate	c. 1883	C	C				
489	2215	7th	Avenue		Single-family Residence	Folk Victorian	c. 1883	C	C				
490	2225	7th	Avenue		Vacant Lot								Resource demolished prior to original nomination. Not counted in Section 5.
491	1702	8th	Avenue		Single-family Residence	N/A (Historically may have been Queen Anne)	c. 1930	C	C	Garage - c. 1925; Outbuilding	C; NC	C; NC	
492	1708	8th	Avenue		American Foursquare	Craftsman	c. 1915	C	C				
493	1712	8th	Avenue		American Foursquare	Craftsman	c. 1915	C	C				
494	1718	8th			Gable Front - Side Hall Plan	N/A	c. 1880	C	C	Garage	NC	NC	
494	1722	8th	Avenue		Gable Front - Side Hall Plan	N/A	c. 1880	C	C	Garage	NC	NC	
495	1728	8th	Avenue		Workers Cottage	N/A	c. 1880	C	C				
496	1732	8th	Avenue		Workers Cottage	N/A	c. 1875	C	C				
497	1835	8th	Avenue		Gable Front - Side Hall Plan	N/A	c. 1885	C	C				
498	1909	8th	Avenue		Single-family Residence	Queen Anne	c. 1900	C	C	Garage - c. 1915	C	C	
499	1914	8th	Avenue		Bungalow	Craftsman	c. 1915	C	C				
500	1917	8th	Avenue		Single-family Residence	Queen Anne - Free Classic	c. 1905	C	C				
501	1920	8th	Avenue		Single-family	Gothic Revival	c. 1870	C	C				

MAP ID	STREET NO.	STREET NAME	SUFFIX	HISTORIC NAME	FORM	ARCHITECTURAL STYLE OR DETAILS	DATE OF CONSTRUCTION	ORIGINAL EVALUATION	AMENDED EVALUATION	SECONDARY STRUCTURE (SS)	SS ORIGINAL EVALUATION	SS AMENDED EVALUATION	NOTES
					Residence								
502	1928	8th	Avenue		Single-family Residence	N/A	c. 1880	C	C	Garage	NC	NC	
503	1530	9th	Avenue		Single-family Residence	Queen Anne - Free Classic	c. 1898-1906	Not in original inventory.	C				
504	1710	9th	Avenue		Gable Front	N/A	c. 1895	C	C				
505	1711	9th	Avenue		Gable Front	N/A (Historically may have been Queen Anne or Folk Victorian)	c. 1890	C	C				
506	1714	9th	Avenue		Gable Front	N/A	c. 1890	C	C				
507	1740	9th	Avenue		Clinic	Modern	c. 1955	NC	C				Contributing with the extended period of significance.
508	1915	9th	Avenue		Cottage	Folk Victorian	c. 1879	C	C				
509	1919	9th	Avenue		Vacant Lot								Contributing resource demolished. Not counted in Section 5.
510	1920	9th	Avenue		Vacant Lot								Contributing resource demolished. Not counted in Section 5.
511	1924	9th	Avenue		Vacant Lot								Resource demolished prior to original nomination. Not counted in Section 5.
512	1925	9th	Avenue		Vacant Lot								Contributing resource demolished. Not counted in Section 5.
513	1929	9th	Avenue		Bungalow	Craftsman	c. 1920	C	C				
514	2007-09	9th	Avenue		Freestanding (Mixed-Use Commercial)	Contemporary	c. 1970	NC	C				This property was counted as two separate addresses in the original nomination, but is one building. Contributing with the extended period of significance.
515	2012	9th	Avenue		Single-family Residence	Queen Anne / Dutch Colonial Revival	c. 1894	C	C				
516	2016	9th	Avenue		Vacant Lot								Contributing resource

MAP ID	STREET NO.	STREET NAME	SUFFIX	HISTORIC NAME	FORM	ARCHITECTURAL STYLE OR DETAILS	DATE OF CONSTRUCTION	ORIGINAL EVALUATION	AMENDED EVALUATION	SECONDARY STRUCTURE (SS)	SS ORIGINAL EVALUATION	SS AMENDED EVALUATION	NOTES
													demolished. Not counted in Section 5.
517	2017	9th	Avenue		American Foursquare	Craftsman	c. 1905	C	C				
518	2115	9th	Avenue		Cottage	Folk Victorian	c. 1885	C	C				
519	2210	9th			Cottage	Craftsman	1912	C	C				
520	1539	10th	Avenue		Cottage	N/A (Historically may have been Queen Anne - Free Classic)	c. 1910	Not in original inventory.	C				
521	1720	10th	Avenue		Single-family Residence	N/A (Historically may have been Queen Anne with later porch remodeling)	c. 1905	C	C				
522	1903	10th	Avenue		Single-family Residence	Ranch	c. 1965	NC	C				Contributing with the extended period of significance.
523	1910	10th	Avenue		American Foursquare	Queen Anne - Free Classic	c. 1900	C	C	Garage - c. 1925	C	C	
524	1913	10th	Avenue		Single-family Residence	Queen Anne	c. 1900	C	C				Garage for 935 19th Street appears to have been counted twice in original inventory as a garage for 1913 10th Avenue. It has been removed.
525	1919	10th	Avenue		Cottage	Queen Anne	c. 1905	C	C				
526	1923	10th	Avenue		American Foursquare	Queen Anne	c. 1900	C	C	Garage	NC; C	C	The original contributing garage was demolished. Non-contributing garage is now contributing with extended period of significance.
527	2016	10th	Avenue		Multi-Unit Dwelling	N/A	c. 1910	C	C				
528	2229	10th	Avenue		Single-family Residence	Craftsman	c. 1914	C	C	Garage - c. 1930	C	C	
529	1619	12th	Avenue		Cottage	Queen Anne	c. 1915	Not in original inventory.	C				
530	1728	12th	Avenue		Single-family Residence	Queen Anne	c. 1895	C	C	Garage - c. 1920	C	C	
531	1902	12th	Avenue		Single-family Residence	Queen Anne - Free Classic	c. 1900	C	C		C	Demolished	Contributing garage demolished.
532	2114	12th	Avenue		American Foursquare	Queen Anne -	c. 1905	C	C				

MAP ID	STREET NO.	STREET NAME	SUFFIX	HISTORIC NAME	FORM	ARCHITECTURAL STYLE OR DETAILS	DATE OF CONSTRUCTION	ORIGINAL EVALUATION	AMENDED EVALUATION	SECONDARY STRUCTURE (SS)	SS ORIGINAL EVALUATION	SS AMENDED EVALUATION	NOTES
						Free Classic							
533	2116	12th	Avenue		Cottage	Queen Anne - Free Classic	c. 1900	C	C				
534	1627	13th	Avenue		American Foursquare	Craftsman	c. 1910	Not in original inventory.	C				
535	1712	13th	Avenue		American Foursquare	Queen Anne - Free Classic	c. 1905	C	C				
536	1714	13th	Avenue		American Foursquare	Queen Anne - Free Classic	c. 1900	C	C				
537	1715	13th	Avenue		Cottage	Folk Victorian	c. 1885	C	C				
538	1720	13th	Avenue		Single-family Residence	Colonial Revival	c. 1930	C	C				
539	1900	13th	Avenue		American Foursquare	N/A	c. 1905	C	C	Garage	NC	NC	
540	1910	13th	Avenue		Single-family Residence	Queen Anne - Free Classic	c. 1905	C	C	Garage - c. 1945	C	C	
541	1710	Lincoln	Court		Bungalow	Craftsman	c. 1920	C	C	Garage	NC	NC	
542	1711	Lincoln	Court		American Foursquare	N/A	c. 1920	C	C	Garage - c. 1925	C	NC	If original garage, it has been altered.
543	1714	Lincoln	Court		American Foursquare	Craftsman	c. 1912	C	C	Garage - c. 1915	C	NC	If original garage, it has been altered.
544	1715	Lincoln	Court		Bungalow	Craftsman	c. 1936	C	C	Garage - c. 1936	C	NC	If original garage, it has been altered.
545	1720	Lincoln	Court		American Foursquare	Queen Anne	c. 1910	C	C	Garage (New)	NC	NC	

Explanation of Amendment:

Section 8 of the Broadway Historic District is being amended to extend the Period of Significance, currently circa 1854 - 1948, to 1973 the 50-year cut-off for the National Register of Historic Places; provide an introductory contextual history on the founding of the City of Rock Island; and update the existing building forms and architectural styles to reflect those found in the district through the period of significance which contribute to the district's eligibility for listing on the National Register of Historic Places under Criterion C for Architecture.

Amendment:

Narrative Statement of Significance

PRE- HISTORY AND EARLY SETTLEMENT OF THE ILLINOIS AND ROCK ISLAND TERRITORIES

Native people have occupied the area now known as Rock Island since the Paleoindian Period, over 10,000 years BP (Before Present). During the seventeenth century, the area served as the hunting grounds for the Illinois Confederation (also known as the Illini or Illiniwek), their main residences located in the central and southern areas of the state. Composed of several tribes, the Illinois Confederation included the Tamaroas, Michigamies, Kaskaskias, Cahokias, and Peorias. From the seventeenth through the nineteenth centuries, this region was also home to people from Anishinaabe groups like the Ojibwe, Potawatomi, and Odawa, other Algonquian speakers such as the Kickapoo, Sauk and Meskwaki (Fox), as well as Siouan-speaking groups including the Ho-Chunk (Winnebago)."

As the burgeoning United States headed west at the beginning of the nineteenth century, the government attempted to buy Native American-owned lands as part of the expansion. In 1804, territorial governor William Henry Harrison negotiated a treaty with Sauk and Meskwaki leaders to purchase their lands east of the Mississippi River. The treaty allowed the tribes to inhabit and use the lands until it was surveyed and sold to settlers. The Sauks continued to live on their lands and in their village of Saukenuk for the next two decades. Five years later, the Illinois territory was created in 1809 and the lands north and west of the Illinois River were formed as Pike County.

After the War of 1812, the promise of fertile lands and the beauty of the landscape had attracted early pioneers to the valleys of the Mississippi and Rock Rivers. The United States government established Fort Armstrong (near present-day Rock Island) in 1816, as part of a chain of western frontier defenses, but it wasn't until 1828 that the government began surveying the land ceded in 1804. Illinois became the 21st state to join the Union in 1818.

The Sauks were officially informed in 1828 by government agent Thomas Forsyth that they were to vacate Saukenuk (present-day Rock Island) and their other settlements east of the Mississippi River. When the time came, many Sauks had chosen to cede their lands and relocate west of the Mississippi River, rather than risk a confrontation with the United States.

Roughly 800 Sauks, led by Black Hawk, Sauk band leader and warrior, chose to stay on their native lands and resist the United States' westward expansion. They were determined to protect Saukenuk, but when his group returned to the village after their winter hunts in 1829-1831, they found their village increasingly occupied by (white) squatters. Their homes claimed by white settlers, their corn hills used as storage for wagons, and the bones of their ancestors disturbed and laid bare upon the ground by the plow.

United States officials were determined to force the Sauk tribe out of Illinois. Under General Edmund P. Gaines, a full assault was launched against Saukenuk on June 26, 1831, only to find that Black Hawk and his followers had abandoned the village and crossed the Mississippi River.

In April 1832, Black Hawk prepared to re-cross east of the Mississippi River leading a faction of Sauks, Meskwakis, and Kickapoos, east of the Mississippi and into the American state of Illinois, from Iowa Indian Territory. While Black Hawk's exact motives were unknown, the presence of children, women, and elders indicated that they were a peaceful party, only hoping to resettle on their native lands.

Convinced that the group was hostile, a frontier militia was organized and opened fire on the group on May 14, 1832. The group responded with a successful attack on the militia at the Battle of Stillman's Run. Black Hawk led his faction to a safe location in southern Wisconsin. Under the command of General Henry Atkinson, the U.S. troops tracked the group to Wisconsin. On July 21, they were defeated by Colonel Henry Dodge's militia at the Battle of Wisconsin Heights. Weakened by starvation and death, survivors retreated toward the Mississippi River.

CREATION OF ROCK ISLAND COUNTY AND THE CITY OF ROCK ISLAND

After the initial removal of Native Americans from their lands in 1828, the county of Rock Island was formed in 1831 from Jo Daviess County. The county was named after the largest island in the Mississippi River. Soon after the conclusion of the Black Hawk War, the creation of a county government was approved by early settlers in 1833 and the first county election occurred on July 5th of the same year. The county government operated out of the first house built in the Town of Farnhamsburg (previously the northern portion of present-day Rock Island), the first settlement on the south side of the Mississippi River. The residence, built in 1826 by Colonel Davenport and Russell Farnham, hosted the first elections, housed the first post office, and served as the seat of the Circuit and County Courts from 1833 to 1835. In 1835, the original seat of justice was moved to the newly platted Town of Stephenson (the north-central portion of the current City of Rock Island), surveyed by the town's first surveyor, Charles Bennett. The town was laid out by commissioners under the authorization of the State Legislature to establish the seat of justice for Rock Island County. Stephenson served as the educational, commercial, and social center of Rock Island County.

The founder of the first newspaper in Stephenson described the town as it appeared in 1840:

> *"The inhabitants of the town and its environs could not be surpassed, if equaled, by any city in the west, for men of intelligence-courteous and kind in everything. Our judiciary consisted of Judge Stone, who was very soon superseded by Judge Brown; our bar consisted of Joseph Knox, Joseph B. Wells, J. Wilson Drury, and H. G. Reynolds; the clerk of the court was an old bachelor, Joseph Conway, brother of Miles Conway, who, with a Mr. Cooper, composed the magistracy of the village; while our medical department was represented by Doctor Gregg alone, a man eminent in his profession. There were three stores in the place, kept by John Meller, Lemuel Andrews and a Mr. Kauffman. Two more came afterwards, viz: Mr. Bond and Mr. Moore. There was one tinning establishment, Lee & Chamberlin's; one saddler shop, J. M. Frizzell's; one cabinet maker's and one gunsmith's shop; three taverns, Mr. Bently's on the river bank; Buffum's, back of the Court House Square; and the Rock Island House on Main Street, kept by VanCourt & Brothers. This was the leading hotel at that day. There was one restaurant, and one other, called a saloon for the want of a more appropriate name. One minister of the gospel (Presbyterian), Reverent Mr. Stewart, preached in a little schoolhouse back of Doctor*

Gregg's residence on Main Street-our only church, lyceum and town hall. The Powars family, Guarnseys and old Mr. Vandruff, who lived on the island in Rock River, and kept a ferry at the Rapids, and something for the inner man, were among the first settlers of Rock Island. There were but few places of any note above Quincy, Illinois."

Out of Stephenson was established the Town of Rock Island created by an act of the State Legislature in March 1841. Under this act Stephenson's name was changed to Rock Island and officially incorporated as a town governed by a board of nine trustees. Rock Island and its predecessor, Stephenson, were founded by white settlers, African-Americans, and Swedish, German, Irish, and Jewish immigrants, who all settled and established the community's distinct neighborhoods. Like Rock Island County, the town is located at the foot of the Upper Rapids of the Mississippi River, just below the westernmost extremity of Rock Island, from which it receives its name. The boundaries of the new town were defined as "all that portion of land contained within the limits of the plat of the town of Stephenson, and all the additions thereto, as of record in the recorder's office, in the County of Rock Island." Rock Island was granted a city charter on February 12, 1849. An election on November 4, 1879 changed the organization of the governing body under the general laws of the State of 1872. As a result, the eastern boundary extends to the western boundary of the City of Moline. From here, the two cities were adjoined and physically connected by three street railways and the passenger lines of three railroads.

In 1854, Rock Island experienced its first economic boom with the arrival of the Chicago, Rock Island, & Pacific Railroad, the first railroad to reach the Mississippi River. This period of economic growth was short lived as Rock Island was also plagued by the Panic of 1857 and heavy westward migration.

Despite the national economic depression of the late 1850s and the Civil War from 1861-1865, Rock Island recovered. In 1875, Augustana College moved to Rock Island and over time has created a beautiful campus with about 2,700 students. Augustana College brought a sense of refinement to the river town, known for being raucous and unrefined.

Refinement of the "rough and tumble" river town continued through the nineteenth century with the creation of active business and civic associations. The most influential group was the Citizen's Improvement Association (CIA), composed of some 100 businessmen who lobbied for paved roads and sidewalks, the demolition of undesirable buildings, and the overall beautification of the City. The success of the CIA is still visible today through the existing brick roads in the DRIHD and the position of Rock Island park commissioner, a position promoted by the association. The association is also known for securing a special assessment tax for home improvement, encouraging Rock Island's industrial growth, attaining a Federal building, securing the construction of new bridges and railroads, and for extending the trolley lines to the top of bluffs, which opened up the surrounding area for development in the early twentieth century. The work of the CIA was continued into the twentieth century with the formation of the Rock Island Club in 1896.

With the work of these associations, Rock Island boasted "a strong urban population, beautiful homes, cheap fuel, the finest of coal at our very door, an abundance of water furnished by a fine combined system of water works, a large water power adjacent to our-selves and neighboring city, awaiting development, a wealthy farming district surrounding us, and a location that capital and labor can both appreciate."

By the turn of the century, three railroads with both passenger and freight traffic served Rock island: the Chicago, Rock Island, & Pacific; the Chicago, Burlington & Quincy; and the Chicago, Milwaukee & St. Paul Railroads. Additionally, an

extensive network of electric surface cars radiating out of Rock Island connected Davenport, Moline, East Moline, Silvis, Milan, Watertown, and the Rock Island Arsenal.

Visitors traveled to Rock Island to observe the City's parks and drives, extensive school and college campuses, the neighborhood churches, public library, hotels, shops and stores, and major factories manufacturing everything from plows to candy and lumber to beer. Travelers were inspired by the City's landscape which mingled the man-made with the natural. From Rock Island one could observe the bluffs of Iowa approach the shore as the hills of Rock Island recede into the distance, leaving a broad and awe-inspiring plain on which the City of Rock Island was built. Along the bank of the Mississippi River can be seen the spires and factories of Davenport, Rock Island, and Moline and the piers and iron spans of the bridges which connect these cities.

An additional factor in Rock Island's success began in 1907 with the formation of the Rock Island Independents (RII) (1907-1925). The RII's were an original member of the National Football League (formerly the National Football Association). The home field of the Independents was Douglas Park (located at 15th Avenue and 10th Street). Here was the site of the first ever National Football League game on September 26, 1920, just nine days after the formation of the league. The Rock Island Independents defeated the non-member St. Paul Ideals. Douglas Park hosted famous teams such as Decatur Staleys (later, the Chicago Bears), Green Bay Packers, and the Chicago Cardinals and Hall of Fame players including Jim Thorpe, Curly Lambeau, George Halas, Ed Healey, Jimmy Conzelman, Joe Guyon, George Trafton, and Paddy Driscoll.

At the time *Historic Rock Island County* was published in 1908, the City of Rock Island was noted as a "substantially built-town" with a population of about 32,000. The location of Rock Island was touted as "one of the most beautiful that can be imagined."

CRITERION C: ARCHITECTURE IN THE BROADWAY HISTORIC DISTRICT

The City of Rock Island was first platted as the Town of Stephenson in 1835, and over the next two decades residential development flourished outward from the town center (present-day Downtown Rock Island). Part of this outward expansion includes what is the Broadway Historic District, located immediately south of the original town center of Rock Island. The Broadway Historic District retains a significant amount of architectural fabric from its early development during the mid-nineteenth century through the mid-twentieth century at which time the district had reach its peak development and maturity.

Buildings in the Broadway Historic District can be categorized by form, architectural style, or commercial building type. An architectural style is well-defined by common features that are distinctive in overall massing, floor plan, materials, and architectural detailing. These buildings may be architect-designed or display a conscious attempt to incorporate typical architectural features of the time period. Of the 518 principal buildings in the District, xxx can be classified as having an architectural style, whether being a pure example, using select details, or being a hybrid of styles. Architectural styles in the district include: Italianate, Folk Victorian, Queen Anne, Colonial Revival, Craftsman, Ranch, and others.

Buildings constructed during the early to mid-19th century are generally less-stylistic and can be identified by their form, feature, or shape rather than an architectural style. These residences were typically built by an owner or builder who relied on simple, practical techniques and locally available materials for overall design and floor layout. Availability and locale determined the types of structural systems, materials, and millwork found in these buildings. Occasionally, ornamental characteristics of an architectural style such as Italianate, Folk Victorian, Eastlake, or Queen Anne are applied to the façade at the time of construction or as a later remodeling. If details of an architectural style are present, the building is first categorized by form and then, by style. There are xxx principal residential buildings categorized by form in the Broadway Historic District. Buildings which closely follow architectural styles and do not express a defined formed have been identified by its use (e.g., Single-family Residence).

There are also four commercial properties sporadically interspersed in the Broadway Historic District, including xxxx. These commercial buildings have been broadly categorized into the following types, which have been established in the work of Richard Longstreth: One- and Two-Part Commercial Blocks and Freestanding.

The following sections describe the architectural styles, residential buildings forms, and commercial building types, identified in the Broadway Historic District.

Notes:

The dates in parenthesis first indicate the time period during which the style was most popular nationally (N). Because of the varying rates in which popular architectural fashions spread across the country, the entrenchment of local building traditions, as well as the dominance of local tastes, dates may differ for local examples.

The second time period in parenthesis is the period in which this style appears locally (L) in the Broadway Historic District.

Architectural features listed under each architectural style are common characteristics, but may not be found in every building and may vary locally, regionally, and nationally.

Residential Building Forms

The Broadway Historic District is especially well-represented with homes from the mid-nineteenth century to early twentieth century and still standing with high integrity. Mid-nineteenth century skilled carpenters and masons built elaborate and highly ornamented houses that have been maintained in good condition. This high-quality building tradition continued throughout the turn of the twentieth-century with houses in a variety of styles and types embellished with popular architectural features and detailing at the time of construction.

Many residences within the Broadway historic District are defined by building form. Form refers to the shape, features, or configuration of a building to which elements of an architectural style are then applied. A residence may then have details of an architectural style(s) found in window and door designs, porch supports and decorative elements such as decorative trim or railings, but is not a pure example of the architectural style. The following section defines those building forms documented in the Broadway Historic District.

Hall and Parlor

The side-gabled, Hall and Parlor house has two rooms side by side without a separating central hallway and is one room deep. The hall usually incorporated the kitchen and other family activity while the parlor was for formal entertaining and/or sleeping. It frequently has three bays: one central door and two windows. Hall and Parlor residences were dominant during the Pre-Railroad era, but are also found during the National era. During the Pre-Railroad era, they were first built of heavy timber framing in the Tidewater South and then with hewn logs walls throughout the Midwest region. After the introduction and expansion of the railway, Hall and Parlor homes were built with light-framed walls which then developed into variations of the Hall and Parlor including the extended Hall and Parlor with rearward extensions, differing chimney placements, and porch sizes, usually mistaken for later additions.

Gable Front Family: Workers Cottage, Gable-Front, Gabled Ell, and 'T' Shape

During the Greek Revival movement in the period between 1830 and 1850, the front-gabled shape was commonly used to echo the pedimented façade of typical Greek temples. This form was particularly common in New England and its popularity expanded along with the expansion of the railroad network and remained a dominant folk form until well into the 20th century. Part of its staying power reflected the fact that gable-front houses were well suited for narrow urban lots which were found in many rapidly developing cities.

Characterized by their roof shape, the Gable-Front roof has two sloped sides that meet at a center ridge. The triangular ends of the walls on the other two sides are called gables. In the Gable-Front form, the gable end faces the street and forms the front of the house. These were built as working-class homes, usually frame, with a rectangular plan, minimal projections on the front facade, and front entry below the face of the gable. Often a porch extends the full width of the front of the house. A house is usually two stories in height, while a cottage is one to one-and-a-half stories. Each is three to five bays wide. The Gable- Front form is commonly found in Midwestern towns because it was a simple type for local builders to construct and could fit on narrow lots.

Subtypes of the Gable-Front form is the Gabled Ell (L-Form) or Cross-Form (T-Form). The Gabled Ell or Cross-Form types are based on general massing and overall floor plan. Unlike the Upright and Wing form, L-Form houses and cottages do not have two separate house sections, but rather an L-Form or T-Form as one single integrated whole with the roof ridges and eaves at the same height. These forms are usually frame construction, two stories in height, and simple in design. They sometimes had applied ornamentation of the popular architectural style at the time around doors and windows.

Side Hall

The Side Hall form is typically configured as one room and a hall wide and three rooms deep with living and dining spaces on the first floor and sleeping rooms on the second floor. The Side Hall is most commonly found as a subtype of the Italianate style with a simple hipped roof (See "Italianate" in the following section "Architectural Styles"). The Side Hall form could also have a bay window on one side that provided light to a sitting or dining room.

Asymmetrical

Commonly found in the Italianate architectural style, the asymmetrical form is simply an L-shaped in plan with a cross-hipped or cross-gabled roof and does not have a tower located in the re-entrant corner of the "L."

Paired Gables

The paired gables form is typically found in the Gothic Revival style, and is defined by a pair of symmetrical cross gable or projecting gabled wings at the front façade.

American Foursquare

American Foursquare houses are typically square or nearly square in plan with four equal-sized rooms (an entrance hall, living room, dining room, and kitchen) in each corner. The type became popular in house building because it was practical and comfortable for the working and middle classes. The American Foursquare is usually two or two and half stories tall, two to three bays wide, with a hipped or pyramidal roof, dormers, a full-width front porch with classical or squared columns or piers, overhanging eaves, and features materials such as brick, stone, stucco, or wood siding. Plan book and catalog companies such as the Aladdin Company, the Radford Architectural Company, the Architects Small House Service Bureau, Sears Roebuck and Company, and Montgomery Ward and Company featured many Foursquare designs between 1900 and 1925.

American Foursquare houses also utilized architectural details from popular architectural styles at the time of construction. In the district, the American Foursquare residences tended to derive details from the Craftsman, Queen Anne, French Eclectic, and Colonial Revival styles.

Bungalow

The original form of the Bungalow came from one story buildings surrounded by verandahs built in India in the nineteenth century to serve as rest houses for travelers known as "dak bungalows." The Bungalow, in the United States, is an informal house type that began in California and quickly spread to other parts of the country.

Bungalows are one to one and a half or sometimes two-story houses that emphasize horizontality. Basic characteristics usually include broad and deep front porches and low-pitched roofs, often with dormers. Exterior materials are often brick with cut stone trim, or they can be frame with details derived from the Craftsman style on the interior. Typical architectural characteristics can include a one to one and a half story with low-pitched roof; wide, open eaves; porches, either full or partial width; porch piers are often battered; exterior finishes are wood shingle, stucco, or brick; shingles usually stained in earth-tone colors; exposed rafters or knee-braces under eaves; and windows creating a horizontal emphasis are either sash or casement.

Single-Family Residence

The Single-Family Residence is a stand-alone or freestanding structure with its own lot intended for one family. In the Broadway Historic District, this is the predominate residential typology, encompassing xxx percent of the buildings in

the district. Single-family Residences do not follow a set building form, but instead rely heavily on popular architectural styles (e.g., Queen Anne, Italianate, and Craftsman) for their architectural features, roof form, and plan.

Other: Multi-Family

Although most of the buildings in the Broadway Historic District are single-family residences, there are xxx buildings representing multi-family housing types which include:

Flat/Apartment Building: This building form is characterized as a singular building with several flats or apartments comprising the interior of the building. A flat or apartment is defined as a self-contained unit which only occupies a portion of a building, usually occupying an entire floor or a portion of a floor. In the district, there are buildings both constructed as flat/apartment buildings, as well as early twentieth century homes that have been converted into a multi-unit dwelling.

Ranch-style Apartment Building: An additional subcategory of the apartment building is the mid to late-twentieth century Ranch-style apartment building. This building typology is designed similar to a Ranch residence with a long, rectilinear plan and side-gabled roof, but is subdivided into multiple apartments.

Double House: A Double House is characterized by a single building being subdivided; down the middle, into two households with separate entrances. In the Broadway Historic District, the Double House typology was predominant during the early twentieth century and adorned with architectural features derived from the Queen Anne style.

Other: Secondary Structures

Coach House/Carriage Barn: A coach house or carriage barn served to shelter horse drawn vehicles for carrying people, and sometimes housed stalls and feed for horses. Large doors (either hinged or sliding) and a few windows are characteristic features.

This outbuilding type usually sits on the same side of the road as the primary house or is easily accessible from the road and has a clear relationship to a doorway of the primary house. Interiors would have large stalls and often a hayloft in the upper story. Later, these were naturally re-purposed into garages or automobiles, and the upper floor of the two-story carriage barns have been converted to residences.

Garage: Garages first appeared in the beginning of the twentieth century. They were typically rectangular buildings, made of wood or concrete: rock face block, beveled block, or cinder block. They would have large doors (sliding or hinged) on either eaves or gable side and sometimes a side entry door. Gable roofs were the most common, though some have hipped, pyramidal, or gambrel roofs. Garages were usually sited near the rear of the lot, accessed by a driveway or directly from the road/alley.

Commercial Buildings Forms

The commercial building, as a distinct architectural form, did not develop until the nineteenth century, although trading

centers and market halls have been around since antiquity. Commercial buildings were typically freestanding or joined by party walls, with the commercial business on the first floor and offices or residences above. The commercial building, as a form, almost always fits on its entire lot, and is built to the sidewalk.

In *The Buildings of Main Street*, Richard Longstreth developed a classification system for historic commercial structures built within compact business districts prior to the 1950s or within existing residential districts where commercial buildings followed standard/traditional forms such as the One- or Two-Part Commercial Block or Freestanding typology. His system uses building mass as the determining factor. The building inventory classifies all commercial buildings first by the massing types defined by Longstreth and second by the architectural style. The commercial buildings interspersed throughout the interior of the Broadway Historic District were constructed following the One- and Two-Part Commercial Blocks and Freestanding forms.

Commercial Blocks: One & Two Part

The two-part commercial block is the most common type of composition used for small and moderate-sized commercial buildings throughout the country. It is typically limited to buildings that are two to four stories in height. This typology is characterized by a horizontal division into two distinct zones, a lower and an upper zone. Each zone received its own design treatment that may be harmonious in design while clearly separated from one another, or they may have little visual relationship. The two-part division reflects the differences in use. The lower zone is located at street level and included public spaces such as retail stores, a banking room, an insurance office, or a hotel lobby. The upper zone housed more private spaces, including offices, hotel rooms, or a meeting mall. Treated in a similar manner as the lower zone of a two-part commercial block is the one-part commercial block. This typology is only one story in height and is typically a simple box in plan with an ornamented façade. In many cases, the street frontage is narrow and the façade is predominately composed of plate glass windows and an entry surmounted by a cornice or parapet.

Freestanding

Freestanding buildings are typically one story, occasionally two stories, but differ from Commercial Blocks in that they have architectural treatment on two or more sides. They are newer, having been built in the age of automobile access. The entry is usually accessible from the street, often oriented to a parking lot on the side or surrounding the building.

Architectural Styles

Exotic Revival (N. 1835-1915) (L. 1867-1880)

The Exotic Revival style was popularized during the Romantic Era which spanned the end of the eighteenth century to the mid-nineteenth century. The style is defined by three distinct subtypes of architectural ornamentation derived from Egyptian, Oriental, and Swiss Chalet architecture which were then applied to common residential building forms.

Typical architectural characteristics may include: Egyptian style columns (Egyptian); Hipped roofs crowned with Onion domes and fenestration openings set within Ogee arches and trimmed with scalloped edges (Oriental); or a low-pitched gabled roof adorned with decorative vergeboard, patterned stickwork on wall surfaces, and a second floor projecting balcony with flat, fretwork at the railing/balustrade and trim (Swiss Chalet).

Gothic Revival (N. 1840-1880) (L. 1865-1900)

The Gothic Revival style is based on medieval design precedents, widely popularized by Andrew Jackson Downing who published pattern books of stylistic details and championed the use of the style. It was promoted as an ideal picturesque rural style, suitable for residential use.

This style was promoted as an appropriate design for rural settings, with its complex and irregular shapes and forms fitting well into the natural landscape. Thus, the Gothic Revival style was often chosen for country homes and houses in rural or small town settings. The style was losing popularity for residential designs by the late 1860s, but resurgence during the 1870s occurred in applying the style to public and religious buildings.

Typical architectural characteristics can include a steeply pitched roof, usually with steep cross gables; gables commonly have decorated vergeboards (commonly called gingerbread or stickwork); windows commonly extend into gable, frequently having pointed-arch shape (Gothic arch); other window shapes include the clover-like foil with three, four or five lobes; doors often have pointed-arch and/or heavy hood ornament; roof peaks are often topped with pinnacles; decorative crowns (gable or drip mold) over windows and doors; and porches with turned posts or columns.

Italianate (N. 1840-1885) (L. 1865-1890)

A popular nineteenth-century style, the Italianate was derived from the architecture of Italian villas and originated in England at the start of the Picturesque Movement. This style with its wide overhanging bracketed eaves was typically found on two and three story buildings. Varying forms include a cube with low pitched hipped roof, rectangular plan with front gable roof, or asymmetrical plan with cross hip or cross gable roof. Often this style included a cupola.

Typical architectural characteristics can include vertical proportions; tall, curved or arched topped windows and doors with hooded molds; stone trim with incised foliated ornament; wide eaves and cornices; large brackets, sometimes paired; intricate wood or pressed metal cornices; porches, both small entry and full width, of single-story height; and paired and single doors are common with large-pane glazing in the door itself.

Second Empire (N. 1855-1885) (L. 1874-1880)

The Second Empire style was popular throughout the United States in the 1860s and 1870s, used extensively in the northeastern and midwestern parts of the country. The Second Empire style had its beginnings in France where it was the style during the reign of Napoleon III (1852-70), known as France's Second Empire. Prominent exhibitions in Paris in 1855 and 1867 helped to spread Second Empire style to England and then the United States.

The Second Empire Style is recognized by the hipped roof form with dormers that allow for the maximum use of an attic area. Unlike earlier Italianate or Greek Revival styles that were based on historic precedent, the Second Empire Style reflected the latest French fashion of the day. Typical architectural characteristics include: a mansard roof with dormer windows with arched or pedimented tops; cornices at the top and bottom of the lower roof slop; decorative eave brackets; patterned shingle roof; iron roof crest; decorative window surrounds and dormers; quoins; and balustrades.

Stick Style (N. 1860-1890) (L. 1880-1892)

The Stick Style is Gothic in its overall verticality but looks toward the Queen Anne style in its picturesque complexity, both in form and in detailing. The style was popularized in house pattern books by Andrew Jackson Downing in the 1860s and 1870s.

The most distinctive stylistic element of the Stick Style is the decorative stickwork or bands of wood trim applied horizontally, vertically, or diagonally to the exterior wall surfaces. The exterior stickwork was considered to display structural honesty by showing the supportive wooden understructure on the outside. A similar pattern of decorative wood trim appears in the trusses of the gables and across gables and on the porch braces.
Typical architectural characteristics can include a steeply pitched gable and cross-gable roofs with decorative trusses in the apex of the gable peaks; cross gables; decorative trusses at gable peak; overhanging eaves with exposed rafters; wood exterior walls with clapboards; horizontal, vertical, or diagonal decorative wood trim – stickwork; porches with diagonal or curved braces; and towers.

Eastlake (N. 1870-1890) (L. 1870-1890)

The Eastlake architectural style is unique as it is typically expressed through distinctive and artistically complex wooden surface ornamentation and detailing applied to residences built in other styles popular during the mid-to-late-nineteenth century including Italianate, Second Empire, Queen Anne, and Stick. The style is derived from the furniture and interior design popularized by English architect Charles L. Eastlake in his 1868 book, *Hints on Household Taste in Furniture, Upholstery, and Other Details*. The applied ornamentation which defines the Eastlake style is angular, notched, and carved, and rejects the preceding curved shapes of the French Baroque Revival Styles. It reflected Eastlake's belief that furniture and décor should be made by hand or machine workers who took personal pride in their work.

Typical architectural characteristics include: turned porch posts, railings, balustrades, bargeboards, braces, and pendants; wooden forms cut by a jigsaw; curved brackets, scrolls, and other stylized elements at every edge of each façade; fretwork or strapwork (interlaced strips of wood) at gables and pediments; beaded spindles and lattice work along porch eaves; and Mansard porch roofs with wrought-iron cresting.

Folk Victorian (N. 1870-1910) (L. 1878-1910)

Similar to Eastlake, the Folk Victorian style is commonly expressed through distinct wooden decorative detailing, but applied to common vernacular building forms. The applied ornamentation which defines the Folk Victorian style is typically derived from popular styles of the time including Italianate, Queen Anne, and Gothic Revival, but is simpler, restrained, and modest. Detailing is applied to porches and cornice lines and feature turned spindles or square porch posts with chamfered corners, lacey spandrels, turned balusters, carved brackets, and simple window surrounds or hoods.

Queen Anne (N. 1880-1910) (L. 1880-1925)

For many, the Queen Anne style typifies the architecture of the Victorian age. This very popular style of the 1880s and 1890s has asymmetrical massing characterized by projecting bays and prominent, compound roof shapes. These buildings were clad in a variety of materials and with multiple textures including patterned shingles. The style was named and popularized by a group of nineteenth century English architects led by Richard Norman Shaw. Roots for the style date back to the Elizabethan and Jacobean periods in England and have little to do with Queen Anne or the formal Renaissance architecture that dominated during her reign (1702-1714).

A subtype of Queen Anne found within the district is Queen Anne-Free Classic. This subtype is characterized by classical columns as porch supports, Palladian windows, and cornice-line dentils, projecting pressed metal bays with slate roofs. It lacks the eclecticism, abundance of decoration, varied and contrasting materials, shapes, and textures, patterned wall surfaces, and irregular roof lines typically found in the style.

Shingle Style (N. 1880-1910) (L. 1897-1904)

The Shingle Style is a variable style that borrows characteristics from several other styles. Many are closely related to the Queen Anne style with a facade that is usually asymmetrical, with irregular, steeply pitched roof lines having cross-gables and multi- level eaves. The distinguishing feature that sets this style apart is the use of continuous wood shingles cladding the roof and walls without interruption at corners. This style was employed by prominent American architects like H.H. Richardson, Frank Lloyd Wright, and the firm or McKim, Meade, and White.

Typical architectural characteristics can include shingled walls and roof; asymmetrical façade; irregular roof lines; moderately pitched roofs; cross gables; extensive wide porches; small sash or casement windows with many panes; and round or polygonal shingled towers.

Colonial Revival (N. 1890-1945) (L. 1904-1955)

Generally larger than those buildings of the earlier Colonial styles, the Colonial Revival Style embodies several of the classical details and elements of the earlier period showing an interest in early Federal, English (Georgian or Adam Styles) and Dutch (Dutch Colonial) houses. This interest revives the architecture of America's founding period, generated, in part by, the Philadelphia Centennial of 1876 celebrating the country's 100th birthday.

Most of these buildings are symmetrical and rectangular in plan; some have wings attached to the side. Detailing is derived from classical sources, partly due to the influence of classicism dominating the 1893 World's Columbian Exposition. Many front facades have classical, temple-like entrances with projecting porticos topped by pediments. Paneled doors flanked by sidelights and topped by rectangular transoms or fanlights are common, as are multi-pane double-hung windows with shutters.

Typical architectural characteristics can include symmetrical facades, often with side porches; red brick or wood clapboard walls; accentuated entrances with classical detailing and decorated with fanlights, sidelights, transoms, columns, and pediments; hipped or gable roofs, often with dormers; symmetrical, double-hung windows that are paired or tripled; columned porch or portico; front door sidelights; pedimented door, windows or dormers; wood shutters often with incised patterns; and cornice with dentils or modillions

Dutch Colonial Revival (N. 1880-1955) (L. 1894-1905)
See "Colonial Revival" above.

The Dutch Colonial Revival style is a subtype of the Colonial Revival style. Typical architectural characteristics can include a gambrel roof; symmetrical front façade; classical entry; and sheathed in wood clapboard or shingles.

Tudor Revival (N. 1890 - 1940) (L. 1925-1928)
A popular romantic revival style from the first half of the twentieth century, Tudor Revival was inspired by English Medieval architecture. The style is recognized by steeply pitched side gabled or hipped roofs, with one or more front facing, asymmetrically placed gables; stucco with half-timbering walls; rounded Tudor arch door openings; and windows are tall and narrow, either double hung or casement, often with decorative leaded glass with stone mullions and trim. Typical characteristics may also include: stepped or crenellated parapets with limestone coping; entrances set within a Tudor arch opening; brick patternwork (e.g., herringbone); limestone trim at fenestration openings; limestone gablets; limestone shield ornament; and brick relief work.

Italian Renaissance Revival (N. 1890-1935) (L. 1914-1935)
The Italian Renaissance Revival style developed at the end of the nineteenth century and was inspired by Italy and the ancient world. This revival style was a dramatic contrast to the earlier Queen Anne Style. This more ordered style has a studied formalism, symmetrical composition, simple flat facades, and low-pitched or flat roofs.
Typical architectural characteristics include: restrained decoration; rectangular form; low-pitched hipped or flat roof; symmetrical façade; limestone keystones at windows and doors; brick patternwork; decorative limestone ornament (e.g., roundels); rusticated base of details (e.g., piers and voussoirs); decorative, projecting metal or brick cornice; carved foliated details; brick corbeling; and arched entrances.

Neoclassical (N. 1895-1955) (L. 1904-1915)

Neoclassical was a dominant architectural style for domestic, civic, and institutional buildings throughout the county during the first half of the twentieth-century. This style is similar to Classical and Greek Revival but is more monumental and ornate compared to its simpler predecessors. Typical architectural characteristics can include a full-height porch for residences or temple-front entry on civic, institutional, and commercial buildings; columns are of the Ionic and Corinthian Orders; exaggerated broken pediments; classical symmetry; dentil cornices; and side-gabled roof with a centered classical pediment.

Craftsman (N. 1905-1930) (L. 1905-1937)

Craftsman was the dominant style for smaller houses built across the country during the period between 1905 through the mid- 1920s. This style developed in California at the turn of the twentieth century and was inspired by the English Arts and Crafts movement which brought a renewed interest in hand crafted materials and harmony with the natural environment. The style quickly spread throughout the country through pattern books and popular magazines. By the end of the 1920s, the style was fading from popularity and few were built after 1930.

Typical architectural characteristics can include a low pitched, gabled or hipped roof with a wide, unenclosed eave overhang; exposed roof rafters; decorative beams or knee braces under gable; porches, full or partial width, with roof supported by tapered square columns, often of brick or stone material; dormers often have exposed rafter ends and knee braces; usually shed or gable roof; and windows designed with a horizontal emphasis.
Craftsman detailing was frequently combined with the bungalow form, and Craftsman Bungalows, inspired by the work of California architects Greene and Greene, were widely published in architectural journals and popular home magazines of the day. Plans were often included in articles about the style, and the Craftsman Bungalow became one of the Country's most popular house styles during the teens and twenties.

French Eclectic (N. 1915-1945) (L. 1895-1915)

The French Eclectic style is derived from centuries of French residential architecture and showcases a breadth of forms and detailing applied to a simple rectilinear plan with symmetrical façades crowned by a common steeply pitched hipped roof. The style was popularized by photographic studies of French homes which were published in architectural journals and popular magazines, and later by the return of American soldiers, who had served in France during World War I, who had developed a familiarity of French domestic architecture, particularly from the Normandy and Brittany regions.

Typical architectural characteristics include: a defining hip roof with its ridge paralleling the front of the house, the roof incorporates a second floor, which is typically lit by segmental, gabled, or hipped roof dormers adorned with a pressed metal pediment; exterior cladding of brick, stucco, or clapboards; and classically inspired detailing at door and window surrounds.

Minimal Traditional (N. 1935-1950) (L. 1940-1945)

The economic Depression of the 1930s brought this compromise style, reflecting the form of traditional houses but lacking in their decorative detail. These houses were built in great numbers immediately before and following World War II. Typical architectural characteristics can include lower pitch roofs with no overhang at the eaves and rake; low-pitched, side-gabled roofs; some have a large chimney and one front-facing gable; small, one-story, occasionally two-story; built of wood, brick, stone, or a combination of these materials; and irregular shape and placement of windows.

Modern (N. 1945-1985) (L. 1955-1970)

Modern architecture is based upon new and innovative technologies of construction, particularly the use of glass, steel and concrete. The style first appeared after World War II and remained popular through the mid-1980s until it was replaced by Postmodernism and the architecture of the twenty-first century. Exhibiting a variety of compositions, the Modern style is characterized by an absence of ornament and an emphasis on form and geometric volumes. Wall surfaces are typically made of masonry, most commonly brick, concrete, limestone or granite, and are often pierced with tall, rectangular window openings, regularly spaced across the facades. However, in contrast, wide expanses of masonry without penetrations and large expanses of glass curtain walls are also characteristic of this period.

International (N. 1945-1975) (L. 1948)

Characterized by an absence of ornament, the International style is the expression of form and volume. By the late 1920s, American architects believed that European modernism was both visually progressive and structurally sound. After World War II, American interests were characterized by a confident, enthusiastic desire to “get on with the business of progress”.

Typical architectural characteristics can include: flat roofs; smooth and uniform wall surfaces; windows with minimal exterior reveals, perceived as continuations of the surface; ribbon and corner windows, bands of glass, or curtain wall construction with thin, metal mullions and smooth spandrel panels; constructed of concrete, glass, and steel; occasionally reveals skeleton-frame construction; and lack of non-essential decoration. Through the 1970s the most common use for the International style was commercial and institutional buildings.

Ranch (N. 1935-1975) (L. 1959-1968)

The origin of the Ranch house dates from 1932, when Cliff May, a San Diego architect, consciously created a building type that he called "the early California Ranch house." Despite its early roots, due to the Depression and World War II, the Ranch house did not become popular until the late 1940s and 1950s, when the idea was widely published.
This new style reflected the increasing use of the automobile. New suburbs were now accessible by car and therefore, compact houses were replaced by sprawling houses on larger lots. The Ranch style epitomizes this new land use sensibility by maximizing façade width and including built-in garages. Typical architectural characteristics include: asymmetrical; one-story with low-pitched roof; hipped, cross-gabled or side-gabled roofs with moderate to wide eave

overhangs; wood and brick cladding; decorative iron or wooden porch supports, decorative shutters, ribbon windows and/or large picture windows in the living room; and an attached two-car garage.

Contemporary (N. 1945-1990) (L. 1960-1970)

This style was favored for architect-designed buildings constructed between 1950 and 1990. It occurs in two distinctive subtypes based on roof shapes: flat or gabled. It can feature wide overhanging eaves, roof beams commonly exposed; heavy piers may support gables, built with natural materials wood, brick, and stone, broad expanse of uninterrupted wall surface, and the absence of traditional detailing.

New Traditional (N. 1935-Present) (L. 2000-2012)

The New Traditional movement was initiated by residential builders responding to public interest in traditional designs at a time when the architectural profession was relatively focused on experimental, modern styles. New Traditional describes buildings that take stylistic cues, freely borrowing from but not copying older styles. Architectural shapes and detailing tend to refer to traditional rather than modern influences. Typically, features of a historic style were either exaggerated or diminished, rarely precise in imitating its prototype, creating a new look which is reminiscent of a previously known style. In the district New Traditional buildings use details derived from Colonial Revival, Classical Revival, Tudor Revival, Prairie, Craftsman, and Victorian styles.

List of Figures
(Resize, compact, and paste images of maps and historic documents in this section. Place captions, with figure numbers above each image. Orient maps so that north is at the top of the page, all document should be inserted with the top toward the top of the page.

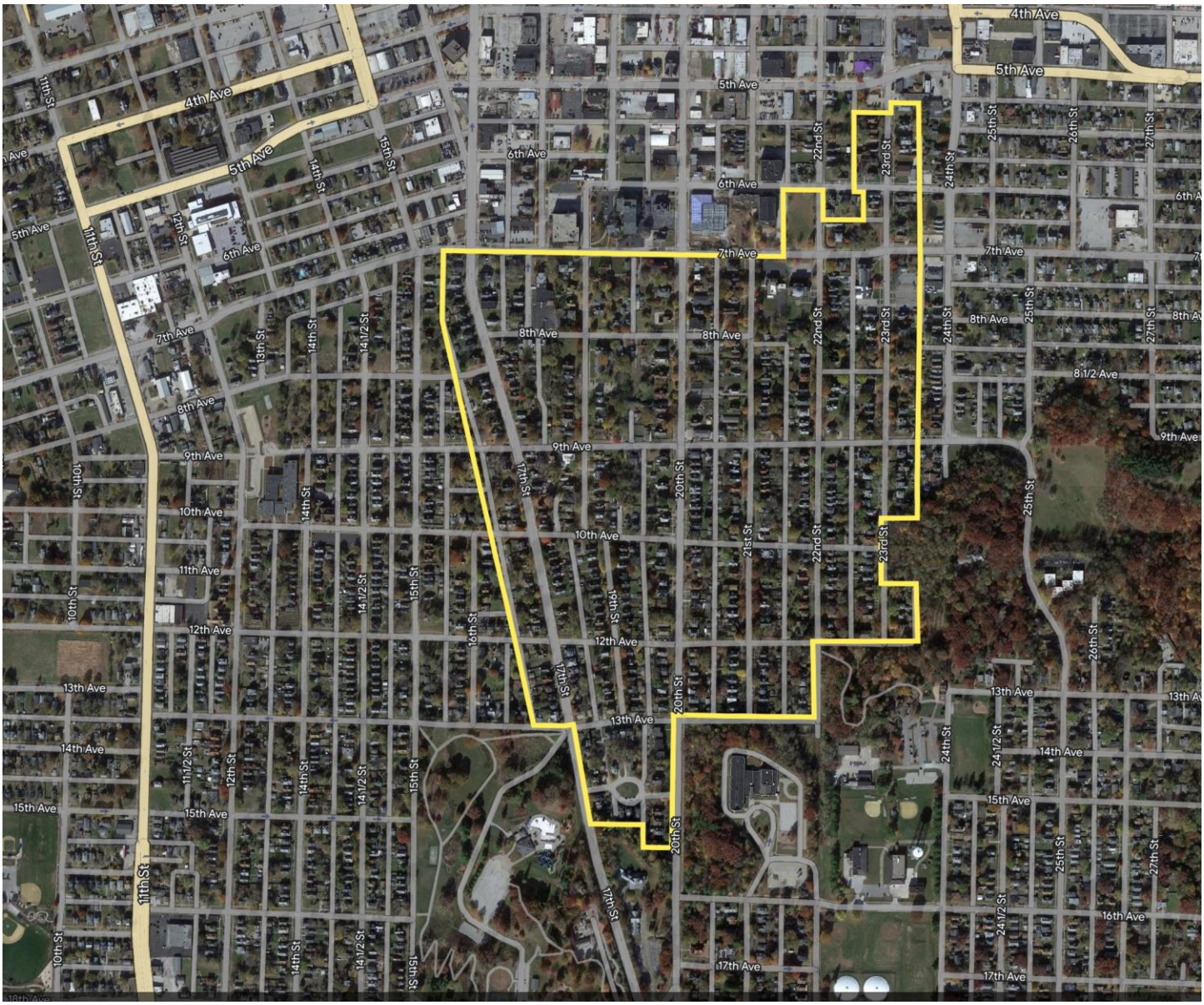
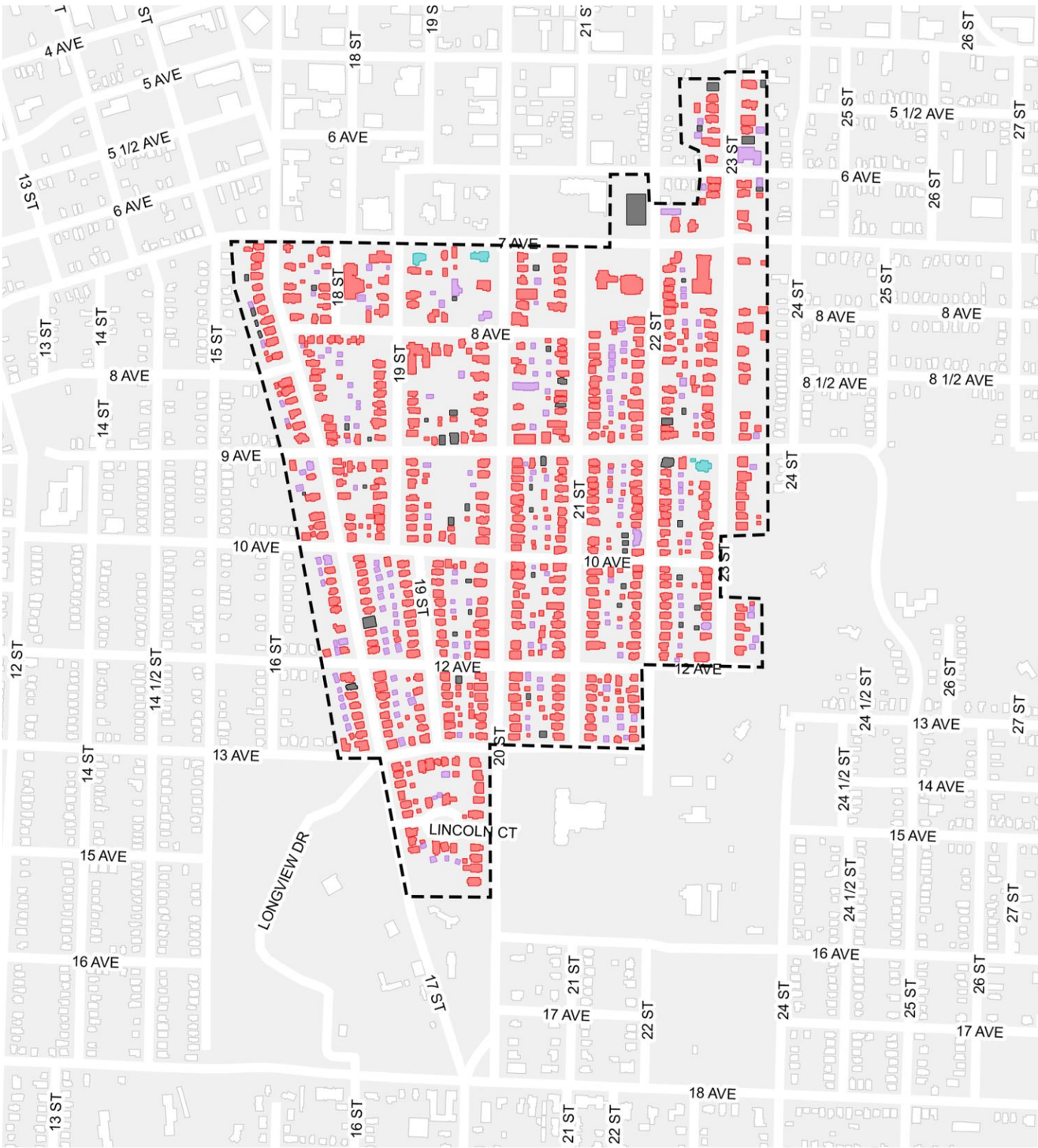


FIGURE 1: MAP OF BROADWAY HISTORIC DISTRICT

*The area in yellow identifies the Broadway Historic District boundary.



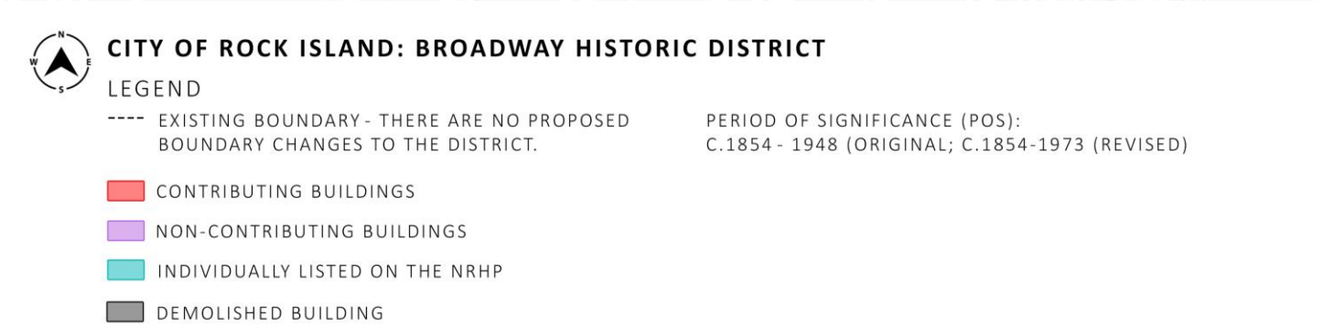


FIGURE 2: BUILDING KEY ERICA TO ADD MAP IDS ONCE INVENTORY IS FINALIZED AFTER CITY REVIEW

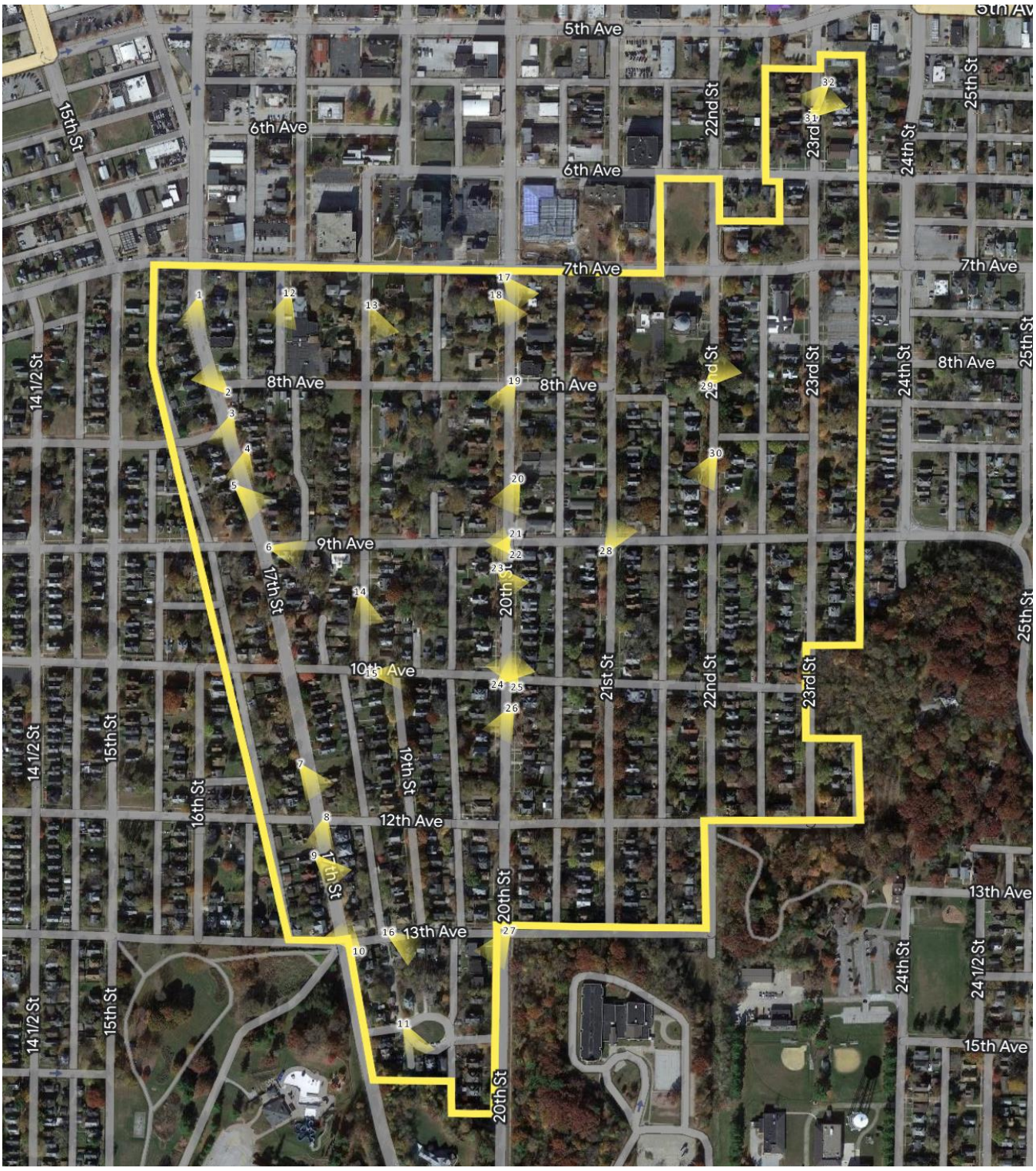


FIGURE 3: PHOTOGRAPH KEY *Photograph number identifies location of camera.

BROADWAY
HISTORIC
DISTRICT
JB
PAUL
SCHIMPF

17TH STREET
6TH AVENUE

845

Renovation

708

20TH STREET
8TH AVENUE

STOP

20TH STREET
9TH AVENUE

937

20TH STREET
10TH AVENUE

SPEED LIMIT
30

20TH STREET

WARNING

BROADWAY
PRIDE

Memorandum

To: Rock Island City Council

From: Tanner Osing, Miles Brainard, Director

Subject: Report from the Community & Economic Development Department regarding a Zoning Code Variance Request at 3008 7th Avenue.

Motion:	Motion whether or not to approve the Zoning Code Variance request with prescribed stipulations.
RC	Roll Call vote is needed.

Date: June 26, 2023

Introduction and Background Information:

The Board of Zoning Appeals held a public hearing on June 14, 2023 and voted unanimously (6 to 0) to recommend that the City Council approve a variance to 5 feet of the 6 foot minimum setback requirement between an accessory structure and another building at 3008 7th Avenue, zoned B-3 (community business) district. The Zoning Ordinance requires a 6 foot setback between an accessory structure (e.g. pergola) and any other building or structure on a lot (Chapter 11, Section 6). The applicant, Brandon Albertson, owner of Brandon's Pub & Grille, requested the variance to build a 25' by 50' pergola to offer covered outdoor seating to patrons. The business has seen increased demand for outdoor seating, especially during warmer months. There is already outdoor table seating where the pergola is proposed to be located. Staff believe that the investment in the pergola will allow for the continued growth of the business, and not have a negative effect on the surrounding neighborhood.

Chapter 8, Section 6-B of the Zoning Ordinance requires that the Board hold public hearings and then make a recommendation to the City Council on variances for business zoned parcels of, or larger, than 20,000 square feet in total area. Since the subject property is larger than 20,000 square feet, the Board's vote comes in the form of a recommendation to the Council.

Previous Council Action (if any):

Budget Impact:

Additional Information as applicable (i.e. provide alternative options, community or staff input, staffing impact; resident impact; etc.):

Council Goal (if applicable):

Recommendation:

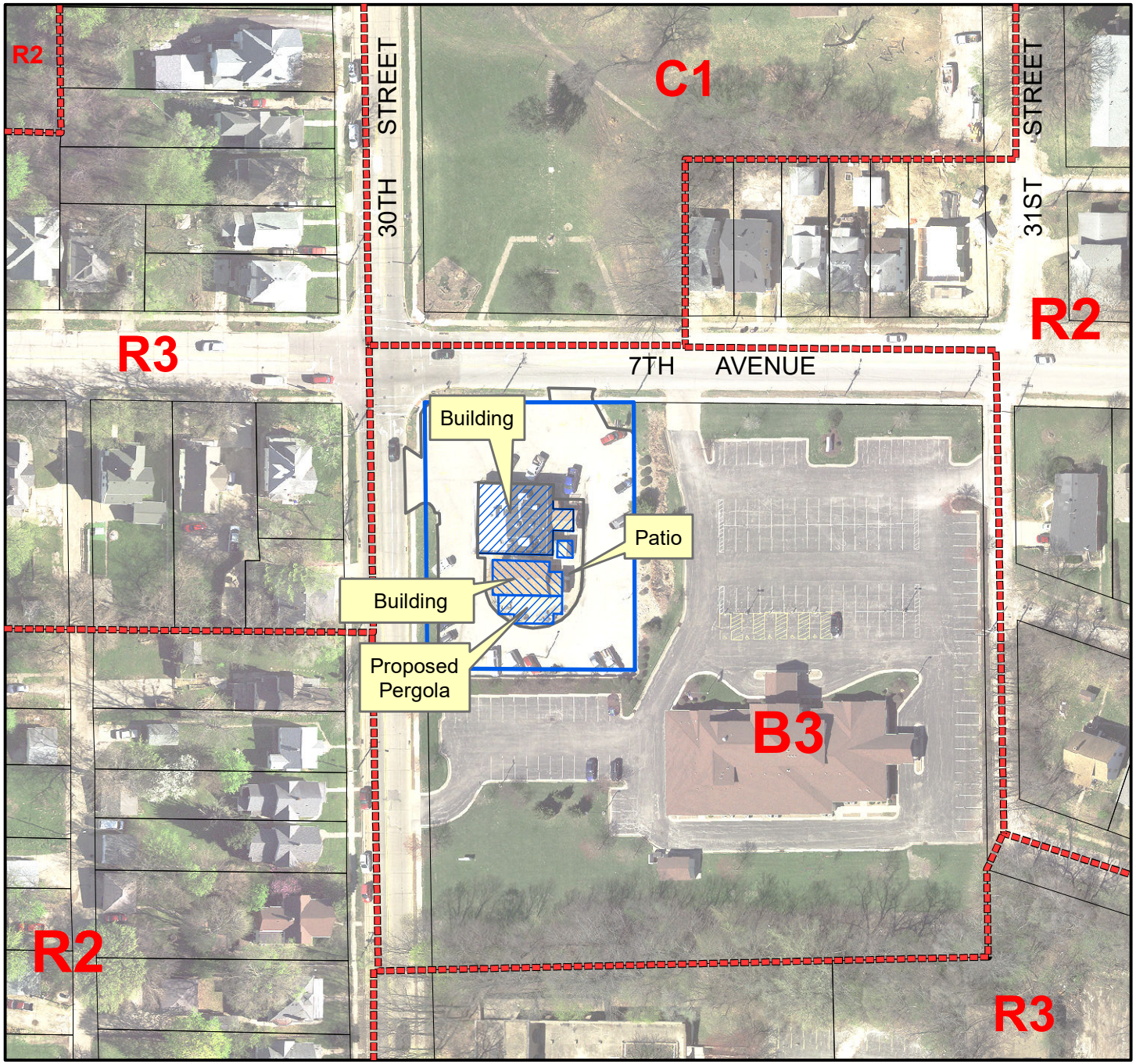
The Community & Economic Development Department and Board of Zoning Appeals recommend that the City Council approve the variance with the following stipulations because it will improve the return on the property and not alter the character of the neighborhood.

1. The requested variances shall only apply to the proposed 25’ by 50’ open pergola and no other accessory structure on the property.
2. The proposed pergola shall be located directly to the south of the south principal building on the property.

Submitted by: Tanner Osing

Approved by: Joshua Adams

LOCATION MAP



VARIANCE REQUEST 2023-12

Legend

- Subject Property
- Parcels
- Zoning District

N

0 25 50 100 150 Ft

City of Rock Island

COMMUNITY AND ECONOMIC DEVELOPMENT DEPARTMENT
Planning and Zoning Division

ROCK ISLAND ILLINOIS

Figure 1: Existing patio where the open pergola is proposed to be located.

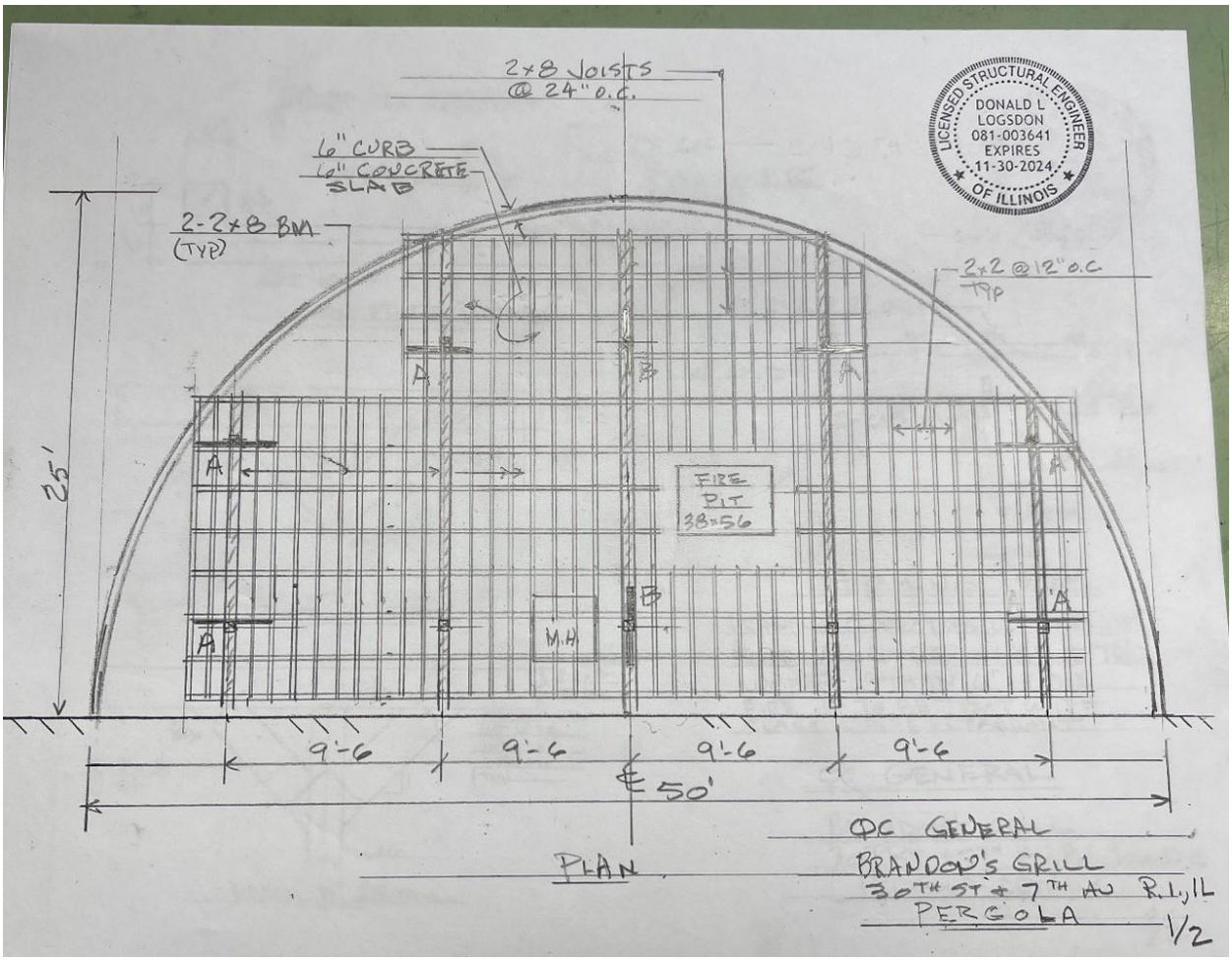


Figure 2: Drawing of the proposed pergola.

Memorandum

To: Rock Island City Council

From: Mike Bartels, Director

Subject: Report from the Traffic Engineering Committee regarding a request to place the parking lot for Inspiredesign Jewelry located at 1815 24th Street, under City ordinance control. (First Reading)

Motion:	Motion whether or not to approve the request and consider the ordinance.
RC	Roll Call vote is needed.

Date: June 26, 2023

Introduction and Background Information:

The Traffic Engineering Committee received a request from Mindy Diaz, Inspiredesign Jewelry, to place their parking lot at 1815 24th Street under city ordinance (Section 9-42) control.

Previous Council Action (if any):

Budget Impact:

There is no cost to the city. The property owner must post the required warning signs and pay an annual fee of $150.00 to the City. The ordinance is only enforced when the signs are posted and a representative of the property owner identifies the illegally parked vehicles.

Additional Information as applicable (i.e. provide alternative options, community or staff input, staffing impact; resident impact; etc.):

Council Goal (if applicable):

Recommendation:

The Traffic Engineering Committee recommends that the City Council approve the request and consider the ordinance.

Submitted by: Michelle Martin, Manager

Approved by: Joshua Adams

A SPECIAL ORDINANCE
REGULATING PARKING ON CERTAIN PRIVATE PROPERTY
IN THE CITY OF ROCK ISLAND, ILLINOIS

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF ROCK ISLAND, ILLINOIS:

Section One. No person, firm or corporation shall park a motor vehicle at the location of the parking lot of Inspiredesign Jewelry, 1815 24th Street, Rock Island, Illinois, without the consent of the property owner.

Section Two. The owner of said property shall pay an annual fee of One Hundred-Fifty Dollars ($150.00) to the City of Rock Island and shall post a sign or signs on said premises indicating that:

(1) Parking is prohibited without the consent of the property owner;

(2) Parking a motor vehicle without consent of the property owner is a violation of city ordinance;

(3) The owner of any vehicle violating the provisions of this section shall be subject to a fine of Twenty-Five Dollars ($25.00); and

(4) Any vehicle violating the provisions of this section may be impounded and the owner of the vehicle shall be responsible for all costs of the towing and impoundment.

Section Three. All ordinances and parts of ordinances in conflict herewith are hereby repealed insofar as they do so conflict.

Section Four. This ordinance shall be in full force and effect 10 days from its passage and approval, as required by law.

_____
MAYOR OF THE CITY OF ROCK ISLAND

PASSED:

APPROVED:

ATTEST: _____
CITY CLERK

ROCK ISLAND
ILLINOIS

PubWorks Mail Mail <pubworksmail@rigov.org>

Online Form Submittal: Private Parking Lot Ordinance Control

1 message

noreply@civicplus.com <noreply@civicplus.com>
To: pubworksmail@rigov.org

Thu, May 25, 2023 at 2:03 PM

Private Parking Lot Ordinance Control

This form is to be used to place a private parking lot under city ordinance (Section 9-42) control. The property owner must post the required warning signs and pay an annual fee to the City. Warning signs may be purchased from the Public Works Department at the cost of $100 per sign. The ordinance is only enforced when the signs are posted and a representative of the property owner identifies the illegally parked vehicles.

Please use one form per request.

(Section Break)

Name of Business	Inspiredesign Jewelry
I am the Property Owner of This Business:	Yes
Property Owner First Name	Mindy
Property Owner Last Name	Diaz
Street Address of Property to be Placed Under City Ordinance Control:	1815 24th St.
City	Rock Island
State	Illinois
Zip Code	61201
Phone Number	3097884367
Email Address	mindy@inspiredesignjewelry.com
Mailing Address (Street, City, State, Zip Code):	14 College Hill Circle Rock Island, IL 61201
Please provide any additional information that may be of assistance to the Traffic Engineering Committee and the City Council members	*Field not completed.*

when they review your request:

Email not displaying correctly? View it in your browser.

Memorandum

To: Rock Island City Council

From: Mike Bartels, Director

Subject: Report from the Traffic Engineering Committee regarding a request to install a 2-way stop sign on 8th Street at its intersection with 16th Avenue and yield signs on 8th Street and 17th Avenue.

Motion: Motion whether or not to deny the request.

RC Roll Call vote is needed.

Date: June 26, 2023

Introduction and Background Information:

The Traffic Engineering Committee received a request to install 2-way stop signs on 8th Street at its intersection with 16th Avenue and yield signs on 8th Street and 17th Avenue.

The Engineering Division conducted a traffic study of these intersections and it did not meet any of the warrants or conditions for the installation of stop and yield signs.

Previous Council Action (if any):

Budget Impact:

The cost to the city is minimal.

Additional Information as applicable (i.e. provide alternative options, community or staff input, staffing impact; resident impact; etc.):

A petition was submitted in support of the request.

Council Goal (if applicable):

Recommendation:

The Traffic Engineering Committee recommends that the City Council deny the request.

Submitted by: Michelle Martin, Manager

Approved by: Joshua Adams

ROCK ISLAND
ILLINOIS

MEMORANDUM
Public Works Department

TO:	Traffic Engineering Committee	**TEC Number:**	23-20
SUBJECT:	Request for Installing STOP & YEILD Signs 8th Street & 16th and 17th Avenues	**Date:**	06/05/23

A resident requested about installing 2-way STOP signs on 8th Street at its intersection with 16th Avenue and YEILD signs on 8th Street and 17th Avenue intersection. There is no STOP control at either intersection. Therefore, in accordance with the Rules of the Road, motorists that uncontrolled intersections should yield the right of way to vehicles similar to 4-Way STOP conditions. Traffic at the above intersection was studied on April 27, 2023.

The request was evaluated in accordance with the latest edition of the Manual of Uniform Traffic Control and Devices (MUTCD). MUTCD was developed by the Federal Highway Administration and the State DOTs to ensure that traffic control is uniform and consistent across the country, states and municipalities. The manual advises against the use of YEILD signs at right-angle intersections such as those studied. As such, we evaluated both intersections for STOP control. MUTCD states that STOP control should not be utilized for speed control and that traffic control is to provide gaps in the flow of traffic to allow roadway users adequate time to cross or access the intersecting roadway. MUTCD states that STOP signs can be warranted at an intersection if one of the following warrants is met:

Intersection of a less important road where application of the normal right-of -way rule would not be expected to provide reasonable compliance with the law: The traffic study indicated the following volumes:

- 8th Street carried 428 AADT;
- 11th Street carried 206 AADT.

This intersection was observed to meet the application of the normal right-of-way rule with reasonable compliance with the law. *Therefore this warrant was not met.*

Street entering a through highway or street (arterial): 8th Street, 16th Avenue and 17th Avenue are classified as local streets. *Therefore this warrant was not met.*

Unsignalized intersection in a signalized area: In accordance with MUTCD criteria, there are no signalized intersections in this area. *Therefore this warrant was not met.*

Minimum vehicular volumes: To satisfy the traffic warrant, the vehicular volume entering the intersection from the major street approaches (total of both approaches) should average at least 300 vehicles/hour for any 8 hours of an average day. The study indicated that 8th Street averaged less than 47 vehicles per hour for the busiest 8 hours of an average day. *Therefore this warrant was not met.*

Restricted view or crash records indicate a need for control by the STOP sign: There are no obstructions that would restrict a motorist's vision at this intersection. To satisfy the accident experience warrant, at least 5 or more reported crashes in a 12-month period that is susceptible to correction by a STOP sign installation. In the past 3 year period, there has been a total three (4) reported crashes at the 8th Street/16th intersection and one (1) reported crash at the intersection of 8th Street/17th Intersection. *Therefore this warrant was not met*.

Summary: *A traffic study performed on the referenced date indicates these intersections do not meet any of the MUTCD warrants for the installation of STOP control.*

SUBMITTED BY: Michael J, Kane, P.E., City Engineer

ROCK ISLAND
ILLINOIS

Proposed Stop Signs
TEC 22-20

Residents who Signed Petition

STOP Proposed Stop Sign Locations

Disclaimer: This product is for informational purposes and may not have been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information.
Map Prepared by City of Rock Island GIS

ROCK ISLAND
ILLINOIS

Stop Sign Request

Residents that would like to have a stop sign installed must submit a petition in support of the request.

CONTACT INFORMATION

Name: Deitria Beechum

Address: 1514 8th str

City: Rock Island State: IL Zip: 6

Phone Number: 641.895.7808

E-Mail: debeechum@yahoo.com

Where would you like the Stop sign installed? (example: name the intersection XX Street XX Avenue) or yield signs
8th st - 16th avenue
8th st. 17th avenue

Give a description of the current intersection:
(example: three-way traffic, four-way traffic)
4 way traffic

Which direction would you prefer traffic to stop?
(example: north bound, south bound, east bound, west bound, north and south bound, east and west bound, etc.)
8th / 16 ave - north/south - Stop sign
8th / 17 ave - north/south - yeild

List the reason for the request to install a Stop sign(s) at this intersection: (please give specific details)
there have been multiple accidents as people are driving to fast and each direction thinks they have the right of way.
Children in these neighborhoods riding bikes & people exiting their vehicles could get hit.
There is a defiant need at both locations and the people were glad someone taking initiative to do something about this issue.

Stop Sign Request
Neighborhood Petition

NAME please print	ADDRESS please print
Dee Beechum	1514 8th st. RI
Allen Jones	1522-8st R.I.
Shirley Conley	1519 8th St RI
Derma Seales	1527-8th R.I.
ERMA J. HUDSON	1623 8th St R.I. IL
Jerry Jones	1625 8th R I. IL
Letisha Hyde	1713 8th Street RI
Jeffery J. Hyde Sr.	1713 8th Street RI
Vicente Ruiz	1710 8th Street RI
Donovan Dean	1708 8th Street RI
Veronica Walton	1518 8th str.

Please e-mail ALL PAGES of the Stop Sign Request to pubworksmail@rigov.org
or mail to the City of Rock Island, Public Works Department, 1309 Mill Street, Rock Island, IL 61201.

Memorandum

To: Rock Island City Council

From: Mike Bartels, Director

Subject: Report from the Traffic Engineering Committee regarding a request to install a handicapped parking space in front of 601 7th Avenue. (First Reading)

Motion:	Motion whether or not to approve the request as recommended and consider the ordinance.
RC	Roll Call vote is needed.

Date: June 26, 2023

Introduction and Background Information:

The Traffic Engineering Committee received a request from Lynn Teague to install a handicapped parking space in front of 601 7th Avenue.

Previous Council Action (if any):

Budget Impact:

The cost to the City is minimal.

Additional Information as applicable (i.e. provide alternative options, community or staff input, staffing impact; resident impact; etc.):

The installation of a handicapped parking space does not restrict the handicapped parking space to only the person requesting the space but is accessible to anyone with a handicapped license plate or placard.

Council Goal (if applicable):

Recommendation:

The Traffic Engineering Committee recommends that the City Council approve the request and consider the ordinance.

Submitted by: Michelle Martin, Manager

Approved by: Joshua Adams

A SPECIAL ORDINANCE
ESTABLISHING A HANDICAPPED PARKING SPACE
IN THE CITY OF ROCK ISLAND, ILLINOIS

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF ROCK ISLAND, ILLINOIS:

Section One. A handicapped parking space be and is hereby established at 601 7th Avenue, in the City of Rock Island, Illinois.

Section Two. Any person other than a handicapped person or someone transporting a handicapped person parking in the above stated location shall be subject to a fine of Three Hundred Fifty Dollars ($350.00).

Section Three. All ordinances and parts of ordinances in conflict herewith are hereby repealed insofar as they do so conflict.

Section Four. This ordinance shall be in full force and effect 10 days from its passage and approval, as required by law.

_____
MAYOR OF THE CITY OF ROCK ISLAND

PASSED:

APPROVED:

ATTEST: _____
CITY CLERK

ROCK ISLAND ILLINOIS

PubWorks Mail Mail <pubworksmail@rigov.org>

Online Form Submittal: Handicapped Parking Space Request Form

1 message

noreply@civicplus.com <noreply@civicplus.com> Mon, Feb 20, 2023 at 9:16 PM
To: pubworksmail@rigov.org

Handicapped Parking Space Request Form

The installation of a handicapped parking space does not restrict the handicapped parking space to only the person requesting the space but is accessible to anyone with a handicapped license plate or placard.

First Name of Handicapped Resident	Lynn
Last Name of Handicapped Resident	Teague
Property Address 1	601 7th Ave
Property Address 2	*Field not completed.*
City	Rock Island
State	IL
Zip	61201
Phone Number	563-209-3061
Email Address	kpatterson070512@gmail.com
Does the handicapped resident own the property?	Yes
If NO, please provide the name, address, and telephone number of the property owner:	*Field not completed.*
Please describe the location to be designated as a handicapped parking space:	Directly right in-front of the front door on the corner of 7th Ave and 6th St.
Does the handicapped resident have access to off-street parking such as a driveway or garage?	Yes

If YES, please describe the off-street parking and explain why the handicapped resident does not use the off-street parking:	I have a garage, but with my oxygen , i am not able to walk that far anymore . Putting this in-front of the front door, would make it so i wouldn't have as many steps to come in, and also just 2 steps to step onto, as i am a fall risk.
In order to utilize a handicapped parking space, a motorist must have a handicapped license plate or placard.	License Plate
List the handicapped license plate or placard number.	310 615
Please provide any additional information that may be of assistance to the Traffic Engineering Committee and the City Council members when they review your request:	I am on oxygen 24/7 . I am battling stage 4 lung cancer, and would like a parking spot for my truck closer to the front door. I have several specialized doctors i do attend to at least twice a week for appointments/ and or followups. My legs get weak from walking, so walking and breathing i am trying to concentrate and not fall. this would provide al ot of help if you would please put the sign up for my truck.

Email not displaying correctly? View it in your browser.

Memorandum

To: Rock Island City Council

From: Mike Bartels, Director

Subject: Report from the Traffic Engineering Committee regarding a request to remove the handicapped parking space in front of 2049 46th Street. (First Reading)

Motion:	Motion whether or not to approve the request as recommended and consider the ordinance.
RC	Roll Call vote is needed.

Date: June 26, 2023

Introduction and Background Information:

The Traffic Engineering Committee received a request from Kristina Gluck, the property owner, to remove the handicapped parking space in front of 2049 46th Street, since the space is no longer needed.

Previous Council Action (if any):

Budget Impact:

The cost to the City to remove the handicapped parking signs is minimal.

Additional Information as applicable (i.e. provide alternative options, community or staff input, staffing impact; resident impact; etc.):

Council Goal (if applicable):

Recommendation:

The Traffic Engineering Committee recommends that the City Council approve the request and consider the ordinance.

Submitted by: Michelle Martin, Manager

Approved by: Joshua Adams

A SPECIAL ORDINANCE
REMOVING A HANDICAPPED PARKING SPACE
IN THE CITY OF ROCK ISLAND, ILLINOIS

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF ROCK ISLAND, ILLINOIS:

Section One. That the handicapped parking space established at 2049 46th Street, in the City of Rock Island, Illinois, be and is hereby removed.

Section Two. All ordinances and parts of ordinances in conflict herewith are hereby repealed insofar as they do so conflict.

Section Three. This ordinance shall be in full force and effect 10 days from its passage and approval, as required by law.

_____
MAYOR OF THE CITY OF ROCK ISLAND

PASSED:

APPROVED:

ATTEST: _____
CITY CLERK

23-15

ROCK ISLAND
ILLINOIS

PubWorks Mail Mail <pubworksmail@rigov.org>

Online Form Submittal: Handicapped Parking Space Removal

1 message

noreply@civicplus.com <noreply@civicplus.com>
To: pubworksmail@rigov.org

Sun, May 21, 2023 at 6:22 PM

Handicapped Parking Space Removal

This form is to be used for the removal of a handicapped parking space.

CONTACT INFORMATION (Person requesting that the handicapped parking space be removed.)

First Name	Kristina
Last Name	Gluck
Property Address 1	2053 46th Street
Property Address 2	*Field not completed.*
City	Rock Island
State	Illinois
Zip	61201
Phone Number	3093730729
Email Address	Kgluck19@yahoo.com
What is the address of the handicapped parking space to be removed?	2049 46th Street, Rock Island, IL 61201
Do you own the property?	No
If NO, please provide the name, address, and telephone number of the property owner:	JPTP/JLJP/QCIPG P.O.Box 217 Moline, IL. 61266 309-481-6683
List the reason for the request to remove the handicapped parking space:	The renter no longer lives at this residence, there is no need for a handicapped parking sign at 2049 46th Street, Rock Island, IL 61201
Please provide any additional information that may be of assistance to the Traffic Engineering Committee and	*Field not completed.*

23-44
15

HANDICAPPED PARKING SPACE REMOVAL REQUEST

To remove a handicapped parking space in the City of Rock Island you must first complete this Handicapped Parking Space Removal Request form and return it to:

City of Rock Island
Public Works Department
ATTN: Traffic Engineering
1309 Mill Street
Rock Island, IL 61201

Upon receipt of this Handicapped Parking Space Request Removal form, the Traffic Engineering Committee (TEC) will review the request and will then make a recommendation to the City Council. A letter will be sent to the person requesting the handicapped parking space removal indicating the date of the City Council meeting along with a copy of the TEC recommendation.

CONTACT INFORMATION (Person requesting that the handicapped parking space be removed.)

Name Bobbie Grace

Address 3524 12th Ave R.I. IL. 61201

Telephone Number 309-721-2364

Email Address annjgrace45@yahoo.com

What is the address of the handicapped parking space to be removed?

2049 46th Street R.I. IL. 61201

Do you own the property? _____ Yes ✓ No

If No, please provide the name, address, and telephone number of the property owner:

Property Owner Name Jon (JPTP/JLJP/QCIPG

Property Owner Address N/A

Property Owner Telephone Number ~~[illegible]~~ 309-481-6683

List the reason for the request to remove the handicapped parking space: _____

I Moved From the Address at 2049 46th Street R.I. IL. 61201 to 3524 12th Ave R.I. IL. 61201

PYROTECHNIC DISPLAY PERMIT APPLICATION
ROCK ISLAND FIRE DEPARTMENT

ROCK ISLAND
ILLINOIS

FOR OFFICE USE ONLY
PERMIT #
PERMIT FEE: $ 50.00
ACCT #101-000000-42112-0000000
RECEIVED BY:
SITE INSPECTED: Y / N

DISPLAY LOCATION

STREET ADDRESS: 777 Bally Blvd, Rock Island, IL 61202
OR SITE LOCATION: _____

OWNER'S NAME: Ballys
ADDRESS: 777 Bally Blvd
CITY / STATE / ZIP: Rock Island, IL 61202
PHONE #: 309-256-5455

PYROTECHNIC DISTRIBUTOR / OPERATOR

CONTRATOR'S NAME: Five Alarm Fireworks / Cesar Benitez
ADDRESS: PO Box 67
CITY / STATE / ZIP: Tinley Park, IL 60477
BUSINESS PHONE #: 708-429-0520
IL. LICENSE #: IL06-OPF-00011-00058
EMERGENCY PHONE # _____

LEAD PYROTECHNIC OPERATOR: Cesar Benitez
ADDRESS: PO Box 67
CITY / STATE / ZIP: Tinley Park, IL 60477
IL. LICENSE #: IL06-OPF-00011-00058

DISPLAY DATE(S)

DATE(S) of DISPLAY: July 7, 2023
PROJECTED DISPLAY TIME: 8:00 - 10:00 pm
ESTIMATED DURATION OF DISPLAY: 2 hrs
APPLICATION SUBMITTED AT LEAST 15 DAYS PRIOR TO DISPLAY: (Y) N

ALL DISPLAYS MUST CONFORM TO ALL STATE, FEDERAL AND MUNICIPAL CODES AS WELL AS COMPLY WITH ALL STATE, FEDERAL AND NATIONAL STANDARDS THAT MAY BE APPLICABLE TO ALL ASPECTS OF THIS DISPLAY.

PYROTECHNIC DISPLAY PERMIT APPLICATION
ROCK ISLAND FIRE DEPARTMENT

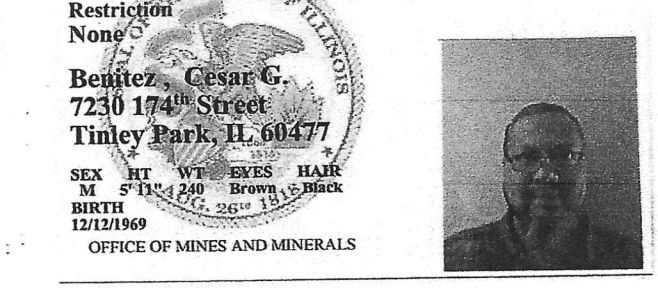
INFORMATION TO BE PROVIDED TO THE FIRE MARSHAL'S OFFICE

1. Completed permit application.
2. Display site plan with safety zones and fall areas.
3. Proof of $1,000,000 liability insurance, with the City and its agents named as a co-insured.
4. Proof of Illinois worker's compensation insurance.
5. Proof of current USDOT hazardous materials registration number.
6. Name, address and phone number of the supplier of the fireworks, if different from that of the operator.
7. Confirmation of the license of the operator and the number of assistants who are to be present.
8. The approximate number and kinds of fireworks to be discharged.
9. A diagram of the grounds on which the outdoor fireworks display is to be held showing the point at which the fireworks are to be discharges; the location of all buildings, highways, and other lines of communication; the lines behind which the audience is to be restrained; and the location of other possible overhead obstructions.
10. Written consent of property owner where display will be conducted.

Applicants must be granted a variance of the City of Rock Island Code of Ordinances, Chapter 10, Article 1, Sec. 10-9 before a permit may be issued.

Application must be completed for review and accepted by the Fire Marshal's Office, City of Rock Island and variance must be granted before a permit will be issued.

3 DOB: 12/12/1969
4b EXP: 12/12/2026
4a ISS: 03/01/2021
1 BENITEZ
2 CESAR GERARDO
8 7230 174TH ST
TINLEY PARK, IL 60477
9 CLASS:
15 SEX: M
16 HGT: 5'-11"
17 WGT: 245 lbs
18 EYES: BRN
TYPE: ORG
5 DD 20210301320OP5715


Restriction
None
Benitez , Cesar G.
7230 174th Street
Tinley Park, IL 60477
SEX HT WT EYES HAIR
M 5' 11" 240 Brown Black
BIRTH
12/12/1969
OFFICE OF MINES AND MINERALS

Illinois Office of the State Fire Marshal
Division of Fire Prevention
THIS IS TO CERTIFY THAT
CESAR G BENITEZ
Pyrotechnic Operator License
Has completed all the requirements under the Pyrotechnic Distributor and Operator Act 225 ILCS 227 and is employed by
FIVE ALARM FIREWORKS
d/b/a:
Group I,II,III,IV,V,VI,VII
Limited Flame Effect
License #
IL06-OPF-00011-00058
Expires: 06/15/2024
Matt Perez
STATE FIRE MARSHAL

MINNESOTA PUBLIC SAFETY
STATE FIRE MARSHAL EST. 1905
FIREWORK OPERATOR CERTIFICATE
Certificate Type: O, P
Certificate No: 01064
Cesar Benitez
7230 174th St.
Tinley Park, IL 60477
Effective Date
12/11/2018
Expiration Date
12/11/2022

FWS No: 899
STATE OF ARKANSAS
Pyrotechnic Shooter
This is to certify that
Cesar Benitez
Is a duly authorized Pyrotechnic Shooter in accordance with ACT 2204 of 2005. This card shall expire 5 (five) years from date of issuance.
Issued: 02/28/2019
Expires: 02/28/2024
Major Lindsey Williams
State Fire Marshal

PY
STATE OF TENNESSEE
DEPARTMENT OF
COMMERCE AND INSURANCE
CESAR BENITEZ
2052
ID NUMBER: 586
LIC STATUS: CERTIFIED
EXPIRATION DATE: March 09, 2023
TENNESSEE FIREWORKS PERMITS
FIREWORKS DISPLAY OPERATORS
THIS IS TO CERTIFY THAT ALL REQUIREMENTS
OF THE STATE OF TENNESSEE HAVE BEEN MET

Missouri Department of Public Safety
Missouri Division of Fire Safety
PO Box 844
Jefferson City, MO 65102
FIREWORKS DISPLAY OPERATOR LICENSE
Performs duties as a Fireworks Display Operator as authorized by the Missouri State Fire Marshal, 320.126 RSMo, 11 CSR 40-3.010 and NFPA 1123.
NAME: Cesar Benitez
LICENSE NUMBER: 1529
EXPIRES: 4 /23/2022
State Fire Marshal:

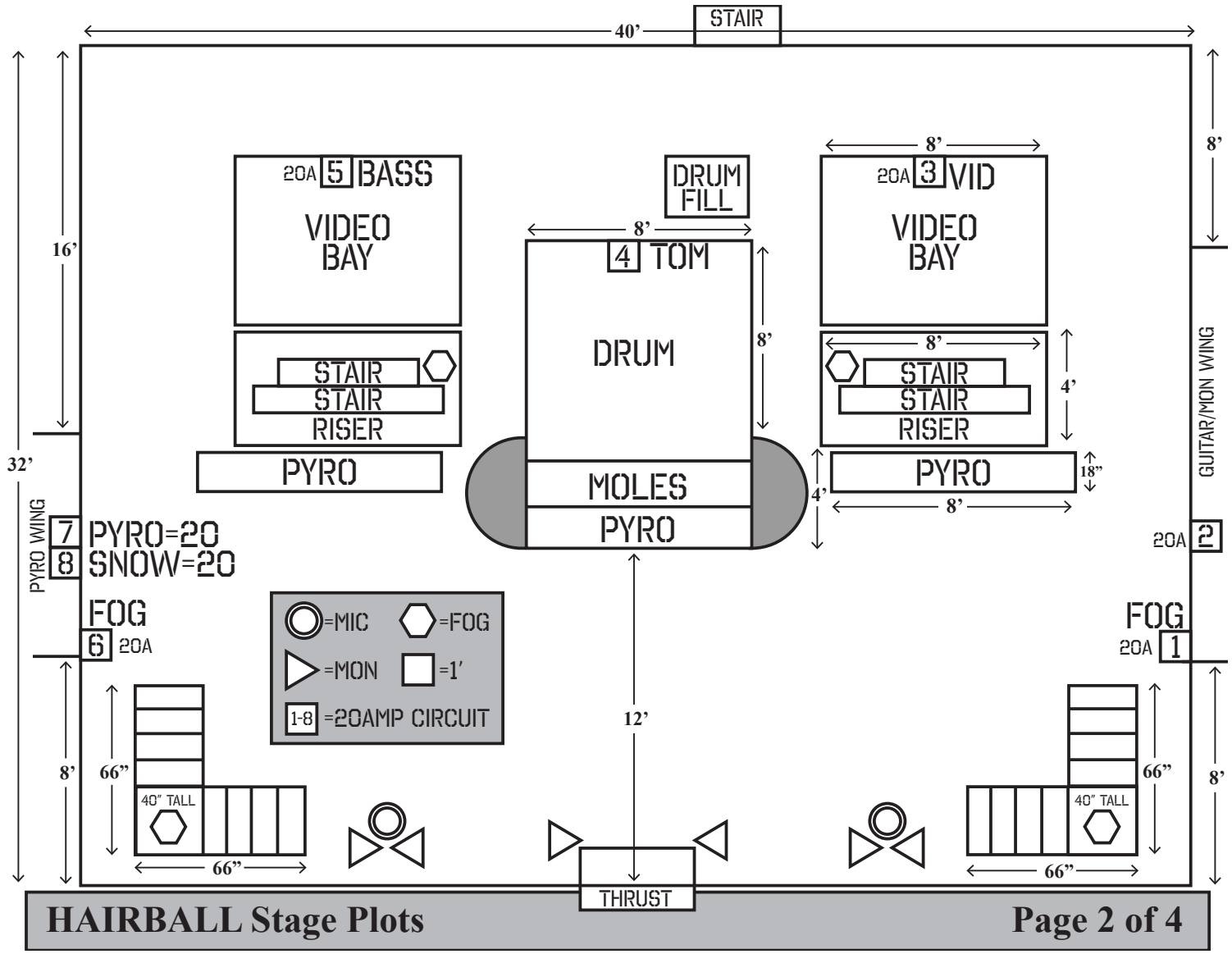
Missouri Department of Public Safety
Missouri Division of Fire Safety
PO Box 844
Jefferson City, MO 65102
PYROTECHNIC DISPLAY OPERATOR LICENSE
Performs duties as a Pyrotechnic Display Operator as authorized by the Missouri State Fire Marshal, 320.126 RSMo, 11 CSR 40-3.010 and NFPA 1126.
NAME: Cesar Benitez
LICENSE NUMBER: 1530
EXPIRES: 4 /23/2022
Acting State Fire Marshal

TABLE OF CONTENTS

2: Stage Plot
3: Pyro by Position List
4: Licenses
5: Certificate of Flame Resistance
6-86: Manual for Flame Projector
87-98: Safety Data Sheets for Starting Fluid in Flame Projectors
99-159: Safety Data Sheets for Product
160-173: NFPA 1126
174-192: NFPA 160

Contact Information
Danielle Findling
(952)484-4696
Danielle@hairballonline.com

HAIRBALL



CONTACT: Danielle Findling
Danielle@HairballOnline.com | (952)484-4696

PYRO BY POSITION

"A"(STAGE RIGHT)/"C"(STAGE LEFT) OF THE DRUM RISER. EACH HAVE 2 BOXES OF PYROTECHNIC DEVICES AND ARE AS FOLLOWS:

12 20' RED COMETS

3 20' SILVER COMETS

2 YELLOW FLAME PROJECTORS

1 RED FLAME PROJECTOR

2 GREEN FLAME PROJECTORS

2 20' SPLATTER CRACKLE MINES

3 20' VARIGRATED MINES

3 FIREBALLS REGULAR

4 ¼ X 20' QUICK SHOTS, SILVER

2 6 SECOND WHISTLES W/TAIL

2 30X20' RED/SILVER GERBS

1 15X20' GOLD GERBS

1 20X20' SILVER GERBS

1 20' RED MINE

1 20' PURPLE MINE

1 20' ORANGE MINE

1 20' YELLOW MINE

24 WHITE BANG SPARK FLASH TUBES

"B"/IN FRONT OF THE DRUM RISER DRUM STAIRS CONTAINING 2 BOARDS OF PYROTECHNIC DEVICES AND ARE AS FOLLOWS:

8 FIREBALLS REGULAR

4 FIREBALLS GREEN

4 20' VARIGRATED MINES

2 20' SPLATTER CRACKLE MINES

4 1X20' BIG SHOTS SILVER

2 30X20' RED/SILVER GERBS

2 20X20' SILVER GERBS

2 15X20' SILVER GERBS

2 15X20' GOLD GERBS

8 WHITE BANG SPARK FLASHTUBES

UP TO 6 DMX FLAME PROJECTORS (3METERS MAX HEIGHT)

EACH UNIT CONTAINS 2 STARTER FLUID CANISTERS

MINNESOTA
PUBLIC SAFETY
STATE FIRE MARSHAL
EST. 1905
FIREWORK OPERATOR CERTIFICATE
Certificate Type: P
NFPA 1126
Certificate No: 1035
Bryant Beckermann
2621 Lyndale Ave S, #206
Minneapolis, MN 55408
Effective Date
12/20/2021
Expiration Date
12/31/2025

GEORGIA
STAGE

3765 Peachtree Crest Drive, Duluth, GA 30097 | 800-211-8217 | georgiastage.com

CERTIFICATE OF FLAME RESISTANCE

SUBMITTED TO: QUIK STAGE

PROJECT LOCATION: BLAINE, MN

This is to certify that the materials described herein have been flame retardant treated (or are inherently flame resistant). Certification is hereby made that:

☐ (a) The article described on this certificate has been treated with a flame retardant chemical such that the fabric meets the minimum requirements of flame resistance established by the NFPA 701 Test. The flame retardancy has a life expectancy of one (1) year, but is likely to be effective for much longer. The flame retardance WILL be removed by water washing. Georgia Stage, LLC, recommends annual testing of the fabric using NFPA 705 Field Test Method for Textiles, as accumulations of airborne dust and oils may diminish the flame resistance of the fabric.

☒ (b) The article described on this certificate meets the minimum requirements of flame resistance established by the NFPA 701 Test. Made with non-combustible elements, this fabric is inherently and permanently flame resistant for the life of the fabric, without the addition of flame retardant chemicals. This flame resistance will NOT wash out. Georgia Stage, LLC, however recommends annual testing of the fabric using the NFPA 705 Field Test Method for Textiles, as accumulations of airborne dust and oils may diminish the flame resistance of the fabric.

STYLE: PREMIER IFR

COLOR: BLACK

YARDS: 49.48

JOB#: 1900662

DATE: 4.19.19

CUSTOMER PO: 10825

User Manual

Galaxis Showtechnik

PYROTEC

G-Flame

Firmware V2.43
Revision date: April 12th 2021

Batch No.: EUF100101, USF100101

Table of contents:

1 Introduction ... 5
1.1 Safety instructions ... 5
1.2 Requirements the operator has to fulfill and necessary qualification ... 6
1.3 General safety instructions when using the G-Flame ... 7
1.4 Application fields and intended use ... 12
1.5 Required approvals ... 12
2 Illustration and description of indicators and control elements ... 13
2.1 Main unit ... 13
2.2 Carrying handle ... 15
2.3 Cover panel ... 16
2.4 Cartridge holder ... 16
3 Nozzles for different types of fuel ... 17
3.1 Changing the nozzles and nozzle holder ... 18
3.2 Sealing of the nozzles or respectively of the nozzle thread ... 18
4 The various inputs and their compatibility and usage, pin assignments of connectors ... 19
4.1 The emergency off input ... 19
4.2 Firing key input ... 19
4.3 Voltage input 12-24V ... 20
4.4 Charging ... 20
4.5 Operation with DMX512 ... 21
4.5.1 The DMX512 input ... 21
4.5.2 Control via DMX512 ... 22
4.5.3 The error message "DMX-RDM not supported!" ... 23
4.6 Control of the device via serial data cables via the RS485 interface in conjunction with the PFC Advanced ... 23
4.7 Advanced wireless module, communication via radio or serial data cables ... 24
5 Instructions for installation and de-installation of the G-Flame ... 25
5.1 Setup of the G-Flame ... 25
5.1.1 Operation with aerosol cartridges ... 26
5.1.2 Operation with gas bottles ... 26
5.1.3 After opening ... 26
5.2 De-installation the G-Flame ... 26
5.2.1 Operation with aerosol cartridges ... 27
5.2.2 Operation with gas bottles ... 27
5.3 Tilting the G-Flame ... 28
5.3.1 Instructions for installation at a tilt of 180° ... 29
5.4 Additional instructions for permanent installations ... 29
5.4.1 Operation with aerosol cartridges ... 29
5.4.2 Operation with gas bottles ... 29
5.5 Instructions regarding the use of Flame Bars ... 29
5.6 Mounting on light or speaker stands ... 30
5.7 Mounting on truss elements ... 30
6 Approved fuels ... 31
6.1 Approved fuels and instructions if the gas bottle option is being used ... 31
6.1.1 Instructions regarding the usage of the gasiform phase ... 31
6.1.2 Instructions regarding the usage of the liquid phase ... 31
6.2 Approved fuels and instructions if the gas cartridge option is being used ... 34
6.3 Fuel consumption ... 37
6.3.1 Fuel consumption if gas bottles are being used ... 37
6.3.2 Fuel consumption if gas cartridges are being used ... 37
7 Safety distances ... 38
7.1 Safety distances if gas bottles are being used, device standing vertically ... 40
7.2 Safety distances if gas cartridges are being used, device standing vertically ... 40
7.3 Safety distances when using flame bars ... 41
7.4 Safety distances if the device is being tilted ... 41
7.5 Safety distances if the device is mounted above the spectators ... 41
7.6 Reduction of the safety distances to actors ... 41
8 Switching on ... 42
9 Compatibility and Firmware Revision History ... 42

10 Automatic Hardware Checks With Startup ... 42
10.1 The Error Message '#' ... 43
10.2 The Error Message 'ATTENTION! Flame Sensor ERROR'. ... 43
10.3 The Error Message 'Radio Module not detected' ... 43
10.4 The Error Message 'Memory error!' ... 43
10.5 The Error Message 'Device Locked' ... 44
10.6 The message 'Memory Maintenance' ... 44
11 Manual hardware checks with startup ... 44
11.1 Checking the fuel valves for correct function ... 44
11.2 Checking the ignition spark generator for correct function ... 45
12 Battery monitoring and warning message 'deep discharge' after powering up the device ... 45
12.1 Resetting the acoustic warning message 'Battery deeply discharged' ... 46
12.2 Resetting the optical warning message 'Battery deeply discharged' ... 46
13 Safety timer ... 46
14 The warning LED 'Attention armed' ... 46
15 The LED indicators ... 47
15.1.1 The LED 'Operation' (blue) ... 47
15.1.2 The LED 'Flame' (yellow) ... 48
15.1.3 The LED 'Charging' (green) ... 48
15.1.4 The LED 'Low Battery' (red) ... 48
15.1.5 Functional check of the LEDs ... 48
16 The menu ... 49
16.1 Standard menu items ... 49
16.1.1 The menu item 'Language' ... 49
16.1.2 The menu item 'Change AF-Reset-Code?' ... 49
16.1.3 The menu item 'Accumulator capacity' ... 49
16.1.4 The menu item 'Accumulator power' ... 50
16.1.5 The menu item 'Input' ... 50
16.1.6 The menu item '45° Tilt Switch' ... 50
16.1.7 The menu item 'Flame monitoring' ... 51
16.1.8 The menu item 'Flame Quota' ... 52
16.1.9 The menu item 'Number of Allowed Misfirings' ... 52
16.1.10 The menu item 'Acoustic Signals' ... 52
16.1.11 The menu item 'LCD Backlight' ... 52
16.1.12 The menu item 'Warning LED' ... 53
16.1.13 The menu item 'Battery measurement' ... 53
16.2 Menu items if DMX512 has been selected as an input ... 55
16.2.1 The menu item 'Flame Channel' ... 55
16.2.2 The menu item 'Safety Channel' ... 55
16.2.3 The menu item 'Power Supply for Wi-DMX' ... 56
16.2.4 The menu item 'Max. Flame Duration' ... 57
16.3 Menu items if the Advanced wireless module has been installed and 'Cable (RS485 of PFC)' or 'Wireless (PFC or PFS)' has been selected as control method ... 57
16.3.1 The menu item 'RF Channel' (i.e. frequency selection) ... 57
16.3.2 The menu item 'Interfering Signal' ... 57
16.3.3 The menu item 'Last Range Test Result' ... 58
16.3.4 The menu item 'Device ID Number' ... 58
16.3.5 The menu item 'Determine Hazard Zone' ... 59
16.3.6 The menu item 'Terminal Programming' ... 59
16.3.6.1 Overview regarding the parameters of the Terminal programming ... 60
16.3.6.2 The selection menu of the Terminal programming ... 60
16.3.6.3 The menu item 'Terminal programming: Keep up & Exit' ... 60
16.3.6.4 The menu item 'Terminal programming: Edit' ... 61
16.3.6.5 The menu item 'Terminal programming: Delete' ... 62
17 Receiving mode or respectively ready to fire mode ... 63
17.1 Displayed information during receiving mode or respectively ready to fire mode, that appears in all operation modes ... 63
17.1.1 Information which control method has been selected ... 63
17.1.2 Tilt switch on/off and its status ... 63
17.1.3 Flame monitoring on/off ... 64

17.2 Display of special information and behavior of the device in the receiving mode or respectively ready to fire mode if 'Wireless (PFC or PFS)' or 'Cable (RS485 of PFC)' has been selected as control method 64
17.2.1 Status information regarding firing mode and hazard zone 64
17.2.2 Display of the device ID number 65
17.2.3 Display of messages 65
17.2.4 Programming of the system ID 65
17.2.5 Setting and loading default settings 65
17.2.6 Performing a field strength calibration 66
17.2.7 The monitoring function Radio Interference 66
18 Switching off 68
19 Command 'Firing mode off' 68
20 Radio range 69
20.1 Radio Range Test 69
21 Remote access 69
22 Operation time 70
23 Installation of accessories 71
23.1 Installation of the Advanced wireless module 71
23.1.1 Installation of the hardware 71
23.1.2 Software installation of the Advanced wireless module 72
23.2 De-installation of the wireless module 73
23.2.1 De-installation of the wireless module in the software 73
23.2.2 De-installation of the hardware 73
23.3 Optional accessory: Power Upgrade 73
24 Usage in rainy conditions 74
25 Maintenance and service life 75
26 Cleaning 76
27 Micro filter 76
28 Warranty 77
29 Damages caused by misusage, maloperation, malfunction 77
30 Technical data 78
31 Accessories 80
32 CE marking of the EU version 81
33 Address of the manufacturer and contact details for requesting an EU declaration of conformity 81

1 Introduction

1.1 Safety instructions

Observe all safety instructions in this documentation! Safety instructions warn of dangers when handling devices and provide information on how to avoid them. They are classified according to the severity of the danger and divided into the following groups:

DANGER	Danger signals dangers for persons. If you do not follow the instructions for avoiding the hazard, the hazard will certainly result in death or serious physical injury.

WARNING	Warning indicates dangers for persons. If you do not follow the instructions for avoiding the hazard, the hazard is likely to result in death or serious injury.

CAUTION	Caution indicates danger to persons. If you do not follow the instructions for avoiding the hazard, the hazard is likely to result in minor physical injury.

NOTICE	Note signals dangers for objects or data. If you do not follow the instructions for avoiding the hazard, the hazard will probably result in damage to property.

TIP	A tip provides additional or supplementary information.

1.2 Requirements the operator has to fulfill and necessary qualification

This product may only be operated by persons of legal age. In Germany the user must be at least 18 years of age.

This product may only be used within the scope of a professional and occupational activity.

The user must be a qualified person. A qualified person is a trained person who has experience with the technology of the device and is particularly informed about the types of energy used by the device and its size. Electrical and thermal types of energy (fuels) occur in this device.

The specialist is expected to use his training and experience to identify energy sources that can cause pain or injury and to take appropriate measures to protect against pain and injury from these energy sources. In addition, the practitioner must take appropriate measures to ensure that less trained persons cannot be injured. A qualified person can be trained either by the manufacturer of the device or by the customer who purchases the device.

Further qualifications such as stage pyrotechnician, SFX technician or professional fire worker is not required

Ensure that all legal requirements for the operation of flame projectors in the country of destination are met.

TIP	In Germany, these include the regulations of the employers' liability insurance association, e.g.: • DGUV regulation 215-312: Safety at events and productions • DGUV regulation 80: Use of liquid gas

1.3 General safety instructions when using the G-Flame

This section is about general safety instructions. You need to mind other safety instructions given in this manual as well. Furthermore, you need to observe the safety distances mentioned in the relevant chapters.

The safety rules enlisted in this manual are referring to the G-Flame only. For the other devices in our product range there is another version of safety instruction which can be found in the user manual of the particular devices.

The following instructions are for your understanding about important and basic safety principles.

Our general safety requirements are based on our own experience plus the contact and feedback from our customers. These rules allow the safe and successful usage of all components of our wireless firing systems. With proceeding development of our products, we will continuously revise and adapt the safety standards in conclusion with your notifications and support.

The following safety instructions are part of all our operation manuals within our product range. These instructions are also available in printed form and can be downloaded via our internet homepage at any time. Please forward these instructions to any relevant persons in your company dealing with this topic.

Any technical device can potentially cause a fault. This could be encouraged through: wrong usage, unit damage, unit aging as well as the wear and tear of the unit. This fundamental thesis was the basic principle when writing these instructions.

The usage of effect devices to generate flame balls and flame columns, especially in indoor and outdoor venues or places of public assembly, can be hazardous and bears many potential risks, such as severe damage to property or personal injury and due to that is of utmost importance to follow all safety instructions whenever the product is being used.

1. Never use the devices if you have not completely read and understood the user manual.

2. Never order somebody to use devices in a potentially risky application if this person is not absolutely reliable or does not have sufficient technical knowledge.

3. The operator who is in charge for the safety has to have complete overview over all devices during the whole application. In addition, he has to be able to take action in the technical control of the system at any time if a potentially dangerous situation is arising. Please refer to the sections in this manual where the 'emergency off' functions are being explained.

4. For the usage of the device in places of public assembly an approval by the authorities that are responsible for the fire prevention is necessary.

5. If flame effects are being used no easily inflammable materials should be present in general. In places of public assembly this kind of material is normally forbidden by the legislator. By the usage of flame retardant spray these materials can be rendered hardly inflammable.

6. Smoking or open fire is strictly prohibited within the safety zone! Keep off any other sources of ignition.

7. Depending on the type, size and quantity of the effects that are being used and depending on the local conditions, allocate the necessary fire prevention and first aid measurements.

8. In all cases respect and follow any national and technical regulations as well as the operation manuals respective to the devices in use.

9. Ensure that the devices are standing securely and that the position or tilt cannot vary during the application. Depending on the circumstances it can be necessary to mount the devices e.g. by using screws. Please mind the chapter in this user manual which is dealing with the mounting of the devices on truss elements.

10. Ensure that the device is not covered by anything and that the fuel can be easily exhausted through the nozzle. Furthermore, ensure that no foreign objects like e.g. confetti or streamers enter the burning chamber.

11. Arm (switch on) the devices as shortly as possible before the effect and disarm (switch off) them immediately after the effect. Optionally this can be achieved either by using the emergency off input or the main switch or the hazard zones or the DMX safety channel. The hazard zones can be turned off and on either by a wireless command or by using serial data cables. As soon as the devices are armed or respectively ready to fire, they must be constantly supervised by the responsible operator.

12. Ensure that no heat sources like strong spotlights are pointed towards the devices or the gas cartridges or the gas bottles.

13. Make sure that non authorized persons cannot gain access to the effect and control devices.

14. The safety boundary distances required by the manufacturer and authorities are to be respected. Secure the area so that non authorized persons cannot gain access to the same.

15. The operation manuals and safety instructions of the manufacturer of the effect and control devices must be observed at all times. If in doubt these must be discussed with the relevant safety organisations.

16. The effect and control devices are only allowed to be used according to the defined applications. Only use fuels that have been approved by the manufacturer.

17. The components of our firing system are to be covered or encased against burn-off cinders or weather conditions where necessary. Electrical contacts should be protected against corrosion, soiling and damage plus they should be cleaned regularly.

18. We recommend to have our products inspected every one to two years. Along with the testing of the rechargeable battery, a visual test as well as a functional test will prove that the operational safety standards are still met.

19. Do not use damaged equipment. If a damage is found, immediately send the device back to the manufacturer for professional repair. Our warranty for the proper function for our equipment is only for components of our system, which have no damage.

20. Any changes in or to the devices as well as repair work on the units other than that through the manufacturer will invalidate any warranty claims and our product liability will be void. Should repair of the units be necessary, then we do require a detailed report of the problem.

21. Please make sure when lending or renting out the equipment, that no damage has occurred during the rental period of the units. Advise your staff, that it is very important to report any possible damage of the units immediately. Customers, which have borrowed or rented the equipment are hereby informed, that it is their duty to report any damage found or suspected on the unit when returning such.

22. When transporting the devices make sure that the packing is sufficient and check the devices after each transport if they have been possibly damaged.

23. Wire connections from the control units to the G-Flame are always to be insulated and must comply with the technical standards. At the same time avoid wire damage, for example through heat, cable twisting, cable pinching and burn-off cinders or through forced piercing. All cables must be checked before each use on its faultless construction. When using used wires, we do recommend a continuity and short circuit test between each insulated connection before using it again.

24. Avoid potential equalizing currents. Please note that these currents can occur between conductive parts of a building or between conductive parts of a building and earth potential. Due to that control lines should not have electrical contact to conductive structures or parts of a building. Potential equalizing currents on the shielding of cables or on control lines can cause malfunction.

25. Please be aware of the fact that through the gas flames ionized gases are created. The thereby produced ions increase the conductivity within the air. This ionization process can cause an electrical arcing especially within the vicinity of high voltage overland cables. This may lead to lethal consequences for the user and other persons. Please note that wind conditions can be totally different a few meters above the ground.

26. Please assure that the effect can only be initiated through the operator. Keep the control unit under lock and key! Within our safety concept, all firing systems are set with individual codes, which inhibit unintended and accidental firing through third parties. If requested we can also supply systems with the same coding. This may be necessary if in a company more than one transmitter is used or when companies exchange the units between each other. It is possible to teach in the G-Flame to any PFC Advanced to enable customers to easily exchange devices.

27. With our using the key code numbers 901 and 311, we are using a standard key code, which can also be found in other products. On a customer's request we can also supply other key codes.

28. Ensure that the safety distance is maintained by all persons. The safety distance is to be enforced from the beginning of the work and maintained until the release by the responsible operator at the end of the show until the closure of the fuel supply, the burning of the fuel in the system and the shutdown of the devices.

29. In the interest of your own safety always use a sufficient length of control cable.

30. During testing and firing of the devices no persons or animals are allowed in the hazard area. Furthermore, no materials that are heat-sensitive or that can catch fire are allowed in the same.

31. When the fuel is burning carbon dioxide is generated which is a suffocative gas if the concentration in the air is sufficiently high. Due to that ensure proper ventilation. If in doubt use CO2 warning devices.

32. To burn the fuel oxygen from the air is necessary. Do not use the device if the oxygen of the air is no longer present, e.g. if carbon dioxide or nitrogen is being used to generate low fog on stages. At least from the lowest part of the burning chamber upwards a sufficient amount of oxygen must be present because otherwise the fuel cannot be ignited.

33. In applications that are critical in terms of safety you should consider safety measurements already during the setup how to safely dismantle the installation.

34. For any safety relevant questions please either contact the manufacturer or closely discuss these with the authorities in charge.

35. Use and transport the device only if the lid is closed.

36. Rehearse the planned effect and the whole course of action several times together with all people that are involved, like artists, actors, participants, technicians and staff members of the security agency etc. and ensure that all possible hazards are ruled out. If this is not possible the effect must be cancelled. Inform all participants about the function of the warning LED 'Attention, device armed' on the device.

37. Utmost care must be taken if material that can easily catch fire are present such as costumes, decoration material, fabrics or props etc.

38. If the smell of gas, leakages, flow noise or leaked fuel (gasiform or liquid) is noticed it is not allowed to put the device into operation and the hazard area has to be cleared, left and barricaded immediately. The fuel supply has to be shut off immediately in these cases.

39. Never bow over the device or put parts of your body above or respectively before the burning chamber if the device is switched on and always keep at least the safety distance that is required so that no dangerous situation can arise.

40. Avoid forces to the quick coupler in the device such as: drag forces, pushing and pulling forces and sidewise forces in all directions. If a gas hose is connected do not pull at the hose, no matter in which direction.

41. If a device did not function properly in an application it is not allowed to use it again until it has been repaired and checked by the manufacturer.

42. The system of the device must be depressurized before the cartridge holder or the hose is being removed. This is achieved by opening the magnetic valves while the fuel supply is shut off. Close the blue valves of the cartridge holder or respectively the shut-off valve of the gas bottle and fire the G-Flame again and again until no more gas is set free by the nozzle.

43. In case that the G-Flame is used to generate a continuous flame (several minutes burning time) the burning chamber and the top side of the G-Flame should be covered with suitable heat protection plates in order to prevent damages due to excessive heat. This applies to various kinds of flame bars and for the standard nozzles as well. If you have any questions regarding this topic, please contact the manufacturer.

44. This only applies to devices with a screw able micro filter: Before each use of the G-Flame, check that the O-ring of the fine filter is functional and check that the fine filter is firmly tightened so that there can be no leakage at this point. Tighten the filter housing by hand.

45. Only use original accessories. Otherwise, the safety of the equipment cannot be guaranteed. Further information can be found in the chapter 'Accessories' in the respective user manuals.

1.4 Application fields and intended use

The G-Flame is a versatile flame projector that can be used - depending on the fuel supply - outdoors, on stages, in buildings or tents.

Typical applications are:

- Flame shows outdoors, solely or combined with aerial fireworks displays or ground fireworks
- Generation of flame effects in bars, clubs or discos
- Applications on stages in buildings e.g. for TV productions or on open-air stages e.g. during a live-concerts
- Generation of flame effects in the area of special effects for TV and movie productions
- Hazard training for fire fighters, policemen, special and military forces

All other applications are considered as unintended and must be approved by the manufacturer.

The device has not been designed to produce a continuous flame. The maximum burning duration the user must mind is 25 seconds. After that the user has to pause the flame effect for at least two minutes so that the unit can cool off sufficiently. Besides long-lasting continuous flame columns are much less dramatic compared to short flame balls and flame columns.

1.5 Required approvals

Before the device can be used, a permit by the owner and if applicable of the tenant of the property or building is required.

For the usage outdoors - if it is not a stage or a place of public assembly - no permit of any authority is required to the best of the manufacturer's knowledge. Usually no charges can be imposed for this kind of usage.

In places of public assembly and on stages the relevant local laws must be followed. The necessary fire precautions must be negotiated with the competent authority for fire prevention depending on the individual case.

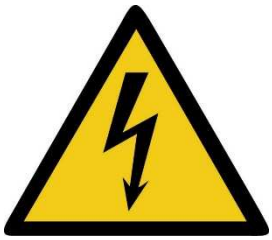
2 Illustration and description of indicators and control elements

2.1 Main unit

1	Antenna	This standard antenna is included in the delivery of the Advanced wireless communication module.
2	Socket 'Antenna'	This feed-through is included in the delivery of the Advanced wireless communication module.
3	Burning chamber	The nozzle is integrated in the bottom of the burning chamber, beneath the ignition electrodes. Furthermore, a drain for the rain water is installed in there.
4	Ionization electrode	This electrode is used for the flame monitoring.
5	Electrode cage	This cage encloses the ignition electrodes. It is open on the bottom so that the electrodes are accessible for cleaning.
6	Main switch	Switch the device on and off here.
7	Charging input (recessed)	Connect the charging unit here.
8	Voltage control input (recessed)	Control input for control voltages ranging from 12 to 24V DC.
9	Firing key input (recessed)	Control input for a potential-free electrical contact.
10	Output for DMX512 and RS485 (recessed)	Either used to daisy-chain the signal to the next device or to insert a connector with a network termination resistor.
11	Input for DMX512 and RS 485 (recessed)	Used to feed in the signal of the DMX console or the PFC Advanced or the device preceding in the network.
12	Emergency Off Input (recessed)	Input for the emergency switch.
13	LC Display	Displays the current information.
14	LED 'Operation'	This blue LED is continuously on if the device is in the menu and it is flashing if the device is in receiving mode or ready to fire.
15	LED 'Flame'	This yellow LED is continuously on if a flame is being generated and it is flashing if a step delay is being processed.
16	LED 'Charging'	This green LED is lit if the device is being charged.
17	LED 'Low Battery'	If the battery is discharged below 30% this red LED is flashing in receiving mode or if the device is ready to fire.
18	Magnetic sensitive area 'Up'	By pointing to this area with the magnetic pen the parameter of the current menu item will be increased or changed. If you point on this field for a longer time the parameter will increase automatically.
19	Magnetic sensitive area 'Down'	By pointing to this area with the magnetic pen the parameter of the current menu item will be decreased or changed. If you point on this field for a longer time the parameter will decrease automatically.

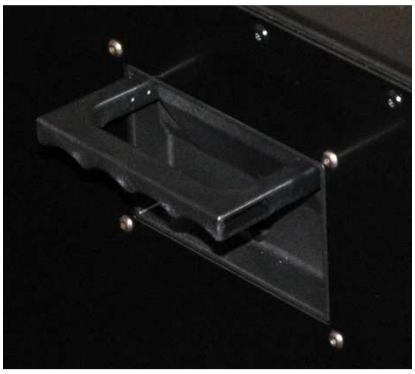
20	Magnetic sensitive area 'Mode'	By pointing to this area for some time, you will enter the menu. If you point to this field for a longer time, you will step through the different menu items automatically. At the end you will return to the receiving or stand-by (ready to fire) mode again.
21	Warning LED	Flashes in red color if the device is armed or while the safety timer is counting down. Can be disabled in the menu.

CAUTION 2.4.4 2.5.1	**Strong heating of the device during operation** During operation, the following parts of the device can heat up considerably: • the casing, in particular the parts forming the combustion chamber • the electrode cage • the ignition electrodes • the electrode for ionization measurement Do not touch these parts until they have cooled down sufficiently and the unit is switched off.

WARNING  2.3.3	**High ignition voltage** For the operation of the ionization measurement and the electrical ignition of the fuel, very high voltages are generated in the device, which can be life-threatening. Therefore, always operate the unit with the cover panel closed and never reach into the interior of the unit or into the ignition electrodes or electrode cage during operation. The electrode for ionization measurement is live while the fuel valves are open. However, a current limiter in the unit prevents any danger from arising.

2.2 Carrying handle

This carrying handle is located on the side of the housing opposite the inputs.



To carry the unit, unfold this handle and grasp the handle with one hand and with the other hand under the edge of the housing at the inputs on the opposite side of the unit.

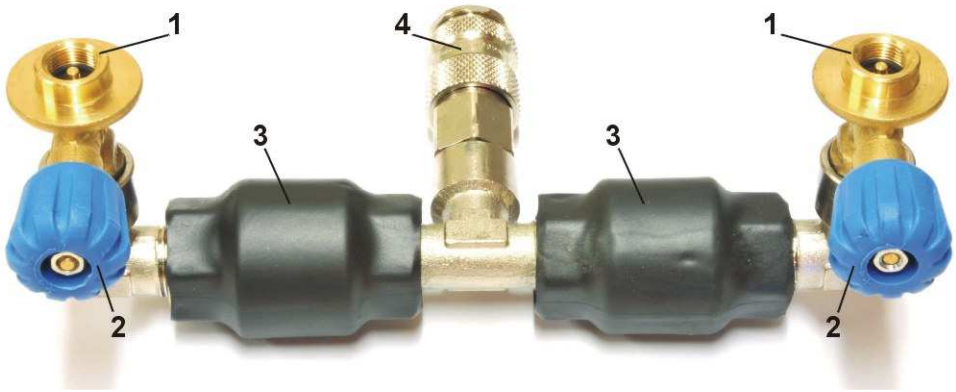
Fold the handle back in when you no longer need it.

2.3 Cover panel

The cover plate is located on one side of the housing. By pressing the release-button, the connection for the gas hose or the cartridge holder and the four nozzle holders become accessible. To close it, insert the cover plate into the guides on the bottom and press it until the release button engages.

2.4 Cartridge holder

This T-shaped cartridge holder is included in the delivery of the gas cartridge option:



1	Reception for gas cartridges	Screw in the cartridges here. The thread is right-handed.
2	Shut-off valve	Opens or closes the fuel supply between cartridge and device. Can also be used to throttle the fuel flow to some extent to reduce the flame height.
3	Non-return valve	Ensures that no fuel will be able to escape if the shut-off valve on the other side is not closed.
4	Quick-coupler	To be connected with the opposing quick-coupler of the device. Can be released by pulling back the knurled ring.

DANGER 2.3.7	**Use of non-original accessories or operation without specified components** The safe operation of the device cannot be guaranteed, if non-original accessories and components are used. All specified parts must be used to operate the device (e.g. pressure reducer). • Use only components and accessories approved by the manufacturer. • Use all components specified by the manufacturer.

3 Nozzles for different types of fuel

Different nozzles have been developed for the various types of fuels. The nozzles have been optimized for:

- perfect ignition behavior
- aesthetic flame shape
- rapid extinguishing of the flame to enable fast step sequences
- best performance of the flame monitoring system

Make sure that you use the correct nozzle for your application every time you operate the device. The usage of other nozzles than the original ones is prohibited.

The following nozzles are available:

This nozzle is intended to be used with gas cartridges.

To gain different flame heights this nozzle is available in these different sizes: S / M / L / XL / XXL

The size XXL is included in the delivery of the gas cartridge option.

This type of nozzle is must be used together with gas bottles if the gasiform phase is being used. It is included in the delivery of the gas bottle option.

Different sizes are not being offered because the flame height can be changed by adjusting the pressure setting at the pressure regulator.

This nozzle has been designed for the usage in conjunction with gas bottles if the liquid phase is being used. It is not included in the delivery of the gas bottle option and must be ordered separately if required. This kind of usage is at one's own risk.

Different sizes are not offered because for this kind of application normally a very high flame is desired and the flame height can be adjusted at the regulator. Please note that special regulators are necessary for the liquefied phase and please read the instructions given in the section 'Approved fuels and instructions if the gas bottle option is being used'.

CAUTION	**Operation without a nozzle**
2.3.5	Operation without a nozzle can cause an unexpected flame column. • Only use the nozzles specified by the manufacturer.

DANGER	**Use of non-original accessories or operation without specified components**
2.3.7	The safe operation of the device cannot be guaranteed, if non-original accessories and components are used. All specified parts must be used to operate the device (e.g. pressure reducer). • Use only components and accessories approved by the manufacturer. • Use all components specified by the manufacturer.

3.1 Changing the nozzles and nozzle holder

The nozzles have always to be screwed in with the supplied Teflon seal.

When changing the nozzles, be sure to tighten them hand-tight (0.7 Nm torque)

NOTICE	Do not use more than 1.0 Nm torque as this will destroy the seal.

Holder for up to four nozzles can be found in the housing of the G-Flame.

3.2 Sealing of the nozzles or respectively of the nozzle thread

The nozzles for gas can operation have a central drilling. After use, you should cover this nozzle opening with insulating tape, preventing objects from entering the device. This is particularly the case if the device is stored or transported unpacked.

If you unscrew the nozzle and do not install another nozzle, you should also cover the opening so that no objects can enter. In such a case, we recommend that you screw in a dummy plug instead.

4 The various inputs and their compatibility and usage, pin assignments of connectors

4.1 The emergency off input

A shielded cable with two stranded wires that are wired to an electrical switch can be connected here. The emergency off switch should be installed in an enclosure. Industrial grade emergency off switches, suitable housings, cables and accessories are available on the market for do-it-yourself constructions. Upon request we can also supply this material or offer a ready-for-use solution.

Several G-Flames should always be controlled by separated emergency off switches to avoid potential equalizing currents. If you want to control several G-Flames with a single emergency off switch we can offer you a customized solution with an optical isolator between the individual signals.

The pin assignment of the emergency off input is as follows:

Pin1 = Shielding for the control signal, to be connected with the shielding of the cable
Pin2 = to be connected with the contact of the electrical switch (output at the G-Flame)
Pin3 = to be connected with the contact of the electrical switch (input at the G-Flame)

A connection diagram is printed on the housing of the G-Flame.

4.2 Firing key input

The firing key input requires a potential-free electrical contact. Contact debouncing has been implemented in hardware and software. The contact must be able to withstand a switching current of at least 100 mA at a voltage of 5V DC.

This input should always be used together with a shielded cable, especially with longer cable lengths.

The firing key input of several devices must not be connected among themselves to avoid equalizing currents caused by different potentials. Instead either galvanically isolated keys must be used or, if several devices should be controlled by a single key a customized solution with a galvanic isolator must be used.

A 3pin XLR socket is installed in the G-Flame for this input. The pin assignment is as follows:

Pin1 = Ground/Shield, to be connected with the shielding of the cable
Pin2 = Output with a voltage of 5V DC with internal current limiter; this pin needs to be connected with the electrical contact of the firing key
Pin3 = Input, 0 or 5V DC, this pin needs to be connected with the electrical contact of the firing key

A connection diagram is printed on the housing of the G-Flame.

You may also use the firing keys which are offered by us as an accessory part for the PFC Advanced. The pin assignment is identical.

If desired we will manufacture firing key according to your requirements, e.g. firing keys with long cables or foot switches.

4.3 Voltage input 12-24V

This input is intended to be used in conjunction with a Galaxis receiver or other firing modules.

The following Galaxis receivers can be used:
- PFE Profi 3 Outputs and PFE Profi 10 Outputs
- PFE Advanced 10 Outputs

Connect the positive output of the receiver with the red female input connector and the negative output (ground) with the black female input connector.

The voltage input of several devices must not be connected among themselves to avoid equalizing currents caused by different potentials. Instead either galvanically isolated outputs must be used or, if several devices should be controlled by a single voltage signal a customized solution with a galvanically isolated outputs must be used.

If using receivers of the Profi series you can select two different control durations (0.5 and 2.6 seconds). It is possible to initiate a firing cue several times one after another to generate several consecutive flame effects. In addition, you can re-fire the firing cue while the output of the receiver is active to prolong the flame effect. With receivers of the Profi series it is not possible to program more than one firing cue to one specific output.

If using receivers of the Advanced series with 10 outputs and Terminal function you may program as many firing cues as required to each output and furthermore you can individually program the duration how long the outputs should be active. This requires that the receiver is operated in 10 output mode. Further explanation regarding the usage of the Terminal function can be found in the operation manual of the PFE Advanced 10 Outputs.

If connecting other firing systems, you have to pay attention that these devices have a DC output voltage ranging between 12 and 24 Volts. Higher voltages can probably damage the input of the G-Flame. In addition, the equipment to be connected should not use capacitor buffered outputs and be able to deliver a constant voltage. If you will be able to influence the duration of the flame effects depends on the scope of operation of the control devices to be connected.

If necessary, we are able to deliver accessory parts like banana plugs and control cables if you inform us about your requirements. You can consult us regarding the technical suitability of other control components.

4.4 Charging

To charge the device connect it to the supplied charging unit and establish mains supply. The charging unit comes with a universal voltage input and can therefore be operated worldwide. All you might need are adapters for the different national standards of wall outlets.

If the accumulator needs a full charge 30h are required. The intelligent charging circuit switches to trickle charge afterwards. The device should be charged continuously while being stored. This way it is 100% at your disposal all the time. Damages from overcharging cannot occur.

The LED 'Charging' is active in green color while the battery is being charged.

NOTICE 2.6.1	**Charging the device** The device may only be charged in certain positions. • Only charge the device in a horizontal position or • Only charge the device lying on its side

TIP	Continuous operation is possible by constantly charging the device.

TIP	After incomplete charging, a slightly higher battery capacity is displayed because the battery voltage has not yet normalized. Wait for an operating time of approx. 10 minutes to measure realistic values

4.5 Operation with DMX512

4.5.1 The DMX512 input

The DMX512 input complies with the DMX standard from 1990 respectively the standard which is defined in DIN56930-2.

The device is equipped with a 5pin female XLR jack as an input and a 5pin male XLR jack as an output to connect a DMX cable and to feed the signal to the next DMX device.

A connector with a termination resistor of 110 Ohm must be installed at the last device in the DMX line.

Up to 32 DMX devices can be operated in a single DMX line. If this is not sufficient you need to use a DMX splitter.

Please note that for DMX signals only shielded twisted-pair cables with lowest possible capacitance and an impedance of 110 Ohm are allowed to be used. Only used cables that are specified according to the DMX standard. E.g. normal microphone cables are in no case suitable for this purpose.

The pin assignment is as follows:

Pin1 = Shield, to be connected with the shielding of the cable, also ground for wireless DMX pens
Pin2 = Signal -
Pin3 = Signal +
Pin4 = unassigned but connected with the same pin on the other jack (to enable the feedthrough of return signals) or +5VDC power supply for wireless DMX pens
Pin5 = unassigned but connected with the same pin on the other jack (to enable the feedthrough of return signals)

A connection diagram is printed on the housing of the G-Flame.

If DMX has been selected as an input in the menu of the device you may optionally activate the power supply for wireless DMX pens. This enables the autarkic operation also in the DMX mode which means that the device is independent from any cables, power supplies and fuel pipes or hoses.

Please refer to the section 'The menu' which describes the operation in DMX mode in detail.

Attention: The DMX protocol is considered to be unsafe because no checksum is being transmitted. Usually it is not allowed to control pyrotechnic effects or similar with DMX. The user solely bears the risk of any potential damages caused by a malfunction. To improve safety, we have implemented the arming of the device by using a safety channel in the G-Flame.

TIP	For the reason of safety, the G-Flames should always be operated in an exclusive DMX universe, that is only used for the flame effects and no other devices. On all unused DMX channels, the dimming value 0% (decimal 0) should be transmitted.

4.5.2 Control via DMX512

In order for a flame to be generated, the safety channel must be transmitted with a dimmer value that is within the previously configured range. See entries in the table under 'The 'Safety channel' menu item'.

First the safety condition must be met before the flame channel can initiate the generation of a flame!

The safety condition is only correctly fulfilled if the dimmer value of the flame channel is below 6% (below decimal 15) during the rising edge of the dimmer value of the safety channel.

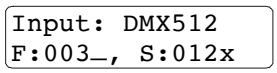
A flame will be generated if the safety condition is met and the flame channel is being received with a dimmer value of at least 90% (at least decimal 229).

Another flame effect can only be triggered if the dimmer value of the flame channel dropped below 6% (below decimal 16) in the meantime.

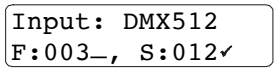
If a flame is being generated currently and the safety channel is being received with a dimmer value outside the previously configured value range, the electromagnetic fuel valves are closed to stop the flame effect.

It can be meaningful to program the G-Flames with different flame channels and a common safety channel. If you move the fader of the safety channel beyond the valid range all G-Flames will be deactivated together. It is still possible to program groups of safety channels if necessary.

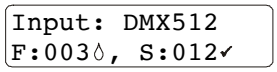
Examples of the display content while receiving DMX signals:



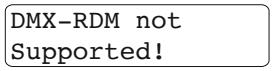
The G-Flame has been programmed to flame channel 3 and safety channel 12 ('F' = Flame channel, 'S' = Safety channel). In addition, you see the status of the safety channels and respectively of the DMX reception. 'x' means that no signal is being received or that the transmitted value of the safety channel is not within the previously configured value range (= device is not armed). The safety condition is not met in this example and no flame is being generated.



'✓' right next to the safety channel means that a DMX signal is being received and a value between the previously configured value range is being received for the safety channel (= device is armed). Consequently, flame effects can be initiated.



The safety condition is fulfilled and the flame channel is being received with a dimming value of at least 90%. The G-Flame generates a flame. In this case a flame symbol is being displayed right next to the flame channel.



During the reception of DMX signals in addition to the display content shown above also the following information is being displayed alternately:

- Tilt switch on/off and the tilt status
- Flame monitoring on/off

As soon as the DMX status is changing the device immediately displays the DMX information again and the LCD backlight is switched on simultaneously if it has been enabled in the menu of the device.

4.5.3 The error message "DMX-RDM not supported!"

```
DMX-RDM not
Supported!
```

If you see this error message, the device is receiving so-called RDM packets, which are not supported and are discarded by the software.

Operation of the device via DMX is not possible in this case. Please switch off RDM at the DMX console for the DMX Universe, which is used to control the G-Flames, to be able to continue operation.

4.6 Control of the device via serial data cables via the RS485 interface in conjunction with the PFC Advanced

Via the connector for the DMX signal the communication on serial data cables with the PFC Advanced is possible. DMX is only a so called protocol which is utilizing an RS485 interface.

In the menu you can choose between radio or cable control. In cable control mode the controller PFC Advanced is the feed-in to a network which has a line architecture. The controller always sends data both ways: via radio and on the cable. For this reason both control methods can be used simultaneously.

The G-Flame can receive the serial data signal on the male 5pin XLR connector and provides an output of this signal on the female 5pin XLR connector in order to feed it through to the next device.

The cable control method is using a 'RS485' network. According to this standard a termination resistor is required at the last bus device which is plugged into the unused connector. Another termination resistor has to be installed at the controller which is normally the first device in the line.

The maximum cable length of one line is 1,000 m. A 'booster' can be used to extend the length. The use of 'splitters' allows star shaped networks, too.

Serial data cables with customized lengths, termination resistors, boosters and splitters are available as accessory parts.

The maximum number of devices per line is 32. The total maximum number of devices is theoretically unlimited if boosters and splitters are being used.

If cable control has been selected in the menu the following is being displayed in receiving mode:

```
Input: Cable
(RS485 of PFC)
```

TIP	Even if the device is in cable control mode a result is displayed if a range test is in progress. The test result informs you about the range condition if you would decide to use the radio control option. A bad result of the radio range test e.g. if no antenna is connected does absolutely not imply that the signal on the cable is insufficient, too.

TIP	Feedback data from remote access functions is sent by the G-Flame on both communication carriers: via radio and on the cable. At the controller PFC Advanced you can choose which feedback signal should be detected.

The pin assignment of the RS485 interface is as follows:

Pin1 = Shielding for serial data cable, to be connected with the shielding of the cable
Pin2 = Serial data cable, Signal -
Pin3 = Serial data cable, Signal +

Pin4 = unassigned but connected between the male and female jack
Pin5 = unassigned but connected between the male and female jack

A connection diagram is printed on the housing of the G-Flame.

Upon request you will be able to receive customized data cables if you provide us your requirements.

4.7 Advanced wireless module, communication via radio or serial data cables

If the device has been equipped with the Advanced wireless module it can be controlled by the Galaxis controllers PFS Profi, PFS Pocket, PFM Advanced USB Modem and PFC Advanced. Remote data requests and remote programming is only possible if the G-Flame is used in conjunction with the PFC Advanced.

When the wireless module is installed remote data requests and remote programming is also possible with the wireless USB modem together with the Composer software from any PC or notebook.

The operation of the G-Flame together with the Advanced wireless module is described in more detail in the section 'menu' in this manual

If the wireless module is installed the G-Flame can also communicate with the PFC Advanced via serial data cables. The connection is established by using the DMX jacks and the DMX interface which in principle works as a so called RS485 interface. Please refer to the manual of the controller PFC Advanced and the receiver PFE Advanced regarding network topography and operation.
If the cable interface has been selected in the menu of the G-Flame the pin assignment of the 5pin male and female XLR connectors is as follows:

The pin assignment is as follows:

Pin1 = Shielding for serial data cable, to be connected with the shielding of the cable
Pin2 = Serial data cable, Signal -
Pin3 = Serial data cable, Signal +
Pin4 = unassigned but connected between the male and female jack
Pin5 = unassigned but connected between the male and female jack

A connection diagram is printed on the housing of the G-Flame.

Upon request you will be able to receive customized data cables if you provide us your requirements.

5 Instructions for installation and de-installation of the G-Flame

5.1 Setup of the G-Flame

First ensure that the equipment is in a safe position and observe all safety rules from the beginning of assembly to the end of disassembly. Before the G-Flame is switched on, make sure that the gas supply has been correctly established

WARNING	**Flammable atmosphere in/at the device**
 2.2.1 2.3.4 2.4.1	When connecting or closing the gas containers, a flammable atmosphere could occur in/at the unit due to lose connections or leaks of the fuel-carrying components. An ignition spark could cause combustion or deflagration in/at the device. • Perform the pressure test of the fuel-carrying components as required in this operating manual. • Make sure that the underside of the device (cutout) is not blocked. • Large cutout at the underside of the device below the fuel-carrying components, so that any escaping gas can be drained. • Do not use the device if leaks are detected. • Follow all safety instructions and regulations at all times.

WARNING	**Unintentional triggering of a flame column**
 2.2.2 2.3.6	Technical faults can lead to unintentional flame effects. • Make sure that the required safety distance to persons is maintained. • Only connect the gas bottle/cartridges when they the device is switched off. • Minimize the presence in the danger zone. • Enable the flame monitoring system. • Never keep body parts above the combustion chamber at any time. • Follow all safety instructions and regulations at all times.

5.1.1 Operation with aerosol cartridges

If you use aerosol cartridges, make sure that they are correctly and tightly screwed into the cartridge holder and that the shut-off valves are closed. Connect the cartridge holder to the G-Flame with the quick coupler. A clearly audible click should be heard. The shut-off valves can now be opened.

5.1.2 Operation with gas bottles

If you use gas cylinders, make sure that the gas hose is correctly and tightly screwed to the gas cylinder and that the shut-off valve is closed. Connect the gas hose to the G-Flame with the quick coupler. A clearly audible click should be heard. The shut-off valve of the gas cylinder can now be opened.

WARNING	**Extracting the fuel from a gas cylinder in the liquid phase with a pressure reducer for the gasiform phase**
 2.3.9	Destruction of pressure reducer or hose or uncontrolled escape of liquid gas, thereby risk of fire and explosion. • Only use the gas bottle as specified by the manufacturer.

5.1.3 After opening

Immediately after opening the gas supply, the gas tightness must be checked. Ensure a quiet environment and pay close attention to any flow noise and use a gas leak detector to ensure that no gas is leaking. In the event of a leak, you must shut off the gas supply immediately and you must not switch on the device. Only if everything is tight, the device may be switched on.

5.2 De-installation the G-Flame

Before you de-install the G-Flame, you must burn off the fuel that is still in the system and the hoses or the cartridge holders. Proceed as follows:

CAUTION	**Strong heating of the device during operation**
 2.4.4 2.5.1	During operation, the following parts of the device can heat up considerably: • the casing, in particular the parts forming the combustion chamber • the electrode cage • the ignition electrodes • the electrode for ionization measurement Do not touch these parts until they have cooled down sufficiently and the unit is switched off.

WARNING	**Flammable atmosphere in/at the device**
 2.2.1 2.3.4 2.4.1	When connecting or closing the gas containers, a flammable atmosphere could occur in/at the unit due to lose connections or leaks of the fuel-carrying components. An ignition spark could cause combustion or deflagration in/at the device. • Perform the pressure test of the fuel-carrying components as required in this operating manual. • Make sure that the underside of the device (cutout) is not blocked. • Large cutout at the underside of the device below the fuel-carrying components, so that any escaping gas can be drained. • Do not use the device if leaks are detected. • Follow all safety instructions and regulations at all times.

5.2.1 Operation with aerosol cartridges

Close the shut-off valves on the cartridge holders and switch the unit on again if it is switched off. Remove the remaining gas in the G-Flame by triggering the device until no flame comes out of the combustion chamber anymore.

Only now you can switch off the unit and remove the cartridge holder without pressure, because the quick connectors must always be opened without pressure so that the seals are not damaged. The unit can now be de-installed.

CAUTION	**Unexpected flame column**
 2.4.2	Unexpected flame column on ignition without connected gas bottle/cartridges due to remaining residual gas in the system. • Flame off residual gas quantities in the system.

5.2.2 Operation with gas bottles

Close the shut-off valve on the gas cylinder and switch the device on again if it is switched off. Remove the remaining gas in the G-Flame by triggering the device until no flame comes out of the combustion chamber anymore.

Only now you can switch off the unit and remove the hose without pressure, because the quick connectors must always be opened without pressure so that the seals are not damaged. The unit can now be de-installed.

CAUTION	**Unexpected flame column**
 2.4.2	Unexpected flame column on ignition without connected gas bottle/cartridges due to remaining residual gas in the system. • Flame off residual gas quantities in the system.

CAUTION	**Dangerous movement of the gas hose**
 2.4.3	The gas hose could take up a dangerous movement due to the residual pressure in the system. • Use quick couplers specified by the manufacturer.

5.3 Tilting the G-Flame

The tilted operation of the G-Flame is possible. We recommend a maximum tilt angle of 45° in conjunction with gas bottles and a maximum tilt angle of 75° when gas cartridges are being used.

NOTICE 2.1.1	**Overturning the device**
	The device may overturn during operation. • Ensure a sufficiently secure stand. • If necessary, attach the unit to the designated mounting points. • Use only suitable stands. • Always enable the tilt switch if possible.

If gas cartridges are installed the liquefied phase is being used und due to that the flames follow better the tilt angle because the influence of the thermal lift on the shape of the flame is significantly lower in this case.

When the tilt angle is more than 30° the tilt sensor has to be turned off in the menu of the device. When doing so please note that the device will not close the electromagnetic valves e.g. if it is turned over. In this case it is so much more important to ensure that the G-Flame is securely mounted and that your personnel is constantly supervising that all devices are in correct position.

If the G-Flame is used with gas cartridges it can also be tilted with an angle of e.g. 90°, 135° or 180° but in these cases the problem exists that the fuel can no longer be used completely or partly in the liquefied phase. Due to that for example a short hose and an external cartridge holder is necessary to enable this operation. If you have a demand for this please contact us so that we can provide a customized solution.

5.3.1 Instructions for installation at a tilt of 180°

If you want to use the G-Flame inclined by 180°, we recommend this application exclusively with gas cartridges. To do this, you must use an extension for the gas cartridge holder (Item No. 1807). This ensures that the gas from the cartridges is still withdrawn in liquid form. This extension means that the gas cartridges can no longer be installed in the housing of the G-Flame.

5.4 Additional instructions for permanent installations

A permanent installation requires that the system is effectively and redundantly monitored by at least two gas detection devices. The function of the gas detectors has to be checked weekly. These function checks must be recorded in writing.

The amount of fuel which is held available and is connected with the device must be as low as possible.

The shut-off valves should be opened as shortly as possible before the usage and they should be closed again as fast as possible after the effects.

5.4.1 Operation with aerosol cartridges

No gas cartridges are allowed to remain in the device if no personnel is present to supervise the devices.

5.4.2 Operation with gas bottles

The fuel shut-off valves on the gas bottles must be closed if no personnel is present to supervise the devices.

5.5 Instructions regarding the use of Flame Bars

If you want to use Flame Bars, we would like to expressly state here that only gaseous fuel and under no circumstances liquid gas may be used! As a result, the conventional cartridge holder cannot be used here.

How this can best be achieved in the respective application should be clarified individually with the manufacturer.

WARNING 2.3.10	**Use of liquid gas** Unexpectedly large flame at the Flame Bars, possibly dropping of burning liquid gas to the ground. • Only use fuels approved by the manufacturer. • Do not use the conventional gas cartridge holder.

DANGER	**Use of non-original accessories or operation without specified components**
2.3.7	The safe operation of the device cannot be guaranteed, if non-original accessories and components are used. All specified parts must be used to operate the device (e.g. pressure reducer). • Use only components and accessories approved by the manufacturer. • Use all components specified by the manufacturer.

5.6 Mounting on light or speaker stands

A receptor for the direct mounting of the G-Flame on light or speaker stands has been integrated in the bottom side of the housing.

5.7 Mounting on truss elements

Cage nuts have been integrated in the bottom of the housing to enable the direct mounting of the device on 3-point and 4-point truss elements. Depending on the shape of the truss elements you want to use you may have to remove one cage nut and insert it in another holder.

Cone shaped couplers with bolts and safety splint-pins (half cone with M10 screw), which can be inserted into the tubes of the truss elements, are available from specialized trade shops for stage equipment.

If necessary, e.g. in places of public assembly, a safety rope can be installed in addition by using the eye on one edge of the housing.

6 Approved fuels

6.1 Approved fuels and instructions if the gas bottle option is being used

Make sure that the correct nozzle for this type of fuel is installed and that it is tightened sufficiently.

Gas bottles with 5 kg, 11 kg or 33 kg of liquefied Propane/Butane gas mixture can be used with this type of operation.

For safety reasons you should use the smallest bottle possible. Only if a high quantity of gas is required for a single event you should use the next larger bottle size.

DANGER 2.3.8	**Use of gas bottles without pressure reducer** The safe operation of the device cannot be guaranteed by operating gas bottles without pressure reducers. All specified parts must be used to operate the device. • Only use gas bottles with an installed pressure reducer.

The usage of other fuels in this operation mode, e.g. with coloring additives, is strictly prohibited because this can lead to leakages in the system or malfunction of the electro-magnetic valves.

The distance between the G-Flame and the gas bottle must be at least 1.0 m. The G-Flame is not allowed to be inclined in the direction of the gas cylinder when it is in tilted operation.

6.1.1 Instructions regarding the usage of the gasiform phase

The usage that is intended by the manufacturer is that only the gasiform phase is being taken from the bottle. Here it is mandatory to use a pressure regulator and the maximum output pressure must not be higher than 4.0 bar. The used gas hose must be approved for a pressure of 6.0 bar.

If you order the gas bottle option we deliver appropriate and approved equipment for this type of usage. If the inner diameter of the gas hose is too small or if the pressure regulator is unsuitable the flame height will be reduced. The usage of gas bottles without pressure regulator is an extreme accident hazard and is strictly prohibited.

The reason is that the pressure in the bottle can reach up to 35 bar and certain components like e.g. the gas hose and the electro-magnetic valves have not been designed for this.

6.1.2 Instructions regarding the usage of the liquid phase

The usage that is intended by the manufacturer is that only the gasiform phase is being taken from the bottle. You can use also the liquid phase on your own risk. When using the liquid phase much higher flames can be generated (approx. 8-9 m). For doing so another nozzle is required and it is prohibited to use the supplied pressure regulator.

WARNING	**Extracting the fuel from a gas cylinder in the liquid phase with a pressure reducer for the gasiform phase**
2.3.9	Destruction of pressure reducer or hose or uncontrolled escape of liquid gas, thereby risk of fire and explosion. • Only use the gas bottle as specified by the manufacturer.

Standard pressure regulators are not suitable to be used with the liquefied phase. When the temperature is rising the pressure in the hose will increase extremely which will destroy the pressure regulator and liquefied gas is set free. Pressure regulators are offered on the market which are suitable to regulate the liquefied phase. Furthermore, a gas hose must be used that has been approved for at least the maximum bottle pressure which is 35 bar. Hydraulic hoses are suitable for this.

It must be avoided by all means that a certain volume filled with liquefied gas is blocked off. For example, it is not allowed to fill the hose with liquefied gas and then close the shut-off valve on the bottle. The pressure in the locked volume will increase with a rate of 7 bar per 1°C when the temperature is rising! If you do not use a regulator must ensure that the bottle pressure is not higher than 10 bar because this is the maximum pressure that the electromagnetic valves can handle and due to that the bottle temperature should not exceed 25°C. It is not advisable to use the liquid phase by turning the bottles upside down. Besides the fact that the bottle is no longer standing stable also dirt from the bottle may enter the regulator (if installed) or the system of the G-Flame. When using the liquid phase, you should only use bottles with a dip tube installed inside. The safety distance must be extremely increased: if there is no wind at least 10 m to the side and 20 m upwards. The safety distance sideways has to be increased in windy conditions by the judgment of the operator. Please note in this context that unburned fuel that is transported by the wind can be hazardous.

Accurately inspect all equipment before each application, especially the gas hose, regarding possible damages. It is strictly prohibited to use damaged parts or equipment.

Ensure that the gas hose cannot become damaged during usage, e.g. by burning stars from aerial shells that fall down to the ground. Fireproof protective covers for the gas hoses are available upon request.

Make sure that the flame monitoring system is enabled in the menu of the G-Flame.

The usage of gas bottles in conjunction with the G-Flame is only permitted outdoors and not on stages, in buildings or tents etc.

Before starting operation, the system has to be checked with a gas leak detector.

Make sure that the quick coupler, the gas hose and the pressure regulator is connected gas tight with the gas bottle.

Depending on your application it can be necessary to use gas detectors to ensure best possible safety. Cost effective devices are offered on the market. Please note in this context that Propane and Butane is heavier than air and due to that it can accumulate in sinks, trenches, cellars or shafts. This characteristic must be taken into consideration when installing gas detectors.

In case that the G-Flame do not ignite the fuel because of a technical defect of if the device should have a leakage the units must be turned off immediately either by using the emergency-off input or by disabling the hazard zone that has been assigned to the device and the fuel supply has to be shut off as quickly as possible. The main switch is not allowed to be used as long as an ignitable fuel-air-mixture is present. The advantage of using the emergency-off input is that no spark, which could possibly ignite the mixture, is being generated when turning off the unit.

In most cases liquefied gas is a mixture of Propane and Butane. The mixing ratio can be very different, depending on the country. This has to do with the fact that the vapor pressure of Propane is much higher compared to Butane. In countries with a warm climate usually the Butane proportion us much higher while in countries with a colder climate the Propane proportion is higher. The mixing ratio can also vary depending in which season the gas is being purchased. The G-Flame can work with any Propane/Butane mixing ratio. You should use the liquefied gas as it is offered in the particular country instead of e.g. bringing pure Propane bottles to a region with relatively warm climatic conditions.

The instructions in the material safety data sheet of the gas bottles, the ADR regulations (i.e. regulations for the transportation of dangerous goods) and the regulations imposed by the employer's liability insurance association for the storage and usage of gas bottles and all other relevant laws, especially for places of public assembly and all accident prevention regulations, must be strictly followed. Especially the maximum allowable temperature of the bottles must not be exceeded. Protect the bottles from direct sun light and ensure that the bottles do not become overheated e.g. if they are loaded on vehicles. Usually the bottles are equipped with a pressure relief valve which opens at 35 bar with a tolerance of +/- 5 bar. This is beneficial to prevent the burst of a bottle during a fire. If the pressure is decreasing this safety valve is closing automatically. Of course, the released gas is a major accident hazard. Liquefied, pure Propane already generates a vapor pressure of 26 bar at a temperature of 70°C. 30 bar is exceeded at a temperature of 78°C and gas could possibly vent through the pressure relief valve. According to the regulations of the employer's liability insurance association already a bottle temperature of 40°C is unallowable.

The valves of the bottles should be opened as shortly as possible before the usage and they should be closed again as fast as possible after the effects.

After each usage the remaining fuel in the gas hose and in the system of the G-Flame must be emptied. To do so first close the valves of the gas bottles and then initiate a flame effect several times until no flame is being generated any more. Then the installation can be dismantled.

TIP	Expect that the G-Flame generates a flame every time you trigger the device even if there is no fuel supply. It could be that there is still fuel in the system and due to that a flame can be possibly generated. Furthermore, it could be that the system has not been completely emptied last time when the devices have been used.

When gas is drawn from the gas bottle, which contains the liquefied phase, the liquid in the bottle is cooling down due to the evaporative heat loss. Especially if a high volume is drawn from the bottle and if the ambient temperature is low this can lead to a significant pressure loss in the bottle resulting in a lower flame height. If you want to use or construct a bottle heater to cope with this problem you must not use appliances that have not been approved for this. Furthermore, the heating device must be equipped with at least two independent temperature monitoring systems for failover redundant operation.

6.2 Approved fuels and instructions if the gas cartridge option is being used

Make sure that the correct nozzle for this type of fuel is installed and that it is tightened sufficiently.

The gas cartridge option is intended to be used for applications on stages or in buildings. It is always possible to use the G-Flame with this variant also outdoors. In this context we would like to point out that the flame effect is less susceptible to windy conditions due to the fact that we liquefied phase is being used if gas cartridges are installed.

When gas cartridges are to be used the following fuel-cartridges are approved:

a)

Manufacturer or respectively supplier:

ROTHENBERGER Werkzeuge GmbH
Industriestraße 7
65779 Kelkheim
Germany

Telephone: +49 / 6195 / 800-0
Fax: +49 / 6195 / 800-3500

e-Mail: info@rothenberger.com
Homepage: www.rothenberger.com

Product name:	Multigas 300
Content:	600 ml Aerosol (330 g)
Composition:	approx. 65% Butane, 35% Propane
Calorific value:	4,61 kWh / Cartridge

b)

Manufacturer or respectively supplier:

CFH Löt- und Gasgeräte GmbH
Bahnhofstraße 50
74254 Offenau
Germany

Telephone: +49 / 7136 / 95 94-0
Fax: +49 / 7136 / 95 94-44

Homepage: www.cfh-gmbh.de
e-Mail: info@cfh-gmbh.de

Product name:	Universaldruckgasdose AT 2000
Content:	600 ml Aerosol (330 g)
Composition:	approx. 70% Butane, 30% Propane
Calorific value:	4,61 kWh / Cartridge

Additional fuels can be approved upon request.

In this operation mode the pressurized liquid is taken from the cartridges and is atomized by the nozzle of the G-Flame. An aerosol is produced which is then ignited by an electrical arc. Due to this we are speaking of aerosol cartridges, fuel cartridges or gas cartridges.

Use only a single cartridge for the reasons of safety if you do not need to generate many flame effects.

The usage of other fuels in this operation mode, e.g. with coloring additives, is strictly prohibited because this can lead to leakages in the system or malfunction of the electro-magnetic valves.

Make sure that the flame monitoring system is enabled in the menu of the G-Flame.

Only use original accessories which you will receive from us when ordering the gas cartridge option. The cartridge adaptor consists of a T-piece with two non-return valves, two shut-off valves and two connectors for the gas cartridges. The non-return valves prevent the leakage of fuel on the other side of the T-piece if a cartridge is being installed while the shut-off valve on the other side is not closed.

Even though non-return valves are installed you have to ensure that both shut-off valves are closed when screwing in one or two cartridges.

Before removing the T-piece from the G-Flame or before screwing in fuel cartridges you have to ensure that no ignition sources are present in the surrounding area. Smoking and open fire is forbidden. All other sources of ignition must be eliminated.

Make sure only to use cartridges that are undamaged and that the connectors for the cartridges and the thread on the cartridges is free from dirt and dust.

Open the cover lid of the G-Flame in order to screw in the cartridges and remove the T-piece by opening the quick-coupler. To do so pull back the knurled ring. Check all parts of the equipment thoroughly if anything is damaged, especially the seal in the quick-coupler of the T-piece. It is strictly prohibited to use damaged equipment.

Pay attention to screw in the cartridges gas-tight, completely and rather tight. Otherwise it is possible that the valve in the cartridges is not completely opened which leads to the problem that the fuel amount that can be drawn from the cartridge is reduced. In this case either the flame height will be reduced or the flame cannot be ignited. Both can cause a shut-off of the electromagnetic valves because the flame monitoring system cannot detect a sufficiently burning flame.

The shut-off valves in the T-piece should be opened as shortly as possible before the usage and they should be closed again as fast as possible after the effects.

Before or respectively while putting the device into service it can be reasonable to check the whole system with a gas leakage detector. If used on stages, buildings or tents this is absolutely necessary. When screwing in the cartridges it can happen that a small amount of fuel is set free. Due to the fact that gas leakage detectors are very sensitive you should wait some minutes so that the fuel that was possibly released when the cartridge was installed can evaporate and volatilize completely. Then you can begin with the testing against leakages.

If it should be the case that G-Flames do not ignite the aerosol spray or that there is a fuel leakage because of a technical defect the units must be turned off immediately either by using the emergency-off input or by deactivating the hazard zone that has been assigned to the device and the fuel supply has to be terminated as fast as possible. The unit may only be turned off by using the main switch if you can assure that there is no inflammable or explosible fuel-air ratio present. The advantage of utilizing the emergency-off input is that during the shut-down no electric spark can be generated that could ignite a fuel-air mixture.

Depending on your application it can be necessary to use gas detectors to ensure best possible safety. In applications on stages, in buildings or tents this is mandatory. Cost effective devices are offered on the market. Please note in this context that Propane and Butane is heavier than air and due to that it can accumulate in sinks, trenches, cellars or shafts. This characteristic must be taken into consideration when installing gas detectors.

Gas cartridges contain predominantly Butane, which has a lower vapor pressure compared to Propane. Furthermore, the vapor pressure curve of Butane has a much flatter characteristic. On the other hand, the cartridge is by far not so robust as a gas bottle. Therefore, the maximum temperature, which is 50 °C according to the guidelines provided by the manufacturers of the cartridges, must not be exceeded during storage, transportation and usage.

The instructions in the material safety data sheet of the gas cartridges, the ADR regulations (i.e. regulations for the transportation of dangerous goods) and the regulations imposed by the employer's liability insurance association for the storage and usage of gas cartridges and all other relevant laws, especially for places of public assembly and all accident prevention regulations, must be strictly followed. Especially the maximum allowable temperature of the gas cartridges must not be exceeded. Protect the cartridges from direct sun light and ensure that the cartridges do not become overheated e.g. if they are loaded on vehicles.

After each usage the remaining fuel in the T-piece and in the system of the G-Flame must be burned off. To do so first close the shut-off valves on the T-piece and then initiate a flame effect several times until no flame is being generated any more. Then the installation can be dismantled. In this context we want to point out that it can take very long until the liquid fuel in the system has completely evaporated. When the liquid fuel evaporates a lot of coldness is being generated (evaporation chill) and this leads to a deceleration of the evaporation. Due to that it can absolutely happen that after a certain time a flame is being generated again even though it seemed that the fuel evaporated completely when emptying the system.

After emptying the system and burning off the fuel the installation can be dismantled. Before your remove the T-piece you have to make sure that no ignition sources are present.

TIP	Expect that the G-Flame generates a flame every time you trigger the device even if there is no fuel supply. It could be that there is still fuel in the system and due to that a flame can be possibly generated. Furthermore, it could be that the system has not been completely emptied last time when the devices have been used.

6.3 Fuel consumption

6.3.1 Fuel consumption if gas bottles are being used

With a gas bottle with a content of 11 kg approx. 1,000 flame effects with a duration of 0.5 seconds and a height of 5 m can be generated. With a 5 kg bottle approx. 450 of these effects are possible.

6.3.2 Fuel consumption if gas cartridges are being used

The fuel consumption depends mainly on the vapor pressure in the gas cartridges which depends on the temperature and also the nozzle size has an effect on the amount of fuel consumed.

The following spreadsheet should give you approximate guideline values. The information in seconds refers to the approximate total burning duration with two cartridges with different cartridge temperatures. The burning duration has been determined by using cartridges with a content of 330 g or respectively 600 ml.

Nozzle size	S	M	L	XL	XXL
-20 to -15°C	62 Sec.	57 Sec.	52 Sec.	47 Sec.	42 Sec.
-15° to -10°C	60 Sec.	55 Sec.	50 Sec.	45 Sec.	40 Sec.
-10° to -5°C	58 Sec.	53 Sec.	48 Sec.	43 Sec.	38 Sec.
-5° to 0°C	56 Sec.	51 Sec.	46 Sec.	41 Sec.	36 Sec.
0° to +5°C	54 Sec.	49 Sec.	44 Sec.	39 Sec.	34 Sec.
+5° to +10°C	52 Sec.	47 Sec.	42 Sec.	37 Sec.	32 Sec.
+10° to +15°C	50 Sec.	45 Sec.	40 Sec.	35 Sec.	30 Sec.
+15° to +20°C	48 Sec.	43 Sec.	38 Sec.	33 Sec.	28 Sec.
+20° to +25°C	46 Sec.	41 Sec.	36 Sec.	31 Sec.	26 Sec.
+25° to +30°C	44 Sec.	39 Sec.	34 Sec.	29 Sec.	24 Sec.
+30° to +35°C	42 Sec.	37 Sec.	32 Sec.	27 Sec.	22 Sec.
+35° to +40°C	40 Sec.	35 Sec.	30 Sec.	25 Sec.	20 Sec.

30 seconds would be for example 100 short flame effects with 0.3 seconds each or 60 flame effects with 0.5 seconds each or 30 flame columns with a valve opening duration of 1.0 seconds.

7 Safety distances

The safety distances stated in this manual refer to flame retardant materials. For other materials or objects that are susceptible to heat the safety distances must be significantly increased. The thermal output of this effect device is enormous. It is more than 1.2 Megawatt if gas cartridges are being used at a cartridge temperature of 20°C. Especially the safety distance upwards must be increased by 3 m if easily inflammable materials are present.

DANGER 2.3.1	**Open flames** Personal injury can occur due to the open flame. • Make sure that the required safety distance to persons is maintained. • Minimize the presence in the danger zone. • Never keep body parts above the combustion chamber at any time. • Follow all safety instructions and regulations at all times.

WARNING 2.2.2 2.3.6	**Unintentional triggering of a flame column** Technical faults can lead to unintentional flame effects. • Make sure that the required safety distance to persons is maintained. • Only connect the gas bottle/cartridges when they the device is switched off. • Minimize the presence in the danger zone. • Enable the flame monitoring system. • Never keep body parts above the combustion chamber at any time. • Follow all safety instructions and regulations at all times.

WARNING 2.3.2	**Ignition failure** The ejected gas stream does not ignite. • Make sure that the required safety distance to persons is maintained. • Minimize the presence in the danger zone. • Activate the flame monitoring system. • Never keep body parts above the combustion chamber at any time. • Follow all safety instructions and regulations at all times.

The required safety distance for safe operation is depending on several parameters. The flame height is influenced by different nozzle sizes if gas cartridges are being used and by the selected output pressure of the pressure regulator if gas bottles are being used. Furthermore, wind and every other air movement and the thermal lift are relevant factors.

The duration how long the electromagnetic fuel valves are opened is having an influence on the required safety distance. If the valves are opened for extremely short times (approx. 0.1 to 0.5 seconds) smaller flame balls are being generated compared to longer durations.

In addition, the temperature of the gas cartridges or gas bottles is affecting the flame height.

The pressure in the gas cartridges is rising with the temperature. Due to the lack of a pressure regulator the flame height depends directly on the temperature of the fuel in the cartridges.

If gas bottles are used the output pressure of the regulator is constant and therefore the flame height is actually not depending on the temperature of the bottle unless the liquefied gas is very cold or is chilled by the evaporative heat loss so that the vapor pressure in the bottle is falling below the selected output pressure of the regulator. Propane has a vapor pressure of approx. 4 bar at 0°C and approx. 2 bar at -15°C.

Wind or thermal influences may heighten the effects which can demand increased safety distances as well.

In general, the following rule applies: The operator is responsible for the accident-free usage of the G-Flame and has to decide by his own judgment which safety distance is required.

In certain circumstances the safety distances may be specified by the authorities that are responsible for the safety during the fire prevention assessment on site. The following tables should inform you about the effect height to be expected and be an orientation guide when specifying the minimum safety distances.

In general, all the recommendations for the safety distances given in here are basing on the condition that there is no wind at all! Windy conditions will lead to the result that the effects are drifting sideways accordingly, especially if gas bottles are being used. This must be considered when choosing the position for the installation, choosing a nozzle size and the operation pressure. Due to the fact that the usage of the devices is beyond our control expressly disclaim any liability for any damages resulting from insufficient safety distances. Therefore, we are only giving recommendations regarding the safety distances instead of fixed values. Every user must decide by himself which minimum safety distance is required for his application.

Utmost care must be taken if actors are wearing costumes that are easily inflammable. In such cases the safety distance must be increased dramatically. If in doubt the effect has to be omitted.

7.1 Safety distances if gas bottles are being used, device standing vertically

Selected pressure [bar]	0,0 - 0,5	0,5 - 1,0	1,0 - 1,5	1,5 - 2,0	2,0 - 2,5	2,5 - 3,0	3,0 - 3,5	3,5 - 4,0
Approx. effect height* [m]	1,5	2,0	2,5	3,0	3,5	4,0	4,5	5,0
Safety distance upwards** [m]	3,5	4,0	4,5	5,0	5,5	6,0	6,5	7,5
Safety distance sideways*** [m]	2,0	2,0	2,5	2,5	3,0	3,0	3,5	3,5

* = Expected effect height if valves are opened for 1.5 seconds if G-Flame is standing vertically

** = Recommended safety distance upwards to persons, animals or flame retardant objects

*** = Recommended safety distance sideways to persons, animals or flame retardant objects

7.2 Safety distances if gas cartridges are being used, device standing vertically

Nozzle size	S	M	L	XL	XXL
-20 to -10°C	approx. 1.5 m 3.5 m 2.0 m	approx. 2.0 m 4.0 m 2.0 m	approx. 2.5 m 4.5 m 2.0 m	approx. 3.0 m 5.0 m 2.5 m	approx. 3.5 m 5.5 m 2.5 m
-10 to 0 °C	approx. 2.0 m 4.0 m 2.0 m	approx. 2.5 m 4.5 m 2.0 m	approx. 3.0 m 5.0 m 2.5 m	approx. 3.5 m 5.5 m 2.5 m	approx. 4.0 m 6.0 m 2.5 m
0 to 10 °C	approx. 2.5 m 4.5 m 2.0 m	approx. 3.0 m 5.0 m 2.5 m	approx. 3.5 m 5.5 m 2.5 m	approx. 4.0 m 6.0 m 2.5 m	approx. 4.5 m 6.5 m 3.0 m
10 to 20 °C	approx. 3.0 m 5.0 m 2.5 m	approx. 3.5 m 5.5 m 2.5 m	approx. 4.0 m 6.0 m 2.5 m	approx. 4.5 m 6.5 m 3.0 m	approx. 5.0 m 7.0 m 3.5 m
20 to 30 °C	approx. 3.5 m 5.5 m 2.5 m	approx. 4.0 m 6.0 m 2.5 m	approx. 4.5 m 6.5 m 3.0 m	approx. 5.0 m 7.0 m 3.5 m	approx. 5.5 m 7.5 m 4.0 m
30 to 40 °C	approx. 4.0 m 6.0 m 2.5 m	approx. 4.5 m 6.5 m 3.0 m	approx. 5.0 m 7.0 m 3.5 m	approx. 5.5 m 7.5 m 4.0 m	approx. 6.0 m 8.0 m 4.5 m

Marking in cyan color = Expected effect height if valves are opened for 1.5 seconds if G-Flame is standing vertically

Marking in yellow color = Recommended safety distance upwards to persons, animals or flame retardant objects

Marking in green color = Recommended safety distance sideways to persons, animals or flame retardant objects

It can be necessary to increase the safety distance to uninvolved persons significantly also to ensure that these people do not become frightened and do not show panic reactions. Our recommendation is here a safety distance of at least 5 m sideways.

7.3 Safety distances when using flame bars

The safety distances when using Flame Bars are 2.5 m upwards from the pipe in all directions and 2.0 m from the pipe ends to the side.

7.4 Safety distances if the device is being tilted

It is also possible to mount the device in a tilted orientation. If gas bottles are being used, we recommend a maximum tilt angle of 45° sideways. When operated with gas cartridges the maximum tilt is 75° sideways.

If the device is operated with a tilt angle the safety distances sideways in the direction of the tilt angle should be increased according either to the operator's judgment or to the guidelines of the authorities. Possibly the safety distances on the other side can be reduced, but we recommend to keep at least a minimum distance of 2.0 m.

We recommend to keep the minimum safety distance upwards to people, animals and flame retardant materials if the device is being tilted because due to the thermal lift the same amount of heat will ascent.

7.5 Safety distances if the device is mounted above the spectators

In general, it is possible to install the devices above the spectators, e.g. on elevated truss elements. The device does not have any fall-out but we recommend a minimum safety distance to people, animals and flame retardant materials of 2 meters above the heads of the spectators. If the devices are used above the spectators you have to take into consideration that they can become frightened and could possibly show panic reactions. This bears the risk of injury and death.

7.6 Reduction of the safety distances to actors

Possibly the safety distance to performers (actors, musicians, Stuntmen, artists, etc.) can be reduced slightly if these persons have been well trained and became familiar with the flame effect. It can be necessary to employ other safety measures such as flame retardant or inflammable costumes, pyrotechnical barrier gel (i.e. stunt gel) for the unprotected skin, etc. The user who is in charge for the safety will also have to take into consideration that heat is being dissipated as infrared radiation (invisible heat radiation) and that heat is rising upwards due to the thermal lift.

8 Switching on

The G-Flame can only be operated if the emergency switch is closed. If you want to use the device without emergency switch you can plug in the supplied XLR connector which is bridging the contacts of the emergency switch before you put the device into operation. In principle the main switch and the emergency switch are wired in series.

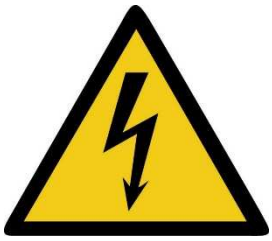
To switch on the G-Flame press the main switch which you will find on the side of the device where the display is.

Firstly, on the LCD the start screen and the firmware version is being displayed:

```
Galaxis
PYROTEC
```

```
G-Flame
Firmware VX.XX
```

Right after that the safety timer is started, unless a warning message is being displayed that the battery has been deeply discharged.

WARNING	**High ignition voltage**
 2.3.3	For the operation of the ionization measurement and the electrical ignition of the fuel, very high voltages are generated in the device, which can be life-threatening. Therefore, always operate the unit with the cover panel closed and never reach into the interior of the unit or into the ignition electrodes or electrode cage during operation. The electrode for ionization measurement is live while the fuel valves are open. However, a current limiter in the unit prevents any danger from arising.

9 Compatibility and Firmware Revision History

This device can be controlled by the following transmitters:
- PFS Profi
- PFS Pocket
- PFC Advanced

The G-Flame can be programmed with the Wireless USB Modem PFM Advanced.

The device communicates bidirectionally with the PFC Advanced and the USB Modem PFM Advanced.

The firmware of the devices is continuously developed. Information about changes between different firmware versions is available on request. Please inform us about the version you are currently using. We will then send you an easy-to-understand extract from the firmware revision history.

10 Automatic Hardware Checks With Startup

As soon as you switch on the device, a check of the hardware for correct function takes place during the startup sequence.

10.1 The Error Message '#'

An error has been detected in the configuration of the device, which is why it has been locked. Unlocking can only be performed with telephone assistance and during business hours by our support. To initiate the unlocking process, press "Up" once when this message is displayed and then press "Down".

The following scrolling text is then displayed:

```
Call the Galaxis office and tell the token. You will
receive the activation code. Continue with Mode.
```

If you now activate 'Mode' a random eight-digit sequence of numbers will be generated and displayed, the so-called token. Tell us this token on the phone and will give you the corresponding activation code.

TIP	You may speed up the ticker by activating the 'Mode' sensor field and keeping it activated.

The sequence is as follows:

```
Token:
53582820
```

Example of a token being displayed. This screen is being displayed sufficiently long so that you can tell us the token on the phone.

```
Code?
▲▼
```

Then you see this request to enter the activation code which you will receive from Galaxis on the phone. With 'Up' and 'Down' you can change the digits. If you see the correct number being displayed activate 'Mode' to proceed. A '0' can be entered the easiest by activating 'Mode' without activating 'Up' or 'Down' before.

```
Code?          OK
44232502▲▼
```

The activation code, which has also eight digits, has been accepted und the device is unlocked. No more warning message will be displayed any more until the next occurrence.

```
Code?           X
5423250200▲▼
```

A wrong activation code has been entered and the code was not accepted. Switch off the G-Flame and repeat the procedure.

10.2 The Error Message 'ATTENTION! Flame Sensor ERROR'.

The flame sensor incorrectly reports a flame although no flame generation is taking place. Please contact us when this error message is displayed in order to perform an error analysis.

10.3 The Error Message 'Radio Module not detected'

The radio option was activated in the menu of the device, but no radio module was detected. Please check the correct installation of the Advanced radio module as described in item 'Software installation of the Advanced radio module'. If this error message occurs again, please contact us to perform an error analysis.

10.4 The Error Message 'Memory error!'

The device has detected an implausible value in the non-volatile data memory, which is why safe operation cannot be guaranteed. Immediately after this error message is displayed, the device is reset

to factory settings. In any case, please check all relevant settings and make corrections if necessary to bring the device back to an operational state. Then test the device for correct function.

NOTICE	**Memory error and reset to factory defaults** Error message: 'Memory error! Call support!' If the device was equipped with an Advanced Radio Module, it can only be reactivated with telephone support and during business hours by our support team. Please follow the steps under 'Software installation of the Advanced wireless module'.

The repeated display of this error message indicates a defective memory chip. Please contact us to discuss the further procedure.

10.5 The Error Message 'Device Locked'

Implausible values have repeatedly been detected in the non-volatile data memory. This indicates a defective memory, which is why the device is permanently locked for safety reasons. This is necessary to avoid unplanned flame effects or general malfunctions. Please contact our support.

10.6 The message 'Memory Maintenance'

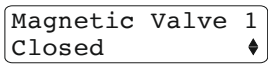
After every 50th switch-on of the device, a so-called memory maintenance is performed to ensure correct functioning of the device even after many years. Please wait until the progress indicator shows 100% and do not switch off the device under any circumstances. After that, the startup process will continue as usual.

11 Manual hardware checks with startup

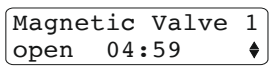
Your device supports a series of hardware tests that you can call up conveniently via the menu. Thereby you have the possibility to check all safety relevant components separately for their correct function. To call up the menu, activate 'Mode' when the device is switched off and switch the device on. Activate 'Mode' until the following display appears.

11.1 Checking the fuel valves for correct function

Your unit has two fuel valves connected in series. You have the option of controlling both fuel valves separately from each other, for example, to check the pipe system for leaks using a gas leak detector.



Activate 'Up' to open the first fuel valve.



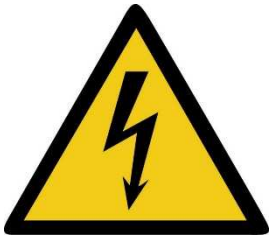
As soon as the fuel valve has been opened, you will see the display opposite. You can now close the fuel valve immediately by activating 'Down', or you can wait for the countdown until it closes automatically. You can reset the countdown to the start time of 05:00 minutes at any time by activating "Up" again.

To end the test of the first fuel valve, activate 'Mode'. You will now be taken to the next screen to control the second fuel valve. The menu navigation is identical to that for the first fuel valve. Activate 'Mode' again to end the test.

TIPP	As soon as the first fuel valve is opened, a small amount of gas accumulates in the line system when the gas supply is connected. When the second fuel valve is opened, this small amount of gas can escape from the system again. Therefore, wait sufficiently long before carrying out a check with the gas leak detector to avoid incorrect measurements.

11.2 Checking the ignition spark generator for correct function

As soon as you have finished the test of the second fuel valve with 'Mode', the menu for testing the ignition spark generator is displayed.

WARNING	**High ignition voltage**
 2.3.3	For the operation of the ionization measurement and the electrical ignition of the fuel, very high voltages are generated in the device, which can be life-threatening. Therefore, always operate the unit with the cover panel closed and never reach into the interior of the unit or into the ignition electrodes or electrode cage during operation. The electrode for ionization measurement is live while the fuel valves are open. However, a current limiter in the unit prevents any danger from arising.

Test Spark: Off ▲▼	Activate 'Up' to generate the ignition spark.
Test Spark: On: 2 Seconds	The ignition spark is now generated for two seconds. During this time, you can hear a distinct buzzing sound, as well as see an ignition spark in the electrode cage.

If you do not get audible or visual feedback, start the test again from the beginning. If this test also fails, a defect must be assumed. In this case, please contact us in order to carry out a fault analysis.

Press 'Mode' to initiate the test menu and continue the startup process.

12 Battery monitoring and warning message 'deep discharge' after powering up the device

The rechargeable battery is monitored during operation. If the battery is being deeply discharged while the device is in receiving mode or ready to fire mode this event is stored in the memory of the device and each time when you switch on the G-Flame you will see a warning message.

TIP	Deep discharges can only be detected if the device is in receiving mode or respectively in ready to fire mode.

In case of a deeply discharged battery you see e.g. this being displayed and during that an acoustic signal will be given:

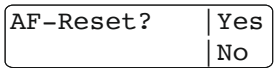
Batt. 1x deeply discharged	The number of deep discharges is being displayed here. The safety will be automatically started after five seconds.

In such cases we recommend to do a battery capacity measurement occasionally to determine if the battery has probably been damaged. Please refer to the menu item 'Start Battery Measurement?'. Please note that deep discharges in general lead to a reduced life time of the batteries.

If the battery shows bad capacity results you can order a new battery at all times from us and replace it yourself.

If you have replaced the battery yourselves you also can reset the warning message described above. Please read below how to achieve this.

12.1 Resetting the acoustic warning message 'Battery deeply discharged'



To deactivate the warning tone, please call up the adjacent menu item, which appears in the last position in the main menu.

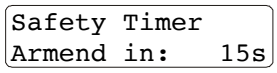
If you have not previously defined your own code to reset the AF counter, now enter code 1248 to reset the counter.

12.2 Resetting the optical warning message 'Battery deeply discharged'

You can reset this warning message yourself after installing a new battery. You will need a PFC Advanced for this. To reset the warning message, please contact our support who will assist you with this process.

13 Safety timer

The safety timer will be started every time when the device is powered up and after exiting the menu.



The timer counts down 15 seconds.

The purpose of the safety timer is that the user can step back from the device before a flame effect can be initiated.

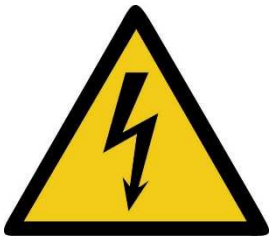
The safety timer will be started no matter which control method has been selected.

TIP	While the safety timer is counting down you can terminate the sequence and directly invoke the menu by activating 'Mode'.

14 The warning LED 'Attention armed'

On one side of the housing where also the display and the connectors can be found there is also a warning indicator in the shape of an exclamation mark.

This warning LED should alert people in the surroundings of installed devices that flame effects will be possibly initiated.

WARNING	High ignition voltage
 2.3.3	For the operation of the ionization measurement and the electrical ignition of the fuel, very high voltages are generated in the device, which can be life-threatening. Therefore, always operate the unit with the cover panel closed and never reach into the interior of the unit or into the ignition electrodes or electrode cage during operation. The electrode for ionization measurement is live while the fuel valves are open. However, a current limiter in the unit prevents any danger from arising.

In general, this warning can be enabled or disabled in the menu of the device depending on whether this function is desired or not.

Under which circumstances the warning will be displayed depends on the settings you have chosen and various operation modes, providing that the warning LED has been activated in the menu:

Selected input	Warning while the safety timer is counting down	Warning while the device is in receiving mode or respectively ready to fire mode
Firing key	Yes	Yes, continuously
12-24V	Yes	Ja, continuously
DMX512	Yes	As soon as the safety channel is received with values between 60% and 80%.
Serial data cable (RS485 of the PFC)	No	As soon as the controller's command 'Firing mode armed' has been received until the command 'Firing mode disarmed' is being received.
Wireless (PFC or PFS)	No	As soon as the controller's command 'Firing mode armed' has been received until the command 'Firing mode disarmed' is being received.

TIP	When using a Galaxis controller for the correct function of the warning LED it is required that the firing mode is disarmed when the G-Flame is put into operation. Furthermore, the G-Flames must be within radio range of the transmitter. On the edge of the coverage area or if radio inferences are disturbing the transmission it can absolutely happen that some commands are received and others are not. This applies also for the display of the warning. Due to that you should take care for good range and operating conditions so that the warning signal will be displayed reliably.

15 The LED indicators

This section describes the LED indicators which can be found right above the display:

15.1.1 The LED 'Operation' (blue)

This blue LED displays the operating mode. While the safety timer is counting down or the device is in the menu this LED is continuously on. In this case no flame effect can be initiated.

If the device is in receiving mode or ready to fire mode this LED is flashing. Only if this is the case a flame effect can be generated.

15.1.2 The LED 'Flame' (yellow)

This yellow LED goes on as soon as the electromagnetic fuel valves are opened.

If the Advanced wireless module is installed you can program step delays and so called atomic effects in the menu of the device or remotely via the wireless link.

If an atomic effect has been initiated the LED goes on as soon as the electromagnetic valves are opening and not when the delayed ignition happens.

When a step delay has been programmed and the firing command for this is being received by the device this LED starts to flash until the electromagnetic valves are opened. During a flame effect this LED is continuously on.

15.1.3 The LED 'Charging' (green)

This green LED is on as soon as the charging voltage is present and the battery is being charged. With this indicator you can check if the charger is functioning properly. If the battery was completely discharged it takes up to 30h for a full charge.

15.1.4 The LED 'Low Battery' (red)

This LED starts to flash in red color in the receiving mode or respectively ready to fire mode if the internal battery has been discharged below 30% and together with the flashes you will hear an acoustic warning signal if the loudspeaker has been enabled. In such a case you should connect the charger soon in order to charge the battery completely again. A full charge takes up to 30 h.

15.1.5 Functional check of the LEDs

Immediately after powering up the device a function test of the LEDs is performed. First the LED 'Operation' goes on for one second, followed by the LED 'Flame' and the LED 'Low Battery' while the start messages are being displayed.

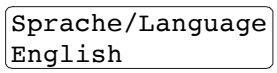
The LED 'Charging' can only be supplied by the charging unit and due to that this LED stays inactive during the LED test sequence.

16 The menu

Certain menu functions of the G-Flame are depending on the selected control method. In this chapter we will first explain the standard menu with all standard menu items. The control variants 'Firing key' and '12-24V' will be described. Later the menu items of the other control methods will be explained.

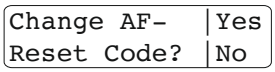
16.1 Standard menu items

16.1.1 The menu item 'Language'



Here you can select the language of the menu and all display texts of the receiving mode or respectively the ready to fire mode.

16.1.2 The menu item 'Change AF-Reset-Code?'



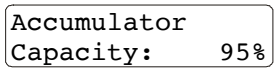
If the device's battery has had a deep discharge in the past and a user-defined reset code has not yet been set, the menu item opposite appears.

After previously confirming 'Yes', the adjacent screen appears. You can define a user-defined, four-digit code here for resetting the audible battery error warning message.

Resetting the battery error warning message is explained in the section 'Resetting the acoustic warning message 'Deep discharge'' and 'Resetting the visual warning message 'Deep discharge''.

16.1.3 The menu item 'Accumulator capacity'

You see e.g. this result in the display:

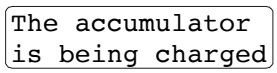


In this example the remaining charging level is 95%. If the value decreases below 30% the charging reserve is being touched. If the battery is being discharged to 0% damages due to deep discharging are possible.

TIP	The display of the accumulator capacity is related to an ambient temperature of 20°C. A fully charged battery could also lead to a reading of e.g. 80% if the temperature is very low.

TIP	The result of this menu item can also be displayed at the controller PFC Advanced by using the function 'Remote data request', provided that the Advanced wireless module has been installed.

No result regarding the accumulator capacity can be acquired as long as the battery is being charged. In this case you will see the following information in the display:



The results may be higher directly after charging. We recommend to wait an operation time of approx. 10 minutes to gain realistic results.

16.1.4 The menu item 'Accumulator power'

By activating 'Mode' you will proceed in the menu and see e.g. this text in the display:

```
Accumulator
Power:       99%
```

To get information regarding the battery power it is discharged with a very high current for a short period of time. The device is analyzing the voltage drop and recovery during this process and is then able to compare the results in relation to an optimum value. The measured parameter is the capability of delivering high current that can decrease during the chemical aging process of the battery. A fully charged battery should have a result of at least 60%.

TIP	The result of this menu item can also be displayed at the controller PFC Advanced by using the function 'Remote data request', provided that the Advanced wireless module has been installed.

16.1.5 The menu item 'Input'

In this menu item you can select one of the following control methods by activating 'Up' and 'Down':

```
Input: Firing
Key (Contact)
```

Direct control input by using a firing key or any other potential-free electrical contact.

```
Input: 12-24V
```

Direct control input for voltages.

```
Input: DMX512
```

DMX512; later you will be able to switch on the power supply for wireless DMX pens if you want to use this technology.

```
Input: Cable
(RS485 of PFC)
```

This option is only being displayed if the Advanced wireless module has been installed. Use this selection if you want to use the G-Flame in conjunction with a PFC Advanced and if serial data cables should be used for the communication. 'RS485' is the cable interface of the controller PFC Advanced. RS485 is the name of the technical standard of the interface being used here for the serial data communication between devices on data cables.

```
Input: Wireless
(PFC or PFS)
```

This option is only being displayed if the Advanced wireless module has been installed. Use this selection if you want to use the G-Flame in conjunction with a PFC Advanced, PFS Profi or a PFS Profi or the wireless USB modem PFM Advanced and if the wireless link should be used. The result of this menu item can also be displayed at the controller PFC Advanced by using the function 'Remote data request', provided that the Advanced wireless module has been installed.

TIP	The feedback information during remote data requests and programming will always be sent on both data exchange carriers: by radio signal and on the cable. You may select which way you want to use for the feedback in the menu of the controller PFC.

For the explanations given hereafter we assume that either 'Firing Key' or '12-24V' has been selected as control method.

16.1.6 The menu item '45° Tilt Switch'

In this menu item you can determine if the flame effect should be terminated or if the fuel valves should remain closed if the G-Flame is tilted by more than 45°.

45° Tilt Switch: On	The shutoff of the flame effect and the inhibition of the fuel valves if the tilt angle is too is enabled.
45° Tilt Switch: Off	The status of the tilt switch will be ignored. Use this selection only if you want to operate the G-Flame with a tilt angle of more than 30°.

TIP	The tilt switch is a mechanical component. Strong vibrations or accelerations on the vertical axis may cause the tilt switch to respond even though that the device is standing upright. In these exceptional cases it can be meaningful to disable the tilt switch.

16.1.7 The menu item 'Flame monitoring'

Right next to the electrodes for the ignition of the flame another electrode has been installed which is used to measure the ionization of the flame. A flame is so to speak electrically conductive and this physical phenomenon is utilized by the electronic circuits of the G-Flame to detect if the flame is burning or not.

Flame monitoring: On	Here the shutoff of the flame effect and of the fuel valves if the flame is not burning is enabled. If no flame is detected for more than one second the valves are closed automatically. The device is terminating the fuel supply for this firing command.
Flame monitoring: Off	With this setting the results of the ionization measurement will be ignored.

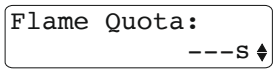
TIP	With every new firing command another attempt will be made to ignite the flame and in this process the fuel valves will be opened for a maximum time of one second. If no flame can be ignited several times one after another you should disable the G-Flame for the reasons of safety either by using the emergency-off input or the hazard zones (Advanced wireless module required for this) to prevent that an unnecessary amount of unburned fuel is set free.

TIP	For the reasons of safety, you should generally enable the ionization measurement.

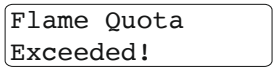
WARNING 2.3.2	**Ignition failure** The ejected gas stream does not ignite. • Make sure that the required safety distance to persons is maintained. • Minimize the presence in the danger zone. • Activate the flame monitoring system. • Never keep body parts above the combustion chamber at any time. • Follow all safety instructions and regulations at all times.

16.1.8 The menu item 'Flame Quota'

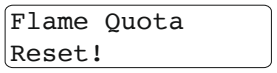
In this menu item, you can define a quota that specifies how long the flame may burn in total before it switches off or is prevented from firing again. As soon as the quota has expired, it can be reset at the PFC via range test on channel 777. When the device is switched on again, the quota is reset to the duration set in the menu, i.e. there is no permanent memory storage of a quota that has already started.



In this screen view, the flame quota has been deactivated, so firing without time restrictions is possible. You can increase the quota in 0.1s steps, up to a maximum of 9.9 seconds.



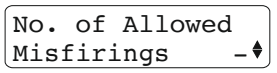
As soon as the quota is exceeded, the adjacent screen appears.



Immediately after resetting the quota on the PFC, this is confirmed with the adjacent screen.

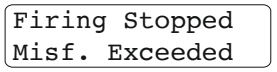
16.1.9 The menu item 'Number of Allowed Misfirings'

This menu item is only displayed if flame monitoring has been activated in the menu.



When flame monitoring is activated, it is possible to have the unit automatically lock itself out after a certain number of misfires.

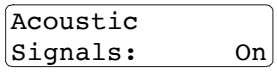
A misfire is considered as such if a flame should be ignited for at least one second, but the flame sensor does not detect a flame because, for example, the gas supply has been shut off.



If the set number of misfires is reached, the screen on the left is displayed each time the unit is triggered. In this case, no ignition takes place for the remaining operating time of the device. To reset the message, the device must be restarted via the On/Off switch.

16.1.10 The menu item 'Acoustic Signals'

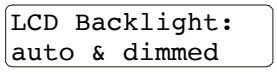
This menu item switches the acoustic signals of the device on or off. Beep tones etc. may be disturbing on theatre stages and in this case, it is meaningful to disable the sounds.
Please note that there will be no acoustic signals at all if the sounds are turned off, even no warning signal if the battery needs recharging.



In this example the acoustic signals are enabled.

16.1.11 The menu item 'LCD Backlight'

This text for example is being displayed:



The display backlight is turned on automatically as soon as the menu is called up or messages are being displayed. The display is illuminated slightly (dimmed) in all other cases. That enables you to read the display content in darkness without any further action required. The power consumption for this slight permanent illumination is negligible.

LCD Backlight: auto & off

If you choose this setting the display backlight is completely turned off as soon as the device is not in the menu or if there is no message.
This is preferable in some applications where the slight illumination of the display could be disturbing.

LCD Backlight: always off

With this setting the display backlight is off all the time.

16.1.12 The menu item 'Warning LED'

In this menu item the following options can be selected:

Warning LED (!): On

The warning LED is switched on. When a warning signal will be given is explained in detail in the chapter 'The warning LED 'Attention armed' '.

Warning LED (!): Off

No warning signal will occur.

16.1.13 The menu item 'Battery measurement'

This additional feature is used for measuring the capacity.

The menu items accumulator capacity and accumulator power measure very quickly the actual charging level of the battery and the ability of the battery to deliver current. Basically, the battery voltage is being monitored for these measurements.

The amount of energy an accumulator can store is decreasing during the aging process. Many factors affect this deterioration such as the chemical aging process itself, the storage temperature, the number and deepness of discharge cycles.
Possibly the amount of energy the battery can store is much less after some years of ageing than it was initially. However, the battery will show high results as a percentage value after charging due to the fact that the off-load voltage is still high. In principle the percentage value refers always to the amount of energy which can be stored in the particular battery. The loss in capacity becomes noticeable only in a shorter operation time. The test results in the menu are falling faster accordingly.

To measure the accumulator capacity precisely it was necessary to send the device to the manufacturer for an accurate battery test procedure. With this useful function you can do this battery measurement with precise capacity metering yourself at the device. In the end the result is being displayed in mAh and as a percentage value by which you can easily decide if the battery needs to be replaced.

Including a full charge before and after the discharge cycle this procedure requires approx. three days.

Proceed this way to perform an accumulator capacity measurement:

Position the device evenly and connect the supplied charging unit. Establish a reliable power supply for the charging unit. Power failures should be avoided. In this case the test sequence will be cancelled to prevent deep discharges and the risk of damaged batteries which could occur in this situation. The ambient room temperature should be between 15 and 25 °C.

Invoke this menu item. You will see the following on the screen:

Start Batt.| Yes Measurem.? | No

You can start the test sequence by activating 'Up'. You will skip this menu item with 'Mode' or 'Down'.

Please connect charging unit!	After starting the test sequence, the device checks if the charging unit is supplying charging current. You will see this message if the charger is not yet connected or if the charger has no mains supply. Establish proper charging now and remain the charger connected permanently.
Warning: Speaker disabled	If the loudspeaker is deactivated, you will see this display. We strongly recommend that you only perform the battery measurement with the loudspeaker switched on, so that you are alerted if a prolonged power failure occurs, because in such a case there is a possibility that the battery will be damaged by a deep discharge!
1. Charging 30:00 h remain	After starting the sequence this is being displayed. Before the discharge cycle (measurement) it is essential that the battery is fully charged otherwise the result would be incorrect. The device will charge the battery for 30 h to ensure that even a completely discharged battery will be fully charged. The remaining time is being displayed continuously. You can skip the initial charging process by activating 'Mode' in order to save time. You should not do this if you are not completely sure that the device's battery has been charged continuously before for at least 30 h.
2. Discharging 13.1V 0 mAh	Subsequently the battery is being discharged and the amount of energy which is drawn is being measured.
After some time e.g.: 2. Discharging 12.4V 617 mAh	The current battery voltage and the capacity in mAh which has been drawn so far is being displayed for your information. This process lasts until the final discharge voltage is reached. If necessary, you can cancel the test by activating 'Mode' for a longer time. After cancelling make sure that the device is charged for a sufficient period of time before using it again.

After the discharging process a final charging process is following. E.g. these messages are being displayed alternately:

3. Charging 29:10 h remain	Here you are informed about the remaining duration of the charging process. Again 30 h are required in total.
3. Charging 12.0V 6.513 mAh	In the lower line next to the current battery voltage the capacity in mAh which has been discharged during the measurement is being displayed.

You may also terminate the final charging process by activating 'Mode'. In this case you are responsible that the battery is being charged sufficiently afterwards. You will directly enter the receiving mode or respectively ready to fire mode.

If the sequence is not cancelled you will see e.g. this being displayed:

4. Finished 93% 6.513 mAh	The test result as a percentage value and the capacity in mAh which has been measured during discharging is being displayed in the bottom line. In addition an acoustic signal is audible which should inform you that the test is finished.

The percentage value should help you to interpret the test result correctly. 100% represent 7,000 mAh, this is the nominal capacity of the battery being used. Results over 100% are possible, too.

If the battery reaches more than 75% (more than 5,250 mAh) it is fairly good. If the result is ranging between 60 and 75% (between 4,200 und 5,250 mAh) the battery should be replaced soon. If the result is less than 60% the battery should be replaced urgently.

TIP	You as the operator can easily replace the battery.

Normally operation is still possible if the battery shows a bad result. A low capacity leads to a shorter operation time. In some cases also the maximum current that can be drawn from the battery can be reduced if the inner resistance of the battery has risen. Before using the device again you should also observe the parameter 'Accumulator Power' in the menu.

It is making sense to test the accumulator regularly. We recommend to do this at least twice a year but not more than four times a year. Due to the fact that the measurement is a full discharge cycle batteries that have become inactive will be refreshed. Several measurements one after another can definitely lead to an enhancement in battery performance and increased capacity.

If the test cycle is conducted too often the negative effect of an accelerated ageing is rather likely to occur.
There are two possibilities why a measurement has been cancelled:

`Terminated: no charging voltage`	The charging voltage was interrupted for an unacceptably long time. To avoid damages the device cancelled the test. Maybe the charger has been disconnected or a power failure of the mains supply occurred. Establish the power supply and start the test sequence again. If your mains supply is unreliable it is recommended to use an UPS (= Uninterruptible Power Supply).
`Terminated by user`	Somebody cancelled the test before a result was gained.

If a power failure of the charging voltage occurs during charging or discharging you will hear an acoustic signal in the first instance. When the interruption lasts for too long the device terminates the measurement to avoid damages. If no UPS (= Uninterruptible Power Supply) is being used you should check once in a while if everything is OK.

16.2 Menu items if DMX512 has been selected as an input

The following menu items are only being displayed if DMX has been selected as the input.

16.2.1 The menu item 'Flame Channel'

`Flame Channel: 001♦`	With 'Up' and 'Down' you can select a DMX channel ranging from 1 to 512 which should be used to control the flame effect. Confirm your selecting with 'Mode'.

The functionality is described in detail in the chapters 'The DMX512 input' and 'Control via DMX512'.

16.2.2 The menu item 'Safety Channel'

In addition to the flame channel a so-called safety channel must be programmed.

`Safety Channel: 013♦ 60-80% = ✓`	With 'Up' and 'Down' you can select a DMX channel ranging from 1 to 512 which should be used as the safety channel. Confirm your selection with 'Mode'. If you have for example 12 G-Flames in use it is meaningful to use the DMX channel 1 to 12 as control channels and the next DMX channel, in this case 13, as a safety channel on all devices.

After the DMX channel has been selected, the value range for the dimmer value for the safety channel is now defined. The following configurations are available for selection:

Safety range:	30-50%	40-60%	50-70%	60-80%	70-90%
Dimmer value decimal:	76-120	102-153	127-178	153-204	178-229

For the respective set safety range, corresponding dimmer values must be transmitted within the defined range so that a flame effect can be triggered.

The functionality is described in detail in the chapters 'The DMX512 input' and 'Control via DMX512'.

It is not permitted to use the same channel number for the flame and the safety channel. In this case the following will be displayed on the LCD:

Identical DMX Channels!

This screen is being displayed for some seconds. After that the device jumps back to the menu item 'Flame Channel' so that different channels can be programmed.

You can only exit the menu if different channels have been selected.

16.2.3 The menu item 'Power Supply for Wi-DMX'

Frequently the autarkic operation is an important aspect in the practical usage of the G-Flame. Besides the Advanced wireless module which enables the wireless communication between the device and a Galaxis controller you may also use wireless DMX solutions, either as an additional option or exclusively.

Here, it is a major disadvantage if DMX receivers as a desktop device offer wireless communication but require first of all a wall power supply and mains power and secondly a cable connection to the G-Flame in order to feed in the DMX signal.

Due to that various manufacturers offer wireless DMX Pens, which can simply directly be plugged into the jacks for the DMX signal. The G-Flame has been equipped with the necessary hardware to supply power to these DMX Pens so that no additional source of power is required and autarkic operation becomes possible also this way.

With this menu item you can switch the power supply for these DMX Pens either on or off:

Power Supply for Wi-DMX: Off

There is no voltage output with this setting.

Power Supply for Wi-DMX: On

With this setting +5VDC on Pin4 and ground (0V) on Pin5 will be applied.

All DMX Pens can be used that need a supply voltage of 5V and not more than 700 mA.

TIP	The DMX Pens offered on the market have a rather high-power consumption compared to the electronic circuits of the G-Flame. Therefore, if this technology is being used the operation time is reduced from usually 60 h to approx. 10 h.

TIP	For best reception during wireless DMX operation you should not directly plug in the DMX Pens and respectively this is maybe even not possible in certain circumstances. Instead use a short DMX cable to operate the DMX pens in some distance. You can for example use some gaffa tape to fix the DMX Pens on the side of the housing so that the antenna is pointing upwards and reception is not impaired.

16.2.4 The menu item 'Max. Flame Duration'

```
Maximum Flame
Duration:       ♦
```

For special applications or for safety reasons, it may be necessary to be able to limit the time of the flame duration in DMX mode. In this case, the flame goes out after the time preset in the menu. To be able to trigger a new ignition, the dimmer value in the flame channel must be set to 0%.

16.3 Menu items if the Advanced wireless module has been installed and 'Cable (RS485 of PFC)' or 'Wireless (PFC or PFS)' has been selected as control method

The following menu items appear only if the Advanced wireless module has been installed and 'Cable (RS485 of PFC)' or 'Wireless (PFC or PFS)' has been selected as control method.

16.3.1 The menu item 'RF Channel' (i.e. frequency selection)

This menu item enables the user to determine which radio channel (RF = Radio Frequency) is being used by the device. You can choose from 70 different frequencies (channel 0 to 69). The particular frequency is being displayed in the bottom line.

```
RF Channel: 69♦
= 434.775 MHz
```

If you are changing the RF channel you will have to program all other devices to the new RF channel to ensure proper radio communication.

WARNING	**Unintentional triggering of flame effects when splitting a Galaxis firing system into two or more systems**
2.3.11	Simultaneous operation of systems that vary only in terms of different radio channels bear a safety risk. If you split your Galaxis firing system into two or more systems: • Make sure that you have assigned different system IDs to the firing systems.

16.3.2 The menu item 'Interfering Signal'

This is the next menu item. You may see this being displayed:

```
Interfering
Signal:        5%
```

The device is measuring and displaying the signal strength on the used radio frequency permanently as long as this menu item is present.

Normally this function is used to find out the cause of a radio interference. Values below 15% are uncritical. If the radio channel is busy you can select another frequency. Please see the section 'RF Channel' in this manual for further information.

TIP	The result of this menu item can also be displayed at the controller PFC Advanced by using the function 'Remote data request'.

TIP	You can use this menu item for a range test, too. Activate the firing mode at your controller PFS Profi, PFS Pocket or PFC Advanced. The device is now measuring the signal strength of your controller. By changing the location of the G-Flame you can try to find out which installation is best. You should definitely switch off the firing mode before you quit the menu and always make sure that there is no unintended activation of the firing button at the controller during the range test.

16.3.3 The menu item 'Last Range Test Result'

You will enter this menu item with another activation of 'Mode'. This function is mainly intended for users who are operating the transmitter PFS Profi or PFS Pocket. The new controller PFC Advanced is now offering the comfort of requesting the result of the range test remotely as well as the PFM Advanced USB Modem.

This function comes in handy if you do the set-up of the system without a helping person. After starting a range test at the transmitter, the G-Flames are displaying the results for approx. 10 seconds. Within this short period of time you cannot check the results of many different devices all over the place. This function enables you to ease this task.

Proceed this way:

- Switch on the G-Flames and start a range test at the controller.
- Go to each device, step through the menu and read the result which is being displayed under 'Last range test result'. This value has been displayed during the test.
- You can do another test if you like after reading all results.

```
Last Range Test
Result:       ?%
```

This means that there is no result stored in the memory of the device. There are several possibilities: Maybe no range test was made so far or the device was not within the radio coverage area. Another reason could be that the result has just been cleared by invoking this menu item before.

```
Last Range Test
Result:      65%
```

In this example the signal level was 65%. Values below 30% are critical.

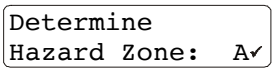
TIP	The result is being cleared after stepping through the menu to ensure that the same result is not being displayed again after the next range test although the G-Flame is possibly out of reach. If you are using this function it is essential to read all the old results before starting a new test to make sure that they are all being cleared!

16.3.4 The menu item 'Device ID Number'

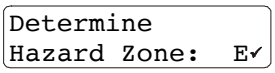
```
Dev. ID No. for
bidir. Comm.:  -
```

This is the next menu item in the menu. A device ID number ranging from 1 to 999 can be programmed here. The device ID number is used as an identification address during bi-directional remote access. If no device ID number has been programmed the G-Flame cannot be accessed from the controller PFC during remote data requests and programming. Normally the devices are programmed with ID numbers in consecutive order. It is not allowed to program the same ID number to more than one device.

16.3.5 The menu item 'Determine Hazard Zone'



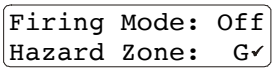
Here you can change the hazard zone of the G-Flame. The default setting zone is hazard zone A. The check symbol indicated that the hazard zone is active, i.e. the G-Flame processes firing commands and generates flames according to the cue programming.



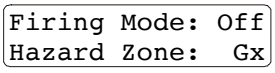
You may use up to 16 different hazard zone. These hazard zones are represented by the letters A to P. In this example the G-Flame has been assigned to the hazard zone E.

TIP	If you change the hazard zone in the menu the status is 'active' by default. Thus, firing commands will be processed and flame effects will be generated. If a specific hazard zone has been deactivated and you select another zone in the menu for the time being and then select the previous hazard zone this zone will be activated by doing so. The 16 hazard zones can be deactivated and also activated again according to your requirements in the manual and automatic firing mode of the controller PFC Advanced. For this please read the user manual of the controller PFC Advanced.

The hazard zone which is currently assigned to the device and its status is being displayed in the receiving mode. You see e.g. this being displayed on the G-Flame's LCD:



In this example the hazard zone 'G' has been assigned to device. The hazard zone is active.



The symbol 'X' right next to the hazard zone indicates that this hazard zone has been deactivated. Flame effects are suppressed until this hazard zone is activated again.

TIP	The status of the device's hazard zone is always active after switching the G-Flame on. Due to that firing commands will be allowed. We assume that all hazard zones should be active after powering all devices up so that only those hazard zones need to be deactivated which bear a risk in terms of safety.

TIP	When you enable or disable hazard zones at the controller the G-Flame displays the current status of the hazard zone right after receiving the command if this hazard zone has been assigned to this device. The display backlight is activated also to show that the device has received the command. This is useful if you want to test if the G-Flames respond to the hazard zone commands.

16.3.6 The menu item 'Terminal Programming'

According to the similarities between the G-Flame and the Galaxis Advanced receivers we also speak of a Terminal programming when operating the G-Flame. Terminal programming means that several firing cues are programmed to a specific output and different durations can be defined in doing so. In principle the G-Flame is an Advanced receiver with a single output. Consequently user-defined flame effects like various flame balls or flame columns can be generated again and again during a show.

TIP	In this section the programming of the Terminal function in the menu of the G-Flame is explained. Please note in this context that all these parameters can also be programmed remotely - which is very convenient - by using either the controller PFC Advanced or any PC or notebook computer via the wireless USB modem PFM Advanced.

16.3.6.1 Overview regarding the parameters of the Terminal programming

The following parameters can be programmed at the G-Flame for each firing cue (1...999):

Parameter name	Range of values	Resolution
Duration	0.1 ... 25.0 seconds	0.1 seconds
Step Delay	0.00 ... 99.99 seconds	0.01 seconds = 10 ms
Atomic Effect	0.0 ... 0.7 seconds	0.1 seconds

The parameter 'Duration' determines how long the fuel valves will be opened. Shorter values for the duration create flame balls, longer values create flame columns.

With the parameter 'Step Delay' time delays are programmed. By doing so the most extreme step sequences can be achieved. The high resolution of only 10 ms enables the user to create extremely fast step chases and dynamic changes in the stepping speed. The functionality is identical with the receiver PFE Advanded 10/100 outputs and in the user manual of this device the application of the step function is described in detail.
The parameter 'Atomic Effect' is a special effect. It is a delay of the electrical ignition which takes place after the fuel valves have been opened. The longer this delay is the more unburned fuel is accumulating above the burning chamber. In the moment of the ignition the amount of fuel in the air is much higher and a nice flame ball similar to an atomic explosion with swirling turbulences is being created. In this context you should be informed that the maximum delay for the atomic effect is 0.7 seconds. Furthermore, the programmed duration must be at least 0.1 seconds longer than the atomic effect delay. The firmware of the G-Flame and of the PFC Advanced prohibits that improper values are programmed for these parameters.

TIP	It can be also appealing to use the atomic effect in conjunction with flame columns which last several seconds to enhance the impression of the whole effect.

16.3.6.2 The selection menu of the Terminal programming

By activating 'Up' and 'Down' you may choose between the following options:

```
Terminalprogr.:
Keep up & Exit
```

```
Terminalprogr.:
Edit
```

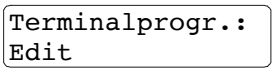
```
Terminalprogr.:
Delete
```

16.3.6.3 The menu item 'Terminal programming: Keep up & Exit'

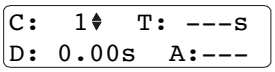
```
Terminalprogr.:
Keep up & Exit
```

If you activate 'Mode' here you quit the menu of the terminal function without having changed any parameter. Use this selection also if you want to exit the menu of the terminal function after having made another selection before, for example after having entered a programming.

16.3.6.4 The menu item 'Terminal programming: Edit'



If you activate 'Mode' here you will enter the menu for editing the terminal function.

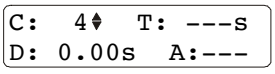


'C' stands for 'Cue', which is the firing channel.
'T' is the parameter duration ('T' for lat. tempus).
'D' stands for 'Delay', which is the step delay.
'A' stands for 'Atomic effect'.

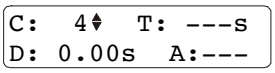
After invoking this edit menu firing cue 1 is pre-selected. The double-headed arrow indicates which parameter can be currently changed with 'Up' and 'Down'. After deletion of the memory no durations are programmed at all. In this case '---' is being displayed for the duration and the atomic effect. '0.00' is being displayed as a step delay.

If '---' is being displayed for the duration, this means that for this firing cue no flame will be generated by this device.

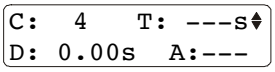
Programming example:
- Firing cue 4 should generate a short flame ball with a duration of 0.3 seconds
- With cue 7 a flame column with a duration of 4.2 seconds should appear.
- Cue 12 should generate an atomic effect with a duration of 0.9 seconds and an atomic effect delay of 0.7 seconds.
- Cue 17 should trigger a short flame ball with a duration of 0.5 seconds and an atomic effect delay of 0.4 seconds. This flame effect is part of a step sequence and due to that a step delay of 1.47 seconds should be counted down before the effect will be generated.



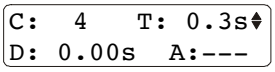
As long as the double-headed arrow is being displayed next to the cue number you can select the cue, in this example cue 4, which should be assigned with a flame effect by activating 'Up' and 'Down'.



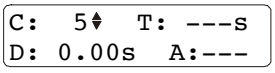
With each short activation of 'Mode' the double-headed arrow jumps to the next parameter. You have to activate 'Mode' once for a short time to determine the firing duration.



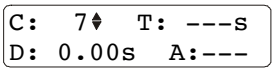
Now you can enter the duration for this firing cue by activating 'Up' and 'Down'.



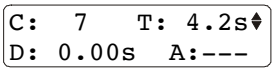
According to the programming example 0.3 seconds have been entered.



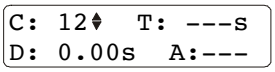
Activate 'Mode' three times for a short period to skip the parameters atomic effect and step delay. Then you will have the opportunity to edit the programming of the next cue. If the double-headed arrow jumps to the cue number again the cue number will be incremented automatically.



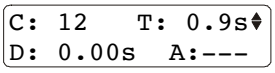
Select cue number 7 by activating 'Up' two times for a short period.



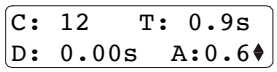
Jump to the parameter duration by activating 'Mode' once for a short period and enter the value 4.2 seconds with 'Up' and 'Down'.



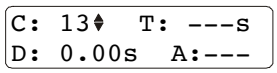
Skip the parameters atomic effect and step delay and select 12 as firing cue in order to proceed with the entries for this cue.



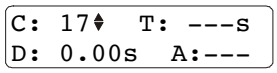
Enter the duration how long the valves will be opened, in this case 0.9 seconds.



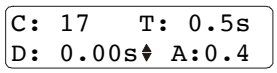
Right after that you can enter the ignition delay (atomic effect) which is in this case 0.6 seconds. This parameter can be edited in the range of 0.0 to 0.7 seconds. The effect duration must be at least 0.1 seconds longer that the ignition delay.



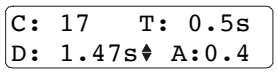
Activate 'Mode' two times for a short period to reach the parameter firing cue. The device increments the cue number automatically so that cue 13 is being displayed.



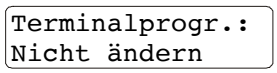
Select cue number 17 with 'Up' and 'Down'. The you program, as already described above, an effect duration of 0.5 seconds and an atomic effect of 0.4 seconds. Rotate through the edit menu with 'Mode' until you reach the parameter step delay.



Now enter the desired step delay by using 'Up' and 'Down'.



As soon as you are finished with your entries activate 'Mode' for a longer time to exit the edit menu.



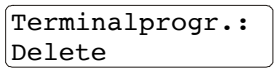
Right after doing so the device returns to the submenu of the Terminal programming. With another activation of 'Mode' for a short period you will exit this submenu and reach the main menu.

TIP	By activating the magnetic sensor fields 'Up' and 'Down' for a longer time you can change the current parameter rapidly.

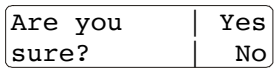
TIP	If you are using the atomic effect, which is also a firing delay, in a music synchronized show you have to take these delays into consideration during the design of the show. In principle this parameter must be handled like the rising time of a display shell. The particular cues must be fired earlier according to the atomic delay so that the flame effect will be synchronized with the music.

TIP	The parameters flame duration, atomic effect and step delay can also be programmed remotely, which is very convenient, either with the controller PFC Advanced or the Galaxis PYROTEC Composer software in conjunction with the wireless USB modem 'PFM Advanced'. Furthermore, you can and perform remote data request.

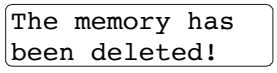
16.3.6.5 The menu item 'Terminal programming: Delete'



All possibly programmed durations (T), all atomic effects (A) and all step delays (D) in the memory of the G-Flame will be deleted with this function.



After activating 'Mode' this safety request is being displayed and you can start the deletion process with 'Up'.



This message is being displayed after deleting the memory, which only takes a short moment. Subsequently the device return to the submenu of the terminal programming.

17 Receiving mode or respectively ready to fire mode

Right after switching on and after the safety timer has elapsed the device enters the receiving or respectively the ready to fire mode. Flame effects and bi-directional remote access functions are only possible in this operation mode. If wireless communications is being used we are speaking of receiving mode. Otherwise it is called ready to fire mode. Which information is being displayed in this mode is depending on the selected control method.

In the following chapter we will describe which messages are being displayed one after another. In general, first the selected control method is being displayed, followed by additional screens regarding the operation status and settings.

17.1 Displayed information during receiving mode or respectively ready to fire mode, that appears in all operation modes

17.1.1 Information which control method has been selected

Depending on the selected control variant one of the following screens is being displayed:

```
Input: Wireless
(PFC or PFS)
```

```
Input: Cable
(RS485 of PFC)
```

```
Input: Firing
Key (Contact)
```

```
Input: 12-24V
```

```
Input: DMX512
F:003_, S:012x
```

The programmed flame channel and safety channel is being displayed if DMX512 has been chosen as an input ('F' = Flame channel, 'S' = Safety channel).

In addition, the status of the safety channel or respectively of the DMX reception is being displayed. 'x' means that either no signal is being received or that the value of the safety channel is not within the previously configured range (= generation of flame effects is not enabled).

'✓' after the safety channel indicated that a DMX signal is being received and that a value within the previously configured range is being received for the safety channel (= device armed).

```
Input: DMX512
F:003◊, S:012✓
```

This example shows the display content if the device is armed by the safety channel (noticeable by the '✓' after the safety channel) and if the flame channel has activated a flame effect (flame symbol next to the flame channel).

17.1.2 Tilt switch on/off and its status

```
Tilt Switch:  On
Status: OK
```

In general, it is being displayed if the tilt switch has been enabled or not and the status of the tilt switch. The tilt switch is enabled in this example, i.e. the flame effect will be terminated if already in progress or flame effects will be disabled if the device is tilted by more than 45°. Status OK means that the G-Flame is not tilted by more than 45° and the generation of flame effects is enabled.

```
Tilt Switch:  On
Status: >45°
```

Here the device is tilted by more than 45° and flame effects will be terminated if this condition is detected during a flame effect and the fuel valves will remain closed if the tilt angle is exceeded in the moment of triggering an effect.

Tilt Switch: Off Status: >45°

The tilt switch has been turned off in the menu. The G-Flame will ignore a tilt angle of more than 45° and flames will be generated, no matter how much the device is being tilted.

17.1.3 Flame monitoring on/off

Flame monitoring: On

Here the flame monitoring system has been deactivated in the menu. The device is measuring the ionization of the flame immediately after the beginning of the ignition phase to determine if the flame is really burning and if it has been completely ignited. If no flame is being detected for more than one second the fuel valves will be closed.

Flame monitoring: Off

In this example the flame monitoring has been disabled in the menu of the device.

17.2 Display of special information and behavior of the device in the receiving mode or respectively ready to fire mode if 'Wireless (PFC or PFS)' or 'Cable (RS485 of PFC)' has been selected as control method

After the selected control method, the status of the tilt switch and the flame monitoring system will be displayed. Right after that the following screens will be visible:

17.2.1 Status information regarding firing mode and hazard zone

Firing Mode: Off Hazard Zone: K✓

The status of the firing mode is being displayed (on or off). Please note in this context that the device is assuming that the firing mode is disarmed at the controller when being switched on. If the G-Flame is powered after the firing mode has been armed 'off' will be displayed nevertheless. Furthermore, this wrong usage leads to the detection of a radio interference because the G-Flame interprets the signal of the controller as an interference. In addition, the hazard zone the device has been assigned to plus if this zone is active or not is being displayed ('✓' = active, 'x' = inactive). The hazard zone is active by default after powering up the device and must be deactivated by a command from the controller if necessary.

If the status of one of these parameters is changing the device immediately jumps to this screen and in addition the display backlight is switched on, if it has been enabled in the menu.

TIP	Every time the firing mode is turned on or off the controller transmits this information to the receiver. If the status of the firing mode is being changed the G-Flame can only display the current status of the firing mode correctly if they are in the receiving mode and within radio coverage.

TIP	If the firing mode is being switched off all possibly opened electromagnetic fuel valves are closed (command 'Firing mode off'). In addition, all stepping sequences that are currently in progress are terminated, provided that the G-Flames are within radio range and that this information is being received.

17.2.2 Display of the device ID number

Dev. ID No. for bidir. Comm.: 15	Then the device ID number for bi-directional communication which has been assigned to this device is being displayed.

17.2.3 Display of messages

The following messages are possible if the Advanced wireless communication module is being used. If enabled in the menu the display backlight is switched on, too, so that it becomes apparent which device is displaying a message.

Transmitting data...	A remote access is currently in progress. The device is transmitting data to the controller or the wireless USB modem.
Writing data...	A remote access is currently in progress and data is written to the memory of the G-Flame.
Remaining Range: 50%	A radio range test is currently in progress and the result is being displayed (no bi-directional remote access but a range test as it is can be conducted with the PFS Profi or PFS Pocket and as it has been also implemented in the PFC Advanced to provide downward compatibility to devices of the Profi series).
Fire Channel: 999	This is being displayed when firing commands are being received. If a flame effect has been programmed for the firing cue the yellow 'Flame' LED goes on in addition or it starts to flash if a step sequence is in progress.
RF Channel: 69 = 434.775 MHz	The G-Flame received the command to change the radio frequency. The new radio channel and the frequency is being displayed.

17.2.4 Programming of the system ID

The G-Flame can be taught to different systems ID, just as it is possible with the Advanced receivers. This procedure is called 'Teach-In' and is used if systems are split into several ones or if devices are lent or rented out to other customers. After the return of the devices they can be e.g. taught to the original system ID again.

To teach-in a system ID 'Up' must be activated while the device is in receiving mode and then the command for the teach-in must be sent. Immediately after that the following confirmation message is being displayed:

Teach-In successful	The device will automatically return to the receiving mode after this message.

17.2.5 Setting and loading default settings

If required, you can reset all settings to default values with a single command after previous configuration. This is useful, for example, if the device was rented out and is to be reset to defined default settings after being taken back. To determine which values are to be defined as default settings, you need two magnetic pins. Please proceed as follows:

With the device switched off, activate 'Mode' and 'Down' at the same time.

Specify Defaults?	Yes No

Confirm the prompt by activating 'Up'.

Navigate through the menu and define your desired default settings. After exiting the menu, the values are saved in the memory and can be loaded into the main memory as described in the next step.

If you then want to reset the device to default settings, proceed as follows:
With the device switched off, activate 'Mode' and 'Up' at the same time.

Set to defaults?	Yes No

Confirm the prompt by activating 'Up'.

Device has been set to defaults

As soon as the device has been reset to default settings, this is indicated on the display with a corresponding message.

17.2.6 Performing a field strength calibration

Your device is calibrated at the factory when it is delivered. However, it may be necessary for you to calibrate the field strength yourself:

1.) You perform a firmware update yourself. In doing so, a field strength calibration is only necessary if one has never taken place before.
2.) The device is operated under extreme climatic conditions (very high or very low ambient temperatures), which may require temperature compensation in the form of field strength calibration.

Cal. Field Strength?	Yes No

If you perform a firmware update and no calibration has taken place before, the device prompts you for calibration during startup. You can skip the prompt, but in this case, inaccurate or erroneous field strength readings may occur. Calibration is therefore strongly recommended.

To perform the calibration, you need a PFC Advanced, hereinafter referred to as the 'auxiliary device'. Please follow the steps below:

1.) Make sure that you are in an environment with the lowest possible radio interference.
2.) The G-Flame must be set to the same radio channel and the same system ID as the auxiliary device. The antenna on the G-Flame must be removed.
3.) Switch on the auxiliary device.
4.) Follow the steps on the display of the G-Flame.

During calibration, errors may occur in the event of problems with the hardware, incorrect operation or due to external influences, so that the calibration is aborted. In any case, an error message with the corresponding error code will be displayed. In this case, please contact us in order to carry out an error analysis.

Calibration succesful

Once the calibration has been successfully performed, you will see the adjacent screen. You can now switch off the auxiliary device. The calibration values have now been permanently stored in the memory.

17.2.7 The monitoring function Radio Interference

The G-Flames are monitoring their frequency permanently. An interference is present if an external carrier with a signal strength of more than 30% in respect to 100% maximum signal strength of the system is present for more than 45 seconds.

Radio
Interference!

This message is appearing if a radio interference has been detected. If the display backlight has been activated the display will be illuminated periodically, too. In this case it is advisable to check if the G-Flame has been installed close to a strong source of interference. Therefore, enter the menu item 'Interfering Signal' and check if there is a higher value all the time.

By stepping through the menu with the magnetic pen the warning 'Radio Interference' will be cleared. The device is always ready for use even if you do not clear this warning message.

TIP	If you switch on a G-Flame while the transmitter is in the firing mode the G-Flame will display the warning message 'Radio Interference' soon. The PFS Profi, PFS Pocket and the PFC Advanced are transmitting continuously (i.e. they are active carriers) if they are in the firing mode. If you change from normal mode to firing mode the controllers are telling the receivers that a continuous and intended transmission will follow. If a G-Flame has been switched on after this or was in the menu while this signal has been sent it will interpret the signal of the own transmitter as an interfering signal.

TIP	You can select another frequency in the menu of the device if the used radio channel is busy or if there is an interference. Of course, you have to select the same frequency also at the controller and all other receivers if additional devices are in use (only possible with Advanced series).

TIP	The frequency (i.e. radio channel) can also be changed remotely with the controller PFC Advanced or the wireless USB modem PFM Advanced.

TIP	Using the controller PFC Advanced the warning 'Radio Interference' and the level of interference can even be checked remotely.

18 Switching off

If possible, you should switch off the device only if it is currently not in the menu. You may switch it off anytime if it is in receiving mode or respectively ready to fire mode or if the safety timer is counting down. Otherwise changes of parameters in the concerned menu item will not be saved.

You should also not switch it off while a remote programming or a remote check is performed by the Advanced wireless module.

Press the main switch to switch off the device.

CAUTION 2.4.4 2.5.1	**Strong heating of the device during operation** During operation, the following parts of the device can heat up considerably: • the casing, in particular the parts forming the combustion chamber • the electrode cage • the ignition electrodes • the electrode for ionization measurement Do not touch these parts until they have cooled down sufficiently and the unit is switched off.

Alternatively, you can also power down the unit by using the emergency off input, i.e. by opening the electrical contact that is connected to this input. In principle the main switch and the emergency off switch are wired in series. Please note when powering down the device with the emergency off input that still there is a small power consumption. Due to that you should also switch off the device with the main switch if the device is not used for a longer time.

The usage of the emergency off input is very recommendable to power down the device with sufficient safety distance and then activate the main switch. Especially when using DMX512 we recommend this procedure because this control signal contains no safety measures.

19 Command 'Firing mode off'

If you operate the Advanced wireless module you can send the command 'Firing mode off'. This command is always being sent when the firing mode is disabled. If this command is being received opened electromagnetic fuel valves are closed, the electrical ignition is switched off and step sequences - if in progress - are terminated, provided that the device is within radio range.

20 Radio range

If the standard antenna is used under good conditions the range is 800 m and can be increased up to 2.000 m by using the antenna Superscan 70 or Superscan 71.

Higher radio range is available on request.

It is a general rule that the higher the antenna is positioned the better the reception will be. Please do not hesitate to ask our personnel for more information about the various possibilities of range improvement.

TIP	An antenna extension cable should be used for the Superscan 70 or Superscan 71 in order to mount the antenna separated to ensure that the generated flame cannot damage the antenna.

TIP	Do not use the high gain antennas Superscan 70 and Superscan 71 together with the remote access functions because in this mode the device is also transmitting data and the radio approval would be voided.

20.1 Radio Range Test

The remote access functions of the controller PFC Advanced make very convenient radio range tests possible because the signal strength of both devices (signal back and forth) are displayed at the controller.

If you want to read the test result at the G-Flame or if you work with the transmitter PFS Profi or PFS Pocket the radio range test can also be done the conventional way.

After starting the test procedure, the G-Flames will for example display the following text:

```
Remaining Range:
              50%
```

This result means that the distance to the transmitter can be approximately doubled until the signal will be too low. In general, you should try to achieve at least a signal level of 30%.

21 Remote access

If the device has been accessed remotely via the wireless link or the serial data cables one of the following text messages will be displayed depending whether data is being read from the device or data is being written to the memory of the G-Flame:

```
Transmitting
data...
```

The device is transmitting while the controller or the wireless USB modem is receiving data.

```
Writing
data...
```

The controller or the wireless USB modem is transmitting data which is written to the memory of the G-Flame.

If the radio channel is being changed by a remote command the new radio channel and the frequency in MHz is being displayed:

```
RF Channel:  69
= 434.775 MHz
```

22 Operation time

As soon as the device is in operation power is consumed from the internal battery. If this accumulator is totally charged and has the full capacity of 7,000 mAh 30% of energy will be left after an operation time as stated below. Continuous operation is possible if the device is being charged permanently.

The values have been calculated assuming that the Advanced wireless module is installed, which consumes energy in addition, and that the fuel valves are opened for a total time of three minutes during the application.

Operation mode	Maximum operation time
Control with firing key input	110 h
Control with voltage input	110 h
Wireless control	110 h
Control via serial data cables (RS485)	70 h
Control via DMX on cables	70 h
Control via DMX and supply of wireless DMX Pens with a current consumption of typically 0.65A @ 5VDC	10 h

TIP	Please be aware of the fact that the rechargeable battery is losing capacity over the life time. The achievable operation time depends on the actual capacity of the particular battery. You can determine the capacity of the batteries by starting the battery measurement function in the menu.

23 Installation of accessories

DANGER	**Use of non-original accessories or operation without specified components**
 2.3.7	The safe operation of the device cannot be guaranteed, if non-original accessories and components are used. All specified parts must be used to operate the device (e.g. pressure reducer). • Use only components and accessories approved by the manufacturer. • Use all components specified by the manufacturer.

23.1 Installation of the Advanced wireless module

The Advanced wireless module can be retrofitted by the user himself if the G-Flame has not been equipped with this optional feature when initially ordering the device.

23.1.1 Installation of the hardware

Open the side panel (cover lid) of the device.

Then remove the blind cover of the antenna socket on the upper side of the device by opening the two screws. Afterwards you can insert the BNC feed through socket and mount it with the same screws.

The wireless module will be mounted with two screws that have already been installed in the device. These screws have been secured with two self-locking nuts and you will find them on the side of the housing in the device near the connector which is intended to plug in the wireless module.

Open the two self-locking nuts and remove the screws.

Insert the wireless module in the 25pin connector (25pin S-Sub socket) which can be found on the front side of the printed circuit board which is installed in the device.

The wireless module comes with two inserted nuts which will lay exactly behind the holes in the housing once the module is completely inserted.

Mount the wireless module by using the screws which you removed before.
Then you have to connect the BNC feed trough socket with the BNC connector of the wireless module by using the short piece of antenna cable with a BNC connector on each end which has been supplied with the module.

Insert and close the cover lid and press it against the housing so that the latching mechanism is holding it in position.

Every time you want to control the device wirelessly the supplied antenna must be installed.

23.1.2 Software installation of the Advanced wireless module

After the wireless module (hardware) has been installed the software installation routine can be carried out. By doing so the microcontroller of the G-Flame is notified that the wireless module is now connected to the main board and the behavior of the firmware is changing accordingly.

Switch on the G-Flame while you activate the sensor fields 'Up' and 'Down' by using two magnetic pens until you see this being displayed:

```
Wireless Option:
              Off
```

You may select between 'On' and 'Off' with 'Up' and 'Down'.

```
Wireless Option:
               On
```

Select 'On' in order to install the module, then activate 'Mode'.

Right after that the following ticker will be displayed:

```
Call the Galaxis office and tell the token. You will
receive the activation code. Continue with Mode.
```

If you now activate 'Mode' a random eight-digit sequence of numbers will be generated and displayed, the so called token. Tell us this token on the phone and will give you the corresponding activation code.

TIP	You may speed up the ticker by activating the 'Mode' sensor field and keeping it activated.

The sequence is as follows:

```
Token:
53582820
```

Example of a token being displayed. This screen is being displayed sufficiently long so that you can tell us the token on the phone.

```
Code?
▲▼
```

Then you see this request to enter the activation code which you will receive from Galaxis on the phone. With 'Up' and 'Down' you can change the digits. If you see the correct number being displayed activate 'Mode' to proceed. A '0' can be entered the easiest by activating 'Mode' without activating 'Up' or 'Down' before.

```
Code?          OK
44232502▲▼
```

The activation code, which has also eight digits, has been accepted und the deep discharge counter has been reset to zero. No more warning message will be displayed any more until the next occurrence.

```
Code?           X
5423250200▲▼
```

A wrong activation code has been entered and the code was not accepted. Switch off the G-Flame and repeat the procedure.

23.2 De-installation of the wireless module

TIP	Before you remove the wireless-module, it must be deactivated in the software of the device. Otherwise the device can no longer be operated because the attempt to initialize the wireless module is failing.

23.2.1 De-installation of the wireless module in the software

Switch on the G-Flame while you activate the sensor fields 'Up' and 'Down' by using two magnetic pens until you see this being displayed:

```
Wireless Option:
             On
```

You may select between 'On' and 'Off' with 'Up' and 'Down'.

```
Wireless Option:
            Off
```

Select 'Off' in order to de-install the module, then activate 'Mode'.

After this 'Attention!' is being displayed in the upper line of the screen and below you will be able to read the following ticker text:

```
Reinstallation is only possible with support
on the phone during the Galaxis office hours!
```

Subsequently the following safety request will be displayed:

```
Are you     | Yes
sure?       |  No
```

Activate 'Up' if you really want to de-install the wireless module now. Otherwise you can select 'Down' to exit the sequence.

Immediately after selecting either 'Yes' or 'No' the device enters the ready to fire mode.

23.2.2 De-installation of the hardware

You can remove the wireless module by following the steps described in the section 'Installation of the hardware' in reverse order.

23.3 Optional accessory: Power Upgrade

The Power Upgrade is an optional accessory. It consists of a gas cartridge holder with an additional quick-coupler which is used to connect the already existing cartridge holder. Furthermore, a housing extension is supplied in order to cover the additional cartridges.

The G-Flame Power Upgrade allows you to use not only two but four cartridges. By doing so a total flame height of approx. eight meters is achieved. The total flame duration remains the same as specified for two cartridges with XXL nozzle.

WARNING	**Fallout when using unspecified nozzles when operating the Power Upgrade**
2.3.12	The use of incorrect nozzles can lead to fallout, as well as fire on the ground due to burning liquid gas residues. • Use the nozzles as specified for the ambient temperature.

Attention: The following nozzles have to be used in conjunction with the Power Upgrade:

Ambient temperature:	**Specified nozzle:**
more than +5°C	Nozzle for liquid gas
less than or equal to +5°C	XXL nozzle

The recommended safety distances are as follows: 12 meters upwards and 6.5 meters sideways if the device is standing vertically on even ground. General notes regarding safety distances can be found in the section 'Safety distances' in this manual.

24 Usage in rainy conditions

The device can also be used even in heavy rainfall. The housing protects the electronic circuits against the immersion of rain water, also if the rain hits the device sideways.

If rain water accumulates in the burning chamber it will be able to drain off through a drilling and a hose. Ensure that this drilling and the hose is not blocked by dirt or foreign particles.

It is prohibited to submerge the device into water or to operate it in any way that water enters the device from the bottom side.

As soon as the high voltage ignition is switched on a very hot electrical arc is being generated and the fuel can be ignited without any problems even in heavy rainfall.

Ensure that all wetness or moisture can dry off completely after each usage in the rain before you stow the devices in cartons, flight cases or similar.

25 Maintenance and service life

WARNING	Flammable atmosphere in/at the device
 2.2.1 2.3.4 2.4.1	When connecting or closing the gas containers, a flammable atmosphere could occur in/at the unit due to lose connections or leaks of the fuel-carrying components. An ignition spark could cause combustion or deflagration in/at the device. • Perform the pressure test of the fuel-carrying components as required in this operating manual. • Make sure that the underside of the device (cutout) is not blocked. • Large cutout at the underside of the device below the fuel-carrying components, so that any escaping gas can be drained. • Do not use the device if leaks are detected. • Follow all safety instructions and regulations at all times.

At the latest with every third application, the user should spray the seals of the quick couplers and the can holder with silicone spray to ensure that they remain elastic and provide a durable leak tight seal.

If the flame burns long after the valves close, the Teflon seal of the nozzles may need to be replaced or the nozzle is not screwed in sufficiently tight.

The rechargeable batteries can be tested by the user himself (please refer to the chapter 'The menu item 'Battery measurement'' in this manual).

This device must be subjected to a leak test once a year. This can be carried out by the manufacturer or a specialist company for gas installations or heating engineers with additional qualification.

The following test pressures should be used:
Intended operation with aerosol cartridges or operation with gas bottles with gaseous phase: 10 bar
Intended operation with gas bottles, liquid phase: 12 bar
The holding time for both test variants is 15 minutes.

However, maintenance by the manufacturer is highly recommended. We recommend this every 12 or 24 months, depending on how often the device is used. In tour operation or for more than 30 applications per year, we recommend maintenance every 12 months.

The following work will be carried out:
- Firmware update if newer software is available
- Inspection and, if necessary, replacement of seals and O-rings
- Lubrication of seals
- Leak test with highly sensitive manometer
- Individual testing of each magnetic valve on its own
- Inspection and, if necessary, tightening of screws
- Checking and, if necessary, repairing screw locking measures
- Visual inspection of the circuit board and all electrical connections for corrosion or other damages requiring repair
- Replacement of damaged or defective components
- Cleaning of the device if necessary
- Cleaning or replacing the micro filter
- Complete function test including communication test
- Check of the frequency deviation of the radio modules if installed
- Adjusting the ignition electrodes and the ionization measurement electrode

Regular maintenance ensures a long service life and provides the basis for reliable and safe operation. In general, it can be assumed that safe operation can no longer be guaranteed after five years without maintenance by the manufacturer or an authorized dealer.

All quick couplers (both sides), all gas hoses and all pressure reducers generally have a service life of only eight years. Have these parts replaced by the manufacturer before this period has expired.

After 50,000 switching cycles, the magnetic valves should be replaced by the manufacturer.

26 Cleaning

The device is very robust. Please take care that e.g. no burning or hot cinders from firework effects fall onto the device, because this may cause damage to the surfaces.

Ensure that the device is switched off before you clean it.

Use a piece of cloth that was moistened with water and at the most some dishwashing agent, for cleaning the device. Solvents, strong detergents and abrasives could damage the surfaces.

Keep all electrical contacts always clean.

Unburned carbon may accumulate at the ignition electrodes, the ionization measurement electrode and on the electrode cage. This is absolutely normal and does not impair the function of the device.

If a lot of unburned carbon has accumulated, we recommend to clean the ignition electrodes and the electrode cage by using a soft brush. Pay attention not to bend the electrodes. In case that the soot cannot be removed this way moisten the brush with brake cleaner. The ionization measurement electrode can be cleaned by using a piece of cloth.

The gap between the tips of the ignition electrodes should approx. 3 mm.

All fuel-carrying components, such as the quick couplers, gas cartridge receptacles and the fittings on the hoses and pressure reducers, are not allowed to become dirty. Always keep them absolutely clean to prevent leakages.

27 Micro filter

This device is equipped with a micro filter. This largely prevents dust particles or foreign particles from getting into the fuel valves and leading to malfunctions and leakages.

Devices produced until September 2017 have a screwable fine filter. Before each use of the units, check that the O-ring is functional and that the filter is hand-tight and leak-proof.

Devices produced since October 2017 have a permanently installed filter. This does not have to be checked for tightness.

After frequent use over a longer period of time, the filter may have to be cleaned. This is usually recognizable by a lower flame height. In this case, please send the unit to the manufacturer to have the filter cleaned or replaced. Under certain circumstances it is possible that the manufacturer is instructing you how to clean the filter yourself.

If devices are sent in for maintenance it can happen that it is necessary that the screwable filter is exchanged against the permanently installed filter.

28 Warranty

The warranty period is 24 months.
If there is any defect during in this period please pack the device properly and send it to the manufacturer with carriage paid to have it repaired free of charge. Please do not forget to attach a description of the symptoms, which have occurred.
Warranty is excluded if the device was damaged due to wrong usage or excessive stress.
Unauthorized repairs and the use of non-original parts will void all warranty, guarantee and product liability claims with immediate effect.

29 Damages caused by misusage, maloperation, malfunction

The devices have been designed to generate flame effects. Discuss all other applications with the manufacturer before usage. In the case that one of the events stated above has happened we are only liable if the causation was within our range of influence. The devices have been developed, manufactured and tested to the best of our knowledge and belief.

Especially the user's work must comply with the safety instructions and the instructions given in this manual at all times.

A long test period and our practical experience proved that the devices operate very safe and reliable even if used in difficult conditions.

30 Technical data

Radio parameters EU version (if Advanced radio module is installed)	Frequency Band: 433.05 - 434.79 MHz Maximum radio-frequency power transmitted: <=10 mW Channel Spacing: 25 kHz Number of radio channels: 70 (433.050 - 434.775 MHz) Modulation: FM narrow band Frequency Shift: +/- 3 kHz Duty Cycle: <10% Radio equipment class according to 2014/53/EU (RED): 1 Radio equipment type: non-specific short-range device, transmitter and receiver (Transceiver) Receiver Category according to ETSI EN 300 220 V3.1.1: demanded by the application: 3 (lowest performance level), fulfilled by the device up to SN F100XXXX2699: 1.5 (second-best performance level), fulfilled by the device starting at SN F100XXXX2700: 1 (best performance level); The receiver category indicates how well the device can still receive radio protocols when strong signals are present on frequencies below and above the used frequency (blocking). Receiver Principle: Double superheterodyne Receiver Sensitivity: -119 dBm @ 12 dB SINAD Wave Length: 70 cm Standard antenna included in delivery: Center Frequency: 434 MHz Radiation Pattern: omnidirectional Radiator Length: Lambda/4, not coiled Antenna Gain: 0.00 dBd, 2.15 dBi
Radio parameters US version (if Advanced radio module is installed)	Frequency Range: 458 - 462.5 MHz License: FCC Part 90, FCC-ID: V9X-LMD400R Maximum radio-frequency power transmitted: <=10 mW Channel Spacing: 12.5 kHz Number of radio channels: 360 (458.0000 - 462.5000 MHz) Modulation: FM narrow band Frequency Shift: +/- 3 kHz Receiver Principle: Double superheterodyne Receiver Sensitivity: -119 dBm @ 12 dB SINAD Wave Length: 65 cm Standard antenna included in delivery: Center Frequency: 460 MHz Radiation Pattern: omnidirectional Radiator Length: Lambda/4, not coiled Antenna Gain: 0.00 dBd, 2.15 dBi
Protocol parameters (if Advanced radio module is installed)	half-duplex, PCM with Manchestercoding, Checksum: 40 Bit CRC, data rate approx. 2,500 bps
Temperature range, excluding fuels	Transport und storage: -30 to +70°C Operation: -20 to +65°C The maximum temperature difference between devices must not exceed 60 K in order to enable unimpaired radio communication. Optimal storage temperature for longest battery life: +10 to +20°C
Humidity	10 - 90% rH, no condensation inside the device
Allowable altitudes above sea level	Storage and transport: -500 to 12,500 m Operation: -500 to 4,000 m
Ignition	Electrical arc
Number of electromagnetic valves	2, connected in series

Functional principle of the flame monitoring system	Ionization measurement

Dimensions (LxWxH) and weight, each without antenna:
300 x 300 x 350 mm; 10.50 kg

Power supply and charging concept:
2 x 12 V, 7 Ah, sealed lead acid type rechargeable battery, PYROTEC charging device

Supplied accessories, included in delivery of the device:
1 Charging unit
1 Magnetic pen
1 User manual

The following parts are included in the gas cartridge option:
- cartridge holder (T-piece with quick-coupler, two non-return valves and two shut-off valves)
- special nozzle for cartridge operation, size XXL

The following parts are included in the gas bottle option:
- gas hose with a length of 5 m and a quick-coupler
- pressure regulator 1-4 bar
- special nozzle for gas bottle operation, gasiform phase

When buying a G-Flame either the gas cartridge or the gas bottle option is included in the purchase price.

The following parts are included if an Advanced wireless module is ordered:
1 standard antenna
1 BNC feedthrough socket to be installed in the housing of the G-Flame
1 antenna cable with two BNC connectors to establish the connection between the BNC antenna feedthrough and the Advanced wireless module

The following parts are included in the optional Power Upgrade:
1 cartridge holder with two quick-couplers, to be used between G-Flame and standard cartridge holder
1 housing extension to cover all four cartridges
The particular nozzles must be ordered separately if not at hand already.

Charging unit:

Mains voltage	100-240 VAC, 50-60 Hz
Power consumption	typ. 4.5 Watts
Charging time	Full charge within 30 h, no danger of overcharging, automatic trickle charge
Dimensions	L-W-H 80-74-29 mm
Weight	0.07 kg

31 Accessories

Below is a list of original accessories that can be obtained from the manufacturer or authorized distributors at any time. The device may only be operated with these original accessories. Otherwise, all claims arising from warranty, guarantee and product liability will become void with immediate effect.

Item No.:	Description:
1496	Aerosol cartridges for G-Flame
1341	Antenna extension cable 1m
1342	Antenna extension cable 2m
1345	Antenna extension cable 5m
1343	BNC-BNC adaptor
10162	Back plate for G-Flame
1498	Pressure regulator for gasiform phase. Operation with liquid phase strictly prohibited. Risk of accident!
1488	Nozzle for operation with gas cartridges size S
1489	Nozzle for operation with gas cartridges size M
1490	Nozzle for operation with gas cartridges size L
1491	Nozzle for operation with gas cartridges size XL
1492	Nozzle for operation with gas cartridges size XXL
1493	Nozzle for operation with gas bottles, gasiform phase
1494	Nozzle for operation with gas bottles, liquid phase
1206	Ext. firing key with XLR cable, 1 Output
15003	Flame Bar, straight, length 2m
15007	Flame Bar, octagon, diameter 48cm
1916	G-Flame Power Upgrade
1485	Gas cartridges option for G-Flame
1484	Gas bottle option for G-Flame, incl. 5m gas hose with quick couplers, pressure reducer for gasiform phase, operation with liquid phase strictly prohibited: Risk of accident! special nozzle for gas bottles
1917	Gas hose for G-Flame 10m
1918	Gas hose for G-Flame 15m
1301	Charging unit Profi series
1311	Magnetic pen
1302	Multi charging unit for up to 10 Profi devices
15001	Emergency Off Button
15000	Emergency Off Splitter 16-way
1499	Emergency Off Splitter 8-way
1320	Standard antenna
1322	Superscan 71, high gain antenna. Only approved for being used in receiving mode!
15020	LPG hose for liquefied gas, proof pressure 75 bar, 1m
15004	LPG hose for liquefied gas, proof pressure 75 bar, 5m
10216	LPG hose for liquefied gas, proof pressure 75 bar, 10m
1811	LPG hose extension for liquefied gas, 1m
1812	LPG hose extension for liquefied gas, 5m
1813	LPG hose extension for liquefied gas, 10m
1803	Gas hose adaptor for USA
1807	Extension for cartridge holder

32 CE marking of the EU version

The EU version of this device is marked with the CE logo:

Each device intended for operation in the EU is accompanied by an EU Declaration of Conformity.

33 Address of the manufacturer and contact details for requesting an EU declaration of conformity

Galaxis Showtechnik GmbH
Lohgerberstr. 2
84524 Neuötting
Germany

Tel.: +49 / 8671 / 73411
Fax: +49 / 8671 / 73513

Homepage: www.galaxis-showtechnik.de
E-Mail: info@galaxis-showtechnik.de

Please use these contact details if you want to request an EU declaration of conformity.

Each device intended for operation in the EU is accompanied by an EU Declaration of Conformity.

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Ashland P.O. Box 2219 Columbus, OH 43216	Regulatory Information Number Telephone Emergency telephone	1-800-325-3751 614-790-3333 1-800-ASHLAND (1-800-274-5263)

Product name PYROIL® REGULAR STARTING FLUID

Product code PYSFR11
Product Use Description No data

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance: aerosol

WARNING! EXTREMELY FLAMMABLE LIQUID AND VAPOR. VAPOR MAY CAUSE FLASH FIRE. CONTENTS UNDER PRESSURE. MAY AFFECT THE CENTRAL NERVOUS SYSTEM CAUSING DIZZINESS, HEADACHE OR NAUSEA. ASPIRATION HAZARD IF SWALLOWED - CAN ENTER LUNGS AND CAUSE DAMAGE. CAUSES EYE IRRITATION. PROLONGED OR REPEATED CONTACT MAY DRY THE SKIN AND CAUSE IRRITATION AND BURNS.

Potential Health Effects

Exposure routes
Inhalation, Skin absorption, Skin contact, Eye Contact

Eye contact
Can cause severe eye irritation. Symptoms include stinging, tearing, redness, and swelling of eyes. Can injure eye tissue.

Skin contact
May cause mild skin irritation. Prolonged or repeated contact may dry the skin. Symptoms may include redness, burning, drying and cracking of skin, and skin burns. Passage of this material into the body through the skin is possible, but it is unlikely that this would result in harmful effects during safe handling and use.

Ingestion

Swallowing small amounts of this material during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful. This material can get into the lungs during swallowing or vomiting. This results in lung inflammation and other lung injury.

Inhalation

Breathing aerosol and/or mist is possible when material is sprayed. Aerosol and mist may present a greater risk of injury because more material may be present in the air than from vapor alone. Breathing small amounts of this material during normal handling is not likely to cause harmful effects. Breathing large amounts may be harmful. Symptoms are not expected at air concentrations below the recommended exposure limits, if applicable (see Section 8.).

Aggravated Medical Condition

Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material:, Skin, lung (for example, asthma-like conditions)

Symptoms

Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include:, stomach or intestinal upset (nausea, vomiting, diarrhea), irritation (nose, throat, airways), central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness), high blood pressure, effects on heart rate, effects on breathing rate

Target Organs

Exposure to this material (or a component) has been found to cause kidney damage in male rats. The mechanism by which this toxicity occurs is specific to the male rat and the kidney effects are not expected to occur in humans.

Carcinogenicity

This material is not listed as a carcinogen by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), or the Occupational Safety and Health Administration (OSHA).

Reproductive hazard

There are no data available for assessing risk to the fetus from maternal exposure to this material.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Components	CAS-No.	Concentration
SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC	64742-89-8	>=70-<80%
ETHYL ETHER	60-29-7	>=15-<20%
CARBON DIOXIDE	124-38-9	>=1.5-<5%

4. FIRST AID MEASURES

Eyes

If symptoms develop, immediately move individual away from exposure and into fresh air. Flush eyes gently with water for at least 15 minutes while holding eyelids apart; seek immediate medical attention.

Skin

Remove contaminated clothing. Flush exposed area with large amounts of water. If skin is damaged, seek immediate medical attention. If skin is not damaged and symptoms persist, seek medical attention. Launder clothing before reuse.

Ingestion

Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. Contact a physician, medical facility, or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended.

Inhalation

If symptoms develop, move individual away from exposure and into fresh air. If symptoms persist, seek medical attention. If breathing is difficult, administer oxygen. Keep person warm and quiet; seek immediate medical attention.

Notes to physician

Hazards: Inhalation of high concentrations of this material, as could occur in enclosed spaces or during deliberate abuse, may be associated with cardiac arrhythmias. Sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to this material.

Treatment: No information available.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Water mist, Carbon dioxide (CO2), Dry chemical

Hazardous combustion products

Aldehydes, carbon dioxide and carbon monoxide, organic compounds, Hydrocarbons

Precautions for fire-fighting

Material is volatile and readily gives off vapors which may travel along the ground or be moved by ventilation and ignited by pilot lights, flames, sparks, heaters, smoking, electric motors, static discharge or other ignition sources at locations near the material handling point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively.Wear full firefighting turn-out gear (full Bunker gear), and respiratory protection (SCBA).

NFPA Flammable and Combustible Liquids Classification

Flammable Liquid Class IA

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

For personal protection see section 8. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Eliminate all ignition sources (flares, flames including pilot lights, electrical sparks).

Environmental precautions

Prevent run-off to sewers, streams or other bodies of water. If run-off occurs, notify proper authorities as required, that a spill has occurred.

Methods for cleaning up

Absorb liquid on vermiculite, floor absorbent or other absorbent material.

7. HANDLING AND STORAGE

Handling

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Avoid prolonged or frequently repeated skin contact with this material. Skin contact can be minimized by wearing impervious protective gloves. As with all products of this nature, good personal hygiene is essential. Hands and other exposed areas should be washed thoroughly with soap and water after contact, especially before eating and/or smoking. Regular laundering of contaminated clothing is essential to reduce indirect skin contact with this material. Static ignition hazard can result from handling and use. Electrically bond and ground all containers, personnel and equipment before transfer or use of material. Special precautions may be necessary to dissipate static electricity for non-

conductive containers. Use proper bonding and grounding during product transfer as described in National Fire Protection Association document NFPA 77. Hydrocarbon solvents are basically non-conductors of electricity and can become electrostatically charged during mixing, filtering or pumping at high flow rates. If this charge reaches a sufficiently high level, sparks can form that may ignite the vapors of flammable liquids.

Storage

Do not store near extreme heat, open flame, or sources of ignition.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC		64742-89-8
OSHA Z1	time weighted average	500 ppm
ACGIH	time weighted average	300 ppm
ACGIH	time weighted average	1,370 mg/m3
ETHYL ETHER		60-29-7
ACGIH	time weighted average	400 ppm
ACGIH	Short term exposure limit	500 ppm
OSHA Z1	Permissible exposure limit	400 ppm
OSHA Z1	Permissible exposure limit	1,200 mg/m3
CARBON DIOXIDE		124-38-9
ACGIH	time weighted average	5,000 ppm
ACGIH	Short term exposure limit	30,000 ppm
NIOSH	Recommended exposure limit (REL):	5,000 ppm
NIOSH	Recommended exposure limit (REL):	9,000 mg/m3
NIOSH	Short term exposure limit	30,000 ppm
NIOSH	Short term exposure limit	54,000 mg/m3
OSHA Z1	Permissible exposure limit	5,000 ppm
OSHA Z1	Permissible exposure limit	9,000 mg/m3

General advice

These recommendations provide general guidance for handling this product. Personal protective equipment should be selected for individual applications and should consider factors which affect

exposure potential, such as handling practices, chemical concentrations and ventilation. It is ultimately the responsibility of the employer to follow regulatory guidelines established by local authorities.

Exposure controls

Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Eye protection

Wear chemical splash goggles when there is the potential for exposure of the eyes to liquid, vapor or mist.

Skin and body protection

Wear resistant gloves (consult your safety equipment supplier).
Wear normal work clothing including long pants, long-sleeved shirts and foot covering to prevent direct contact of the product with the skin. Launder clothing before reuse. If skin irritation develops, contact your facility health and safety professional or your local safety equipment supplier to determine the proper personal protective equipment for your use.

Respiratory protection

A NIOSH-approved air-purifying respirator with an appropriate cartridge and/or filter may be persmissible under certain circumstancs where airborne concentrations are expected to exceed exposure limits (if applicable) or if overexposure has otherwise been determined. Protection provided by air-purifying respirators is limited. Use a positive pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are not known or any other circumstances where an air-purifying respirator may not provide adequate protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	aerosol
Form	aerosol
Colour	No data
Odour	No data
Boiling point/boiling range	34.60 °C @ 1,013.23 hPa Calculated Phase Transition Liquid/Gas
pH	No data
Flash point	-45.00 °C Calculated Flash Point
Evaporation rate	No data
Lower explosion limit/Upper explosion limit	1.05 %(V) / 36.5 %(V)

Vapour pressure	717.261 hPa @ 25 °C Calculated Vapor Pressure
Vapour density	No data
Density	0.7114 g/cm3 @ 60.01 °F / 15.56 °C
Solubility	No data
Partition coefficient: n-octanol/water	No data
log Pow	no data available
Autoignition temperature	No data

10. STABILITY AND REACTIVITY

Stability
Stable.

Conditions to avoid
Heat, flames and sparks.

Incompatible products
halogens, Strong oxidizing agents

Hazardous decomposition products
Aldehydes, carbon dioxide and carbon monoxide, organic compounds, Hydrocarbons

Hazardous reactions
Product will not undergo hazardous polymerization.

Thermal decomposition
No data

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity

SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC	:	LD 50 Rat: > 8,000 mg/kg
ETHYL ETHER	:	LD 50 Rat: 3,230 - 3,920 mg/kg
CARBON DIOXIDE	:	no data available

Acute inhalation toxicity

SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC	:	LC 50 Rat: 3400 ppm, 4 h
ETHYL ETHER	:	LC 50 Rat: 32,000 mg/l, 4 h

CARBON DIOXIDE	:	no data available

Acute dermal toxicity

SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC	:	LD 50 Rat: > 4,000 mg/kg
ETHYL ETHER	:	no data available
CARBON DIOXIDE	:	no data available

12. ECOLOGICAL INFORMATION

Biodegradability

SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC	:	no data available
ETHYL ETHER	:	no data available
CARBON DIOXIDE	:	no data available

Bioaccumulation

SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC	:	no data available
ETHYL ETHER	:	no data available
CARBON DIOXIDE	:	no data available

Ecotoxicity effects

Toxicity to fish

SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC	:	no data available
ETHYL ETHER	:	no data available
CARBON DIOXIDE	:	no data available

Toxicity to daphnia and other aquatic invertebrates.

SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC	:	no data available
ETHYL ETHER	:	no data available
CARBON DIOXIDE	:	no data available

Toxicity to algae

SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC	:	no data available
ETHYL ETHER	:	no data available
CARBON DIOXIDE	:	no data available

Toxicity to bacteria

SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC	:	no data available
ETHYL ETHER	:	no data available
CARBON DIOXIDE	:	no data available

Biochemical Oxygen Demand (BOD)

SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC	:	no data available
ETHYL ETHER	:	no data available
CARBON DIOXIDE	:	no data available

Chemical Oxygen Demand (COD)

SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC	:	no data available
ETHYL ETHER	:	no data available
CARBON DIOXIDE	:	no data available

Additional ecological information

SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC	:	no data available
ETHYL ETHER	:	no data available
CARBON DIOXIDE	:	no data available

13. DISPOSAL CONSIDERATIONS

Waste disposal methods

Dispose of in accordance with all applicable local, state and federal regulations. For assistance with your waste management needs - including disposal, recycling and waste stream reduction, contact Ashland Distribution's Environmental Services Group at 800-637-7922.

14. TRANSPORT INFORMATION

REGULATION

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.

MEXICAN REGULATION FOR THE LAND TRANSPORT OF HAZARDOUS MATERIALS AND WASTES

UN	AEROSOLES	2

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

UN	Aerosols, flammable (engine starting fluid)	2.1	

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

UN	Aerosols, flammable (engine starting fluid)	2.1	

INTERNATIONAL MARITIME DANGEROUS GOODS

UN	1950	AEROSOLS	2.1	LIMITED QUANTITY

TRANSPORT CANADA - INLAND WATERWAYS

UN	1950	AEROSOLS	2.1

TRANSPORT CANADA - RAIL

UN	1950	AEROSOLS	2.1

TRANSPORT CANADA - ROAD

UN	1950	AEROSOLS	2.1

U.S. DOT - INLAND WATERWAYS

	1950	ORM-D, CONSUMER COMMODITY	ORM

U.S. DOT - RAIL

	1950	ORM-D, CONSUMER COMMODITY	ORM

U.S. DOT - ROAD

	1950	ORM-D, CONSUMER COMMODITY	ORM

***ORM = ORM-D, CBL = COMBUSTIBLE LIQUID**

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

15. REGULATORY INFORMATION

California Prop. 65

WARNING! This product contains a chemical known in the State of California to cause cancer.	BENZENE
WARNING! This product contains a chemical known in the State of California to cause birth defects or other reproductive harm.	BENZENE TOLUENE

SARA Hazard Classification

Acute Health Hazard
Fire Hazard
Sudden Release of Pressure Hazard

New Jersey RTK Label Information

n-HEPTANE	142-82-5
ETHYL ETHER	60-29-7
CARBON DIOXIDE	124-38-9

Pennsylvania RTK Label Information

n-HEPTANE	142-82-5
ETHYL ETHER	60-29-7
CARBON DIOXIDE	124-38-9
BENZENE	71-43-2

Notification status

EU. EINECS	y (positive listing)
US. Toxic Substances Control Act	y (positive listing)
Australia. Industrial Chemical (Notification and Assessment) Act	y (positive listing)
Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL). (Can. Gaz. Part II, Vol. 133)	y (positive listing)
Japan. Kashin-Hou Law List	n (Negative listing)
Korea. Toxic Chemical Control Law (TCCL) List	y (positive listing)
Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act	y (positive listing)
China. Inventory of Existing Chemical Substances	y (positive listing)
New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand	y (positive listing)

Reportable quantity - Product

US. EPA CERCLA Hazardous Substances (40 CFR 302)	511 lbs

Reportable quantity-Components

ETHYL ETHER	60-29-7	100 lbs

	HMIS	NFPA
Health	2	1
Flammability	4	4
Physical hazards	0	
Instability		0
Specific Hazard	--	--

16. OTHER INFORMATION

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This MSDS has been prepared by Ashland's Environmental Health and Safety Department (1-800-325-3751).

Flash Tube
Safety Data Sheet

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name : Flash Tube

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Pyrotechnic Article

1.3. Details of the supplier of the safety data sheet

RES Specialty Pyrotechnics, Inc.
21595 286th Street
Belle Plaine, MN 56011

1.4. Emergency telephone number

Emergency number : 952-873-3113

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Expl. 1.4	H204
Flam. Sol. 2	H228
Ox. Sol. 3	H272
Acute Tox. 4 (Oral)	H302
Skin Sens. 1	H317

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :

GHS01 GHS02 GHS03 GHS07

Signal word (GHS-US) : Warning

Hazard statements (GHS-US) :
H204 - Fire or projection hazard
H228 - Flammable solid
H272 - May intensify fire; oxidizer
H302 - Harmful if swallowed
H317 - May cause an allergic skin reaction

Precautionary statements (GHS-US) :
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
P220 - Keep/Store away from clothing/combustible materials
P221 - Take any precaution to avoid mixing with combustibles
P240 - Ground/bond container and receiving equipment
P241 - Use explosion-proof electrical/ventilating/lighting equipment
P250 - Do not subject to grinding/shock/friction
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
P264 - Wash thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P272 - Contaminated work clothing must not be allowed out of the workplace
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P301 + P312 - If swallowed: Call a poison center/doctor if you feel unwell
P302 + P352 - If on skin: Wash with plenty of water
P330 - Rinse mouth
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention
P362+P364 - Take off contaminated clothing and wash it before reuse
P370+P378 - In case of fire: Use water to extinguish
P370+P380 - In case of fire: Evacuate area
P372 - Explosion risk in case of fire
P373 - DO NOT fight fire when fire reaches explosives
P374 - Fight fire with normal precautions from a reasonable distance
P401 - Store locked up
P501 - Dispose of contents/container in accordance with local/regional/national/international

regulations.

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Pyrotechnic mixtures in solid form containing fuels and oxidizers, pyrotechnic substances or a mixture of substances designed to produce an effect by heat, light, sound, gas, or smoke or a combination of these as the result of non-detonative self-sustaining exothermic chemical reactions. These items are classified as explosives 1.4G by the U.S. DOT. No chemical composition is exposed during normal handling, transportation and storage. The following components are present in these products as a pyrotechnic composition:

Name	Product identifier	%	Classification (GHS-US)
Magnesium	(CAS No) 7439-95-4	0 - 84.8	Not classified
Aluminum	(CAS No) 7429-90-5	0 - 84.8	Not classified
Strontium nitrate	(CAS No) 10042-76-9	0 - 40	Not classified
Barium nitrate	(CAS No) 10022-31-8	0 - 40	Acute Tox. 4 (Oral), H302
Potassium nitrate	(CAS No) 7757-79-1	0 - 20	Ox. Sol. 3, H272 Aquatic Acute 3, H402
Titanium	(CAS No) 7440-32-6	0 - 20	Not classified
1,3,5,7-Tetraazatricyclo[3.3.1.13,7]decane	(CAS No) 100-97-0	0 - 10	Not classified
Vinyl chloride-vinylidene chloride copolymer	(CAS No) 9011-06-7	0 - 10	Not classified
Ethanedioic acid, disodium salt	(CAS No) 62-76-0	0 - 10	Not classified
Carbon black	(CAS No) 1333-86-4	0 - 4	Not classified
Sulfur	(CAS No) 7704-34-9	0 - 3	Skin Irrit. 2, H315

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Medical attention is required. Remove to fresh air. Professional assistance by a doctor is needed if irritation develops or persists.

First-aid measures after skin contact : No immediate medical attention is required. Remove contaminated clothing as needed and launder before reuse. Wash skin thoroughly with mild soap/water. Professional assistance by a doctor is needed if irritation develops or persists.

First-aid measures after eye contact : Medical attention is required. Immediately flush eyes with plenty of water for 15 minutes. An eye wash kit is required at the workplace. Professional assistance by a doctor is needed if irritation persists.

First-aid measures after ingestion : Medical attention is required. Professional assistance by a doctor is needed. Induce vomiting immediately (as directed by medical personnel). Never give anything by mouth to an unconscious person.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation : Not anticipated under normal use conditions. If casing is broken, dusts may cause irritation.

Symptoms/injuries after skin contact : Not anticipated under normal use conditions. If casing is broken, dusts may cause irritation.

Symptoms/injuries after eye contact : Not anticipated under normal use conditions. If casing is broken, dusts may cause irritation.

Symptoms/injuries after ingestion : Not anticipated under normal use conditions. If casing is broken, ingested dusts may cause irritation.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Pyrotechnics are self oxidizing. Flood with water. Fire extinguisher (Class A) may be used. Do not use suffocation methods.

Unsuitable extinguishing media : None.

5.2. Special hazards arising from the substance or mixture

Fire hazard : May cause fire or explosion; strong oxidizer.

Explosion hazard : These products will burn rapidly in the event of a fire. Fiery debris may be projected. Large quantities may explode in a fire.

5.3. Advice for firefighters

Protection during firefighting : Firefighters should wear full protective gear.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Spilled composition is highly combustible. In case a device is broken open and pyrotechnic composition is spilled: Keep away any possible ignition source such as open flames, sparks and lit cigarettes. Prevent possible electrostatic discharges (for example: do not use a synthetic dustpan and brush).

Methods for cleaning up : Carefully pick up the material and place in a cardboard container. For dusts which may be released from a broken device, use dustless methods and place into a closed container for disposal. Take up wet and do not dry sweep or blow with compressed air. Care must be taken when using or disposing of chemical materials and/or their containers to prevent environmental contamination.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : All pyrotechnic devices should be handled with caution. Avoid open flames, smoking, friction, impact, excessive heat, electrostatic discharges, radio frequent interference and moisture.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in dry, cool, well-ventilated area.

7.3. Specific end use(s)

Pyrotechnics

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Strontium nitrate (10042-76-9)	
ACGIH	Not applicable
OSHA	Not applicable

Potassium nitrate (7757-79-1)	
ACGIH	Not applicable
OSHA	Not applicable

Magnesium (7439-95-4)	
ACGIH	Not applicable
OSHA	Not applicable

Aluminum (7429-90-5)		
ACGIH	ACGIH TWA (mg/m³)	1 mg/m³ (respirable fraction)
OSHA	OSHA PEL (TWA) (mg/m³)	15 mg/m³ (total dust) 5 mg/m³ (respirable fraction)

Vinyl chloride-vinylidene chloride copolymer (9011-06-7)	
ACGIH	Not applicable
OSHA	Not applicable

1,3,5,7-Tetraazatricyclo[3.3.1.13,7]decane (100-97-0)	
ACGIH	Not applicable
OSHA	Not applicable

Sulfur (7704-34-9)	
ACGIH	Not applicable
OSHA	Not applicable

Carbon black (1333-86-4)		
ACGIH	ACGIH TWA (mg/m³)	3 mg/m³ (inhalable fraction)
OSHA	OSHA PEL (TWA) (mg/m³)	3.5 mg/m³

Barium nitrate (10022-31-8)	
ACGIH	Not applicable
OSHA	Not applicable

Titanium (7440-32-6)	
ACGIH	Not applicable
OSHA	Not applicable

Ethanedioic acid, disodium salt (62-76-0)	
ACGIH	Not applicable
OSHA	Not applicable

8.2. Exposure controls

Appropriate engineering controls	:	None required under normal product handling conditions.
Hand protection	:	None required under normal product handling conditions.
Eye protection	:	None required under normal product handling conditions.
Skin and body protection	:	Wear suitable working clothes.
Respiratory protection	:	None required under normal product handling conditions.

9.1. Information on basic physical and chemical properties

Physical state	:	Solid
Appearance	:	Contained in cardboard casing.
Odor	:	None
Odor threshold	:	Not Applicable
pH	:	Not Applicable
Relative evaporation rate (butyl acetate=1)	:	Not Applicable
Melting point	:	Not Applicable
Freezing point	:	Not Applicable
Boiling point	:	Not Applicable
Flash point	:	Not Applicable
Auto-ignition temperature	:	>150°C
Decomposition temperature	:	Not Applicable
Flammability (solid, gas)	:	No data available
Vapor pressure	:	No data available
Relative vapor density at 20 °C	:	No data available
Relative density	:	No data available
Solubility	:	Not Applicable

Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

The product is stable at normal handling and storage conditions.

10.3. Possibility of hazardous reactions

Will not occur.

10.4. Conditions to avoid

Open flames, sparks, high temperatures, friction or impact, electrostatic discharges and radio frequent radiation.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

Decomposition does not occur under normal circumstances during storage, transport and handling.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed.

Flash Tube	
ATE US (oral)	887.500 mg/kg body weight
Strontium nitrate (10042-76-9)	
LD50 oral rat	2750 mg/kg
Potassium nitrate (7757-79-1)	
LD50 oral rat	3015 mg/kg
ATE US (oral)	3015.000 mg/kg body weight
Magnesium (7439-95-4)	
LD50 oral rat	230 mg/kg

1,3,5,7-Tetraazatricyclo[3.3.1.13,7]decane (100-97-0)	
LD50 oral rat	9200 mg/kg
ATE US (oral)	9200.000 mg/kg body weight
Sulfur (7704-34-9)	
LD50 oral rat	> 3000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat (mg/l)	> 9.23 mg/l/4h
Carbon black (1333-86-4)	
LD50 oral rat	> 15400 mg/kg
Barium nitrate (10022-31-8)	
LD50 oral rat	355 mg/kg
ATE US (oral)	355.000 mg/kg body weight

Ethanedioic acid, disodium salt (62-76-0)	
LD50 oral rat	11160 mg/kg

Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Not classified
Respiratory or skin sensitization : May cause an allergic skin reaction.
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

Vinyl chloride-vinylidene chloride copolymer (9011-06-7)	
IARC group	3 - Not classifiable

Carbon black (1333-86-4)	
IARC group	2B - Possibly carcinogenic to humans
In OSHA Hazard Communication Carcinogen list	Yes

Reproductive toxicity : Not classified
Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

1,3,5,7-Tetraazatricyclo[3.3.1.13,7]decane (100-97-0)	
LC50 fish 1	44600 - 55600 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	29868 - 43390 mg/l (Exposure time: 48 h - Species: Daphnia magna)
Sulfur (7704-34-9)	
LC50 fish 1	866 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static])
LC50 fish 2	< 14 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on the global warming : No known ecological damage caused by this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN0431 Articles, pyrotechnic (for technical purposes), 1.4, II

UN-No.(DOT) : UN0431

DOT Proper Shipping Name : Articles, pyrotechnic
for technical purposes

Department of Transportation (DOT) Hazard Classes : 1.4 - Class 1.4 - Explosives (with no significant blast hazard) 49 CFR 173.50

Hazard labels (DOT) : 1.4G - Explosive

Packing group (DOT) : II - Medium Danger

DOT Packaging Non Bulk (49 CFR 173.xxx) : 62

DOT Packaging Bulk (49 CFR 173.xxx) : None

DOT Packaging Exceptions (49 CFR 173.xxx) : None

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : Forbidden

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 75 kg

DOT Vessel Stowage Location : 02 - The material may be stowed ''on deck'' or ''under deck'' on a cargo vessel (up to 12 passengers) and ''on deck'' in closed cargo transport units or ''under deck'' in closed cargo transport units on a passenger vessel.

DOT Vessel Stowage Other : 25 - Shade from radiant heat

SECTION 15: Regulatory information

15.1. US Federal regulations

Strontium nitrate (10042-76-9)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Potassium nitrate (7757-79-1)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Magnesium (7439-95-4)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Aluminum (7429-90-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on SARA Section 313 (Specific toxic chemical listings)

SARA Section 313 - Emission Reporting	1.0 % (dust or fume only)

Vinyl chloride-vinylidene chloride copolymer (9011-06-7)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

1,3,5,7-Tetraazatricyclo[3.3.1.13,7]decane (100-97-0)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Sulfur (7704-34-9)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Carbon black (1333-86-4)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Barium nitrate (10022-31-8)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Titanium (7440-32-6)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Ethanedioic acid, disodium salt (62-76-0)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. US State regulations

Carbon black (1333-86-4)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
Yes	No	No	No	

Strontium nitrate (10042-76-9)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

Potassium nitrate (7757-79-1)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

Magnesium (7439-95-4)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

Aluminum (7429-90-5)
U.S. - Massachusetts - Right To Know List U.S. - Minnesota - Hazardous Substance List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

1,3,5,7-Tetraazatricyclo[3.3.1.13,7]decane (100-97-0)
U.S. - New Jersey - Right to Know Hazardous Substance List

Sulfur (7704-34-9)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

Carbon black (1333-86-4)
U.S. - Massachusetts - Right To Know List U.S. - Minnesota - Hazardous Substance List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

Barium nitrate (10022-31-8)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

Titanium (7440-32-6)
U.S. - New Jersey - Right to Know Hazardous Substance List

SECTION 16: Other information

Full text of H-phrases::

Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 3	Hazardous to the aquatic environment - Acute Hazard Category 3
Expl. 1.4	Explosive Category 1.4
Flam. Sol. 2	Flammable solids Category 2
Ox. Sol. 3	Oxidizing solids Category 3
Skin Irrit. 2	Skin corrosion/irritation Category 2
Skin Sens. 1	Skin sensitization Category 1
H204	Fire or projection hazard
H228	Flammable solid
H272	May intensify fire; oxidizer
H302	Harmful if swallowed
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H402	Harmful to aquatic life

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name : Fireball Airburst

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Pyrotechnic Article

1.3. Details of the supplier of the safety data sheet

RES Specialty Pyrotechnics, Inc.
21595 286th Street
Belle Plaine, MN 56011

1.4. Emergency telephone number

Emergency number : 952-873-3113

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Expl. 1.4	H204
Flam. Sol. 2	H228
Acute Tox. 4 (Oral)	H302

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :

GHS01 GHS02 GHS07

Signal word (GHS-US) : Warning

Hazard statements (GHS-US) :
H204 - Fire or projection hazard
H228 - Flammable solid
H302 - Harmful if swallowed

Precautionary statements (GHS-US) :
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
P240 - Ground/bond container and receiving equipment
P241 - Use explosion-proof electrical/ventilating/lighting/equipment
P250 - Do not subject to grinding/shock/friction
P264 - Wash thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P301 + P312 - If swallowed: Call a poison center/doctor if you feel unwell
P330 - Rinse mouth
P370+P378 - In case of fire: Use water to extinguish
P370+P380 - In case of fire: Evacuate area
P372 - Explosion risk in case of fire
P373 - DO NOT fight fire when fire reaches explosives
P374 - Fight fire with normal precautions from a reasonable distance
P401 - Store locked up
P501 - Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Pyrotechnic mixtures in solid form containing fuels and oxidizers, pyrotechnic substances or a mixture of substances designed to produce an effect by heat, light, sound, gas, or smoke or a combination of these as the result of non-detonative self-sustaining exothermic chemical reactions. These items are classified as explosives 1.4G by the U.S. DOT. No chemical composition is exposed during normal handling, transportation and storage. The following components are present in these products as a pyrotechnic composition:

Name	Product identifier	%	Classification (GHS-US)
Lycopodium (powder)	(CAS No) 8023-70-9	0 - 90	Not classified
Potassium perchlorate	(CAS No) 7778-74-7	0 - 50	Not classified
Strontium nitrate	(CAS No) 10042-76-9	0 - 50	Not classified
Magnesium	(CAS No) 7439-95-4	0 - 40	Not classified
Titanium	(CAS No) 7440-32-6	0 - 19.25	Not classified
Aluminum	(CAS No) 7429-90-5	0 - 11.55	Not classified
Iron	(CAS No) 7439-89-6	0 - 6.82	Acute Tox. 4 (Oral), H302
Silicon	(CAS No) 7440-21-3	0 - 1.54	Not classified
Carbon	(CAS No) 7440-44-0	0 - 0.22	Not classified

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Medical attention is required. Remove to fresh air. Professional assistance by a doctor is needed if irritation develops or persists.

First-aid measures after skin contact : No immediate medical attention is required. Remove contaminated clothing as needed and launder before reuse. Wash skin thoroughly with mild soap/water. Professional assistance by a doctor is needed if irritation develops or persists.

First-aid measures after eye contact : Medical attention is required. Immediately flush eyes with plenty of water for 15 minutes. An eye wash kit is required at the workplace. Professional assistance by a doctor is needed if irritation persists.

First-aid measures after ingestion : Medical attention is required. Professional assistance by a doctor is needed. Induce vomiting immediately (as directed by medical personnel). Never give anything by mouth to an unconscious person.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation : Not anticipated under normal use conditions. If casing is broken, dusts may cause irritation.

Symptoms/injuries after skin contact : Not anticipated under normal use conditions. If casing is broken, dusts may cause irritation.

Symptoms/injuries after eye contact : Not anticipated under normal use conditions. If casing is broken, dusts may cause irritation.

Symptoms/injuries after ingestion : Not anticipated under normal use conditions. If casing is broken, ingested dusts may cause irritation.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Pyrotechnics are self oxidizing. Flood with water. Fire extinguisher (Class A) may be used. Do not use suffocation methods.

Unsuitable extinguishing media : None.

5.2. Special hazards arising from the substance or mixture

Fire hazard : May cause fire or explosion; strong oxidizer.

Explosion hazard : These products will burn rapidly in the event of a fire. Fiery debris may be projected. Large quantities may explode in a fire.

5.3. Advice for firefighters

Protection during firefighting : Firefighters should wear full protective gear.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Spilled composition is highly combustible. In case a device is broken open and pyrotechnic composition is spilled: Keep away any possible ignition source such as open flames, sparks and lit cigarettes. Prevent possible electrostatic discharges (for example: do not use a synthetic dustpan and brush).

Methods for cleaning up : Carefully pick up the material and place in a cardboard container. For dusts which may be released from a broken device, use dustless methods and place into a closed container for disposal. Take up wet and do not dry sweep or blow with compressed air. Care must be taken when using or disposing of chemical materials and/or their containers to prevent environmental contamination.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : All pyrotechnic devices should be handled with caution. Avoid open flames, smoking, friction, impact, excessive heat, electrostatic discharges, radio frequent interference and moisture.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in dry, cool, well-ventilated area.

7.3. Specific end use(s)

Pyrotechnics

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Aluminum (7429-90-5)		
ACGIH	ACGIH TWA (mg/m³)	1 mg/m³ (respirable fraction)
OSHA	OSHA PEL (TWA) (mg/m³)	15 mg/m³ (total dust) 5 mg/m³ (respirable fraction)

Magnesium (7439-95-4)	
ACGIH	Not applicable
OSHA	Not applicable

Silicon (7440-21-3)		
ACGIH	Not applicable	
OSHA	OSHA PEL (TWA) (mg/m³)	15 mg/m³ (total dust) 5 mg/m³ (respirable fraction)

Lycopodium (powder) (8023-70-9)	
ACGIH	Not applicable
OSHA	Not applicable

Potassium perchlorate (7778-74-7)	
ACGIH	Not applicable
OSHA	Not applicable

Titanium (7440-32-6)	
ACGIH	Not applicable
OSHA	Not applicable

Strontium nitrate (10042-76-9)	
ACGIH	Not applicable
OSHA	Not applicable

Carbon (7440-44-0)	
ACGIH	Not applicable
OSHA	Not applicable

Iron (7439-89-6)	
ACGIH	Not applicable
OSHA	Not applicable

8.2. Exposure controls

Appropriate engineering controls : None required under normal product handling conditions.
Hand protection : None required under normal product handling conditions.
Eye protection : None required under normal product handling conditions.
Skin and body protection : Wear suitable working clothes.
Respiratory protection : None required under normal product handling conditions.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid
Appearance : Contained in cardboard casing.
Odor : None
Odor threshold : Not Applicable
pH : Not Applicable
Relative evaporation rate (butyl acetate=1) : Not Applicable
Melting point : Not Applicable
Freezing point : Not Applicable
Boiling point : Not Applicable
Flash point : Not Applicable
Auto-ignition temperature : >150°C
Decomposition temperature : Not Applicable
Flammability (solid, gas) : No data available
Vapor pressure : No data available
Relative vapor density at 20 °C : No data available
Relative density : No data available
Solubility : Not Applicable
Log Pow : No data available
Log Kow : No data available
Viscosity, kinematic : No data available
Viscosity, dynamic : No data available
Explosive properties : No data available
Oxidizing properties : No data available
Explosive limits : No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

The product is stable at normal handling and storage conditions.

10.3. Possibility of hazardous reactions

Will not occur.

10.4. Conditions to avoid

Open flames, sparks, high temperatures, friction or impact, electrostatic discharges and radio frequent radiation.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

Decomposition does not occur under normal circumstances during storage, transport and handling.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed.

Fireball Airburst	
ATE US (oral)	500.000 mg/kg body weight

Magnesium (7439-95-4)	
LD50 oral rat	230 mg/kg
Silicon (7440-21-3)	
LD50 oral rat	3160 mg/kg

Strontium nitrate (10042-76-9)	
LD50 oral rat	2750 mg/kg
Carbon (7440-44-0)	
LD50 oral rat	> 10000 mg/kg
Iron (7439-89-6)	
LD50 oral rat	984 mg/kg
ATE US (oral)	984.000 mg/kg

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on the global warming : No known ecological damage caused by this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN0431 Articles, pyrotechnic (for technical purposes), 1.4, II

UN-No.(DOT) : UN0431

DOT Proper Shipping Name : Articles, pyrotechnic
for technical purposes

Department of Transportation (DOT) Hazard Classes : 1.4 - Class 1.4 - Explosives (with no significant blast hazard) 49 CFR 173.50

Hazard labels (DOT) : 1.4G - Explosive

Packing group (DOT) : II - Medium Danger

DOT Packaging Non Bulk (49 CFR 173.xxx) : 62

DOT Packaging Bulk (49 CFR 173.xxx) : None

DOT Packaging Exceptions (49 CFR 173.xxx) : None

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : Forbidden

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 75 kg

DOT Vessel Stowage Location : 02 - The material may be stowed ‘‘on deck’’ or ‘‘under deck’’ on a cargo vessel (up to 12 passengers) and ‘‘on deck’’ in closed cargo transport units or ‘‘under deck’’ in closed cargo transport units on a passenger vessel.

DOT Vessel Stowage Other : 25 - Shade from radiant heat

SECTION 15: Regulatory information

15.1. US Federal regulations

Aluminum (7429-90-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on SARA Section 313 (Specific toxic chemical listings)

SARA Section 313 - Emission Reporting	1.0 % (dust or fume only)

Magnesium (7439-95-4)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Silicon (7440-21-3)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Potassium perchlorate (7778-74-7)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Titanium (7440-32-6)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Strontium nitrate (10042-76-9)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Carbon (7440-44-0)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Iron (7439-89-6)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. US State regulations

Aluminum (7429-90-5)

U.S. - Massachusetts - Right To Know List
U.S. - Minnesota - Hazardous Substance List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

Magnesium (7439-95-4)

U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

Silicon (7440-21-3)

U.S. - Massachusetts - Right To Know List
U.S. - Minnesota - Hazardous Substance List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

Potassium perchlorate (7778-74-7)

U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

Titanium (7440-32-6)

U.S. - New Jersey - Right to Know Hazardous Substance List

Strontium nitrate (10042-76-9)

U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

Full text of H-phrases::

Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Expl. 1.4	Explosive Category 1.4
Flam. Sol. 2	Flammable solids Category 2
H204	Fire or projection hazard
H228	Flammable solid
H302	Harmful if swallowed

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product

Flame Projector
Safety Data Sheet

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name : Flame Projector

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Pyrotechnic Article

1.3. Details of the supplier of the safety data sheet

RES Specialty Pyrotechnics, Inc.
21595 286th Street
Belle Plaine, MN 56011

1.4. Emergency telephone number

Emergency number : 952-873-3113

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Expl. 1.4	H204
Acute Tox. 2 (Oral)	H300
Acute Tox. 1 (Dermal)	H310
Skin Sens. 1	H317
STOT RE 2	H373

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :

GHS01 GHS06 GHS07 GHS08

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : H204 - Fire or projection hazard
H300+H310 - Fatal if swallowed or in contact with skin
H317 - May cause an allergic skin reaction
H373 - May cause damage to organs through prolonged or repeated exposure

Precautionary statements (GHS-US) : P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
P240 - Ground/bond container and receiving equipment
P250 - Do not subject to grinding/shock/friction
P260 - Do not breathe dust/fume/gas/mist/vapors/spray
P262 - Do not get in eyes, on skin, or on clothing
P264 - Wash thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P272 - Contaminated work clothing must not be allowed out of the workplace
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P301 + P310 - If swallowed: Immediately call a poison center/doctor
P302 + P352 - If on skin: Wash with plenty of water
P310 - Immediately call a poison center/doctor
P314 - Get medical advice/attention if you feel unwell
P330 - Rinse mouth
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention
P361 - Take off immediately all contaminated clothing
P362+P364 - Take off contaminated clothing and wash it before reuse
P363 - Wash contaminated clothing before reuse
P370+P380 - In case of fire: Evacuate area
P372 - Explosion risk in case of fire
P373 - DO NOT fight fire when fire reaches explosives
P374 - Fight fire with normal precautions from a reasonable distance
P405 - Store locked up
P501 - Dispose of contents/container in accordance with local/regional/national/international

regulations.

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Pyrotechnic mixtures in solid form containing fuels and oxidizers, pyrotechnic substances or a mixture of substances designed to produce an effect by heat, light, sound, gas, or smoke or a combination of these as the result of non-detonative self-sustaining exothermic chemical reactions. These items are classified as explosives 1.4G by the U.S. DOT. No chemical composition is exposed during normal handling, transportation and storage. The following components are present in these products as a pyrotechnic composition:

Name	Product identifier	%	Classification (GHS-US)
Nitroglycerin	(CAS No) 55-63-0	0 - 20	Unst. Expl, H200 Acute Tox. 2 (Oral), H300 Acute Tox. 1 (Dermal), H310 Acute Tox. 2 (Inhalation), H330 STOT RE 2, H373 Aquatic Chronic 2, H411
Urea, N,N'-diethyl-N,N'-diphenyl-	(CAS No) 85-98-3	0 - 20	Not classified
Diphenylamine	(CAS No) 122-39-4	0 - 20	Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Nitrocellulose	(CAS No) 9004-70-0	0 - 20	Not classified
Rosin	(CAS No) 8050-09-7	0 - 20	Acute Tox. 1 (Oral), H300 Skin Sens. 1, H317
Strontium nitrate	(CAS No) 10042-76-9	0 - 2	Not classified
Aluminum	(CAS No) 7429-90-5	0 - 2	Not classified
Barium nitrate	(CAS No) 10022-31-8	0 - 2	Acute Tox. 4 (Oral), H302

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Medical attention is required. Remove to fresh air. Professional assistance by a doctor is needed if irritation develops or persists.

First-aid measures after skin contact : No immediate medical attention is required. Remove contaminated clothing as needed and launder before reuse. Wash skin thoroughly with mild soap/water. Professional assistance by a doctor is needed if irritation develops or persists.

First-aid measures after eye contact : Medical attention is required. Immediately flush eyes with plenty of water for 15 minutes. An eye wash kit is required at the workplace. Professional assistance by a doctor is needed if irritation persists.

First-aid measures after ingestion : Medical attention is required. Professional assistance by a doctor is needed. Induce vomiting immediately (as directed by medical personnel). Never give anything by mouth to an unconscious person.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation : Not anticipated under normal use conditions. If casing is broken, dusts may cause irritation.

Symptoms/injuries after skin contact : Not anticipated under normal use conditions. If casing is broken, dusts may cause irritation.

Symptoms/injuries after eye contact : Not anticipated under normal use conditions. If casing is broken, dusts may cause irritation.

Symptoms/injuries after ingestion : Not anticipated under normal use conditions. If casing is broken, ingested dusts may cause irritation.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Pyrotechnics are self oxidizing. Flood with water. Fire extinguisher (Class A) may be used. Do not use suffocation methods.

Unsuitable extinguishing media : None.

5.2. Special hazards arising from the substance or mixture

Fire hazard : May cause fire or explosion; strong oxidizer.

Explosion hazard : These products will burn rapidly in the event of a fire. Fiery debris may be projected. Large quantities may explode in a fire.

5.3. Advice for firefighters

Protection during firefighting : Firefighters should wear full protective gear.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Spilled composition is highly combustible. In case a device is broken open and pyrotechnic composition is spilled: Keep away any possible ignition source such as open flames, sparks and lit cigarettes. Prevent possible electrostatic discharges (for example: do not use a synthetic dustpan and brush).

Methods for cleaning up : Carefully pick up the material and place in a cardboard container. For dusts which may be released from a broken device, use dustless methods and place into a closed container for disposal. Take up wet and do not dry sweep or blow with compressed air. Care must be taken when using or disposing of chemical materials and/or their containers to prevent environmental contamination.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : All pyrotechnic devices should be handled with caution. Avoid open flames, smoking, friction, impact, excessive heat, electrostatic discharges, radio frequent interference and moisture.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in dry, cool, well-ventilated area.

7.3. Specific end use(s)

Pyrotechnics

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Strontium nitrate (10042-76-9)	
ACGIH	Not applicable
OSHA	Not applicable

Nitroglycerin (55-63-0)		
ACGIH	ACGIH TWA (ppm)	0.05 ppm
OSHA	OSHA PEL (Ceiling) (mg/m³)	2 mg/m³
OSHA	OSHA PEL (Ceiling) (ppm)	0.2 ppm

Urea, N,N'-diethyl-N,N'-diphenyl- (85-98-3)		
ACGIH	Not applicable	
OSHA	Not applicable	

Diphenylamine (122-39-4)		
ACGIH	ACGIH TWA (mg/m³)	10 mg/m³
OSHA	Not applicable	

Nitrocellulose (9004-70-0)		
ACGIH	Not applicable	
OSHA	Not applicable	

Rosin (8050-09-7)		
ACGIH	Not applicable	
OSHA	Not applicable	

Barium nitrate (10022-31-8)		
ACGIH	Not applicable	
OSHA	Not applicable	

Aluminum (7429-90-5)		
ACGIH	ACGIH TWA (mg/m³)	1 mg/m³ (respirable fraction)
OSHA	OSHA PEL (TWA) (mg/m³)	15 mg/m³ (total dust) 5 mg/m³ (respirable fraction)

8.2. Exposure controls

Appropriate engineering controls : None required under normal product handling conditions.
Hand protection : None required under normal product handling conditions.
Eye protection : None required under normal product handling conditions.
Skin and body protection : Wear suitable working clothes.
Respiratory protection : None required under normal product handling conditions.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid
Appearance : Contained in cardboard casing.
Odor : None
Odor threshold : Not Applicable
pH : Not Applicable
Relative evaporation rate (butyl acetate=1) : Not Applicable
Melting point : Not Applicable
Freezing point : Not Applicable
Boiling point : Not Applicable
Flash point : Not Applicable
Auto-ignition temperature : >150°C
Decomposition temperature : Not Applicable
Flammability (solid, gas) : No data available
Vapor pressure : No data available
Relative vapor density at 20 °C : No data available
Relative density : No data available
Solubility : Not Applicable
Log Pow : No data available
Log Kow : No data available
Viscosity, kinematic : No data available

Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

The product is stable at normal handling and storage conditions.

10.3. Possibility of hazardous reactions

Will not occur.

10.4. Conditions to avoid

Open flames, sparks, high temperatures, friction or impact, electrostatic discharges and radio frequent radiation.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

Decomposition does not occur under normal circumstances during storage, transport and handling.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Fatal if swallowed. Dermal: Fatal in contact with skin.

Flame Projector	
ATE US (oral)	9.198 mg/kg body weight
ATE US (dermal)	24.590 mg/kg body weight
Strontium nitrate (10042-76-9)	
LD50 oral rat	2750 mg/kg
Nitroglycerin (55-63-0)	
LD50 oral rat	100 mg/kg
LD50 dermal rabbit	> 280 mg/kg
ATE US (oral)	5.000 mg/kg body weight
ATE US (dermal)	5.000 mg/kg body weight
ATE US (gases)	100.000 ppmV/4h
ATE US (vapors)	0.500 mg/l/4h
ATE US (dust, mist)	0.050 mg/l/4h
Urea, N,N'-diethyl-N,N'-diphenyl- (85-98-3)	
LD50 oral rat	2750 mg/kg
Diphenylamine (122-39-4)	
LD50 oral rat	1120 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
ATE US (oral)	100.000 mg/kg body weight
ATE US (dermal)	300.000 mg/kg body weight
ATE US (gases)	700.000 ppmV/4h
ATE US (vapors)	3.000 mg/l/4h
ATE US (dust, mist)	0.500 mg/l/4h
Nitrocellulose (9004-70-0)	
LD50 oral rat	> 5 g/kg
Rosin (8050-09-7)	
LD50 oral rat	7600 mg/kg

Rosin (8050-09-7)	
LD50 dermal rabbit	> 2500 mg/kg
LC50 inhalation rat (mg/l)	1.5 mg/l/4h
ATE US (oral)	3.000 mg/kg
Barium nitrate (10022-31-8)	
LD50 oral rat	355 mg/kg
ATE US (oral)	355.000 mg/kg body weight

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified

Respiratory or skin sensitization : May cause an allergic skin reaction.

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

Nitroglycerin (55-63-0)	
LC50 fish 1	0.87 - 3.25 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [flow-through])
EC50 Daphnia 1	46 - 55 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 fish 2	0.87 - 2.21 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
EC50 Daphnia 2	38 - 55 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])

Diphenylamine (122-39-4)	
LC50 fish 1	3.47 - 4.14 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	1.69 - 2.46 mg/l (Exposure time: 48 h - Species: Daphnia magna)

Rosin (8050-09-7)	
EC50 Daphnia 1	3.8 - 5.4 mg/l (Exposure time: 48 h - Species: Daphnia magna)

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

Diphenylamine (122-39-4)	
BCF fish 1	51 - 253
Log Pow	3.5

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on the global warming : No known ecological damage caused by this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN0431 Articles, pyrotechnic (for technical purposes), 1.4, II

UN-No.(DOT) : UN0431

DOT Proper Shipping Name : Articles, pyrotechnic
for technical purposes

Department of Transportation (DOT) Hazard Classes : 1.4 - Class 1.4 - Explosives (with no significant blast hazard) 49 CFR 173.50

Hazard labels (DOT) : 1.4G - Explosive

Packing group (DOT) : II - Medium Danger

DOT Packaging Non Bulk (49 CFR 173.xxx) : 62

DOT Packaging Bulk (49 CFR 173.xxx) : None

DOT Packaging Exceptions (49 CFR 173.xxx) : None

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : Forbidden

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 75 kg

DOT Vessel Stowage Location : 02 - The material may be stowed ''on deck'' or ''under deck'' on a cargo vessel (up to 12 passengers) and ''on deck'' in closed cargo transport units or ''under deck'' in closed cargo transport units on a passenger vessel.

DOT Vessel Stowage Other : 25 - Shade from radiant heat

SECTION 15: Regulatory information

15.1. US Federal regulations

Strontium nitrate (10042-76-9)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Nitroglycerin (55-63-0)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on SARA Section 313 (Specific toxic chemical listings)	
SARA Section 313 - Emission Reporting	1.0 %
Urea, N,N'-diethyl-N,N'-diphenyl- (85-98-3)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Diphenylamine (122-39-4)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on SARA Section 313 (Specific toxic chemical listings)	
EPA TSCA Regulatory Flag	T - T - indicates a substance that is the subject of a Section 4 test rule under TSCA.
SARA Section 313 - Emission Reporting	1.0 %
Nitrocellulose (9004-70-0)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Rosin (8050-09-7)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

Barium nitrate (10022-31-8)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Aluminum (7429-90-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on SARA Section 313 (Specific toxic chemical listings)	
SARA Section 313 - Emission Reporting	1.0 % (dust or fume only)

15.2. US State regulations

Strontium nitrate (10042-76-9)
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

Nitroglycerin (55-63-0)
U.S. - Massachusetts - Right To Know List
U.S. - Minnesota - Hazardous Substance List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

Diphenylamine (122-39-4)
U.S. - Massachusetts - Right To Know List
U.S. - Minnesota - Hazardous Substance List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

Nitrocellulose (9004-70-0)
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

Rosin (8050-09-7)
U.S. - Minnesota - Hazardous Substance List

Barium nitrate (10022-31-8)
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

Aluminum (7429-90-5)
U.S. - Massachusetts - Right To Know List
U.S. - Minnesota - Hazardous Substance List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

Full text of H-phrases::

Acute Tox. 1 (Dermal)	Acute toxicity (dermal) Category 1
Acute Tox. 1 (Oral)	Acute toxicity (oral) Category 1
Acute Tox. 2 (Inhalation)	Acute toxicity (inhalation) Category 2
Acute Tox. 2 (Oral)	Acute toxicity (oral) Category 2
Acute Tox. 3 (Dermal)	Acute toxicity (dermal) Category 3
Acute Tox. 3 (Inhalation)	Acute toxicity (inhalation) Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral) Category 3
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment - Chronic Hazard Category 2
Expl. 1.4	Explosive Category 1.4
Skin Sens. 1	Skin sensitization Category 1
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
Unst. Expl	Unstable explosives
H200	Unstable explosives

H204	Fire or projection hazard
H300	Fatal if swallowed
H301	Toxic if swallowed
H302	Harmful if swallowed
H310	Fatal in contact with skin
H311	Toxic in contact with skin
H317	May cause an allergic skin reaction
H330	Fatal if inhaled
H331	Toxic if inhaled
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H411	Toxic to aquatic life with long lasting effects

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name : Proximate Gerb Series: All Types

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Pyrotechnic Article

1.3. Details of the supplier of the safety data sheet

RES Specialty Pyrotechnics, Inc.
21595 286th Street
Belle Plaine, MN 56011

1.4. Emergency telephone number

Emergency number : 952-873-3113

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Expl. 1.4	H204
Ox. Sol. 3	H272
Acute Tox. 4 (Oral)	H302
Skin Irrit. 2	H315

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :

GHS01 GHS03 GHS07

Signal word (GHS-US) : Warning

Hazard statements (GHS-US) :
H204 - Fire or projection hazard
H272 - May intensify fire; oxidizer
H302 - Harmful if swallowed
H315 - Causes skin irritation

Precautionary statements (GHS-US) :
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
P220 - Keep/Store away from clothing/combustible materials
P221 - Take any precaution to avoid mixing with combustibles
P240 - Ground/bond container and receiving equipment
P250 - Do not subject to grinding/shock/friction
P264 - Wash thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P301 + P312 - If swallowed: Call a poison center/doctor if you feel unwell
P302 + P352 - If on skin: Wash with plenty of water
P330 - Rinse mouth
P332+P313 - If skin irritation occurs: Get medical advice/attention
P362 - Take off contaminated clothing and wash before reuse
P370+P378 - In case of fire: Use water to extinguish
P370+P380 - In case of fire: Evacuate area
P372 - Explosion risk in case of fire
P373 - DO NOT fight fire when fire reaches explosives
P374 - Fight fire with normal precautions from a reasonable distance
P401 - Store locked up
P501 - Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Pyrotechnic mixtures in solid form containing fuels and oxidizers, pyrotechnic substances or a mixture of substances designed to produce an effect by heat, light, sound, gas, or smoke or a combination of these as the result of non-detonative self-sustaining exothermic chemical reactions. These items are classified as explosives 1.4G by the U.S. DOT. No chemical composition is exposed during normal handling, transportation and storage. The following components are present in these products as a pyrotechnic composition:

Name	Product identifier	%	Classification (GHS-US)
Potassium nitrate	(CAS No) 7757-79-1	0 - 75	Ox. Sol. 3, H272 Aquatic Acute 3, H402
Barium nitrate	(CAS No) 10022-31-8	0 - 43	Acute Tox. 4 (Oral), H302
Strontium nitrate	(CAS No) 10042-76-9	0 - 43	Not classified
Titanium	(CAS No) 7440-32-6	0 - 29.75	Not classified
Sulfur	(CAS No) 7704-34-9	0 - 25	Skin Irrit. 2, H315
Magnesium	(CAS No) 7439-95-4	0 - 20	Not classified
Vinyl chloride-vinylidene chloride copolymer	(CAS No) 9011-06-7	0 - 17	Not classified
Starch	(CAS No) 9005-25-8	0 - 14	Not classified
Benzoic acid, potassium salt	(CAS No) 582-25-2	0 - 14	Not classified
Nitrocellulose	(CAS No) 9004-70-0	0 - 11	Not classified
Iron	(CAS No) 7439-89-6	0 - 10.54	Acute Tox. 4 (Oral), H302
Carbon black	(CAS No) 1333-86-4	0 - 10	Not classified
Red Gum	None	0 - 9	Not classified
Copper oxide (CuO)	(CAS No) 1317-38-0	0 - 5	Not classified
Aluminum	(CAS No) 7429-90-5	0 - 3.85	Not classified
Sodium bicarbonate	(CAS No) 144-55-8	0 - 3	Not classified
Silicon	(CAS No) 7440-21-3	0 - 2.38	Not classified
Carbon	(CAS No) 7440-44-0	0 - 0.34	Not classified

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Medical attention is required. Remove to fresh air. Professional assistance by a doctor is needed if irritation develops or persists.

First-aid measures after skin contact : No immediate medical attention is required. Remove contaminated clothing as needed and launder before reuse. Wash skin thoroughly with mild soap/water. Professional assistance by a doctor is needed if irritation develops or persists.

First-aid measures after eye contact : Medical attention is required. Immediately flush eyes with plenty of water for 15 minutes. An eye wash kit is required at the workplace. Professional assistance by a doctor is needed if irritation persists.

First-aid measures after ingestion : Medical attention is required. Professional assistance by a doctor is needed. Induce vomiting immediately (as directed by medical personnel). Never give anything by mouth to an unconscious person.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation : Not anticipated under normal use conditions. If casing is broken, dusts may cause irritation.

Symptoms/injuries after skin contact : Not anticipated under normal use conditions. If casing is broken, dusts may cause irritation.

Symptoms/injuries after eye contact : Not anticipated under normal use conditions. If casing is broken, dusts may cause irritation.

Symptoms/injuries after ingestion : Not anticipated under normal use conditions. If casing is broken, ingested dusts may cause irritation.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Pyrotechnics are self oxidizing. Flood with water. Fire extinguisher (Class A) may be used. Do not use suffocation methods.

Unsuitable extinguishing media : None.

5.2. Special hazards arising from the substance or mixture

Fire hazard : May cause fire or explosion; strong oxidizer.

Explosion hazard : These products will burn rapidly in the event of a fire. Fiery debris may be projected. Large quantities may explode in a fire.

5.3. Advice for firefighters

Protection during firefighting : Firefighters should wear full protective gear.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Spilled composition is highly combustible. In case a device is broken open and pyrotechnic composition is spilled: Keep away any possible ignition source such as open flames, sparks and lit cigarettes. Prevent possible electrostatic discharges (for example: do not use a synthetic dustpan and brush).

Methods for cleaning up : Carefully pick up the material and place in a cardboard container. For dusts which may be released from a broken device, use dustless methods and place into a closed container for disposal. Take up wet and do not dry sweep or blow with compressed air. Care must be taken when using or disposing of chemical materials and/or their containers to prevent environmental contamination.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : All pyrotechnic devices should be handled with caution. Avoid open flames, smoking, friction, impact, excessive heat, electrostatic discharges, radio frequent interference and moisture.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in dry, cool, well-ventilated area.

7.3. Specific end use(s)

Pyrotechnics

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Potassium nitrate (7757-79-1)	
ACGIH	Not applicable
OSHA	Not applicable

Magnesium (7439-95-4)	
ACGIH	Not applicable
OSHA	Not applicable

Aluminum (7429-90-5)		
ACGIH	ACGIH TWA (mg/m³)	1 mg/m³ (respirable fraction)
OSHA	OSHA PEL (TWA) (mg/m³)	15 mg/m³ (total dust) 5 mg/m³ (respirable fraction)

Vinyl chloride-vinylidene chloride copolymer (9011-06-7)	
ACGIH	Not applicable
OSHA	Not applicable

Sulfur (7704-34-9)		
ACGIH	Not applicable	
OSHA	Not applicable	

Carbon black (1333-86-4)		
ACGIH	ACGIH TWA (mg/m³)	3 mg/m³ (inhalable fraction)
OSHA	OSHA PEL (TWA) (mg/m³)	3.5 mg/m³

Barium nitrate (10022-31-8)		
ACGIH	Not applicable	
OSHA	Not applicable	

Titanium (7440-32-6)		
ACGIH	Not applicable	
OSHA	Not applicable	

Copper oxide (CuO) (1317-38-0)		
ACGIH	Not applicable	
OSHA	Not applicable	

Sodium bicarbonate (144-55-8)		
ACGIH	Not applicable	
OSHA	Not applicable	

Strontium nitrate (10042-76-9)		
ACGIH	Not applicable	
OSHA	Not applicable	

Starch (9005-25-8)		
ACGIH	ACGIH TWA (mg/m³)	10 mg/m³
OSHA	OSHA PEL (TWA) (mg/m³)	15 mg/m³ (total dust) 5 mg/m³ (respirable fraction)

Benzoic acid, potassium salt (582-25-2)		
ACGIH	Not applicable	
OSHA	Not applicable	

Nitrocellulose (9004-70-0)		
ACGIH	Not applicable	
OSHA	Not applicable	

Carbon (7440-44-0)		
ACGIH	Not applicable	
OSHA	Not applicable	

Iron (7439-89-6)		
ACGIH	Not applicable	
OSHA	Not applicable	

Silicon (7440-21-3)		
ACGIH	Not applicable	
OSHA	OSHA PEL (TWA) (mg/m³)	15 mg/m³ (total dust) 5 mg/m³ (respirable fraction)

8.2. Exposure controls

Appropriate engineering controls	:	None required under normal product handling conditions.
Hand protection	:	None required under normal product handling conditions.
Eye protection	:	None required under normal product handling conditions.
Skin and body protection	:	Wear suitable working clothes.
Respiratory protection	:	None required under normal product handling conditions.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Solid
Appearance	:	Contained in cardboard casing.
Odor	:	None
Odor threshold	:	Not Applicable
pH	:	Not Applicable
Relative evaporation rate (butyl acetate=1)	:	Not Applicable
Melting point	:	Not Applicable
Freezing point	:	Not Applicable
Boiling point	:	Not Applicable
Flash point	:	Not Applicable
Auto-ignition temperature	:	>150°C
Decomposition temperature	:	Not Applicable
Flammability (solid, gas)	:	No data available
Vapor pressure	:	No data available
Relative vapor density at 20 °C	:	No data available
Relative density	:	No data available
Solubility	:	Not Applicable
Log Pow	:	No data available
Log Kow	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	No data available
Explosive limits	:	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

The product is stable at normal handling and storage conditions.

10.3. Possibility of hazardous reactions

Will not occur.

10.4. Conditions to avoid

Open flames, sparks, high temperatures, friction or impact, electrostatic discharges and radio frequent radiation.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

Decomposition does not occur under normal circumstances during storage, transport and handling.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed.

Proximate Gerb Series: All Types	
ATE US (oral)	758.506 mg/kg body weight

Potassium nitrate (7757-79-1)	
LD50 oral rat	3015 mg/kg
ATE US (oral)	3015.000 mg/kg body weight

Magnesium (7439-95-4)	
LD50 oral rat	230 mg/kg

Sulfur (7704-34-9)	
LD50 oral rat	> 3000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat (mg/l)	> 9.23 mg/l/4h

Carbon black (1333-86-4)	
LD50 oral rat	> 15400 mg/kg

Barium nitrate (10022-31-8)	
LD50 oral rat	355 mg/kg
ATE US (oral)	355.000 mg/kg body weight

Sodium bicarbonate (144-55-8)	
LD50 oral rat	4220 mg/kg
ATE US (oral)	4220.000 mg/kg

Strontium nitrate (10042-76-9)	
LD50 oral rat	2750 mg/kg

Nitrocellulose (9004-70-0)	
LD50 oral rat	> 5 g/kg

Carbon (7440-44-0)	
LD50 oral rat	> 10000 mg/kg

Iron (7439-89-6)	
LD50 oral rat	984 mg/kg
ATE US (oral)	984.000 mg/kg

Silicon (7440-21-3)	
LD50 oral rat	3160 mg/kg

Skin corrosion/irritation : Causes skin ir
Serious eye damage/irritation : Not classified
Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

Vinyl chloride-vinylidene chloride copolymer (9011-06-7)	
IARC group	3 - Not classifiable

Carbon black (1333-86-4)	
IARC group	2B - Possibly carcinogenic to humans
In OSHA Hazard Communication Carcinogen list	Yes

Reproductive toxicity : Not classified
Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

Sulfur (7704-34-9)	
LC50 fish 1	866 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static])
LC50 fish 2	< 14 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])

Sodium bicarbonate (144-55-8)	
LC50 fish 1	8250 - 9000 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
EC50 Daphnia 1	2350 mg/l (Exposure time: 48 h - Species: Daphnia magna)

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on the global warming : No known ecological damage caused by this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN0431 Articles, pyrotechnic (for technical purposes), 1.4, II

UN-No.(DOT) : UN0431

DOT Proper Shipping Name	:	Articles, pyrotechnic for technical purposes
Department of Transportation (DOT) Hazard Classes	:	1.4 - Class 1.4 - Explosives (with no significant blast hazard) 49 CFR 173.50
Hazard labels (DOT)	:	1.4G - Explosive

Packing group (DOT)	:	II - Medium Danger
DOT Packaging Non Bulk (49 CFR 173.xxx)	:	62
DOT Packaging Bulk (49 CFR 173.xxx)	:	None
DOT Packaging Exceptions (49 CFR 173.xxx)	:	None
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	:	Forbidden
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	:	75 kg
DOT Vessel Stowage Location	:	02 - The material may be stowed ''on deck'' or ''under deck'' on a cargo vessel (up to 12 passengers) and ''on deck'' in closed cargo transport units or ''under deck'' in closed cargo transport units on a passenger vessel.
DOT Vessel Stowage Other	:	25 - Shade from radiant heat

SECTION 15: Regulatory information

15.1. US Federal regulations

Potassium nitrate (7757-79-1)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Magnesium (7439-95-4)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Aluminum (7429-90-5)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on SARA Section 313 (Specific toxic chemical listings)

SARA Section 313 - Emission Reporting	1.0 % (dust or fume only)

Vinyl chloride-vinylidene chloride copolymer (9011-06-7)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Sulfur (7704-34-9)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Carbon black (1333-86-4)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Barium nitrate (10022-31-8)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Titanium (7440-32-6)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Copper oxide (CuO) (1317-38-0)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Sodium bicarbonate (144-55-8)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Strontium nitrate (10042-76-9)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Starch (9005-25-8)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Benzoic acid, potassium salt (582-25-2)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Nitrocellulose (9004-70-0)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Carbon (7440-44-0)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Iron (7439-89-6)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Silicon (7440-21-3)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. US State regulations

Carbon black (1333-86-4)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
Yes	No	No	No	

Potassium nitrate (7757-79-1)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

Magnesium (7439-95-4)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

Aluminum (7429-90-5)
U.S. - Massachusetts - Right To Know List U.S. - Minnesota - Hazardous Substance List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

Sulfur (7704-34-9)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

Carbon black (1333-86-4)
U.S. - Massachusetts - Right To Know List U.S. - Minnesota - Hazardous Substance List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

Barium nitrate (10022-31-8)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

Titanium (7440-32-6)
U.S. - New Jersey - Right to Know Hazardous Substance List

Strontium nitrate (10042-76-9)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

Starch (9005-25-8)
U.S. - Massachusetts - Right To Know List U.S. - Minnesota - Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

Nitrocellulose (9004-70-0)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

Silicon (7440-21-3)
U.S. - Massachusetts - Right To Know List U.S. - Minnesota - Hazardous Substance List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

Full text of H-phrases::

Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 3	Hazardous to the aquatic environment - Acute Hazard Category 3
Expl. 1.4	Explosive Category 1.4
Ox. Sol. 3	Oxidizing solids Category 3
Skin Irrit. 2	Skin corrosion/irritation Category 2
H204	Fire or projection hazard
H272	May intensify fire; oxidizer
H302	Harmful if swallowed
H315	Causes skin irritation
H402	Harmful to aquatic life

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product

Proximate Mine Series: All Types
Multishot Plate: All Types
Safety Data Sheet

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name : Proximate Mine Series: All Types
Multishot Plate: All Types

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Pyrotechnic Article

1.3. Details of the supplier of the safety data sheet

RES Specialty Pyrotechnics, Inc.
21595 286th Street
Belle Plaine, MN 56011

1.4. Emergency telephone number

Emergency number : 952-873-3113

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Expl. 1.4	H204
Ox. Sol. 3	H272
Acute Tox. 4 (Oral)	H302
Skin Irrit. 2	H315

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :

GHS01 GHS03 GHS07

Signal word (GHS-US) : Warning

Hazard statements (GHS-US) :
H204 - Fire or projection hazard
H272 - May intensify fire; oxidizer
H302 - Harmful if swallowed
H315 - Causes skin irritation

Precautionary statements (GHS-US) :
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
P220 - Keep/Store away from clothing/combustible materials
P221 - Take any precaution to avoid mixing with combustibles
P240 - Ground/bond container and receiving equipment
P250 - Do not subject to grinding/shock/friction
P264 - Wash thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P301 + P312 - If swallowed: Call a poison center/doctor if you feel unwell
P302 + P352 - If on skin: Wash with plenty of water
P330 - Rinse mouth
P332+P313 - If skin irritation occurs: Get medical advice/attention
P362 - Take off contaminated clothing and wash before reuse
P370+P378 - In case of fire: Use water to extinguish
P370+P380 - In case of fire: Evacuate area
P372 - Explosion risk in case of fire
P373 - DO NOT fight fire when fire reaches explosives
P374 - Fight fire with normal precautions from a reasonable distance
P401 - Store locked up
P501 - Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Pyrotechnic mixtures in solid form containing fuels and oxidizers, pyrotechnic substances or a mixture of substances designed to produce an effect by heat, light, sound, gas, or smoke or a combination of these as the result of non-detonative self-sustaining exothermic chemical reactions. These items are classified as explosives 1.4G by the U.S. DOT. No chemical composition is exposed during normal handling, transportation and storage. The following components are present in these products as a pyrotechnic composition:

Name	Product identifier	%	Classification (GHS-US)
Potassium nitrate	(CAS No) 7757-79-1	0 - 75	Ox. Sol. 3, H272 Aquatic Acute 3, H402
Potassium perchlorate	(CAS No) 7778-74-7	0 - 75	Not classified
Bismuth oxide (Bi2O3)	(CAS No) 1304-76-3	0 - 72	Not classified
Strontium nitrate	(CAS No) 10042-76-9	0 - 50	Not classified
Barium nitrate	(CAS No) 10022-31-8	0 - 50	Acute Tox. 4 (Oral), H302
Nitrocellulose	(CAS No) 9004-70-0	0 - 25	Not classified
Magnesium	(CAS No) 7439-95-4	0 - 24	Not classified
Sulfur	(CAS No) 7704-34-9	0 - 21	Skin Irrit. 2, H315
Carbon black	(CAS No) 1333-86-4	0 - 15	Not classified
Vinyl chloride-vinylidene chloride copolymer	(CAS No) 9011-06-7	0 - 14	Not classified
Carbonic acid, strontium salt (1:1)	(CAS No) 1633-05-2	0 - 14	Not classified
Barium carbonate	(CAS No) 513-77-9	0 - 14	Acute Tox. 4 (Oral), H302
Copper oxide (CuO)	(CAS No) 1317-38-0	0 - 14	Not classified
Limestone	(CAS No) 1317-65-3	0 - 14	Not classified
Red Gum	None	0 - 11	Not classified
Titanium	(CAS No) 7440-32-6	0 - 10	Not classified
Aluminum	(CAS No) 7429-90-5	0 - 9	Not classified
Dextrin	None	0 - 5	Not classified
Sodium benzoate	(CAS No) 532-32-1	0 - 6	Not classified
Ethanedioic acid, disodium salt	(CAS No) 62-76-0	0 - 3	Not classified
Carbonic acid, magnesium salt (1:1)	(CAS No) 546-93-0	0 - 3	Not classified

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Medical attention is required. Remove to fresh air. Professional assistance by a doctor is needed if irritation develops or persists.

First-aid measures after skin contact : No immediate medical attention is required. Remove contaminated clothing as needed and launder before reuse. Wash skin thoroughly with mild soap/water. Professional assistance by a doctor is needed if irritation develops or persists.

First-aid measures after eye contact : Medical attention is required. Immediately flush eyes with plenty of water for 15 minutes. An eye wash kit is required at the workplace. Professional assistance by a doctor is needed if irritation persists.

First-aid measures after ingestion : Medical attention is required. Professional assistance by a doctor is needed. Induce vomiting immediately (as directed by medical personnel). Never give anything by mouth to an unconscious person.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation : Not anticipated under normal use conditions. If casing is broken, dusts may cause irritation.

Symptoms/injuries after skin contact : Not anticipated under normal use conditions. If casing is broken, dusts may cause irritation.

Symptoms/injuries after eye contact : Not anticipated under normal use conditions. If casing is broken, dusts may cause irritation.

Symptoms/injuries after ingestion : Not anticipated under normal use conditions. If casing is broken, ingested dusts may cause irritation.

4.3. Most important symptoms and effects, both acute and delayed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Pyrotechnics are self oxidizing. Flood with water. Fire extinguisher (Class A) may be used. Do not use suffocation methods.

Unsuitable extinguishing media : None.

5.2. Special hazards arising from the substance or mixture

Fire hazard : May cause fire or explosion; strong oxidizer.

Explosion hazard : These products will burn rapidly in the event of a fire. Fiery debris may be projected. Large quantities may explode in a fire.

5.3. Advice for firefighters

Protection during firefighting : Firefighters should wear full protective gear.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Spilled composition is highly combustible. In case a device is broken open and pyrotechnic composition is spilled: Keep away any possible ignition source such as open flames, sparks and lit cigarettes. Prevent possible electrostatic discharges (for example: do not use a synthetic dustpan and brush).

Methods for cleaning up : Carefully pick up the material and place in a cardboard container. For dusts which may be released from a broken device, use dustless methods and place into a closed container for disposal. Take up wet and do not dry sweep or blow with compressed air. Care must be taken when using or disposing of chemical materials and/or their containers to prevent environmental contamination.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : All pyrotechnic devices should be handled with caution. Avoid open flames, smoking, friction, impact, excessive heat, electrostatic discharges, radio frequent interference and moisture.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in dry, cool, well-ventilated area.

7.3. Specific end use(s)

Pyrotechnics

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Strontium nitrate (10042-76-9)	
ACGIH	Not applicable
OSHA	Not applicable

Potassium nitrate (7757-79-1)	
ACGIH	Not applicable

Potassium nitrate (7757-79-1)		
OSHA	Not applicable	

Magnesium (7439-95-4)		
ACGIH	Not applicable	
OSHA	Not applicable	

Aluminum (7429-90-5)		
ACGIH	ACGIH TWA (mg/m³)	1 mg/m³ (respirable fraction)
OSHA	OSHA PEL (TWA) (mg/m³)	15 mg/m³ (total dust) 5 mg/m³ (respirable fraction)

Vinyl chloride-vinylidene chloride copolymer (9011-06-7)		
ACGIH	Not applicable	
OSHA	Not applicable	

Sulfur (7704-34-9)		
ACGIH	Not applicable	
OSHA	Not applicable	

Carbon black (1333-86-4)		
ACGIH	ACGIH TWA (mg/m³)	3 mg/m³ (inhalable fraction)
OSHA	OSHA PEL (TWA) (mg/m³)	3.5 mg/m³

Barium nitrate (10022-31-8)		
ACGIH	Not applicable	
OSHA	Not applicable	

Titanium (7440-32-6)		
ACGIH	Not applicable	
OSHA	Not applicable	

Ethanedioic acid, disodium salt (62-76-0)		
ACGIH	Not applicable	
OSHA	Not applicable	

Barium carbonate (513-77-9)		
ACGIH	Not applicable	
OSHA	Not applicable	

Sodium benzoate (532-32-1)		
ACGIH	Not applicable	
OSHA	Not applicable	

Carbonic acid, strontium salt (1:1) (1633-05-2)		
ACGIH	Not applicable	
OSHA	Not applicable	

Bismuth oxide (Bi2O3) (1304-76-3)		
ACGIH	Not applicable	
OSHA	Not applicable	

Limestone (1317-65-3)		
ACGIH	Not applicable	

Limestone (1317-65-3)		
OSHA	OSHA PEL (TWA) (mg/m³)	15 mg/m³ (total dust) 5 mg/m³ (respirable fraction)

Potassium perchlorate (7778-74-7)	
ACGIH	Not applicable
OSHA	Not applicable

Copper oxide (CuO) (1317-38-0)	
ACGIH	Not applicable
OSHA	Not applicable

Nitrocellulose (9004-70-0)	
ACGIH	Not applicable
OSHA	Not applicable

Carbonic acid, magnesium salt (1:1) (546-93-0)	
ACGIH	Not applicable
OSHA	Not applicable

8.2. Exposure controls

Appropriate engineering controls : None required under normal product handling conditions.
Hand protection : None required under normal product handling conditions.
Eye protection : None required under normal product handling conditions.
Skin and body protection : Wear suitable working clothes.
Respiratory protection : None required under normal product handling conditions.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid
Appearance : Contained in cardboard casing.
Odor : None
Odor threshold : Not Applicable
pH : Not Applicable
Relative evaporation rate (butyl acetate=1) : Not Applicable
Melting point : Not Applicable
Freezing point : Not Applicable
Boiling point : Not Applicable
Flash point : Not Applicable
Auto-ignition temperature : >150°C
Decomposition temperature : Not Applicable
Flammability (solid, gas) : No data available
Vapor pressure : No data available
Relative vapor density at 20 °C : No data available
Relative density : No data available
Solubility : Not Applicable
Log Pow : No data available
Log Kow : No data available
Viscosity, kinematic : No data available
Viscosity, dynamic : No data available
Explosive properties : No data available
Oxidizing properties : No data available

Explosive limits : No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

The product is stable at normal handling and storage conditions.

10.3. Possibility of hazardous reactions

Will not occur.

10.4. Conditions to avoid

Open flames, sparks, high temperatures, friction or impact, electrostatic discharges and radio frequent radiation.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

Decomposition does not occur under normal circumstances during storage, transport and handling.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed.

Proximate Mine Series: All Types	
ATE US (oral)	573.599 mg/kg body weight
Strontium nitrate (10042-76-9)	
LD50 oral rat	2750 mg/kg
Potassium nitrate (7757-79-1)	
LD50 oral rat	3015 mg/kg
ATE US (oral)	3015.000 mg/kg body weight
Magnesium (7439-95-4)	
LD50 oral rat	230 mg/kg

Sulfur (7704-34-9)	
LD50 oral rat	> 3000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat (mg/l)	> 9.23 mg/l/4h
Carbon black (1333-86-4)	
LD50 oral rat	> 15400 mg/kg
Barium nitrate (10022-31-8)	
LD50 oral rat	355 mg/kg
ATE US (oral)	355.000 mg/kg body weight

Ethanedioic acid, disodium salt (62-76-0)	
LD50 oral rat	11160 mg/kg
Barium carbonate (513-77-9)	
LD50 oral rat	418 mg/kg
ATE US (oral)	418.000 mg/kg body weight
Sodium benzoate (532-32-1)	
LD50 oral rat	4070 mg/kg
ATE US (oral)	2100.000 mg/kg body weight

Bismuth oxide (Bi2O3) (1304-76-3)	
LD50 oral rat	5 g/kg

Nitrocellulose (9004-70-0)	
LD50 oral rat	> 5 g/kg

Skin corrosion/irritation : Causes skin irritation.
Serious eye damage/irritation : Not classified
Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

Vinyl chloride-vinylidene chloride copolymer (9011-06-7)	
IARC group	3 - Not classifiable

Carbon black (1333-86-4)	
IARC group	2B - Possibly carcinogenic to humans
In OSHA Hazard Communication Carcinogen list	Yes

Reproductive toxicity : Not classified
Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

Sulfur (7704-34-9)	
LC50 fish 1	866 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static])
LC50 fish 2	< 14 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])

Sodium benzoate (532-32-1)	
LC50 fish 1	420 - 558 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	< 650 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 fish 2	> 100 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

Sodium benzoate (532-32-1)	
BCF fish 1	(no bioaccumulation)
Log Pow	-2.13

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on the global warming : No known ecological damage caused by this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN0431 Articles, pyrotechnic (for technical purposes), 1.4, II

UN-No.(DOT) : UN0431

DOT Proper Shipping Name : Articles, pyrotechnic
for technical purposes

Department of Transportation (DOT) Hazard Classes : 1.4 - Class 1.4 - Explosives (with no significant blast hazard) 49 CFR 173.50

Hazard labels (DOT) : 1.4G - Explosive

Packing group (DOT) : II - Medium Danger

DOT Packaging Non Bulk (49 CFR 173.xxx) : 62

DOT Packaging Bulk (49 CFR 173.xxx) : None

DOT Packaging Exceptions (49 CFR 173.xxx) : None

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : Forbidden

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 75 kg

DOT Vessel Stowage Location : 02 - The material may be stowed ‘‘on deck’’ or ‘‘under deck’’ on a cargo vessel (up to 12 passengers) and ‘‘on deck’’ in closed cargo transport units or ‘‘under deck’’ in closed cargo transport units on a passenger vessel.

DOT Vessel Stowage Other : 25 - Shade from radiant heat

SECTION 15: Regulatory information

15.1. US Federal regulations

Strontium nitrate (10042-76-9)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Potassium nitrate (7757-79-1)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Magnesium (7439-95-4)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Aluminum (7429-90-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on SARA Section 313 (Specific toxic chemical listings)	
SARA Section 313 - Emission Reporting	1.0 % (dust or fume only)
Vinyl chloride-vinylidene chloride copolymer (9011-06-7)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Sulfur (7704-34-9)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Carbon black (1333-86-4)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Barium nitrate (10022-31-8)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Titanium (7440-32-6)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Ethanedioic acid, disodium salt (62-76-0)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Barium carbonate (513-77-9)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Sodium benzoate (532-32-1)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Carbonic acid, strontium salt (1:1) (1633-05-2)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Bismuth oxide (Bi2O3) (1304-76-3)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Limestone (1317-65-3)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Potassium perchlorate (7778-74-7)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Copper oxide (CuO) (1317-38-0)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Nitrocellulose (9004-70-0)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Carbonic acid, magnesium salt (1:1) (546-93-0)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

15.2. US State regulations

Carbon black (1333-86-4)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
Yes	No	No	No	

Strontium nitrate (10042-76-9)
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

Potassium nitrate (7757-79-1)
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

Magnesium (7439-95-4)
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

Aluminum (7429-90-5)
U.S. - Massachusetts - Right To Know List
U.S. - Minnesota - Hazardous Substance List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

Sulfur (7704-34-9)
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

Carbon black (1333-86-4)
U.S. - Massachusetts - Right To Know List
U.S. - Minnesota - Hazardous Substance List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

Barium nitrate (10022-31-8)
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

Titanium (7440-32-6)
U.S. - New Jersey - Right to Know Hazardous Substance List

Limestone (1317-65-3)
U.S. - Massachusetts - Right To Know List
U.S. - Minnesota - Hazardous Substance List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

Potassium perchlorate (7778-74-7)
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

Nitrocellulose (9004-70-0)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

Carbonic acid, magnesium salt (1:1) (546-93-0)
U.S. - Massachusetts - Right To Know List U.S. - Minnesota - Hazardous Substance List

SECTION 16: Other information

Full text of H-phrases::

Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 3	Hazardous to the aquatic environment - Acute Hazard Category 3
Expl. 1.4	Explosive Category 1.4
Ox. Sol. 3	Oxidizing solids Category 3
Skin Irrit. 2	Skin corrosion/irritation Category 2
H204	Fire or projection hazard
H272	May intensify fire; oxidizer
H302	Harmful if swallowed
H315	Causes skin irritation
H402	Harmful to aquatic life

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product

Whistle
Safety Data Sheet

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name : Whistle

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Pyrotechnic Article

1.3. Details of the supplier of the safety data sheet

RES Specialty Pyrotechnics, Inc.
21595 286th Street
Belle Plaine, MN 56011

1.4. Emergency telephone number

Emergency number : 952-873-3113

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Expl. 1.4 H204
Ox. Sol. 1 H271
Acute Tox. 4 (Oral) H302

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :

GHS01 GHS03 GHS07

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : H204 - Fire or projection hazard
H271 - May cause fire or explosion; strong oxidizer
H302 - Harmful if swallowed

Precautionary statements (GHS-US) : P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
P220 - Keep/Store away from clothing/combustible materials
P221 - Take any precaution to avoid mixing with combustibles
P240 - Ground/bond container and receiving equipment
P250 - Do not subject to grinding/shock/friction
P264 - Wash thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P283 - Wear fire/flame resistant/retardant clothing
P301 + P312 - If swallowed: Call a poison center/doctor if you feel unwell
P306+P360 - If on clothing: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes
P330 - Rinse mouth
P370+P378 - In case of fire: Use water to extinguish
P370+P380 - In case of fire: Evacuate area
P371+P380+P375 - In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion
P372 - Explosion risk in case of fire
P373 - DO NOT fight fire when fire reaches explosives
P374 - Fight fire with normal precautions from a reasonable distance
P401 - Store locked up
P501 - Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Pyrotechnic mixtures in solid form containing fuels and oxidizers, pyrotechnic substances or a mixture of substances designed to produce an effect by heat, light, sound, gas, or smoke or a combination of these as the result of non-detonative self-sustaining exothermic chemical reactions. These items are classified as explosives 1.4G by the U.S. DOT. No chemical composition is exposed during normal handling, transportation and storage. The following components are present in these products as a pyrotechnic composition:

Name	Product identifier	%	Classification (GHS-US)
Potassium perchlorate	(CAS No) 7778-74-7	0 - 70	Not classified
Sodium salicylate	(CAS No) 54-21-7	0 - 30	Not classified
Bismuth oxide (Bi2O3)	(CAS No) 1304-76-3	0 - 20	Not classified
Titanium	(CAS No) 7440-32-6	0 - 5	Not classified
Castor oil	(CAS No) 8001-79-4	0 - 4	Not classified
Copper oxide (CuO)	(CAS No) 1317-38-0	0 - 3	Not classified
Aluminum	(CAS No) 7429-90-5	0 - 2.4	Not classified
Magnesium	(CAS No) 7439-95-4	0 - 2.4	Not classified
Nitrocellulose	(CAS No) 9004-70-0	0 - 1	Not classified
Iron oxide (Fe2O3)	(CAS No) 1309-37-1	0 - 1	Not classified

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Medical attention is required. Remove to fresh air. Professional assistance by a doctor is needed if irritation develops or persists.

First-aid measures after skin contact : No immediate medical attention is required. Remove contaminated clothing as needed and launder before reuse. Wash skin thoroughly with mild soap/water. Professional assistance by a doctor is needed if irritation develops or persists.

First-aid measures after eye contact : Medical attention is required. Immediately flush eyes with plenty of water for 15 minutes. An eye wash kit is required at the workplace. Professional assistance by a doctor is needed if irritation persists.

First-aid measures after ingestion : Medical attention is required. Professional assistance by a doctor is needed. Induce vomiting immediately (as directed by medical personnel). Never give anything by mouth to an unconscious person.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation : Not anticipated under normal use conditions. If casing is broken, dusts may cause irritation.

Symptoms/injuries after skin contact : Not anticipated under normal use conditions. If casing is broken, dusts may cause irritation.

Symptoms/injuries after eye contact : Not anticipated under normal use conditions. If casing is broken, dusts may cause irritation.

Symptoms/injuries after ingestion : Not anticipated under normal use conditions. If casing is broken, ingested dusts may cause irritation.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Pyrotechnics are self oxidizing. Flood with water. Fire extinguisher (Class A) may be used. Do not use suffocation methods.

Unsuitable extinguishing media : None.

5.2. Special hazards arising from the substance or mixture

Fire hazard : May cause fire or explosion; strong oxidizer.

Explosion hazard : These products will burn rapidly in the event of a fire. Fiery debris may be projected. Large quantities may explode in a fire.

5.3. Advice for firefighters

Protection during firefighting : Firefighters should wear full protective gear.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Spilled composition is highly combustible. In case a device is broken open and pyrotechnic composition is spilled: Keep away any possible ignition source such as open flames, sparks and lit cigarettes. Prevent possible electrostatic discharges (for example: do not use a synthetic dustpan and brush).

Methods for cleaning up : Carefully pick up the material and place in a cardboard container. For dusts which may be released from a broken device, use dustless methods and place into a closed container for disposal. Take up wet and do not dry sweep or blow with compressed air. Care must be taken when using or disposing of chemical materials and/or their containers to prevent environmental contamination.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : All pyrotechnic devices should be handled with caution. Avoid open flames, smoking, friction, impact, excessive heat, electrostatic discharges, radio frequent interference and moisture.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in dry, cool, well-ventilated area.

7.3. Specific end use(s)

Pyrotechnics

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Magnesium (7439-95-4)	
ACGIH	Not applicable
OSHA	Not applicable

Aluminum (7429-90-5)		
ACGIH	ACGIH TWA (mg/m³)	1 mg/m³ (respirable fraction)
OSHA	OSHA PEL (TWA) (mg/m³)	15 mg/m³ (total dust) 5 mg/m³ (respirable fraction)

Potassium perchlorate (7778-74-7)	
ACGIH	Not applicable
OSHA	Not applicable

Nitrocellulose (9004-70-0)	
ACGIH	Not applicable
OSHA	Not applicable

Bismuth oxide (Bi2O3) (1304-76-3)	
ACGIH	Not applicable
OSHA	Not applicable

Castor oil (8001-79-4)	
ACGIH	Not applicable

Castor oil (8001-79-4)	
OSHA	Not applicable

Sodium salicylate (54-21-7)	
ACGIH	Not applicable
OSHA	Not applicable

Titanium (7440-32-6)	
ACGIH	Not applicable
OSHA	Not applicable

Copper oxide (CuO) (1317-38-0)	
ACGIH	Not applicable
OSHA	Not applicable

Iron oxide (Fe2O3) (1309-37-1)		
ACGIH	ACGIH TWA (mg/m³)	5 mg/m³ (respirable fraction)
OSHA	OSHA PEL (TWA) (mg/m³)	10 mg/m³ (fume) 15 mg/m³ (total dust) 5 mg/m³ (respirable fraction)

8.2. Exposure controls

Appropriate engineering controls : None required under normal product handling conditions.
Hand protection : None required under normal product handling conditions.
Eye protection : None required under normal product handling conditions.
Skin and body protection : Wear suitable working clothes.
Respiratory protection : None required under normal product handling conditions.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid
Appearance : Contained in cardboard casing.
Odor : None
Odor threshold : Not Applicable
pH : Not Applicable
Relative evaporation rate (butyl acetate=1) : Not Applicable
Melting point : Not Applicable
Freezing point : Not Applicable
Boiling point : Not Applicable
Flash point : Not Applicable
Auto-ignition temperature : >150°C
Decomposition temperature : Not Applicable
Flammability (solid, gas) : No data available
Vapor pressure : No data available
Relative vapor density at 20 °C : No data available
Relative density : No data available
Solubility : Not Applicable
Log Pow : No data available
Log Kow : No data available
Viscosity, kinematic : No data available
Viscosity, dynamic : No data available
Explosive properties : No data available
Oxidizing properties : No data available
Explosive limits : No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

The product is stable at normal handling and storage conditions.

10.3. Possibility of hazardous reactions

Will not occur.

10.4. Conditions to avoid

Open flames, sparks, high temperatures, friction or impact, electrostatic discharges and radio frequent radiation.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

Decomposition does not occur under normal circumstances during storage, transport and handling.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed.

Whistle	
ATE US (oral)	500.000 mg/kg body weight
Magnesium (7439-95-4)	
LD50 oral rat	230 mg/kg

Nitrocellulose (9004-70-0)	
LD50 oral rat	> 5 g/kg
Bismuth oxide (Bi2O3) (1304-76-3)	
LD50 oral rat	5 g/kg

Sodium salicylate (54-21-7)	
LD50 oral rat	930 mg/kg

Iron oxide (Fe2O3) (1309-37-1)	
LD50 oral rat	> 10000 mg/kg

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Iron oxide (Fe2O3) (1309-37-1)	
IARC group	3 - Not classifiable

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

Sodium salicylate (54-21-7)	
LC50 fish 1	1270 - 1470 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

Sodium salicylate (54-21-7)	
Log Pow	2.26

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on the global warming : No known ecological damage caused by this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN0431 Articles, pyrotechnic (for technical purposes), 1.4, II

UN-No.(DOT) : UN0431

DOT Proper Shipping Name : Articles, pyrotechnic
for technical purposes

Department of Transportation (DOT) Hazard Classes : 1.4 - Class 1.4 - Explosives (with no significant blast hazard) 49 CFR 173.50

Hazard labels (DOT) : 1.4G - Explosive

Packing group (DOT) : II - Medium Danger

DOT Packaging Non Bulk (49 CFR 173.xxx) : 62

DOT Packaging Bulk (49 CFR 173.xxx) : None

DOT Packaging Exceptions (49 CFR 173.xxx) : None

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : Forbidden

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 75 kg

DOT Vessel Stowage Location	:	02 - The material may be stowed ‘‘on deck’’ or ‘‘under deck’’ on a cargo vessel (up to 12 passengers) and ‘‘on deck’’ in closed cargo transport units or ‘‘under deck’’ in closed cargo transport units on a passenger vessel.
DOT Vessel Stowage Other	:	25 - Shade from radiant heat

SECTION 15: Regulatory information

15.1. US Federal regulations

Magnesium (7439-95-4)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Aluminum (7429-90-5)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on SARA Section 313 (Specific toxic chemical listings)

SARA Section 313 - Emission Reporting	1.0 % (dust or fume only)

Potassium perchlorate (7778-74-7)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Nitrocellulose (9004-70-0)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Bismuth oxide (Bi2O3) (1304-76-3)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Castor oil (8001-79-4)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Sodium salicylate (54-21-7)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Titanium (7440-32-6)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Copper oxide (CuO) (1317-38-0)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Iron oxide (Fe2O3) (1309-37-1)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. US State regulations

Magnesium (7439-95-4)
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

Aluminum (7429-90-5)
U.S. - Massachusetts - Right To Know List
U.S. - Minnesota - Hazardous Substance List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

Potassium perchlorate (7778-74-7)
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

Nitrocellulose (9004-70-0)
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

Titanium (7440-32-6)
U.S. - New Jersey - Right to Know Hazardous Substance List

Iron oxide (Fe2O3) (1309-37-1)
U.S. - Massachusetts - Right To Know List U.S. - Minnesota - Hazardous Substance List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

Full text of H-phrases::

Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Expl. 1.4	Explosive Category 1.4
Ox. Sol. 1	Oxidizing solids Category 1
H204	Fire or projection hazard
H271	May cause fire or explosion; strong oxidizer
H302	Harmful if swallowed

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product

Cannon Simulator
Safety Data Sheet

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name : Cannon Simulator

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Pyrotechnic Article

1.3. Details of the supplier of the safety data sheet

RES Specialty Pyrotechnics, Inc.
21595 286th Street
Belle Plaine, MN 56011

1.4. Emergency telephone number

Emergency number : 952-873-3113

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Expl. 1.4 H204
Ox. Sol. 3 H272
Acute Tox. 4 (Oral) H302

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :

GHS01 GHS03 GHS07

Signal word (GHS-US) : Warning

Hazard statements (GHS-US) :
H204 - Fire or projection hazard
H272 - May intensify fire; oxidizer
H302 - Harmful if swallowed

Precautionary statements (GHS-US) :
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
P220 - Keep/Store away from clothing/ /combustible materials
P221 - Take any precaution to avoid mixing with combustibles/...
P240 - Ground/bond container and receiving equipment
P250 - Do not subject to grinding/shock/ /friction
P264 - Wash ... thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P301 + P312 - If swallowed: Call a poison center/doctor/ if you feel unwell
P330 - Rinse mouth
P370+P378 - In case of fire: Use ... to extinguish
P370+P380 - In case of fire: Evacuate area
P372 - Explosion risk in case of fire
P373 - DO NOT fight fire when fire reaches explosives
P374 - Fight fire with normal precautions from a reasonable distance
P401 - Store ...
P501 - Dispose of contents/container to ...

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Pyrotechnic mixtures in solid form containing fuels and oxidizers, pyrotechnic substances or a mixture of substances designed to produce an effect by heat, light, sound, gas, or smoke or a combination of these as the result of non-detonative self-sustaining exothermic chemical reactions. These items are classified as explosives 1.4G by the U.S. DOT. No chemical composition is exposed during normal handling, transportation and storage. The following components are present in these products as a pyrotechnic composition:

Name	Product identifier	%	Classification (GHS-US)
Magnesium	(CAS No) 7439-95-4	0 - 74	Not classified
Strontium nitrate	(CAS No) 10042-76-9	0 - 70	Not classified
Potassium nitrate	(CAS No) 7757-79-1	0 - 50	Ox. Sol. 3, H272 Aquatic Acute 3, H402
Aluminum	(CAS No) 7429-90-5	0 - 24	Not classified

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Medical attention is required. Remove to fresh air. Professional assistance by a doctor is needed if irritation develops or persists.

First-aid measures after skin contact : No immediate medical attention is required. Remove contaminated clothing as needed and launder before reuse. Wash skin thoroughly with mild soap/water. Professional assistance by a doctor is needed if irritation develops or persists.

First-aid measures after eye contact : Medical attention is required. Immediately flush eyes with plenty of water for 15 minutes. An eye wash kit is required at the workplace. Professional assistance by a doctor is needed if irritation persists.

First-aid measures after ingestion : Medical attention is required. Professional assistance by a doctor is needed. Induce vomiting immediately (as directed by medical personnel). Never give anything by mouth to an unconscious person.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation : Not anticipated under normal use conditions. If casing is broken, dusts may cause irritation.

Symptoms/injuries after skin contact : Not anticipated under normal use conditions. If casing is broken, dusts may cause irritation.

Symptoms/injuries after eye contact : Not anticipated under normal use conditions. If casing is broken, dusts may cause irritation.

Symptoms/injuries after ingestion : Not anticipated under normal use conditions. If casing is broken, ingested dusts may cause irritation.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Pyrotechnics are self oxidizing. Flood with water. Fire extinguisher (Class A) may be used. Do not use suffocation methods.

Unsuitable extinguishing media : None.

5.2. Special hazards arising from the substance or mixture

Fire hazard : May cause fire or explosion; strong oxidizer.

Explosion hazard : These products will burn rapidly in the event of a fire. Fiery debris may be projected. Large quantities may explode in a fire.

5.3. Advice for firefighters

Protection during firefighting : Firefighters should wear full protective gear.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Spilled composition is highly combustible. In case a device is broken open and pyrotechnic composition is spilled: Keep away any possible ignition source such as open flames, sparks and lit cigarettes. Prevent possible electrostatic discharges (for example: do not use a synthetic dustpan and brush).

Methods for cleaning up : Carefully pick up the material and place in a cardboard container. For dusts which may be released from a broken device, use dustless methods and place into a closed container for disposal. Take up wet and do not dry sweep or blow with compressed air. Care must be taken when using or disposing of chemical materials and/or their containers to prevent environmental contamination.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : All pyrotechnic devices should be handled with caution. Avoid open flames, smoking, friction, impact, excessive heat, electrostatic discharges, radio frequent interference and moisture.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in dry, cool, well-ventilated area.

7.3. Specific end use(s)

Pyrotechnics

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Strontium nitrate (10042-76-9)	
ACGIH	Not applicable
OSHA	Not applicable

Potassium nitrate (7757-79-1)	
ACGIH	Not applicable
OSHA	Not applicable

Magnesium (7439-95-4)	
ACGIH	Not applicable
OSHA	Not applicable

Aluminum (7429-90-5)		
ACGIH	ACGIH TWA (mg/m³)	1 mg/m³ (respirable fraction)
OSHA	OSHA PEL (TWA) (mg/m³)	15 mg/m³ (total dust) 5 mg/m³ (respirable fraction)

8.2. Exposure controls

Appropriate engineering controls : None required under normal product handling conditions.

Hand protection : None required under normal product handling conditions.

Eye protection : None required under normal product handling conditions.

Skin and body protection : Wear suitable working clothes.

Respiratory protection : None required under normal product handling conditions.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid

Appearance : Contained in cardboard casing.

Odor : None

Odor threshold	:	Not Applicable pH
	:	Not Applicable
Relative evaporation rate (butyl acetate=1)	:	Not Applicable
Melting point	:	Not Applicable
Freezing point	:	Not Applicable
Boiling point	:	Not Applicable
Flash point	:	Not Applicable
Auto-ignition temperature	:	>150°C
Decomposition temperature	:	Not Applicable
Flammability (solid, gas)	:	No data available
Vapor pressure	:	No data available
Relative vapor density at 20 °C	:	No data available
Relative density	:	No data available
Solubility	:	Not Applicable
Log Pow	:	No data available
Log Kow	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	No data available
Explosive limits	:	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

The product is stable at normal handling and storage conditions.

10.3. Possibility of hazardous reactions

Will not occur.

10.4. Conditions to avoid

Open flames, sparks, high temperatures, friction or impact, electrostatic discharges and radio frequent radiation.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

Decomposition does not occur under normal circumstances during storage, transport and handling.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed.

Cannon Simulator	
ATE US (oral)	500.000 mg/kg body weight
Strontium nitrate (10042-76-9)	
LD50 oral rat	2750 mg/kg
Potassium nitrate (7757-79-1)	
LD50 oral rat	3015 mg/kg
ATE US (oral)	3015.000 mg/kg body weight
Magnesium (7439-95-4)	
LD50 oral rat	230 mg/kg

Skin corrosion/irritation	:	Not classified
Serious eye damage/irritation	:	Not classified
Respiratory or skin sensitization	:	Not classified
Germ cell mutagenicity	:	Not classified
Carcinogenicity	:	Not classified
Reproductive toxicity	:	Not classified
Specific target organ toxicity (single exposure)	:	Not classified
Specific target organ toxicity (repeated exposure)	:	Not classified
Aspiration hazard	:	Not classified

SECTION 12: Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on the global warming : No known ecological damage caused by this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description	:	UN0431 Articles, pyrotechnic (for technical purposes), 1.4, II
UN-No.(DOT)	:	UN0431
DOT Proper Shipping Name	:	Articles, pyrotechnic for technical purposes
Department of Transportation (DOT) Hazard Classes	:	1.4 - Class 1.4 - Explosives (with no significant blast hazard) 49 CFR 173.50
Hazard labels (DOT)	:	1.4G - Explosive

Packing group (DOT)	:	II - Medium Danger
DOT Packaging Non Bulk (49 CFR 173.xxx)	:	62
DOT Packaging Bulk (49 CFR 173.xxx)	:	None

DOT Packaging Exceptions (49 CFR 173.xxx)	:	None
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	:	Forbidden
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	:	75 kg
DOT Vessel Stowage Location	:	02 - The material may be stowed ‘‘on deck’’ or ‘‘under deck’’ on a cargo vessel (up to 12 passengers) and ‘‘on deck’’ in closed cargo transport units or ‘‘under deck’’ in closed cargo transport units on a passenger vessel.
DOT Vessel Stowage Other	:	25 - Shade from radiant heat

SECTION 15: Regulatory information

15.1. US Federal regulations

Strontium nitrate (10042-76-9)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Potassium nitrate (7757-79-1)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Magnesium (7439-95-4)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Aluminum (7429-90-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on SARA Section 313 (Specific toxic chemical listings)	
SARA Section 313 - Emission Reporting	1.0 % (dust or fume only)

15.2. US State regulations

Strontium nitrate (10042-76-9)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List
Potassium nitrate (7757-79-1)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List
Magnesium (7439-95-4)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List
Aluminum (7429-90-5)
U.S. - Massachusetts - Right To Know List U.S. - Minnesota - Hazardous Substance List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

Full text of H-phrases::

Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 3	Hazardous to the aquatic environment - Acute Hazard Category 3
Expl. 1.4	Explosive Category 1.4
Ox. Sol. 3	Oxidizing solids Category 3
H204	Fire or projection hazard
H272	May intensify fire; oxidizer
H302	Harmful if swallowed
H402	Harmful to aquatic life

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product

NFPA 1126

Standard for the

Use of Pyrotechnics Before a Proximate Audience

2016 Edition

IMPORTANT NOTE: This NFPA document is made available for use subject to important notices and legal disclaimers. These notices and disclaimers appear in all publications containing this document and may be found under the heading "Important Notices and Disclaimers Concerning NFPA Documents." They can also be obtained on request from NFPA or viewed at www.nfpa.org/disclaimers.

UPDATES, ALERTS, AND FUTURE EDITIONS: New editions of NFPA codes, standards, recommended practices, and guides (i.e., NFPA Standards) are released on scheduled revision cycles. This edition may be superseded by a later one, or it may be amended outside of its scheduled revision cycle through the issuance of Tentative Interim Amendments (TIAs). An official NFPA Standard at any point in time consists of the current edition of the document, together with any TIAs and Errata in effect. To verify that this document is the current edition or to determine if it has been amended by any TIAs or Errata, please consult the National Fire Codes® Subscription Service or visit the Document Information (DocInfo) pages on the NFPA website at www.nfpa.org/docinfo. In addition to TIAs and Errata, the DocInfo pages also include the option to sign up for Alerts for each document and to be involved in the development of the next edition.

NOTICE: An asterisk (*) following the number or letter designating a paragraph indicates that explanatory material on the paragraph can be found in Annex A.

A reference in brackets [ ] following a section or paragraph indicates material that has been extracted from another NFPA document. As an aid to the user, the complete title and edition of the source documents for extracts in mandatory sections of the document are given in Chapter 2 and those for extracts in informational sections are given in Annex E. Extracted text may be edited for consistency and style and may include the revision of internal paragraph references and other references as appropriate. Requests for interpretations or revisions of extracted text shall be sent to the technical committee responsible for the source document.

Information on referenced publications can be found in Chapter 2 and Annex E.

Chapter 1 Administration

1.1 Scope. This standard shall provide requirements for the protection of property, operators, performers, support personnel, and the viewing audiences where pyrotechnic effects are used indoors or outdoors with a proximate audience.

1.2 Purpose.

1.2.1 The purpose of this standard shall be to provide minimum requirements to the operators and manufacturers for the safe operation of pyrotechnic effects.

1.2.2* The purpose of this standard shall be to provide requirements for the reasonable protection of pyrotechnic operators, performers, support personnel, proximate audiences, property, and buildings where pyrotechnics are used indoors or outdoors from safety and fire hazards.

1.2.2.1 The purpose of this standard shall be to provide guidelines to the authority having jurisdiction for approval of the use of pyrotechnics as specified in 1.2.2.

1.2.2.2 The purpose of this standard shall be to provide requirements for local permits.

1.3 Application.

1.3.1* This standard shall apply to the use of pyrotechnics in the performing arts in conjunction with theatrical, musical, or similar productions before a proximate audience, performers, or support personnel.

1.3.2 This standard shall apply to the performance specifications, instructions, notifications, and labeling by the manufacturer of pyrotechnics materials, devices, equipment, and supplies.

1.3.3 This standard shall apply to any indoor use of pyrotechnics.

1.3.4 This standard shall apply to any hybrid flame effect used before a proximate audience.

1.3.5 Application of NFPA 1123.

1.3.5.1 This standard shall apply to any outdoor use of pyrotechnics at distances less than those required by NFPA 1123.

1.3.5.2 The use of pyrotechnics before a proximate audience shall not be construed as a display of fireworks as regulated by NFPA 1123, except that any use of aerial shells as regulated by NFPA 1123 shall comply with the provisions of that code.

1.3.6 Application to Air Show Environments.

1.3.6.1 This standard shall apply to the installation and use of pyrotechnic devices on aircraft in a static display or as part of ground support acts during an air show when such devices are used at distances less than those specified in NFPA 1123.

1.3.6.2 Devices mounted to aircraft shall be mounted in a secure manner to maintain their proper position and orientation and to prevent the unintentional separation of the device from the aircraft.

1.3.6.3* This standard shall not apply to the use of pyrotechnic devices that have been mounted on aircraft once the aircraft is airborne and operating under the terms of a Federal Aviation Administration (FAA) waiver.

1.3.6.4* This standard shall not apply to the use of ground-based effects utilizing explosives, liquid fuels, or other combustibles in air show environments.

1.3.7 Application to the Entertainment Industry.

1.3.7.1 This standard shall apply to the video recording, audio recording, or filming of any television, radio, or movie production only where such production takes place before a proximate audience and includes the use of pyrotechnics.

1.3.7.2 Where there is no audience present, NFPA 140 shall be used to regulate any pyrotechnic use.

1.3.8 This standard shall apply to the rehearsal of any production in which pyrotechnics are used.

1.3.9 This standard shall not apply to the manufacture, transportation, or storage of fireworks at a manufacturing facility.

1.3.10 This standard shall not apply to the use of consumer fireworks by the general public.

1.3.11* This standard shall not apply to the manufacture, transportation, storage, and use of explosives.

1.3.12 This standard shall not apply to the transportation, handling, or use of pyrotechnics by the Armed Forces of the United States of America.

1.3.13 This standard shall not apply to the transportation of pyrotechnic materials and devices approved and governed by U.S. Department of Transportation regulations.

1.3.14* Application to Training.

1.3.14.1 This standard shall not apply to the use of pyrotechnics in training by the fire service, law enforcement, or similar government agencies.

1.3.14.2 This standard shall apply where there is a proximate audience that is not part of the live fire training evolution.

1.3.15 Applicability of NFPA *101*.

1.3.15.1 Facilities in or at which pyrotechnics are to be used or stored shall comply with the applicable provisions of NFPA *101*.

1.3.15.2 Pyrotechnics shall be permitted to be used in accordance with the provisions of NFPA *101*, 13.7.3, where approved by the authority having jurisdiction.

1.3.16* This standard shall not apply to the use of flammable liquids and flammable gases in the performing arts.

1.3.17 This standard shall not apply to the manufacture of model rocket and high power rocket motors as covered in NFPA 1125.

1.3.18* This standard shall not apply to the design, construction, limitation of propellant mass and power, and reliability of all rocket motors, other than fireworks rockets, produced commercially for sale to or use by the public for purposes of education, recreation, and sporting competition.

1.3.19 This standard shall not apply to the sale and use of model rockets and model rocket motors used in conformance with NFPA 1122.

1.3.20 This standard shall not apply to the sale and use of high power sport rockets and high power sport rocket motors used in conformance with NFPA 1127.

1.3.21 This standard shall not apply to the use of firearms used in motion pictures, television, or other entertainment industries.

1.3.22 This standard shall apply to any portion or component of any hybrid flame effect that utilizes materials, devices, and methodologies governed by this standard.

1.3.23* This standard shall not apply to the use of flame effect materials as defined in NFPA 160.

1.4 Retroactivity. The provisions of this standard reflect a consensus of what is necessary to provide an acceptable degree of protection from the hazards addressed in this standard at the time the standard was issued.

1.4.1 Unless otherwise specified, the provisions of this standard shall not apply to facilities, equipment, structures, or installations that existed or were approved for construction or installation prior to the effective date of the standard. Where specified, the provisions of this standard shall be retroactive.

1.4.2 In those cases where the authority having jurisdiction determines that the existing situation presents an unacceptable degree of risk, the authority having jurisdiction shall be permitted to apply retroactively any portions of this standard deemed appropriate.

1.4.3 The retroactive requirements of this standard shall be permitted to be modified if their application clearly would be impractical in the judgment of the authority having jurisdiction, and only where it is clearly evident that a reasonable degree of safety is provided.

1.5 Equivalency. Nothing in this standard is intended to prevent the use of systems, methods, or devices of equivalent or superior quality, strength, fire resistance, effectiveness, durability, and safety over those prescribed by this standard.

1.5.1 Technical documentation shall be submitted to the authority having jurisdiction to demonstrate equivalency.

1.5.2 The system, method, or device shall be approved for the intended purpose by the authority having jurisdiction.

Chapter 2 Referenced Publications

2.1 General. The documents or portions thereof listed in this chapter are referenced within this standard and shall be considered part of the requirements of this document.

2.2 NFPA Publications. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471.

NFPA 10, *Standard for Portable Fire Extinguishers,* 2013 edition.

NFPA 72®, *National Fire Alarm and Signaling Code,* 2016 edition.

NFPA *101®*, *Life Safety Code®,* 2015 edition.

NFPA 140, *Standard on Motion Picture and Television Production Studio Soundstages, Approved Production Facilities, and Production Locations,* 2013 edition.

NFPA 160, *Standard for the Use of Flame Effects Before an Audience,* 2016 edition.

NFPA 1122, *Code for Model Rocketry,* 2013 edition.

NFPA 1123, *Code for Fireworks Display,* 2014 edition.

NFPA 1125, *Code for the Manufacture of Model Rocket and High Power Rocket Motors,* 2012 edition.

NFPA 1127, *Code for High Power Rocketry,* 2013 edition.

2.3 Other Publications.

2.3.1 U.S. Government Publications. U.S. Government Printing Office, Washington, DC 20402.

Title 27, Code of Federal Regulations, Part 55, Bureau of Alcohol, Tobacco, Firearms and Explosives, "Explosives Law and Regulations."

Title 27, Code of Federal Regulations, Subpart K.

Title 49, Code of Federal Regulations, Part 171 to End.

2.3.2 Other Publications.

Merriam-Webster's Collegiate Dictionary, 11th edition, Merriam-Webster, Inc., Springfield, MA, 2003.

2.4 References for Extracts in Mandatory Sections.

NFPA 1123, *Code for Fireworks Display*, 2014 edition.

Chapter 3 Definitions

3.1 General. The definitions contained in this chapter shall apply to the terms used in this standard. Where terms are not defined in this chapter or within another chapter, they shall be defined using their ordinarily accepted meanings within the context in which they are used. *Merriam-Webster's Collegiate Dictionary*, 11th edition, shall be the source for the ordinarily accepted meaning.

3.2 NFPA Official Definitions.

3.2.1* Approved. Acceptable to the authority having jurisdiction.

3.2.2* Authority Having Jurisdiction (AHJ). An organization, office, or individual responsible for enforcing the requirements of a code or standard, or for approving equipment, materials, an installation, or a procedure.

3.2.3 Labeled. Equipment or materials to which has been attached a label, symbol, or other identifying mark of an organization that is acceptable to the authority having jurisdiction and concerned with product evaluation, that maintains periodic inspection of production of labeled equipment or materials, and by whose labeling the manufacturer indicates compliance with appropriate standards or performance in a specified manner.

3.2.4* Listed. Equipment, materials, or services included in a list published by an organization that is acceptable to the authority having jurisdiction and concerned with evaluation of products or services, that maintains periodic inspection of production of listed equipment or materials or periodic evaluation of services, and whose listing states that either the equipment, material, or service meets appropriate designated standards or has been tested and found suitable for a specified purpose.

3.2.5 Shall. Indicates a mandatory requirement.

3.2.6 Should. Indicates a recommendation or that which is advised but not required.

3.2.7 Standard. An NFPA Standard, the main text of which contains only mandatory provisions using the word "shall" to indicate requirements and that is in a form generally suitable for mandatory reference by another standard or code or for adoption into law. Nonmandatory provisions are not to be considered a part of the requirements of a standard and shall be located in an appendix, annex, footnote, informational note, or other means as permitted in the NFPA Manuals of Style. When used in a generic sense, such as in the phrase "standards development process" or "standards development activities," the term "standards" includes all NFPA Standards, including Codes, Standards, Recommended Practices, and Guides.

3.3 General Definitions.

3.3.1* Aerial Shell. A cartridge containing pyrotechnic composition, a burst charge, and an internal time fuse or module that is propelled into the air from a mortar and that is intended to burst at or near apogee.

3.3.2 Airburst. A pyrotechnic device that is suspended in the air to simulate outdoor aerial fireworks shells without producing hazardous debris.

3.3.3 Assistant. A person who works under the supervision of the pyrotechnic operator.

3.3.4 Audience. Spectators whose primary purpose is to view a performance.

3.3.5 Binary Materials. See 3.3.6, Binary System.

3.3.6* Binary System. A two-component pyrotechnic system.

3.3.7 Black Powder. A low explosive consisting of an intimate mixture of potassium or sodium nitrate, charcoal, and sulfur.

3.3.8 Combustible. Capable of undergoing combustion.

3.3.9* Comet. A single pellet of pyrotechnic composition that is ignited and simultaneously propelled into the air from a mortar or tube.

3.3.10 Concussion Effect. A pyrotechnic effect that produces a loud noise and a violent jarring shock for dramatic effect.

3.3.11 Concussion Mortar. A device specifically designed and constructed, when loaded with pyrotechnic material, to produce a concussion effect.

3.3.12* Electric Match. An electric device that contains a small amount of pyrotechnic material that ignites when current flows through the device. [**1123,** 2014]

3.3.13* Electrical Firing System. Electrical equipment that provides and/or controls the ignition of pyrotechnics.

3.3.14* Fallout Area. The designated area in which hazardous debris is intended to fall after a pyrotechnic device is fired.

3.3.15* Fallout Radius. A line that defines the fallout area of a pyrotechnic device.

3.3.16 Fire (verb). To ignite pyrotechnics by using an electric match, electrical current, or some other means.

3.3.17* Flammable. A combustible that is capable of easily being ignited and rapidly consumed by fire.

3.3.18 Flare. A pyrotechnic device designed to produce a single source of intense light for a defined period of time.

3.3.19 Flash Pot. A device used with flashpowder that produces a flash of light and directs the flash.

3.3.20 Flashpowder. A specific pyrotechnic material in powder form composed of fuel(s) and oxidizer(s) that upon ignition produces a flash of light, sparkles, an audible report, or a combination of these effects.

3.3.21* Fuel. In pyrotechnics, anything combustible or acting as a chemical-reducing agent.

3.3.22 Gerb. A cylindrical preload pyrotechnic device, intended to produce a controlled spray of sparks with a reproducible and predictable duration, height, and diameter.

3.3.23* Hazardous Debris. Any debris produced or expelled by the functioning of a pyrotechnic device that is capable of causing personal injury or unpredicted property damage.

3.3.24* Holder. Any device used to hold a pyrotechnic device other than a mortar.

3.3.25* Hybrid Flame Effect. A flame effect that is used in combination with a pyrotechnic material or device.

3.3.26* Ingredient. A chemical used to create a pyrotechnic material.

3.3.27* Isolated Power Supplies. Ungrounded power supplies that provide electricity in which both wires are isolated from ground.

3.3.28* Lift Charge. The composition in a pyrotechnic device that propels (lifts) the effect into the air when ignited.

3.3.29 Magazine. A building or structure, other than an explosives manufacturing building, approved for the storage of explosive materials.

3.3.30* Mine. A device containing multiple pyrotechnic effects that are simultaneously ignited and dispersed into the air from a mortar or tube.

3.3.31 Mortar. A device used to direct and control the effect of the pyrotechnic material.

3.3.32 Oxidizer. Any material that readily yields oxygen or other oxidizing gas, or that readily reacts to promote or initiate combustion of combustible materials.

3.3.33* Performance. The enactment of a musical, dramatic, operatic, or other entertainment production.

3.3.34* Performer. Any person active in a performance during which pyrotechnics are used and who is not part of the audience or support personnel.

3.3.35* Permittee. The person or persons responsible for obtaining the required permits for a production that includes the use of pyrotechnics.

3.3.36 Preload. A pyrotechnic device supplied by the manufacturer in a ready-to-use condition.

3.3.37* Producer. An individual who has overall responsibility for the operation and management of the performance where the pyrotechnics are to be used.

3.3.38* Production. All the performances of a musical, dramatic, operatic, or other series of shows.

3.3.39 Proximate Audience. An audience closer to pyrotechnic devices than permitted by NFPA 1123.

3.3.40 Pyrotechnic Device. Any device containing pyrotechnic materials and capable of producing a special effect as defined in this standard.

3.3.41* Pyrotechnic Material (Pyrotechnic Special Effects Material). A chemical mixture that contains sufficient oxygen or oxidizing agent required to initiate or maintain combustion and is used in the entertainment industry to produce visible or audible effects by combustion, deflagration, or detonation.

3.3.42* Pyrotechnic Operator. The person who has overall responsibility for the operation and safety of a pyrotechnic display.

3.3.43 Pyrotechnic Special Effect. A special effect created through the use of pyrotechnic materials and devices. *(See also 3.3.47, Special Effect.)*

3.3.44 Pyrotechnics. Controlled exothermic chemical reactions that are timed to create the effects of heat, gas, sound, dispersion of aerosols, emission of visible electromagnetic radiation, or a combination of these effects to provide the maximum effect from the least volume.

3.3.45 Rehearsal. A practice performance during which no audience is present.

3.3.46 Saxon. A pyrotechnic device consisting of a tube that rotates around a pivot point to produce a circular shower of sparks.

3.3.47* Special Effect. A visual or audible effect used for entertainment purposes, often produced to create an illusion.

3.3.48* Support Personnel. Any individual who is not a performer or member of the audience.

3.3.49 Venue Manager. An individual who has overall responsibility for the operation and management of the facility where pyrotechnics are to be used in a performance.

3.3.50 Waterfall, Falls, Park Curtain. An effect of a cascade of sparks usually produced by multiple devices fired simultaneously.

3.3.51 Wheel. A pyrotechnic device that rotates on a central axis and that consists of multiple gerbs or rockets attached to a framework.

Chapter 4 Transportation of Pyrotechnic Materials

4.1 Transportation. All ingredients, pyrotechnic materials, and pyrotechnic devices shall be transported in accordance with U.S. Department of Transportation (U.S. DOT) 49 CFR and any state and local requirements.

Chapter 5 Storage of Pyrotechnic Materials and Devices

5.1 Storage Requirements.

5.1.1* All pyrotechnic materials and devices shall be stored in accordance with 27 CFR Subpart K (Federal Storage Regulation) and any state and local regulations.

5.1.2 If more pyrotechnic material than is needed for the performance is prepared by mixing a single unit, the excess mixed material shall be considered, handled, stored, and disposed of as a pyrotechnic material of the applicable explosive class as defined in 27 CFR 55.

5.2 In-Transit Requirements.

5.2.1 All pyrotechnic materials and devices not stored in magazines meeting the requirements of 27 CFR Subpart K shall remain in their prescribed U.S. Department of Transportation containers until it becomes necessary to set them up for a performance.

5.2.2 The time between removal from storage and actual use shall be the shortest time practicable with respect to the needs of a performance.

5.2.3 Pyrotechnic materials and devices shall be supervised, except where they are secured or inaccessible.

5.3 Separation Distance from Unprotected Heat Source or Open Flame. Pyrotechnic materials and devices shall not be

stored within 50 ft (15.3 m) of any unprotected source of heat or open flame.

Chapter 6 Permit Requirements and Operator Qualifications

6.1 Permit Requirements.

6.1.1 The requirements of this standard shall be used by the authority having jurisdiction to promote the safety of the production and the qualifications of the pyrotechnic operator.

6.1.2 The use of all pyrotechnics shall be approved by the authority having jurisdiction.

6.1.3 The authority having jurisdiction shall determine that measures are established to provide crowd management, security, fire protection, and other emergency services.

6.1.4 All planning and use of pyrotechnics shall be coordinated with the venue manager and producer.

6.2 Pyrotechnics Plans.

6.2.1 Before the performance of any production, the permittee shall submit a plan for the use of pyrotechnics to the authority having jurisdiction.

6.2.2 After a permit has been granted, the permittee shall keep the plan available at the site for safety inspectors or other designated agents of the authority having jurisdiction.

6.2.3 The addition of pyrotechnics to a performance or any change in the presentation of pyrotechnics, excluding the reduction in the number or size of the devices, shall require approval by the authority having jurisdiction.

6.2.4* Hybrid flame effects shall meet the requirements of 6.2.4.1 and 6.2.4.2.

6.2.4.1 That portion of the hybrid flame effect that is governed by NFPA 1126 shall meet all of the requirements of NFPA 1126.

6.2.4.2 That portion of the hybrid flame effect that is governed by NFPA 160 shall meet all of the requirements of NFPA 160.

6.3 Content of Plans.

6.3.1 The plan for the use of pyrotechnics shall be made in writing or such other form as is approved by the authority having jurisdiction.

6.3.2 The plan shall include the following:

(1) Name of the person, group, or organization sponsoring the production
(2) Date and time of day of the production
(3) Exact location of the production
(4) Name of the person actually in charge of firing the pyrotechnics (i.e., the pyrotechnic operator)
(5) Number, names, and ages of all assistants who are to be present
(6) Qualifications of the pyrotechnic operator
(7) Pyrotechnic experience of the operator
(8) Confirmation of any applicable state and federal licenses held by the operator or assistant(s)
(9) Evidence of the permittee's insurance carrier or financial responsibility
(10) Number and types of pyrotechnic devices and materials to be used, the operator's experience with those devices and effects, and a definition of the general responsibilities of assistants
(11) Diagram of the grounds or facilities where the production is to be held that shows the point at which the pyrotechnic devices are to be fired, the fallout radius for each pyrotechnic device used in the performance, and the lines behind which the audience is to be restrained
(12) Point of on-site assembly of pyrotechnic devices
(13) Manner and place of storage of the pyrotechnic materials and devices
(14) Material safety data sheet (MSDS) for the pyrotechnic material(s) to be used
(15) Certification that the set, scenery, and rigging materials are inherently flame-retardant or have been treated to achieve flame-retardancy
(16) Certification that all materials worn by performers in the fallout area during use of pyrotechnic effects shall be inherently flame-retardant or have been treated to achieve flame-retardancy
(17) In the case of a hybrid flame effect, identification of those portions of the flame effect that require compliance with NFPA 160 and those portions that require compliance with NFPA 1126

6.3.3* Plan Submission. All plans shall be submitted as soon as possible so that the authority having jurisdiction has time to be present and to notify other interested parties.

6.4 Pyrotechnics Demonstration.

6.4.1 Pre-Show Review and Demonstration.

6.4.1.1* Where required, a walk-through and a representative demonstration of the pyrotechnics shall be provided to the authority having jurisdiction before a permit is approved.

6.4.1.2 The authority having jurisdiction shall be permitted to waive this requirement based on past history, prior knowledge, and other factors, provided the authority is confident that the discharge of pyrotechnics can be conducted safely.

6.4.2 The demonstration shall be scheduled with sufficient time allowed to reset/reload the pyrotechnics before the arrival of the audience.

6.4.3 Fire Alarms.

6.4.3.1 Where the use of certain indoor pyrotechnics requires smoke detectors to be bypassed or air-handling systems to be disengaged, the fire department shall be notified and a fire department representative shall be present for the demonstration.

6.4.3.2 The individual responsible for the life safety systems of the building shall return those systems to normal operating conditions as soon as the likelihood of false alarms from the pyrotechnics has passed.

6.4.3.3 Alarm verification as described in 23.8.5.4.1 of *NFPA 72* shall be allowed as a means of controlling false alarm initiation resulting from residual particulates suspended in the air.

6.5* Qualifications of Operators and Assistants.

6.5.1 All pyrotechnic operators shall be at least 21 years old and licensed or approved by the authority having jurisdiction in accordance with any and all applicable laws.

6.5.1.1 An applicant for licensing as an operator shall provide evidence of actual experience as an operator or assistant as part

of demonstrating competency to the authority having jurisdiction.

6.5.1.2 An applicant for licensing as an operator shall successfully complete a written examination of laws, regulations, and safety practices pertaining to the discharge of pyrotechnics, which shall be administered by the authority having jurisdiction, or otherwise shall demonstrate knowledge of these areas.

6.5.2 All assistants shall be at least 18 years old.

Chapter 7 Requirements for Manufacturers of Pyrotechnics and Associated Equipment

7.1 Pyrotechnic Product Information. The pyrotechnic operator shall use products provided with written information supplied by the manufacturer detailing the following information:

(1) Name of the pyrotechnic device and a description of its effect
(2) Performance characteristics (duration, height, and diameter of the effect) of the pyrotechnic device where used as specified, or, in the case of binary materials, where used in the specified amounts for the designated materials and equipment
(3) Material safety data sheet (MSDS) for the pyrotechnic materials
(4)* The manufacturer's statement regarding whether the pyrotechnic device or material is intended for indoor use and whether it is to be used with any cautions or special considerations
(5) Instructions for the proper method(s) of placing, loading, and using the pyrotechnic device, including any cautions or special considerations
(6) Name, address, and phone number of the manufacturer

7.2 Identification of Pyrotechnic Devices or Binary Systems.

7.2.1 All pyrotechnic products or binary systems used shall have been identified or marked by the manufacturer with the following information:

(1) Name of the pyrotechnic device or binary system
(2) Name, address, and phone number of the manufacturer
(3) Statement describing the conditions of use and potential hazards
(4)* Manufacturer's statement regarding whether the pyrotechnic device or binary system is intended for indoor use

7.2.2 The marking on the pyrotechnic device shall be of at least 6-point type size.

7.2.3 Where the pyrotechnic device is too small to bear the label specified in 7.2.1, this information shall be printed on the instruction sheet, shipping container, or packaging.

7.3 Pyrotechnic Equipment.

7.3.1 The pyrotechnic operator shall use equipment for which the manufacturer has provided instructions for use, including the ratings of the types and quantities of material(s) for those devices.

7.3.2 The pyrotechnic operator shall use electrical firing systems for which the manufacturer has provided instructions for the setup and use of the system with pyrotechnics.

7.4 Binary Materials.

7.4.1 Binary materials shall be premeasured and packaged by the manufacturer.

7.4.2 Binary materials intended for indoor use shall be labeled by the manufacturer as being intended for indoor use.

Chapter 8 Use of Pyrotechnics

8.1 General Fire Protection.

8.1.1* Portable Fire-Fighting Equipment. Four or more fire extinguishers of the classification and size as approved by the authority having jurisdiction shall be readily accessible while the pyrotechnics are being loaded, prepared for firing, or fired.

8.1.1.1* In all cases, at least two pressurized water, Class 2-A extinguishers and two Class 10-BC extinguishers shall be provided, in addition to those required by NFPA 10, for the building.

8.1.1.2 The extinguishers shall be placed so that at least one is located on each opposing side of the performance where pyrotechnics are used.

8.1.1.3 Additional fire-extinguishing equipment shall be provided as required by NFPA 10 and the authority having jurisdiction.

8.1.2 Personnel who have a working knowledge of the use of the applicable fire extinguishers shall be present while the pyrotechnics are being handled, used, or removed.

8.1.3 To prevent unauthorized personnel from gaining access to the pyrotechnics, the venue manager for the site shall provide a separate, lockable room or facility for the preparation of pyrotechnic materials and devices that has been approved by the authority having jurisdiction and that is acceptable to the pyrotechnic operator.

8.1.4 Provisions for lockable storage for pyrotechnics, approved by the authority having jurisdiction, also shall be provided.

8.1.5 No personnel shall use or handle pyrotechnic materials or devices while under the influence of intoxicating beverages, narcotics, controlled substances, or prescription or nonprescription drugs that can impair judgment.

8.1.6 Fire Detection and Life Safety Systems.

8.1.6.1 Portions of fire detection and life safety systems shall be permitted to be interrupted during the operation of temporarily installed pyrotechnic effects when the following conditions are met:

(1) Approval by the authority having jurisdiction
(2) Approval by the owner or owner's agent
(3)* Presence of an approved fire watch capable of directing the operation of all fire detection and life safety systems installed in the building

8.1.6.2 Fire detection and life safety systems shall be permitted to be interrupted during the operation of permanently installed pyrotechnic effects only for initial acceptance of the system.

8.2 Firing Prerequisites.

8.2.1 Mounting.

8.2.1.1 All pyrotechnic devices shall be mounted in a secure manner to maintain their proper positions and orientations so that, when they are fired, the pyrotechnic effects described in the plan submitted by the permittee are produced.

8.2.1.2* Pyrotechnic devices shall be mounted so that no fallout from the device endangers human lives, results in personal injury, or damages property.

8.2.2 Equipment.

8.2.2.1 Pyrotechnic materials shall be fired only from equipment specifically constructed for the purpose of firing pyrotechnic materials.

8.2.2.2 The pyrotechnic operator shall be responsible for selecting equipment and materials that are compatible.

8.2.2.3 Protection of Performer.

8.2.2.3.1 Where a pyrotechnic special effect is placed on or in contact with a performer's body, a means of shielding or containment adequate to prevent any injury to the performer shall be provided.

8.2.2.3.2 This protection shall be sufficient to protect against the normal functioning of the pyrotechnic special effect as well as any possible malfunction.

8.2.2.4 Converted electrical switch boxes, lamp sockets, lamp holders, plug fuses, or other similar thin-walled, brittle devices shall not be used for concussion mortars or flash pots.

8.2.3 Mixing of Binary Systems. Binary systems shall be mixed and used in accordance with the manufacturer's instructions.

8.2.3.1 Binary systems shall be mixed one unit at a time, and no more units than are needed for immediate use shall be mixed.

8.2.3.2 Binary systems shall be mixed only in the bottles supplied by the manufacturer.

8.2.3.3 No additional tools shall be used in the mixing of binary systems.

8.2.4 All holders shall be constructed and secured so that they remain in a fixed position when the pyrotechnic device is fired.

8.2.5 Mortars and Flash Pots.

8.2.5.1 Mortars and flash pots shall be constructed so that they do not fragment when the pyrotechnic material is fired and so that their shapes are not distorted after use.

8.2.5.2 Distorted mortars and flash pots shall not be used.

8.2.6 Before firing the pyrotechnic device, the pyrotechnic operator or designated performance security staff shall prevent unauthorized entry into the area where the special effects are to occur.

8.2.7 Rotating pyrotechnic devices, such as wheels and saxons, shall be mounted securely so that their rotation does not cause the holder to fail.

8.2.8 Rockets.

8.2.8.1 Where rockets are launched before a proximate audience, performers, or support personnel, the rockets shall be attached securely to a guide wire or cable with both ends attached and placed on an impact-resistant surface located at the terminal end of the guide.

8.2.8.2 The guide wire or cable required by 8.2.8.1 shall be of sufficient strength and flame resistance to withstand the exhaust from the rocket.

8.2.8.3 An effective arrangement to stop the rocket shall be provided.

8.2.9 Flares shall be placed so that any debris falls into a safe, flame-resistant area.

8.2.10 Comets and mines shall be fired so that the trajectory of their pyrotechnic material is not carried over the audience.

8.2.11 Waterfalls and gerbs shall be placed for firing so that no flammable materials are within their fallout area.

8.2.12 Pyrotechnic devices and materials used indoors shall be specifically manufactured and marked for indoor use by the manufacturer.

8.2.13 Airbursts shall be permitted to be fired above the audience, subject to the following conditions:

(1) The airburst shall be suspended by a minimum 30-gauge metal wire that is attached securely to a secure support acceptable to the authority having jurisdiction.
(2) The airburst shall occur at a minimum height of three times the diameter of the effect.
(3) Where the effect is demonstrated, there shall be no burning or glowing particles less than 15 ft (4.6 m) above the floor.

8.3* Firing Safeguards.

8.3.1 Circuit Testers.

8.3.1.1 Circuit testers shall supply no more than 25 mA.

8.3.1.2 Circuit testers shall be permitted to include, but are not limited to, blasting galvanometers, low-current multimeters, or a firing system with a built-in circuit tester.

8.3.2 Power Sources.

8.3.2.1* Grounded power supplies that switch both sides of every electric match firing circuit or that are designed to fail safe upon detection of a ground fault shall be permitted to be used in firing systems.

8.3.2.2 Power sources used for firing pyrotechnic devices shall also be permitted to use batteries, isolated power supplies, or transformers.

8.3.2.3 Only pyrotechnic systems shall be used for pyrotechnic purposes.

8.3.3 All firing systems shall be designed to ensure against accidental firing by providing at least a two-step interlock in which no firing power can be applied to any firing circuit unless the operator intentionally does both of the following:

(1) Enables or arms the firing system
(2) Deliberately applies firing power

8.3.4* Electrical firing systems shall include a means that greatly reduces the possibility that unauthorized or unintentional firings can occur.

8.3.5 Communication.

8.3.5.1 Pyrotechnic devices shall be fired only when the area where the effect is to occur is in clear view of the pyrotechnic operator or an assistant who is in direct communication with the operator.

8.3.5.2* Direct communication with the pyrotechnic operator or assistant shall be permitted to be accomplished using signal lights or other nonverbal means of communication.

8.3.6* Warning lights or other signals shall be permitted to indicate the impending firing of a pyrotechnic effect.

8.3.7 Concussion mortars and concussion effects shall be secured by being placed under the stage or behind barricades made of equipment road cases to prevent access by the audience, performers, and support personnel.

8.3.8 While the authority having jurisdiction has the authority to stop the firing of pyrotechnics, the ultimate responsibility for firing shall be that of the pyrotechnic operator.

8.4 Separation Distances for Audiences.

8.4.1* Each pyrotechnic device fired during a performance shall be separated from the audience by a minimum of 15 ft (4.6 m) or twice the fallout radius of the device, whichever is greater, except where otherwise approved by the authority having jurisdiction.

8.4.2 Concussion mortars and concussion effects shall be separated from the audience by a minimum of 25 ft (7.6 m).

8.4.3 There shall be no glowing or flaming particles within 10 ft (3 m) of the audience.

8.5 Safety Precautions.

8.5.1 The premises where pyrotechnic materials and devices are handled and used shall be maintained in a neat and orderly condition and shall be kept free of any conditions that can create a fire hazard.

8.5.2 Shipping Container Inspection. The pyrotechnic operator shall inspect the containers in which all pyrotechnic materials and devices have been shipped.

8.5.2.1 Damaged pyrotechnic materials and devices shall not be used and shall be disposed of in accordance with the manufacturer's instructions.

8.5.2.2 Before disposal, shipping containers shall be inspected for loose pyrotechnic materials.

8.5.2.3 If a shipping container is found to contain loose pyrotechnic materials, it shall be disposed of in accordance with the manufacturer's instructions.

8.5.3 Storage Requirements.

8.5.3.1 Pyrotechnic materials and devices shall be stored in accordance with regulations promulgated by the Bureau of Alcohol, Tobacco, Firearms, and Explosives (ATF).

8.5.3.2 A closed vehicle, such as a truck, shall be permitted to be used for storage where permitted by ATF, state, or local regulations.

8.5.4 A quantity of pyrotechnics no greater than that needed for the production of special effects in one performance or rehearsal shall be removed from storage.

8.5.5 Smoking.

8.5.5.1 Smoking shall not be permitted within 25 ft (7.6 m) of the area where pyrotechnics are being handled or stored.

8.5.5.2 NO SMOKING signs shall be conspicuously posted.

8.5.5.3 Smoking by performers as part of the performance shall be permitted as blocked in rehearsals and approved by the pyrotechnic operator and the authority having jurisdiction.

8.5.6 No pyrotechnics shall be left unattended other than in a secured, approved location.

8.5.7* The pyrotechnic operator and assistants shall wear safety glasses and protective clothing applicable to the hazard associated with the material during preparation and loading of pyrotechnic devices.

8.6 Performance.

8.6.1 Safeguarding Performers.

8.6.1.1 The pyrotechnic effect operator shall advise all performers and support personnel that they are exposed to a potentially hazardous situation when performing or otherwise carrying out their responsibilities in the vicinity of a pyrotechnic effect.

8.6.1.2 Performers and support personnel familiar and experienced with the pyrotechnic effects being used shall be permitted to be in the area of a pyrotechnic effect, but only voluntarily and in the performance of their duties.

8.6.2 No part, projectile, or debris from the pyrotechnic material or device shall be propelled so that it damages overhead properties, overhead equipment, or the ceiling and walls of the performance site.

8.6.3 Final Pre-Performance Safety Procedures.

8.6.3.1 Immediately before any performance, the pyrotechnic operator shall make a final check of wiring, position(s), hookups, and pyrotechnic devices to ensure that they are in working order.

8.6.3.2 The pyrotechnic operator also shall verify safety distances.

8.6.4 The placement and wiring of all pyrotechnic devices shall be designed to minimize the possibility of performers and support personnel disturbing the devices during a performance.

8.6.5 The pyrotechnic operator shall exercise extreme care throughout the performance to ensure that the pyrotechnic devices function correctly and that the performers, support personnel, and audience are clear of the devices.

8.6.6 Smoke Control. When pyrotechnics are fired, the quantity of smoke developed shall be controlled so as not to obscure the visibility of exit signs or paths of egress.

8.7 Requirements After Performance.

8.7.1 Post-Performance Procedures.

8.7.1.1 Immediately after each performance and before support personnel remove any property related to a perform-

ance, the pyrotechnic operator shall verify that all pyrotechnic devices have been fired.

8.7.1.2 Any unfired pyrotechnic materials or devices shall be either fired or disposed of in accordance with the manufacturer's recommendations.

8.7.2 All unused pyrotechnics shall be disposed of in accordance with the manufacturer's instructions or returned to storage as soon as possible following the performance or rehearsal.

8.7.3 After all other properties and equipment relating to the production have been removed from the performance site, the pyrotechnic operator shall verify that the performance site is free of any pyrotechnic devices or materials.

8.7.4 Post-Performance Pyrotechnics Storage Requirement.

8.7.4.1 All pyrotechnics shall be stored properly for transportation to the next performance.

8.7.4.2 No pyrotechnics shall be transported unless such transportation meets U.S. Department of Transportation regulations.

8.7.5 Binary systems that have been mixed in excess of the needs of a rehearsal or performance shall be stored as an explosive of the applicable class or disposed of in accordance with the manufacturer's instructions. *(See Section 5.3 for storage requirements.)*

8.7.6 Life safety and other systems that have been disarmed or disengaged as specified by 6.4.3 and 8.1.6 shall be restored to normal operating condition as soon as the likelihood of false alarms from the use of pyrotechnics has passed.

8.7.7 The fire watch required by 8.1.6 shall remain present until the restoration of normal operating conditions has been verified.

Annex A Explanatory Material

Annex A is not a part of the requirements of this NFPA document but is included for informational purposes only. This annex contains explanatory material, numbered to correspond with the applicable text paragraphs.

A.1.2.2 NFPA 1126 does not address the potential health hazards of smoke from pyrotechnic reactions, ordinary combustion smoke, or concurrently used theatrical effects such as chemical fogs, dusts, or noise.

A.1.3.1 The circumstances of each show or attraction can be unique and can require individual evaluation when determining the need for protective systems. Factors such as the experience and qualifications of the operations and maintenance personnel, clearance distance between show elements and nonparticipants, visual conditions, and magnitude of the potential hazards are to be weighed in the development and presentation of the production.

A.1.3.6.3 While this standard applies where pyrotechnics are loaded or displayed on the ramp or as part of ground displays at distances less than those specified in NFPA 1123, it does not apply when an aircraft is airborne per the FAA waiver as outlined in 14 CFR 91.119(b) or 14 CFR 91.119(c). The requirements in 14 CFR 91.119(b) and 14 CFR 91.119(c) are that aircraft operate at a minimum of 500 ft (152 m) or 1000 ft (305 m) from the crowd lines and that aircraft do not overfly the audience areas as part of the routine. Once the aircraft has returned to the ground, unfired and misfired devices should be handled in accordance with this standard.

A.1.3.6.4 For information and guidance on ground-based effects in air shows, refer to International Council on Air Shows (ICAS) *Guidelines for the Use of Pyrotechnics and Special Effects at Air Shows,* and NFPA 495.

A.1.3.11 For information on the manufacture, transportation, storage, and use of explosives, see NFPA 495.

A.1.3.14 For information on training uses for pyrotechnics, see NFPA 1403.

A.1.3.16 For information on flammable and combustible liquids, see NFPA 30. For information on storage and handling of liquefied petroleum gases, see NFPA 58.

A.1.3.18 For information on model rockets, see NFPA 1122.

A.1.3.23 For information on the individual or combined use of solid, liquid, or gaseous fuels in the entertainment industry, see NFPA 160. For information on flammable and combustible liquids, see NFPA 30. For information on storage and handling of liquefied petroleum gases, see NFPA 58. For information on the installation of fuel gas piping systems and equipment, see NFPA 54.

A.3.2.1 Approved. The National Fire Protection Association does not approve, inspect, or certify any installations, procedures, equipment, or materials; nor does it approve or evaluate testing laboratories. In determining the acceptability of installations, procedures, equipment, or materials, the authority having jurisdiction may base acceptance on compliance with NFPA or other appropriate standards. In the absence of such standards, said authority may require evidence of proper installation, procedure, or use. The authority having jurisdiction may also refer to the listings or labeling practices of an organization that is concerned with product evaluations and is thus in a position to determine compliance with appropriate standards for the current production of listed items.

A.3.2.2 Authority Having Jurisdiction (AHJ). The phrase "authority having jurisdiction," or its acronym AHJ, is used in NFPA documents in a broad manner, since jurisdictions and approval agencies vary, as do their responsibilities. Where public safety is primary, the authority having jurisdiction may be a federal, state, local, or other regional department or individual such as a fire chief; fire marshal; chief of a fire prevention bureau, labor department, or health department; building official; electrical inspector; or others having statutory authority. For insurance purposes, an insurance inspection department, rating bureau, or other insurance company representative may be the authority having jurisdiction. In many circumstances, the property owner or his or her designated agent assumes the role of the authority having jurisdiction; at government installations, the commanding officer or departmental official may be the authority having jurisdiction.

A.3.2.4 Listed. The means for identifying listed equipment may vary for each organization concerned with product evaluation; some organizations do not recognize equipment as listed unless it is also labeled. The authority having jurisdiction should utilize the system employed by the listing organization to identify a listed product.

A.3.3.1 Aerial Shell. Comets and mines are not aerial shells. The shells are most commonly 3 in. to 6 in. (76 mm to

152 mm) outside diameter and are fired from mortars. Upon firing, the fuse and lift charge are consumed.

A.3.3.6 Binary System. These items are shipped as separate ingredients: an oxidizer and a fuel. The ingredients do not become a pyrotechnic material until they are mixed.

A.3.3.9 Comet. A comet is not an aerial shell or mine. Comets frequently leave a trail of sparks as they rise in the air, and they sometimes burst into smaller fragments at their zenith. A comet is self-consuming as it rises into the air and can be designed to split apart.

A.3.3.12 Electric Match. When a sufficient electric current is passed through the wire circuit, the heat that is generated ignites the pyrotechnic composition, producing a small burst of flame. This flame can be used to ignite a fuse or a lift charge in a fireworks device. For the purposes of this standard, the term *electric match* also refers to other similar technologies in which an electric current is used to produce a high temperature for ignition purposes. [**1123,** 2014]

A.3.3.13 Electrical Firing System. In an electrical system, the electrical firing system is the source of electric current used to initiate electric matches or other devices. Generally, the electrical firing system has components, such as a primary key switch, test circuits, warning indicators, cables, isolation transformers, and switches to control the routing of the current to various pyrotechnics.

A.3.3.14 Fallout Area. The fallout area is defined as a circle that, in turn, is defined by the fallout radius.

A.3.3.15 Fallout Radius. The line is defined by two points. The first point is at the center of a pyrotechnic device. The second point is the point most distant from the center of the pyrotechnic device at which any hazardous debris from the device can fall.

A.3.3.17 Flammable. Flammables can be solids, liquids, or gases exhibiting these qualities.

A.3.3.21 Fuel. Examples of fuels include sulfur, aluminum powder, iron powder, charcoal, magnesium, gums, and organic plastic binders. Fuels are an ingredient of pyrotechnic materials.

A.3.3.23 Hazardous Debris. This includes, but is not limited to, hot sparks, heavy casing fragments, and unignited components. Materials such as confetti, lightweight foam pieces, feathers, or novelties are not to be construed as hazardous debris.

A.3.3.24 Holder. The purpose of a holder is to maintain the position of a pyrotechnic device. Holders hold preloads, which are self-contained. A holder is not to be construed to be a mortar.

A.3.3.25 Hybrid Flame Effect. Special effects that use any of the fuels allowed by NFPA 160, but are initiated or directly ignited by means of a pyrotechnic device are common examples of a hybrid flame effect. One example of a hybrid flame effect is one that uses a pyrotechnic device or igniter to provide the initial flame to light a supervised pilot burner, which, when ignited, can be then proven by a conventional flame safeguard or other means. Often this hybrid configuration is used where the pilot burner is in and/or around water or spray, and conventional ignition means have been determined to be unreliable or to utilize voltages or currents that provide a risk of hazard to persons in and around the water. In other instances, this configuration might be used for added reliability, operational integration, or simply for convenience. In any of these instances, the pyrotechnic igniter is used under the requirements of NFPA 1126 and is installed, maintained, and operated to meet the requirements of both NFPA 1126 and the AHJ. The flame effect itself, regardless of the fuel it uses, is designed, installed, maintained, and operated to meet the requirements of both NFPA 160 and the AHJ.

A second example of a hybrid flame effect is one that utilizes a combustible dust, initially aerosolized and propelled out the end of the burner nozzle by a charge of compressed air and ignited as it passes through a field of burning metal sparks generated by yet another pyrotechnic device. Dust or powder fuel is an acceptable flame effect material under this standard. What causes this effect to be classified as a hybrid flame effect is that the pyrotechnic ignition device(s) falls under the purview of NFPA 1126. (Note that if a gas pilot burner, or even a burning brand were used to ignite an aerosolized powder, this flame effect would not be considered hybrid and would fall entirely under the scope of NFPA 160.)

A third example is an often-used flame effect that is typically limited to outdoor use and utilizes flammable or combustible liquid as a fuel. This would be an acceptable flame effect material under NFPA 160. The fuel is contained in a nonporous bag and placed inside a suitable open-topped container that serves as a "mortar" or burner nozzle. Upon firing, the liquid is freed from the bag, lifted from the barrel, and aerosolized by means of a substantial black powder lifting charge. A second pyrotechnic device might or might not be used to ensure ignition of the fuel at the mouth of the container. What causes this effect to be classified as a hybrid flame effect is that the aerosolizing and igniting charges fall under the purview of NFPA 1126, or, depending upon the particular composition and quantity of the charge in use, possibly NFPA 1123 or NFPA 495. Additionally, the storage and/or handling of the liquid fuel would be governed by the requirements of NFPA 30. (Note that if a compressed air charge was used to aerosolize the liquid and a gas- fired pilot burner or even a burning brand was used to ignite the aerosol, this flame effect would not be considered hybrid and would fall entirely under the scope of NFPA 160.)

A.3.3.26 Ingredient. Such a chemical is not itself a pyrotechnic material.

A.3.3.27 Isolated Power Supply. An an ungrounded generator, an ungrounded dc-to-ac converter, or commercial power supplied through an isolation transformer.

A.3.3.28 Lift Charge. The lift charge usually consists of a Black Powder charge.

A.3.3.30 Mine. A mine is not an aerial shell or comet.

A.3.3.33 Performance. The enactment begins and progresses to its end according to a script, plan, or other preconceived list of events. A performance can include encores.

A.3.3.34 Performer. Performers can include, but are not limited to, actors, singers, musicians, and acrobats.

A.3.3.35 Permittee. The permittee can vary from jurisdiction to jurisdiction. The pyrotechnic operator is not necessarily the permittee.

A.3.3.37 Producer. Generally, the producer is an employee of the promotion company, entertainment company, festival, theme park, or other entertainment group.

A.3.3.38 Production. There are two types of productions: fixed and touring.

A.3.3.41 Pyrotechnic Material (Pyrotechnic Special Effects Material). Such a chemical mixture consists predominantly of solids capable of producing a controlled, self-sustaining, and self-contained exothermic chemical reaction that results in heat, gas, sound, light, or a combination of these effects. The chemical reaction functions without external oxygen.

A.3.3.42 Pyrotechnic Operator. The operator is also responsible for storing, setting up, and removing pyrotechnic materials and devices after a performance.

A.3.3.47 Special Effect. For example, smoke might be produced to create the impression of fog being present, or a puff of smoke, a flash of light, and a loud sound might be produced to create the impression that a cannon has been fired.

A.3.3.48 Support Personnel. Among others, support personnel include the road crew of any production, stage hands, property masters, security guards, fire watch officers, janitors, or any other employee.

A.5.1.1 Binary systems are usually supplied in fuel and oxidizer packages, which are intended to be mixed as single units of fixed size.

A.6.2.4 Where the standards impose different requirements, the most stringent requirement should be the one used, unless otherwise approved by the AHJ.

A.6.3.3 Advance notice should be given no less than 24 hours prior to an event. In some instances, the authority having jurisdiction can waive the 24-hour time period for advance notice.

A.6.4.1.1 The AHJ should invite the local responding fire companies to witness the demonstration so they are familiar with the potential hazards involved.

A.6.5 See Annex C for additional requirements on licensing pyrotechnic operators.

A.7.1(4) Pyrotechnics intended for indoor use can be used outdoors.

A.7.2.1(4) Chemicals and compounds that are not recommended for indoor use other than in trace quantities include, but are not limited to, antimony, arsenic, cadmium, chromium, lead, mercury, nickel, selenium, zinc, and their compounds; naphthalene; or any dye rated as a carcinogen.

Pyrotechnics intended for indoor use can be used outdoors.

A.8.1.1 Attempting to extinguish pyrotechnic fires is not recommended. Fire extinguishers should be chosen to fight potential secondary fires.

A.8.1.1.1 It is often helpful, depending on the type of effect, to have one or more water sprayers (atomizers) sized according to the effect to be present for minor occurrences.

A.8.1.6.1(3) A fire watch is a qualified person or persons in attendance during all times when fixed fire detection systems are intentionally taken out of operation, and should be acceptable to the authority having jurisdiction. The fire watch should be familiar with the operation of all fire and life safety systems in the building and be able to notify emergency responders.

A.8.2.1.2 Deliberate destruction of properties or portions of the set, where destroyed as part of the special effects, should not be construed as property damage.

A.8.3 The source used for testing match continuity should be separate from the firing power supply and must be strictly incapable of producing more than 25 mA. Electromagnetic induced currents in firing circuit wiring can be reduced by utilizing one or more of the following methods:

(1) Use of twisted pair
(2) Use of shielded wire, with the shield bonded to earth ground
(3) Running the wire through metal conduit that is bonded to earth ground
(4) Shunting as near to the electric match as practical

Firing power sources used for firing pyrotechnic devices should be restricted to the following:

(1) Batteries
(2) Low-voltage dc power supplies
(3) Transformers incorporating an electrostatic shield between the primary and secondary winding, with the shield connected to ground

The firing power source, be it ac or dc, and regardless of the voltage level, should be grounded and fused such that a ground fault in the firing circuit cannot cause unintentional ignition. Firing circuit design should be such that neither ignitor lead is electrically connected to the firing power source until ignition is intended. It should not be permitted to wire one side of multiple match terminals together, then to switch current to the other terminal of the ignitor. Switching of one line is permitted if there is only one ignitor in the system or if there is only one match per firing power source. Suggested firing circuit is shown in Figure A.8.3.

A.8.3.2.1 A show control system can be used to sequence a dedicated pyrotechnic system, but the show control system cannot initiate the pyrotechnic system directly.

A.8.3.4 Common techniques include a key-operated switch or similar device. Switches should have labels under or above each switch. The labels should use either letters or numbers.

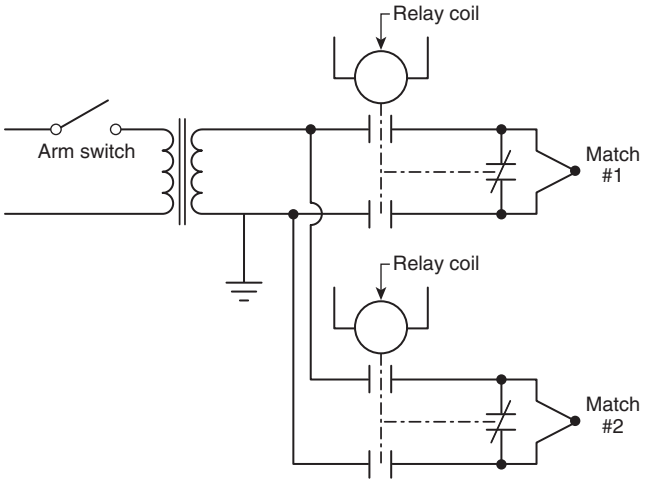


FIGURE A.8.3 Suggested Firing Circuit. Note that the relay contacts shown can be replaced by solid state switching devices. (Circuitry for test currents is omitted for clarity.)

% $8&# +55 *

A.8.3.5.2 For shows that will require direct communications, a safety meeting should take place to determine signals and or communications for stopping or postponing the show due to safety concerns. Those present at the meeting should be the operator and the AHJ as well as other necessary support personnel.

A.8.3.6 Warning lights should be used for warning support personnel of the presence of concussion special effects.

A.8.4.1 A pyrotechnic device with a 10 ft (3 m) fallout radius should be separated from the audience by a minimum distance of 20 ft (6 m).

A.8.5.7 Protective clothing should include long-sleeved shirts and long pants made of 100 percent cotton, leather, or other materials with equivalent flammability, melting, thermal, or static-reducing protective characteristics.

Annex B Inspection Requirements

This annex is not a part of the requirements of this NFPA document but is included for informational purposes only.

B.1 Inspection Requirements. The authority having jurisdiction, who is required to judge the safety of any production, might or might not be familiar with pyrotechnic special effects. The following guidelines are provided as a possible inspection routine that can be used as a model:

(1) Access
  (a) Fire lane kept clear
  (b) Hydrants not blocked
  (c) Fire department connections clear
  (d) Standpipe connections clear
  (e) At least two fire extinguishers provided
  (f) Extinguishing equipment charged and in good working order
  (g) Warning signs
(2) Exits
  (a) All designated exits clear
  (b) Exits visible
(3) Pyrotechnic materials and devices
  (a) Proper and current license in the possession of the pyrotechnic operator
  (b) Permit on site
  (c) Fire department briefed on proposed activity
  (d) Proper ventilation
(4) Electrical
  (a) Cords and connections in good condition
  (b) Power supply operational and in good condition
  (c) Pyrotechnic firing mechanism in good working order
(5) Flameproofing
  (a) Set and scenic materials treated for flame retardance
  (b) Burlap or other protective materials used for rigging treated for flame retardance

Annex C Licensing Requirements for Pyrotechnic Operators

This annex is not a part of the requirements of this NFPA document but is included for informational purposes only.

C.1 Pyrotechnic Experience. A license should be granted only to an individual who has actively participated in the setup and loading of at least five performances where pyrotechnic special effects were used. (The issuing office can substitute an alternative number of performances.)

C.2 Formal Requirements. A license should be granted only to an individual who has met at least one of the following requirements:

(1) Successful completion of a comprehensive written examination covering this standard and state laws pertaining to the use of pyrotechnic special effects
(2) Receipt of a competency certificate from a national organization that promotes the safe use of pyrotechnic special effects
(3) Possession of a license for the use of pyrotechnic special effects issued by another state

C.3 Provisions for License Renewal. A license should not be renewed unless the applicant's record proves active participation in at least three pyrotechnic special effect performances during the past 4 years and that those performances were conducted in a safe manner. The pyrotechnic uses can be of either the indoor or outdoor type.

C.4 27 CFR Part 555.62. A license or permit issued under this part confers no right or privilege to conduct business or operations, including storage, contrary to state or other law. The holder of a license or permit issued under this part is not, by reason of the rights and privileges granted by that license or permit, immune from punishment for conducting an explosive materials business or operations in violation of the provisions of any state or other law. Similarly, compliance with the provisions of any state or other law affords no immunity under federal law or regulations.

Annex D Glossary

This annex is not a part of the requirements of this NFPA document but is included for informational purposes only.

D.1 Common Industry Terms. The following terms are not necessarily inclusive of all the terms used in the pyrotechnic special effects industry.

D.1.1 Articles Pyrotechnic (as Defined in Part 555.11 of 27 CFR). Pyrotechnic devices for professional use similar to consumer fireworks in chemical composition and construction but not intended for consumer use. Such articles meeting the weight limits for consumer fireworks but not labeled as such and classified by U.S. Department of Transportation regulations in 49 CFR 172.101 as UN0431 or UN0432.

D.1.2 Alternating Current (ac). An electrical current that reverses direction in a circuit at regular intervals. Almost all electrical current supplied from wall outlets or sockets is alternating current.

D.1.3 Black Match. A fuse made from thread impregnated with Black Powder and used for igniting pyrotechnic devices.

D.1.4 Blank Cartridge. A cartridge constructed from a cartridge case equipped with a percussion primer and filled with various loads of smokeless powder or other propellant. Weapons using blank cartridges often are used in conjunction with bullet hits.

D.1.5 Body Hit Effect. The effect of a bullet hit that simulates impact from a weapon as it strikes a person.

D.1.6 Bridgewire. A fine wire that either heats up or explodes when an electric current is applied. It is used to fire pyrotechnic devices.

D.1.7 Bullet Hit. A small explosive charge attached to a person's clothing or body, or to an inanimate object, to simulate a slug from a weapon as it strikes a person or object.

D.1.8 Bullet Hit Effect. The effect of a bullet hit that simulates impact from a weapon as it strikes an object.

D.1.9 Colored Smoke. An aerosol of special dyestuffs of chemical reactants dispersed by pyrotechnic heat or explosion.

D.1.10 Color Pot. A tube containing pyrotechnic materials. It produces a colored flame when ignited.

D.1.11 Concussion Flashpowder. Flashpowder intended to be used in a concussion mortar to produce a loud concussive effect.

D.1.12 Consumer Fireworks (formerly known as "Common Fireworks"). Any small fireworks device designed primarily to produce visible effects by combustion that complies with the construction, chemical composition, and labeling regulations of the U.S. Consumer Product Safety Commission, as set forth in 16 CFR 1500 and 1507. Some small devices designed to produce audible effects are included, such as whistling devices, ground devices containing 50 mg (0.8 gr) or less of explosive composition (salute powder), and aerial devices containing 130 mg (2 gr) or less of explosive composition (salute powder) per explosive unit. Consumer fireworks are classed as Explosives 1.4G and described as Fireworks UN0336 by the U.S. Department of Transportation.

D.1.13 Deflagration. A rapid chemical reaction in which the output of heat is sufficient to enable the reaction to continue and accelerate without input of heat from another source. Deflagration is primarily a surface phenomenon, with most reaction products flowing away from the unreacted material along the surface at less than supersonic velocity. The effect of a deflagration under confinement is an explosion. Confinement of the reaction increases pressure, rate of reaction, and temperature and, in some cases, can cause transition into a detonation.

D.1.14 Det Cord. A flexible detonating cord. It is a highly explosive material encased in a plastic-covered cord resembling a clothesline.

D.1.15 Detonation. An extremely rapid chemical reaction in which the pressure generated is sufficient to cause the formation of a shock wave, which causes the reaction to continue. Detonation is a phenomenon with reaction products flowing in the direction of unreacted materials at supersonic velocity. The effect of a detonation with or without confinement is an explosion.

D.1.16 Detonator. Any device containing an initiating or primary explosive that is used for initiating detonation. The term includes, but is not limited to, electric blasting caps (instantaneous and delay types), blasting caps for use with safety fuses, detonating cord delay connectors, and nonelectric caps that use a detonating cord, shock tube, or any other replacement for electric legwires. A detonator also could be an explosive or device initiated by a primer and used to initiate another explosive that is less sensitive and larger.

D.1.17 Direct Current (dc). An electrical current that flows in one direction. Most frequently, direct current is supplied by a battery.

D.1.18 Display Fireworks (formerly known as "Special Fireworks"). Large firework articles designed to produce visible or audible effects for entertainment purposes by combustion, deflagration, or detonation. This term includes, but is not limited to, salutes containing more than 130 mg (2 gr) of explosive composition (salute powder), aerial shells containing more than 60 g (2.1 oz) of total pyrotechnic and explosive composition, and other display pieces that exceed the limit for classification as consumer fireworks. Display fireworks are described as Fireworks UN0335 and classed as Explosives 1.3G by the U.S. Department of Transportation.

D.1.19 Explosion. The rapid production of hot gases at a high pressure as the result of a chemical reaction and the sudden release of the energy to cause strong dynamic stresses in the surroundings. The term usually refers to the effects of a detonation of initiating explosives and high explosives but also applies to the effect of a deflagrating propellant explosive in certain circumstances such as heavy confinement. The term also describes a mechanical phenomenon in which failure of the container results in a sudden release of pressure from within a vessel.

D.1.20 Explosive. Any chemical compound, mixture, or device whose primary or common purpose is to function by explosion. The term includes, but is not limited to, dynamite, Black Powder, pellet powder, initiating explosives, detonators, safety fuses, squibs, detonating cords, igniter cords, and igniters. The term "explosives" includes any material determined to be within the scope of 18 USC 40, "Importation, Manufacture, Distribution, and Storage of Explosive Materials," and also includes any material classified as Explosive 1.1, 1.2, or 1.3 by the U.S. Department of Transportation, "Hazardous Materials Regulations."

D.1.21 Fireworks. Any composition or device for producing a visible and/or audible effect by combustion, deflagration, or detonation and that meets the definition of "consumer" or "display" fireworks as set forth by 49 CFR 171 to end, U.S. Department of Transportation,"Hazardous Materials Regulations."

D.1.22 First Fire. The ignited mixture used with pyrotechnic devices and loaded in direct contact with the main pyrotechnic charge. A pyrotechnic first-fire mixture is compounded to produce a high temperature and hot slag. The mixture is readily ignitible and capable of igniting the underlying pyrotechnic charge.

D.1.23 Lycopodium. The spores produced by the genus of mosses called lycopodium. This powdery, organic, yellow material can be agitated and dispersed mechanically into a cloud and then ignited by a spark, pilot flame, or electrical heating device. Although not a pyrotechnic material, this material is used by special effects operators to produce fire effects or in conjunction with other pyrotechnics to create a special effect.

D.1.24 Nonelectric Detonator. A detonator that does not need electric energy to function.

D.1.25 Photoflash Flashpowder. A loose pyrotechnic mixture that yields a very large amount of light for a small fraction of a second on exploding.

D.1.26 Quick Match. Black match that is encased in a loose-fitting paper sheath. Although exposed black match burns slowly, quick match burns extremely rapidly and almost instantaneously. Quick match is used in fuses for aerial shells and for simultaneous ignition of a number of pyrotechnic devices, such as lances in a ground display piece.

D.1.27 Safety Fuse. A flexible cord containing an internal burning medium by which fire or flame is conveyed at a constant and relatively uniform rate from the point of ignition to the point of use.

D.1.28 Salute Powder. See D.1.31, Sonic Flash.

D.1.29 Smoke Pot. A pyrotechnic device used to create smoke during a production.

D.1.30 Soft Detonator. A detonator with a higher velocity than a bullet hit, but with no metallic elements or jacket. It is essentially a blasting cap without a metal jacket.

D.1.31 Sonic Flash (Salute Powder, Extra-Fast Flash, Concussion Flashpowder). Flashpowder specifically formulated to produce a loud concussive effect.

D.1.32 Sparkle Flashpowder. A flashpowder that produces a bright flash of light and a shower of sparks when ignited.

D.1.33 Sparkle Pot. A pyrotechnic device intended to contain and control the discharge of sparkle flashpowder.

D.1.34 Squib. A device consisting of an electric match plus a base pyrotechnic charge. It usually is contained in a thin metal tube and often has a hole or slit to direct the flame produced when fired. Squibs are regulated in a manner similar to blasting caps. Squibs are not usually used in fireworks, although electric matches often are incorrectly called squibs.

D.1.35 Stars. Small masses of pyrotechnic compounds that are projected from aerial shells, mines, or roman candles. Stars burn while in the air, producing color or streamer effects.

D.1.36 Theatrical Flashpowder. A pyrotechnic material intended for use in theatrical shows. Theatrical flashpowder produces a flash of light when ignited. Typical theatrical flashpowders burn more slowly than salute powder and also might produce a shower of sparks. Theatrical flashpowder is not intended to produce a loud report.

Annex E Informational References

E.1 Referenced Publications. The documents or portions thereof listed in this annex are referenced within the informational sections of this standard and are not part of the requirements of this document unless also listed in Chapter 2 for other reasons.

E.1.1 NFPA Publications. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471.

NFPA 30, *Flammable and Combustible Liquids Code*, 2015 edition.

NFPA 54, *National Fuel Gas Code*, 2016 edition.

NFPA 58, *Liquefied Petroleum Gas Code*, 2014 edition.

NFPA 160, *Standard for the Use of Flame Effects Before an Audience*, 2016 edition.

NFPA 495, *Explosive Materials Code*,2013 edition.

NFPA 1122, *Code for Model Rocketry*, 2013 edition.

NFPA 1123, *Code for Fireworks Display*, 2014 edition.

NFPA 1403, *Standard on Live Fire Training Evolutions*,2012 edition.

E.1.2 Other Publications.

E.1.2.1 ICAS Publications. The International Council of Air Shows (ICAS), 751 Miller Drive, SE. Suite F-4, Leesburg, Virginia 20175.

Guidelines for the Use of Pyrotechnics and Special Effects at Air Shows, 2008.

E.1.2.2 U.S. Government Publications. U.S. Government Printing Office, Washington, DC 20402.

Title 14, Code of Federal Regulations, Part 91.119, "Aeronautics and Space, Minimum Safe Altitudes: General."

Title 16, Code of Federal Regulations, Parts 1500 and 1507, U.S. Consumer Product Safety Commission, “Federal Hazardous Substances Act Regulations.”

Title 27, Code of Federal Regulations, Part 555.11, Bureau of Alcohol, Tobacco, and Firearms, “Orange Book.”

Title 27, Code of Federal Regulations, Part 555.62, “State or Other Law.”

Title 49, Code of Federal Regulations, Parts 171 to end, U.S. Department of Transportation, “Hazardous Materials Regulations.”

Title 18, U.S. Code, Chapter 40, “Importation, Manufacture, Distribution, and Storage of Explosive Materials,” 1970.

E.2 Informational References. (Reserved)

E.3 References for Extracts in Informational Sections.

NFPA 1123, *Code for Fireworks Display*, 2014 edition.

Copyright 2019 National Fire Protection Association (NFPA®). Licensed, by agreement, for individual use and download on 05/07/2019 to Hairball Productions for designated user Hairball Productions. No other reproduction or transmission in any form permitted without written permission of NFPA®. For inquiries or to report unauthorized use, contact licensing@nfpa.org.

NFPA 160

Standard for the

Use of Flame Effects Before an Audience

2016 Edition

IMPORTANT NOTE: This NFPA document is made available for use subject to important notices and legal disclaimers. These notices and disclaimers appear in all publications containing this document and may be found under the heading "Important Notices and Disclaimers Concerning NFPA Documents." They can also be obtained on request from NFPA or viewed at www.nfpa.org/disclaimers.

UPDATES, ALERTS, AND FUTURE EDITIONS: New editions of NFPA codes, standards, recommended practices, and guides (i.e., NFPA Standards) are released on scheduled revision cycles. This edition may be superseded by a later one, or it may be amended outside of its scheduled revision cycle through the issuance of Tentative Interim Amendments (TIAs). An official NFPA Standard at any point in time consists of the current edition of the document, together with any TIAs and Errata in effect. To verify that this document is the current edition or to determine if it has been amended by any TIAs or Errata, please consult the National Fire Codes® Subscription Service or visit the Document Information (DocInfo) pages on the NFPA website at www.nfpa.org/docinfo. In addition to TIAs and Errata, the DocInfo pages also include the option to sign up for Alerts for each document and to be involved in the development of the next edition.

NOTICE: An asterisk (*) following the number or letter designating a paragraph indicates that explanatory material on the paragraph can be found in Annex A.

A reference in brackets [ ] following a section or paragraph indicates material that has been extracted from another NFPA document. As an aid to the user, the complete title and edition of the source documents for extracts in mandatory sections of the document are given in Chapter 2 and those for extracts in informational sections are given in Annex D. Extracted text may be edited for consistency and style and may include the revision of internal paragraph references and other references as appropriate. Requests for interpretations or revisions of extracted text shall be sent to the technical committee responsible for the source document.

Information on referenced publications can be found in Chapter 2 and Annex D.

Chapter 1 Administration

1.1* Scope. This standard shall provide requirements for the protection of the audience, support personnel, performers, the operator, assistants, and property where flame effects are used.

1.2 Purpose. The purpose of this standard shall be to provide minimum requirements for the design, manufacture, and operation of flame effects.

1.3 Application.

1.3.1* This standard shall apply to flame effects for entertainment, exhibition, demonstration, or simulation before an audience, including their design, fabrication, installation, testing, control, operation, and maintenance.

1.3.2 This standard shall apply to the following:

(1) Use of flame effects before an audience *(see 3.3.12, Flame Effect)*
(2) Design, fabrication, installation, testing, control, operation, and maintenance of equipment, materials, procedures, and systems used to produce flame effects
(3) Rehearsal, videotaping, audiotaping, or filming of any television, radio, or movie production if such production is before an audience and includes the use of flame effects
(4) Rehearsal of any production incorporating flame effects intended to be presented before an audience
(5) Storage and holding at a venue where flammable and combustible materials are to be used to create flame effects
(6) That portion or component of any hybrid flame effect that utilizes fuels, materials, devices, and methodologies governed by this standard.

1.3.3 This standard shall not apply to the following:

(1)* Flame effects produced solely by pyrotechnic special effects devices or pyrotechnic material
(2)* Use of pyrotechnic special effects
(3)* Storage of flammable solids, liquids, and gases not to be used to create flame effects
(4) Nitrocellulose-based flame projectors
(5) Manufacture, off-site storage, and transportation of materials and equipment used to produce flame effects
(6) Use of flame effects in fire training, except where there is an audience that is not part of the training
(7)* Manufacture, transportation, storage, sale, or use of model or high-power rocket motors
(8) Traditional nontheatrical public display of flames such as the following:
    (a) Use of lighted candles in restaurants or religious services
    (b) Fireplaces in areas open to the public
    (c) Restaurant cooking visible to the patrons
    (d) Listed Group II flame effects
    (e) Flame effects used in a fireworks display *(see NFPA 1123)*
(9) Use of consumer fireworks by the public
(10) Use of motor vehicles in races or sanctioned competitive sporting events
(11)* Use of ground-based effects utilizing explosives, liquid fuels, or other combustibles in air show environments

1.3.4* This standard shall not be used as a product standard.

1.3.5 When there is no audience present, NFPA 140. shall be used to regulate any flame effect use.

1.4 Retroactivity. The provisions of this standard reflect a consensus of what is necessary to provide an acceptable degree of protection from the hazards addressed in this standard at the time the standard was issued.

1.4.1 Unless otherwise specified, the provisions of this standard shall not apply to facilities, equipment, structures, or installations that existed or were approved for construction or installation prior to the effective date of the standard. Where specified, the provisions of this standard shall be retroactive.

1.4.2 In those cases where the authority having jurisdiction determines that the existing situation presents an unacceptable degree of risk, the authority having jurisdiction shall be permit-

Copyright 2019 National Fire Protection Association (NFPA®). Licensed, by agreement, for individual use and download on 05/07/2019 to Hairball Productions for designated user Hairball Productions. No other reproduction or transmission in any form permitted without written permission of NFPA®. For inquiries or to report unauthorized use, contact licensing@nfpa.org.

ted to apply retroactively any portions of this standard deemed appropriate.

1.4.3 The retroactive requirements of this standard shall be permitted to be modified if their application clearly would be impractical in the judgment of the authority having jurisdiction, and only where it is clearly evident that a reasonable degree of safety is provided.

1.5 Equivalency. Nothing in this standard is intended to prevent the use of systems, methods, or devices of equivalent or superior quality, strength, fire resistance, effectiveness, durability, and safety over those prescribed by this standard.

1.5.1 Technical documentation shall be submitted to the authority having jurisdiction to demonstrate equivalency.

1.5.2 The system, method, or device shall be approved for the intended purpose by the authority having jurisdiction.

Chapter 2 Referenced Publications

2.1 General. The documents or portions thereof listed in this chapter are referenced within this standard and shall be considered part of the requirements of this document.

2.2 NFPA Publications. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471.

NFPA 10, *Standard for Portable Fire Extinguishers,* 2013 edition.

NFPA 140, *Standard on Motion Picture and Television Production Studio Soundstages, Approved Production Facilities, and Production Locations,* 2013 edition.

NFPA 1123, *Code for Fireworks Display,* 2014 edition.

2.3 Other Publications.

2.3.1 ASME Publications. American Society of Mechanical Engineers, Three Park Avenue, New York, NY 10016-5990.

Boiler Pressure Vessel Code, 2013.

2.3.2 Other Publications.

Merriam-Webster's Collegiate Dictionary, 11th edition, Merriam-Webster, Inc., Springfield, MA, 2003.

2.4 References for Extracts in Mandatory Sections.

NFPA 1126, *Standard for the Use of Pyrotechnics Before a Proximate Audience,* 2016 edition.

Chapter 3 Definitions

3.1 General. The definitions contained in this chapter shall apply to the terms used in this standard. Where terms are not defined in this chapter or within another chapter, they shall be defined using their ordinarily accepted meanings within the context in which they are used. *Merriam-Webster's Collegiate Dictionary*, 11th edition, shall be the source for the ordinarily accepted meaning.

3.2 NFPA Official Definitions.

3.2.1* Approved. Acceptable to the authority having jurisdiction.

3.2.2* Authority Having Jurisdiction (AHJ). An organization, office, or individual responsible for enforcing the requirements of a code or standard, or for approving equipment, materials, an installation, or a procedure.

3.2.3 Labeled. Equipment or materials to which has been attached a label, symbol, or other identifying mark of an organization that is acceptable to the authority having jurisdiction and concerned with product evaluation, that maintains periodic inspection of production of labeled equipment or materials, and by whose labeling the manufacturer indicates compliance with appropriate standards or performance in a specified manner.

3.2.4* Listed. Equipment, materials, or services included in a list published by an organization that is acceptable to the authority having jurisdiction and concerned with evaluation of products or services, that maintains periodic inspection of production of listed equipment or materials or periodic evaluation of services, and whose listing states that either the equipment, material, or service meets appropriate designated standards or has been tested and found suitable for a specified purpose.

3.2.5 Shall. Indicates a mandatory requirement.

3.3 General Definitions.

3.3.1 Accumulator. A container or piping that holds a predetermined volume of fuel that is ready for use in a flame effect.

3.3.2 Area.

3.3.2.1 *Hazard Area.* The area made hazardous by the operation of the flame effect.

3.3.2.1.1 Accessible Hazard Area. That area made hazardous by the flame effect that is normally accessible to a person without the deliberate use of an additional means of access that is not normally in place.

3.3.2.2 *Holding Area.* An area where flame effect material or loaded flame effect devices are held prior to use.

3.3.2.3 *Storage Area.* An area where flame effect material or flame effect devices are stored prior to use or movement to a holding area.

3.3.3* Arm. That sequence of control system functions for the establishing of a source of ignition that must be complete and verified immediately before the firing of the flame effect.

3.3.4 Assistant. A person who works under the supervision of the flame effect operator.

3.3.5 Cast Members. Performers involved in a production involving the use of flame effects that may or may not be employees. (Many amusement employees are also referred to as "cast members.")

3.3.6 Direct Ignition. An automatic or manual ignition system that ignites fuel without a pilot.

3.3.7 Emergency Stop [Emergency Shutdown (ESD) System]. A circuit or other mechanism that, when actuated, results in the complete shutdown and extinguishment of all flame effects that are controlled by it.

3.3.8* Enable. The final set of control system functions that must be verified to be in a specific control mode immediately before the arming and firing of a flame effect may be implemented.

Copyright 2019 National Fire Protection Association (NFPA®). Licensed, by agreement, for individual use and download on 05/07/2019 to Hairball Productions for designated user Hairball Productions. No other reproduction or transmission in any form permitted without written permission of NFPA®. For inquiries or to report unauthorized use, contact licensing@nfpa.org.

3.3.9 Enable Button. The control operator that is manually actuated by the operator prior to and during the arming and firing of the effect.

3.3.10 Fail-Safe. A state or an attribute of a system such that every single point failure in the system results in all controlling parts of the system with the ability to do harm to humans, animals, or equipment being disconnected from all sources of power and stored energy at the primary disconnect point.

3.3.11* Fire. The sequence of control system functions that result in the deliberate release of fuel for ignition.

3.3.12 Flame Effect. The combustion of solids, liquids, or gases utilizing atmospheric oxygen to produce thermal, physical, visual, or audible phenomena before an audience.

3.3.12.1 ***Automatic Flame Effect.*** A flame effect that is supervised and fired by an automatic control system.

3.3.12.2* ***Hybrid Flame Effect.*** A flame effect that is used in combination with a pyrotechnic material or device.

3.3.12.3 ***Manual Flame Effect.*** A flame effect that is operated manually without the use of an automatic control system.

3.3.12.4 ***Portable Flame Effects.*** Flame effects that are designed and installed, either in a permanent or temporary installation, and that are designed to move or be moved in the course of operation or installation.

3.3.13 Flame Effect Appliance. The complete assembly of components and devices that controls and generates a flame effect.

3.3.14 Flame Effect Burner. A burner designed to produce specific sizes and configurations of flames for flame effects.

3.3.15 Flame Effect Material. Any solid, liquid or gas fuel, or combination thereof, that requires the addition of oxygen in order to initiate and maintain combustion.

3.3.16 Flame Effect Operator. The single person with overall responsibility for flame effect operations and safety.

3.3.17 Flame Effect Safety Controller. A control system that is part of a flame effect appliance that is used to prove that the source of ignition is present ("flame safeguard control").

3.3.18* Flame Effect System. The complete assembly of interconnected components, devices, and/or appliances that provides all of the functions necessary to fuel, monitor, supervise, generate, and control flame effects, including the emergency shutdown of the flame effects and, where necessary, the monitoring of external conditions that affect operation.

3.3.19* Flame Effect Systems, Classifications.

3.3.19.1 ***Group I Flame Effect.*** An attended, manually controlled flame effect.

3.3.19.2 ***Group II Flame Effect.*** An individual or group flame effect designed for unattended operation that is temporarily or permanently installed outside any structure.

3.3.19.3 ***Group III Flame Effect.*** An attended, temporarily installed flame effect for a specific production with limited operation and fixed time for removal.

3.3.19.4 ***Group IV Flame Effect.*** A large individual or group flame effect that is permanently installed inside or outside any structure designed for unattended operation without a main show supervisory control system.

3.3.19.5 ***Group V Flame Effect.*** A large individual or group flame effect that is temporarily or permanently installed inside or outside any structure and is designed for intermittent or continuous operation under the supervision of a main show control system but without full-time supervision by a technician.

3.3.19.6 ***Group VI Flame Effect.*** A large individual or group flame effect that is temporarily or permanently installed inside or outside any structure and is designed for intermittent operation under the supervision of a main show control system and a technical director, with cast members in close proximity to the effect at the time of operation.

3.3.19.7 ***Group VII Flame Effect.*** An individual flame effect that can be temporarily or permanently installed inside or outside any structure that, due to its unique operating requirements, does not fit into any other classification.

3.3.20 Hybrid Flame Effect. See 3.3.12.2.

3.3.21 Installation, Term of.

3.3.21.1 ***Permanent Installation.*** An installation of flame effects for which the governing use permit has a duration longer than 180 days.

3.3.21.2 ***Temporary Installation.*** An installation of flame effects for which the governing use permit has a duration of 180 days or less within a twelve-month period in a single venue.

3.3.22* Performer. Any person active in a performance during which pyrotechnics are used and who is not part of the audience or support personnel. [**1126,** 2016]

3.3.23 Permit. A document issued by the AHJ for the purpose of authorizing performance of a specified activity. Unless otherwise specified, the word *permit,* when used in this document, refers to a use permit.

3.3.23.1 ***Use Permit.*** A document issued by the AHJ for the purpose of authorizing the use of specific flame effects in a specific venue on a specified date and time or within a specified period.

3.3.24 Plan.

3.3.24.1 ***Design Plan.*** The plan for a flame effect appliance or design that presents the design criteria and/or assumptions used in the design, along with complete design information.

3.3.24.2 ***Flame Effect Plan.*** The document that is used to convey to the AHJ the information needed to evaluate the flame effect for the purpose of applying for a permit.

3.3.25* Primary Safety Control. A control with a sensor that is directly responsive to the ignition device attributes necessary for the safe operation of the effect.

3.3.26 Rated. A description of performance derived from testing or evaluation that guides appropriate selection, installation, and use of equipment that is not listed.

3.3.27* Safety Shutdown (Lockout). The safe shutdown of the flame effect in the event of the actuation of any flame effect primary safety control or limit switch.

Copyright 2019 National Fire Protection Association (NFPA®). Licensed, by agreement, for individual use and download on 05/07/2019 to Hairball Productions for designated user Hairball Productions. No other reproduction or transmission in any form permitted without written permission of NFPA®. For inquiries or to report unauthorized use, contact licensing@nfpa.org.

3.3.28 Safety-Critical. The failure of a device, component, system, or mechanism, which results in a situation that is immediately dangerous to life, health, or property.

3.3.29* Supervisory Control System. A manual or automatic control system that supervises the operation of the flame effect.

3.3.30* Support Personnel. Any individual who is not a performer or member of the audience. [**1126,** 2016]

3.3.31 Valve.

3.3.31.1 ***Accumulator Charge Valve.*** A valve used to control the flow of fuel into an accumulator.

3.3.31.2 ***Effect Valve.*** The last fuel shutoff valve before the flame effect burner.

3.3.31.3 ***Safety Shutoff Valve.*** A fast-closing valve that automatically and completely shuts off the fuel supply in response to a normal or safety shutdown.

3.3.31.4 ***Vent Valve.*** A normally open, power-closed valve, normally located between the two safety shutoff valves.

3.3.32* Venue. The property, facility, building, or room within a building where flame effects are used, intended to be used, or are prohibited.

Chapter 4 Holding Areas for Flame Effect Materials and Devices

4.1* General. All flame effect materials and devices not connected for use shall be stored in accordance with applicable codes and standards and any state and local regulations.

4.2 Holding Areas. All flammable flame effect materials and loaded devices that have been removed from storage areas in anticipation of use shall be stored in a holding area acceptable to the authority having jurisdiction.

4.2.1 Quantity Limitations.

4.2.1.1 The maximum quantity of flammable flame effect materials and loaded devices stored in a holding area shall be that quantity used in one day.

4.2.1.2 Quantities of flammable flame effect materials and devices in excess of those used in one day shall be permitted to be stored in holding areas with the approval of the authority having jurisdiction.

4.2.2 Flammable flame effect materials and loaded devices in holding areas shall be secured or supervised continuously by an attendant trained in emergency response procedures.

Chapter 5 Permit and Approval Requirements and Terms of Installation

5.1 Permit Requirements.

5.1.1* Permit Required. Except when otherwise required by the jurisdiction, a use permit shall be required for the use of flame effects before an audience.

5.1.2* Terms of Installation.

5.1.2.1 Permanent Installation. An installation of flame effects for which the governing use permit has a duration longer than 180 days shall be considered a permanent installation.

5.1.2.2 Temporary Installation. An installation of flame effects for which the governing use permit has a duration of 180 days or less within a 12-month period in a single venue shall be considered a temporary installation.

5.1.3 Use Permits.

5.1.3.1 A use permit shall authorize the use of only the number and types of flame effects in the venue as specified in the flame effect plan, as described in Section 5.3.

5.1.3.2 Use permits shall have a specified expiration date.

5.1.3.2.1 Use permits for temporarily installed flame effects shall specify the date(s) and time(s) of use and the expiration date of the permit.

5.1.3.2.2 Use permits for permanently installed flame effects shall specify the duration and expiration date of the permit.

5.1.3.3 Any activity authorized by the use permit shall be conducted by the permittee or the permittee's agents or employees in compliance with all requirements of this standard applicable thereto and in accordance with the approved plans and conditions.

5.2 Approval Requirements.

5.2.1 Prior Approval Required. Other than during the flame effect demonstration, as described in Section 5.4, the use of all flame effects shall be first approved by the authority having jurisdiction (AHJ).

5.2.1.1* Hybrid flame effects shall meet the requirements of 5.2.1.1.1 and 5.2.1.1.2.

5.2.1.1.1 That portion of the hybrid flame effect that is governed by NFPA 160 shall meet all of the requirements of NFPA 160.

5.2.1.1.2 That portion of the hybrid flame effect that is governed by NFPA 1126 shall meet all of the requirements of NFPA 1126.

5.2.2 Approval of Flame Effect Plan. A plan for the use of flame effects shall be submitted to the AHJ for approval.

5.2.2.1 After a flame effect plan has been approved, the plan shall be maintained to be readily accessible at the venue and shall be subject to inspection as specified by the AHJ.

5.2.2.2* If any addition or modification of flame effects to that described in the approved plan is made, that addition or modification shall be approved by the AHJ prior to use of the modified flame effects.

5.2.2.3 In the case of a hybrid flame effect, the plan shall identify those portions of the flame effect that require compliance with NFPA 160 and those portions that require compliance with NFPA 1126.

5.3* Content of Flame Effect Plans.

5.3.1 Flame Effect Plan Requirements.

5.3.1.1 The plan for the use of flame effects shall be submitted in writing or other form acceptable to the authority having jurisdiction.

5.3.1.2* The plan shall include the following:

(1) The name of the person, group, or organization responsible for the production

Copyright 2019 National Fire Protection Association (NFPA®). Licensed, by agreement, for individual use and download on 05/07/2019 to Hairball Productions for designated user Hairball Productions. No other reproduction or transmission in any form permitted without written permission of NFPA®. For inquiries or to report unauthorized use, contact licensing@nfpa.org.

(2) The dates and times of the production
(3) The location of the production
(4) The flame effect classification
(5) A site plan showing the following:
    (a) A narrative description of the flame effect
    (b) The location of flame effect devices to be fired and their controls and control sequence
    (c) The area affected by the flame effect device
    (d) The location of the audience
    (e) The fuels used and their estimated consumption
    (f) Air for combustion and ventilation for indoor effects
    (g) Flammable materials piping
    (h) Storage and holding areas and their capacities
    (i) Supplemental fire protection features
    (j) Emergency response procedures
    (k) Means of egress
(6) A current material safety data sheet (MSDS) for the materials (fuels) consumed in the flame effect
(7) Documentation that the combustible materials used for construction of the flame effects have been rendered flame retardant
(8) The name of the effect operator

5.3.2 The operator shall make operating instructions for flame effects available to the authority having jurisdiction.

5.3.3 The plan shall be reviewed with the authority having jurisdiction, flame effects operator, and building owner/representative prior to the production, to ensure coordinated response in the event of an emergency.

5.4 Flame Effect Demonstration.

5.4.1* When required, a walk-through and a representative demonstration of the flame effects shall be provided to the authority having jurisdiction before flame effects are approved.

5.4.2 The demonstration shall be scheduled with sufficient time to allow resetting of the flame effects prior to the arrival of the audience.

5.5 Interruption of Fire Protection and Life Safety Systems During Flame Effect Demonstrations and Operations. Fire protection and life safety systems shall not be permitted to be interrupted during the operation of flame effects.

5.5.1 Portions of fire protection and life safety systems shall be permitted to be interrupted during the operation of temporary indoor flame effects when the following conditions are met:

(1) Approval of the authority having jurisdiction is received.
(2) Approval of the owner or owner's agent is received.
(3)* An approved fire watch capable of directing the operation of all fire protection and life safety systems installed in the building is present.

5.5.2 Fire protection and life safety systems shall be permitted to be interrupted during the operation of permanently installed indoor flame effects only for initial acceptance of the system.

Chapter 6 Documentation of Flame Effects

6.1 General.

6.1.1 All flame effect devices and materials shall have drawings, manuals, or written descriptions to describe the type of item and performance specifications of the flame effect created.

6.1.2 This documentation shall be on site and available to the authority having jurisdiction.

6.2 Operating Procedures.

6.2.1 All flame effects shall have written operating instructions, including start-up, show operations, normal shutdown procedures, and emergency shutdown procedures.

6.2.2 Operating instructions shall be available to the operator.

Chapter 7 Use of Flame Effects

7.1 Testing and Evaluation.

7.1.1 Flame effects shall be tested to verify that they operate in accordance with their designs.

7.1.2* Flame effects shall be evaluated to verify that spectators, performers, support personnel, and the operator are not exposed to a hazardous situation when the flame effects are activated as designed or anticipated.

7.1.3 On an interval acceptable to the authority having jurisdiction, flame effects shall be inspected for normal and safe operating condition and retested for operation as designed and anticipated.

7.1.4 Documentation of the testing and evaluation shall be permitted to be prepared by a third party acceptable to the authority having jurisdiction.

7.1.5 The documentation shall be made available to the authority having jurisdiction as a part of the application for approval of the effect.

7.2 Housekeeping. The premises where flame effect devices are installed or fired shall be maintained in a neat and orderly condition.

7.3 Site Inspection. The flame effect operator shall inspect all areas of the site where flame effect materials and devices are ignited before start-up and after shutdown.

7.4 Smoking.

7.4.1 Smoking shall be prohibited in the area where fuels used in flame effects are present.

7.4.2 Smoking by performers as part of the performance shall be permitted where approved by the authority having jurisdiction.

7.5 Rehearsal and Pre-Show Operations.

7.5.1 The flame effect operator shall advise all performers and support personnel that they are exposed to a potentially hazardous situation when performing or otherwise carrying out their responsibilities in the vicinity of a flame effect.

7.5.2 Performers and support personnel familiar and experienced with the flame effects being used shall be permitted to

Copyright 2019 National Fire Protection Association (NFPA®). Licensed, by agreement, for individual use and download on 05/07/2019 to Hairball Productions for designated user Hairball Productions. No other reproduction or transmission in any form permitted without written permission of NFPA®. For inquiries or to report unauthorized use, contact licensing@nfpa.org.

be in the area of a flame effect, but only voluntarily and in the performance of their duties.

7.6 Show Operations. Show operations shall be in accordance with the plan approved by the authority having jurisdiction.

7.7 Post-Show Operations. Post-show operations shall be in accordance with the plan approved by the authority having jurisdiction.

7.7.1 Fire and life safety systems that have been interrupted shall be restored immediately after completion of the flame effect.

7.7.2 When restoration of fire and life safety systems is necessary, it shall be conducted by a person trained in the operation of all aspects of the systems.

7.8 Maintenance. Flame effect systems shall be maintained to design specifications.

7.9 Emergency Operations. Emergency operations shall be in accordance with the plan approved by the authority having jurisdiction.

7.10 Protective Clothing.

7.10.1 The flame effect performers, operators, and assistants shall be protected by clothing or other means suitable for their exposure to flame effects.

7.10.2 Protective clothing requiring fire resistance shall be tested and demonstrated to be flame retardant, and documentation shall be furnished to the authority having jurisdiction upon request.

7.10.3 Bare skin (naked) shall be permitted when the illusion of danger is implicit in the visual effect desired by the performer.

7.11 Security.

7.11.1 A means shall be provided to render installed flame effect systems inoperative when not in use.

7.11.2 Portable flame effects shall be stored and secured when not in use.

Chapter 8 Flame Effect Operator

8.1* Operator Qualifications.

8.1.1 The operator of any flame effect shall understand and be familiar with the operating manual or instructions.

8.1.2 The operator shall demonstrate competency by experience and training or by holding a license acceptable to the authority having jurisdiction.

8.2 Operator Responsibilities. The flame effect operator shall be responsible for storage, setup, operations, and teardown of all flame effect materials, devices, equipment, systems, and supervision of assistants.

8.3 Substance Abuse and Safety. No person shall use or handle flame effect materials or devices while under the influence of the following:

(1) Intoxicating beverages
(2) Narcotics or controlled substances
(3) Prescription drugs and/or nonprescription drugs that impair judgment

8.4* Minimum Age. All flame effect operators shall be at least 21 years of age.

Chapter 9 System Components, Flame Effect Control Systems, and Design

9.1 General Requirements for Flame Effect Control System Design.

9.1.1 All flame effect control systems shall be designed and installed to prevent accidental firing and unintentional release of fuel.

9.1.2 All Group II through Group VII control systems shall be designed to ensure against accidental firing by providing at least a removable activator, keyswitch, or coded arming system in which no control power can be applied to any control system unless the operator intentionally does both of the following:

(1) Deliberately applies control power
(2) Enables or arms the control system

9.1.3 Control System Attendance Requirements.

9.1.3.1 Any Group III, Group VI, or Group VII flame effects control systems shall not be left unattended while connected to a fuel source.

9.1.3.2 Control systems that are disconnected from their power source or de-energized by means of a removable activator, keyswitch, or coded arming system shall be permitted to be left unattended while connected to a fuel source.

9.1.4 Control System Operation.

9.1.4.1 All flame effect control systems shall be designed to implement the following functions:

(1) Emergency stop capability
(2) Fuel management
(3) Controlled enabling of flame effect
(4) Controlled arming of flame effect
(5) Controlled and repeatable firing of flame effect

9.1.4.2 The flame effect plan submitted for approval to the authority having jurisdiction shall indicate the means of providing for these requirements.

9.1.5 Flame effect control system components shall be listed.

9.1.5.1 Where listed devices are not available, approved devices shall be permitted.

9.1.6 Control system components and protective devices, including sensors, valves, and switches, shall be located so that they are protected against physical damage and tampering, and so that they can be serviced and maintained.

9.2* Specific Requirements for Flame Effect Control System Design and Operation, by Group. Control systems for each flame effect group shall be in accordance with Table 9.2.

9.3 Implementation of the Required Control Functions.

9.3.1* Emergency Stop.

9.3.1.1 One of the following conditions shall be met prior to the use of flame effects:

Copyright 2019 National Fire Protection Association (NFPA®). Licensed, by agreement, for individual use and download on 05/07/2019 to Hairball Productions for designated user Hairball Productions. No other reproduction or transmission in any form permitted without written permission of NFPA®. For inquiries or to report unauthorized use, contact licensing@nfpa.org.

Table 9.2 Group Control Functions Required

Flame Effect Group	Control Type	Minimum Control Requirements
I	Manual controls	1. No automatic controls shall be required.
II	Automatic controls	1. Ignition supervision shall be provided. 2. Automatic shutoff shall follow failure.
III	Automatic controls	1. Manual operation of the effect valve shall be permitted. 2. If the operator cannot confirm the pilot or direct ignition source for the flame special effect, a primary safety control shall be installed. 3. Two fuel shutoff valves, one of which will be a safety shutoff valve, shall be provided and installed in series.
IV	Automatic controls	1. Primary limit device(s) shall be installed as required. 2. A fuel supervisory station shall be installed with fuel pressure limit switches to control the supervisory station valves. 3. Each flame effect burner shall be equipped with a primary safety control and an effect valve. 4. A flame effect safety control system that is capable of safely operating the entire flame effect consistently for repeated cycles shall be used.
V	Automatic controls	1. The requirements for Group IV shall apply. 2. A flame effect safety control system that is capable of safely operating the entire flame effect consistently that is sequenced by the main control system shall be used. The flame effect safety control system shall maintain all of its internal safety features, with the interface between the flame effect control system and the main show control system limited to those commands and status indicators that cannot alter or override the flame supervisory system control logic.
VI	Automatic controls	1. The requirements for Group V shall apply. 2. Where cast members are in close proximity to the flame effect, the flame effect shall be under the active control of a main show control system and a fail-safe positive manual enable (PME).
VII	Manual or automatic controls	1. Controls shall be as recommended by the designer and acceptable to the authority having jurisdiction.

(1) Approval of a plan to extinguish the flame effect as required in 9.3.1.4
(2) Approval of a supervisory control system for the emergency stop and complete shutdown of the flame effect and any interrelated safety-critical system as required in 9.3.1.5

9.3.1.2 Interrelated safety-critical system and flame effect control system safety considerations shall extend to safety-critical effects, allied equipment, and other proximate equipment to avoid additional or contributory hazards.

9.3.1.3 Where the hazards described in 9.3.1.2 exist, the effects safety controller shall have a direct validated means of confirming the status or other information from the other systems before the safety-critical effect is enabled or triggered.

9.3.1.4 Manually controlled flame effects (Group I and manually controlled Group VII) shall have a plan for the emergency stop and complete shutdown of the operation of the effects through one or more of the following:

(1) Manual fuel shutoff valve(s)
(2) Manual turn-off of control power
(3) Fire containment devices
(4) Other devices acceptable to the authority having jurisdiction

9.3.1.5 Automatically controlled flame effects (Group II through Group VI and automatically controlled Group VII) shall have provisions for the emergency stop and complete shutdown of the operation of the effects installed according to the following criteria:

(1) The flame effect control system shall not be capable of operation unless the emergency stop is reset.
(2) The actuation of the emergency stop shall bring the flame effect control system to a safe state.
(3) The emergency stop shall require manual reset.
(4) The emergency stop shall actuate both manually and automatically upon the detection of an unsafe condition, including power failure.
(5) The emergency stop shall be fail-safe.
(6)* The emergency stop shall be automatically actuated when a monitored condition exceeds a preset limit of operation.

9.3.1.6 Manual Emergency Stop Control Stations.

9.3.1.6.1 Manually operated emergency stop control stations shall be clearly identified and placed in accessible locations and shall maintain the actuated state until manually reset.

9.3.1.6.2 Operation of a manual emergency stop station shall actuate the emergency stop.

Copyright 2019 National Fire Protection Association (NFPA®). Licensed, by agreement, for individual use and download on 05/07/2019 to Hairball Productions for designated user Hairball Productions. No other reproduction or transmission in any form permitted without written permission of NFPA®. For inquiries or to report unauthorized use, contact licensing@nfpa.org.

9.3.2 Fuel Management.

9.3.2.1 The fuel supply for the operation of the flame effect shall be available only during operation.

9.3.2.2 Fuels not provided through a central distribution system and that are supplied to the flame effect shall be limited to that amount necessary for operation.

9.3.2.3 Minimum tank size for liquefied flammable gas flame effects shall be determined by the surface area required to prevent reduced fuel delivery to the burner during the effect.

9.3.2.4 Fuel Delivery.

9.3.2.4.1 Fuels delivered through a central distribution system shall be in accordance with the following:

(1) A manual fuel shutoff valve shall be installed as follows:
   (a) It shall be installed in an accessible location at the point of delivery and upstream of any other flame effect control system components that, when closed, will shut off all fuel supplied to the flame effect control system.
   (b) Where the point of delivery is outside a building containing the flame effect control system, the valve shall be located outside of the building.

(2) The following shall apply to fuel pressure:
   (a) Where low fuel pressure could cause the flame effect control system to malfunction, devices to provide low-fuel-pressure supervision shall be installed.
   (b) Where high fuel pressure could cause the flame system to malfunction, devices to provide high-fuel-pressure supervision shall be installed.

(3)* A supervisor station shall be installed and shall meet the following criteria:
   (a) It shall be installed downstream of the manual fuel shutoff valve.
   (b) It shall shut off all fuel supplied to the flame effect control system when closed.
   (c) When opened during the enable process, it shall be held open by a maintained signal from the flame effect control system.

9.3.2.4.2 The supervisor station shall be provided with a means to test the seat-tightness of the shutoff valve at the operating pressure.

9.3.2.5 Effect Valve.

9.3.2.5.1 Each flame effect shall be provided with an automatic fuel shutoff valve (the effect valve), installed upstream of the burner.

9.3.2.5.2 The effect valve shall shut off all fuel to the burner when closed.

9.3.2.5.3 The effect valve shall be opened only at the time of firing the flame effect and shall be held open by a maintained signal from the flame effect control system.

9.3.2.5.4 The effect valve shall close on loss of the hold-open signal.

9.3.2.6* Systems Using Fuel Accumulators. Fuel accumulators used in flame effect control systems shall meet the following requirements:

(1) Accumulator tanks shall be designed, manufactured, and certified as unfired pressure vessels.
   (a)* Accumulators for use with flammable or liquefied gas shall be designed, manufactured, and tested in accordance with the ASME *Boiler Pressure Vessel Code* or the Department of Transportation for the pressure of the gas in use.

(2)* The volume of fuel stored in an accumulator tank shall be no more than what is required to produce the desired flame effect.

(3) Each accumulator shall have a manual fuel shutoff valve at the connection to the inlet of the tank, and when closed, this valve shall shut off all fuel supplied to the accumulator tank.

(4) An accumulator charge valve that charges the accumulator when opened shall be installed at the connection to the inlet of the tank.

(5) The accumulator shall be charged as close to the time of the actual arming and firing of the effect as is practical.

(6) Each accumulator shall be designed and installed so that the fuel can be safely removed, as follows:
   (a) Accumulators fixed in location shall be provided with a permanently installed means of conveying the fuel to a safe point of discharge.
   (b) Portable accumulators shall be allowed to be moved to a safe location for discharge.

(7) The mixing of air or any other oxidizing media with fuel that creates a flammable mixture within an accumulator tank shall be prohibited.

9.3.3* Controlled Enabling of Flame Effect Control System. All flame effect control systems shall be manually or automatically enabled according to a prescribed sequence of operations outlined in the plan, which prepares the flame effect for subsequent arming and firing.

9.3.3.1 Flame Effect Safety Controller Function.

9.3.3.1.1 A flame effect safety controller shall be used to automatically sequence the enable process, monitor areas of restricted access, and allow, trigger, and request safety-critical action.

9.3.3.1.2 Flame effect control system safety considerations shall extend to other safety-critical effects, allied equipment, and other proximate equipment to avoid additional or contributory hazards.

9.3.3.1.3 In circumstances described in 9.3.3.1.2, the flame effect safety controller shall have a direct validated means of confirming the status or other information from the other systems before the flame effect is enabled.

9.3.3.2* The enable process shall begin with the activation of the control power to the flame effect control system.

9.3.3.3 Fuel Supply and Auxiliary Services.

9.3.3.3.1 Following the activation of the control power, the fuel supply and auxiliary services necessary to the operation of the flame effect control system (compressed air supply, oxidizers, additives, etc.) shall be permitted to be turned on.

9.3.3.3.2 Positive confirmation through the use of an interlock or other device of the fuel supply and each auxiliary service shall be made prior to the continuation of the enable process.

Copyright 2019 National Fire Protection Association (NFPA®). Licensed, by agreement, for individual use and download on 05/07/2019 to Hairball Productions for designated user Hairball Productions. No other reproduction or transmission in any form permitted without written permission of NFPA®. For inquiries or to report unauthorized use, contact licensing@nfpa.org.

9.3.3.4* Interlocks.

9.3.3.4.1 Interlocks shall be provided in the control system to monitor changes of condition and to automatically implement control system responses to the change of condition.

9.3.3.4.2 Safety interlocks shall be fail-safe.

9.3.4 Controlled Arming of Effect.

9.3.4.1 All flame effects shall be manually or automatically armed prior to any attempt to fire.

9.3.4.2 The arming of the effect shall be manually or automatically monitored and confirmed until the effect is fired.

9.3.4.3 Manual Confirmation of Arming (Group I and Manually Controlled Group VII).

9.3.4.3.1 The flame effect shall be confirmed as armed when the means of ignition can be clearly and directly seen by the operator or assistant(s) firing the flame effect for the entire time that the effect is enabled.

9.3.4.3.2 When the means of ignition cannot be clearly and directly seen by the operator or assistant(s) firing the flame effect for the entire time that the effect is enabled, the confirmation of the arming of that effect shall be done automatically.

9.3.4.4* Automatic Confirmation of Arming (Group II through Group VI and Automatically Controlled Group VII). The flame effect shall be confirmed as armed when a sensor(s) has detected the presence of the means of ignition necessary for the correct operation of the effect through the monitoring of a characteristic unique to the means of ignition.

9.3.4.5 Control sensors and devices used to automatically confirm arming shall operate in the environment where installed.

9.3.4.6 Where cast members or moving set pieces are present in the hazard area immediately before or after the arming and firing of the flame effect, a positive manual enable (PME) shall be required during arming and firing.

9.3.4.7 Ignition Detection Device Function.

9.3.4.7.1 It shall not be possible for an ignition detection device to report the presence of an ignition device or pilot, due to false sensing of ignition devices, pilots, or flame effects other than that ignition device or pilot intended to be sensed by the ignition detection device.

9.3.4.7.2 It also shall not be possible for an ignition detection device to report the presence of an ignition device or pilot due to false sensing of other non-fire-related devices normally present in the local environment including, but not limited to, spark effects, ultraviolet light sources, or effects that generate heat without flame.

9.3.5* Firing of Flame Effects.

9.3.5.1 Flame effects shall only be fired after they have been confirmed as armed following the completion of the enable and arming process and confirmation that the hazard area is clear.

9.3.5.2 If the arming confirmation is lost during the firing process or the hazard area becomes unsafe, the firing of the effect shall be immediately terminated and the effect secured until the problem has been corrected.

9.3.5.3* Monitoring of the Hazard Area Surrounding the Flame Effect.

9.3.5.3.1 That area surrounding each flame effect that is made hazardous by the operation of the effect shall be monitored and confirmed clear and ready for firing, or access to the area shall be supervised by automatic means, or the area shall be made inaccessible, prior to any attempt to fire the effect.

9.3.5.3.2 Other parameters critical to the safety of the flame effect shall also be monitored or supervised.

9.3.5.4* Supervision of the Hazard Area Surrounding the Flame Effect.

9.3.5.4.1 The accessible hazard area shall be under the direct observation of the operator or assistant(s) firing the flame effect for the entire time that the effect is enabled and fired.

9.3.5.4.2 Where the hazard area cannot be seen by the operator or assistant(s) firing the flame effect for the entire time that the effect is enabled, an alternative means of monitoring the area shall be permitted to be used, with the approval of the authority having jurisdiction.

9.3.5.4.3 Use of Enable Buttons.

9.3.5.4.3.1 If all areas of safety concern cannot be seen by a single human operator, as many enable buttons shall be used as are necessary to ensure safety.

9.3.5.4.3.2 Such buttons shall be monitored separately and verified for proper operation by the flame effect control system.

9.3.5.5 Firing. The design of the flame effect control system shall prevent the firing of any flame effect except on the deliberate positive action of an operator or on the verification by the automatic control system of correct enabling and arming of the effect.

9.3.5.5.1 Manual Firing of Flame Effects. It shall be the responsibility of the operator to verify the correct enabling and arming and the safety of the hazard area prior to the manual firing of the effect.

9.3.5.5.2 Automatic Firing of Flame Effects.

9.3.5.5.2.1 The operating power for firing any flame effect shall originate from the flame effect control system and only be supplied under the supervision of all limits, interlocks, and ignition-monitoring devices present for the safe and reliable operation of the flame effect.

9.3.5.5.2.2 All effect valves shall be permitted to be opened only by a maintained firing signal from the flame effect control system and shall automatically close on loss of signal.

9.3.6 Post-Operation Securing. Immediately following the firing of any flame effect, the enable and arming signals shall be removed, all fuel and auxiliary services shall be secured without going through the sequence of operation specified in 9.3.5.5, and a visual inspection of all effect hazard areas shall be completed prior to confirmation that the flame effect control system is secure.

Copyright 2019 National Fire Protection Association (NFPA®). Licensed, by agreement, for individual use and download on 05/07/2019 to Hairball Productions for designated user Hairball Productions. No other reproduction or transmission in any form permitted without written permission of NFPA®. For inquiries or to report unauthorized use, contact licensing@nfpa.org.

Chapter 10 System Installation and Testing

10.1 General.

10.1.1 Flame effects shall be tested to verify that they operate in accordance with the flame effect control system design.

10.1.2 Documentation of the testing shall be provided by the manufacturer or fabricator.

10.2 Pressure Testing and Inspection of Piping. Where flame effect systems use piping, such piping shall be pressure tested in accordance with the requirements of the authority having jurisdiction.

10.2.1 The complete piping system with all accessories in place shall be pressure tested at no less than the system operating pressure.

10.2.2 Pressure Test Procedures.

10.2.2.1 System pressures shall be recorded together with the temperature and the atmospheric pressure.

10.2.2.2 Pressure testing of reassembled flame effect piping systems designed to be separated into subassemblies shall be permitted to be tested at system operating pressure, with leak detection using a noncorrosive leak-detecting solution, or other means acceptable to the authority having jurisdiction, at the reconnected joints.

10.3 Temperatures of Components.

10.3.1 Temperatures of components that are used in the fabrication of a flame effect control system shall not exceed the rated temperature limits of the component during sustained operation of the flame effect.

10.3.2 Temperatures of components subject to the heat of the flame effect shall be determined while the flame effect is being operated at its maximum design cycle rate during the acceptance test required by Section 10.1.

10.3.2.1 The temperatures shall be observed until a maximum or stable reading has been attained.

10.3.2.2 The temperatures attained shall not exceed the rated temperatures for the components.

10.3.3 Temperatures of Surroundings.

10.3.3.1 Temperatures of combustible materials subject to the heat of the flame effect shall not exceed 117°F (47.2°C) above the ambient temperature after equilibrium temperatures are attained.

10.3.3.2 The temperatures shall be observed until a maximum or stable reading has been attained.

Chapter 11 Fire Protection Provisions

11.1 General. The wide range in size, arrangement, and location of flame effects covered by this standard shall preclude the inclusion of detailed fire protection provisions that are applicable to all flame effects.

11.2 Evaluation for Permanently Installed Flame Effects.

11.2.1* Where required by the authority having jurisdiction, a fire hazards evaluation shall be conducted for permanently installed flame effects to be used at a venue for a performance.

11.2.2 The evaluation in 11.2.1 shall be coordinated with the building owner, the flame effect operator, and the authority having jurisdiction.

11.3* Additional Fire Safety Provisions for Temporary Installations.

11.3.1 Where determined by the authority having jurisdiction that a need for fixed or additional fire protection equipment or standby fire safety personnel exists, such equipment or personnel shall be provided.

11.3.2 Four or more fire extinguishers of the proper classification and size as approved by the authority having jurisdiction shall be readily accessible while the flame effects performance is being conducted.

11.3.2.1 In all cases, at least two pressurized water, Class 2-A extinguishers and two Class 10-BC extinguishers shall be provided, in addition to those required by NFPA 10, for the building.

11.3.2.2 The extinguishers shall be placed so that at least one each is located on opposing sides of the performance where flame effects are used.

11.4 Standby Fire Safety Personnel Requirements.

11.4.1 Where required by the fire hazards evaluation or the authority having jurisdiction, standby fire safety personnel shall be present along with operational supplemental equipment.

11.4.2 Standby fire safety personnel shall have a working knowledge of the supplemental fixed or portable fire-fighting equipment used in the area of the flame effects.

11.4.3 Standby fire safety personnel shall have a means of communication or of transmitting an alarm during the operation of flame effects.

Annex A Explanatory Material

Annex A is not a part of the requirements of this NFPA document but is included for informational purposes only. This annex contains explanatory material, numbered to correspond with the applicable text paragraphs.

A.1.1 This document details how to control the use of flame effects. The issue of permitting or prohibiting the use of open flames before an audience is in the scope of a code such as NFPA *101*, The *Life Safety Code* has traditionally prohibited open flames within assembly occupancies.

A.1.3.1 The circumstances of each show or attraction can be unique and can require individual evaluation when determining the need for protective systems. Factors such as the experience and qualifications of the operations and maintenance personnel, clearance distance between show elements and nonparticipants, visual conditions, and magnitude of the potential hazards are to be weighed in the development and presentation of the production.

A.1.3.3(1) As covered in NFPA 1126.

A.1.3.3(2) For information on the use of pyrotechnic special effects before an audience, see NFPA 1126.

A.1.3.3(3) For information on the storage of flammable and combustible liquids, see NFPA 30. For information on the storage of flammable gases, see NFPA 55, and NFPA 58.

Copyright 2019 National Fire Protection Association (NFPA®). Licensed, by agreement, for individual use and download on 05/07/2019 to Hairball Productions for designated user Hairball Productions. No other reproduction or transmission in any form permitted without written permission of NFPA®. For inquiries or to report unauthorized use, contact licensing@nfpa.org.

A.1.3.3(7) For information on the manufacture, transportation, or storage of model or high power rocket motors, see NFPA 1125. For information on the sale or use of model or high power rocket motors, see NFPA 1122 and NFPA 1127.

A.1.3.3(11) For information and guidance on ground-based effects in air shows, refer to International Council on Air Shows (ICAS) *Guidelines for the Use of Pyrotechnics and Special Effects at Air Shows* and NFPA 495.

A.1.3.4 This standard contains user requirements for the performance, use, or installation of flame effects. User requirements are those that apply to users of the product and specify when, where, and how a product is used.

Unlike this standard, a product standard contains performance, testing, and third-party certification requirements, and can contain design requirements, for a specific product, such as a flame effect appliance. Third-party certification includes the requirements for the testing, labeling, listing, follow-up, and quality assurance programs by which a product is certified as being compliant with a specific standard from a certification organization. Product standards should be written, to the extent possible, such that the product is evaluated and tested for compliance with minimal or no judgmental decisions and with specific pass/fail requirements and a designated test method to evaluate the performance. NFPA 160 does not meet these requirements, nor is it intended for use as a product standard.

A.3.2.1 Approved. The National Fire Protection Association does not approve, inspect, or certify any installations, procedures, equipment, or materials; nor does it approve or evaluate testing laboratories. In determining the acceptability of installations, procedures, equipment, or materials, the authority having jurisdiction may base acceptance on compliance with NFPA or other appropriate standards. In the absence of such standards, said authority may require evidence of proper installation, procedure, or use. The authority having jurisdiction may also refer to the listings or labeling practices of an organization that is concerned with product evaluations and is thus in a position to determine compliance with appropriate standards for the current production of listed items.

A.3.2.2 Authority Having Jurisdiction (AHJ). The phrase "authority having jurisdiction," or its acronym AHJ, is used in NFPA documents in a broad manner, since jurisdictions and approval agencies vary, as do their responsibilities. Where public safety is primary, the authority having jurisdiction may be a federal, state, local, or other regional department or individual such as a fire chief; fire marshal; chief of a fire prevention bureau, labor department, or health department; building official; electrical inspector; or others having statutory authority. For insurance purposes, an insurance inspection department, rating bureau, or other insurance company representative may be the authority having jurisdiction. In many circumstances, the property owner or his or her designated agent assumes the role of the authority having jurisdiction; at government installations, the commanding officer or departmental official may be the authority having jurisdiction.

A.3.2.4 Listed. The means for identifying listed equipment may vary for each organization concerned with product evaluation; some organizations do not recognize equipment as listed unless it is also labeled. The authority having jurisdiction should utilize the system employed by the listing organization to identify a listed product.

A.3.3.3 Arm. In a manually operated system, the enabling, arming, and firing functions are provided directly through the actions of the flame effect operator or assistant. *Arm* means supplying a source of ignition and verifying its presence, such as with manual ignition of a pilot, flammable liquid, or flammable solid.

A.3.3.8 Enable. In a manually operated system, the enabling, arming, and firing functions are provided directly through the actions of the flame effects operator or assistant. *Enable* means bringing to the site all the equipment, setting it up, and readying it for arming, such as bringing a campfire effect to the stage, verifying that no hazards are present in the area, and connecting all components.

A.3.3.11 Fire. In a manually operated system, the enabling, arming, and firing functions are provided directly through the actions of the flame effect operator or assistant. *Fire* means supplying fuel to the source of ignition, such as by manually opening a valve and verifying that the fuel ignites.

A.3.3.12.2 Hybrid Flame Effect Flame effects that use any of the fuels allowed by this standard but are initiated or directly ignited by means of a pyrotechnic device are common examples of a hybrid flame effect. One example of a hybrid flame effect is one that uses a pyrotechnic device or igniter to provide the initial flame to light a supervised pilot burner, which, when ignited, can be then proven by a conventional flame safeguard or other means. Often this hybrid configuration is used where the pilot burner is in and/or around water or spray, and conventional ignition means have been determined to be unreliable or to utilize voltages or currents that provide a risk of hazard to persons in and around the water. In other instances, this configuration might be used for added reliability, operational integration, or simply for convenience. In any of these instances, the pyrotechnic igniter is used under the requirements of NFPA 1126 and is installed, maintained, and operated to meet the requirements of both NFPA 1126 and the AHJ. The flame effect itself, regardless of the fuel it uses, is designed, installed, maintained, and operated to meet the requirements of both NFPA 160 and the AHJ.

A second example of a hybrid flame effect is one that utilizes a combustible dust, initially aerosolized and propelled out the end of the burner nozzle by a charge of compressed air and ignited as it passes through a field of burning metal sparks generated by yet another pyrotechnic device. Dust or powder fuel is an acceptable flame effect material under this standard. What causes this effect to be classified as a hybrid flame effect is that the pyrotechnic ignition device(s) falls under the purview of NFPA 1126. (Note that if a gas pilot burner or even a burning brand were used to ignite an aerosolized powder, this flame effect would not be considered hybrid and would fall entirely under the scope of NFPA 160.)

A third example is an often-used flame effect that is typically limited to outdoor use and utilizes flammable or combustible liquid as a fuel. This would be an acceptable flame effect material under this standard. The fuel is contained in a nonporous bag and placed inside a suitable open-topped container that serves as a "mortar" or burner nozzle. Upon firing, the liquid is freed from the bag, lifted from the barrel, and aerosolized by means of a substantial black powder lifting charge. A second pyrotechnic device might or might not be used to ensure ignition of the fuel at the mouth of the container. What causes this effect to be classified as a hybrid flame effect is that the aerosolizing and igniting charges fall under the purview of NFPA 1126,

Copyright 2019 National Fire Protection Association (NFPA®). Licensed, by agreement, for individual use and download on 05/07/2019 to Hairball Productions for designated user Hairball Productions. No other reproduction or transmission in any form permitted without written permission of NFPA®. For inquiries or to report unauthorized use, contact licensing@nfpa.org.

or, depending upon the particular composition and quantity of the charge in use, possibly NFPA 1123 or NFPA 495. Additionally, the storage and/or handling of the liquid fuel would be governed by the requirements of NFPA 30. (Note that if a compressed air charge was used to aerosolize the liquid and a gas fired pilot burner or even a burning brand was used to ignite the aerosol, this flame effect would not be considered hybrid and would fall entirely under the scope of NFPA 160.)

A.3.3.18 Flame Effect System. Manually controlled systems might not have interconnected components, devices, and/or appliances that provide all of the functions necessary to fuel, monitor, supervise, generate, and control flame effects, including the emergency shutdown of the flame effects and, where necessary, the monitoring of external conditions that affect operation. The flame effects operator or assistant carries out all the functions described in the definition.

A.3.3.19 Flame Effect Systems, Classifications. Examples of flame effects are as follows:

(1) *Group I.* Where used to give the illusion of danger to a performer, the use of hand-held burning torches, cigarette lighters, candles, matches, lighting paper in an ashtray, jugglers burning batons, fire rings that are jumped through, and other flame effects that are not included in another flame effect group.
(2) *Group II.* Unattended torches, burning urns, and small fires.
(3) *Group III.* An attended, temporarily installed flame effect used by traveling shows and concerts and effects used for limited-duration special events, such as the Olympics. This group also includes a traveling entertainment event that plays various venues, such as (but not limited to) circuses, operas, musicals, stage plays, trade shows, or corporate events. This group effect also includes a nontraveling entertainment event that plays a single venue.
(4) *Group IV.* A burning cabin or bonfire and large single or multiple flaming brazier entrance features used to create a "theme" atmosphere. A standalone-type flame effect control system without any significant control supervision by a main show control system is used.
(5) *Group V.* A simulated building or vehicle explosion that is part of a larger theme-type attraction. The flame effect control system is totally dedicated to the operation of the flame effect elements. The flame effect control system maintains all its internal safety features, with the interface between the flame effect control system and the main show control system limited to those commands and status indicators that cannot alter or override the flame supervisory system control logic.
(6) *Group VI.* A live-action stunt show that is part of a larger theme-type attraction. The flame effect control system is totally dedicated to the operation of the flame effect elements. The flame effect control system maintains all its internal safety features, with the interface between the flame effect control system and the main show control system limited to those commands and status indicators that cannot alter or override the flame supervisory system control logic.
(7) *Group VII.* A fire created as part of an illusion used to make an item or individual disappear.

See Table A.3.3.19 for a list of features included in each flame effect group.

Table A.3.3.19 Features Included in Flame Effect Groups

	Flame Effect Groups						
Features	**I**	**II**	**III**	**IV**	**V**	**VI**	**VII**
Outside	X	X	X	X	X	X	X
Inside	X		X	X	X	X	X
Temporary installation	X	X	X		X	X	X
Permanent installation		X		X	X	X	X
Attended	X		X			X	X
Unattended		X		X	X		X
Visual flame verification	X		X				X
Automatic flame supervision		X		X	X	X	X
Manual fuel controls	X						X
Automatic fuel controls		X	X	X	X	X	X
Main show control					X	X	
Proximate cast			X			X	X

Note: A blank space means that the feature cannot be in the group. An X means that it is a feature of the group.

A.3.3.22 Performer. Performers can include, but are not limited to, actors, singers, musicians, and acrobats. [**1126,** 2016]

A.3.3.25 Primary Safety Control. In the event of ignition failure or loss of flame, the control causes a safety shutdown.

A.3.3.27 Safety Shutdown (Lockout). The flame effect can be restarted only after a manual reset following correction of the abnormal condition.

A.3.3.29 Supervisory Control System. In the case of a manual system, this function might be performed by the flame effect operator or assistant.

A.3.3.30 Support Personnel. Among others, support personnel include the road crew of any production, stage hands, property masters, security guards, fire watch officers, janitors, or any other employee. [**1126,** 2016]

A.3.3.32 Venue. The term *venue* is one that is widely used in the entertainment industry. For the purposes of this standard, the term is to be used to specify the exact area of the property, building, or the room within a building where the use of flame effects is to be allowed. For example, the use of flame effects can be allowable in one specific meeting room of a hotel, but not in another; or in the case of reconfigurable (flexible plan) buildings or rooms, some configurations can be safe for the use of flame effects, but not others.

A.4.1 The following NFPA standards cover storage of flame effect materials:

Copyright 2019 National Fire Protection Association (NFPA®). Licensed, by agreement, for individual use and download on 05/07/2019 to Hairball Productions for designated user Hairball Productions. No other reproduction or transmission in any form permitted without written permission of NFPA®. For inquiries or to report unauthorized use, contact licensing@nfpa.org.

NFPA 30, *Flammable and Combustible Liquids Code*

NFPA 54, *National Fuel Gas Code*

NFPA 55, *Compressed Gases and Cryogenic Fluids Code*

NFPA 58, *Liquefied Petroleum Gas Code*

NFPA 59A, *Standard for the Production, Storage, and Handling of Liquefied Natural Gas (LNG)*

NFPA *101*, *Life Safety Code*

NFPA 400, *Hazardous Materials Code*

NFPA 1126, *Standard for the Use of Pyrotechnics Before a Proximate Audience*

A.5.1.1 Because permit and approval requirements vary with each jurisdiction, this standard is intended to provide requirements that can be used by the authority having jurisdiction in making sound judgment regarding the safety of the proposed use of flame effects and the qualifications of the flame effect operator.

A.5.1.2 The use of flame effects is governed by a permit, which specifies the date(s) and time(s) or the expiration date of the permit, which, in turn, define the period during which the effects can be used. The length of this period determines the term of installation — that is, whether the flame effect installation is to be considered permanent or temporary. The term of installation is used in this standard as a criterion to classify the flame effects into one of seven groups.

A.5.2.1.1 Where the standards impose different requirements, the most stringent requirement should be the one used, unless otherwise approved by the AHJ.

A.5.2.2.2 There is an inherent danger in the modification of flame effects once the initial commissioning activities are complete. A protective control system could provide protection against events and safety concerns that are not recognized or fully understood by other than the original designers of the system. For others to attempt modifications to a protective system invites the inadvertent elimination of subtle but important safety features of a system.

A.5.3 Measures for control of inadvertent liquefied or gaseous fuel releases, additive system releases, portable component releases, or fire should be coordinated with local emergency-handling agencies, such as fire and police departments.

Information on those hazards not commonly covered in the training programs of emergency-handling agencies should be provided upon request to emergency responders.

The safety of emergency personnel should be considered in the plan.

A.5.3.1.2 See Annex B for guidelines on design of flame effects.

A.5.4.1 The AHJ should invite the local responding fire companies to witness the demonstration to familiarize them with the potential hazards involved.

A.5.5.1(3) A fire watch is a qualified person or persons in attendance during all times when fixed fire protection systems are intentionally taken out of operation and should be acceptable to the authority having jurisdiction. The fire watch should be familiar with the operation of all fire and life safety systems in the building and be able to notify emergency responders.

A.7.1.2 As a guide, the incident radiation from the flame effect should not cause the surface temperature of the exposed skin of a member of the audience to exceed 111°F (44°C), as measured using an infrared surface thermometer or other equivalent means. The operator should have, on site, the instrumentation necessary to verify skin temperature, if requested by the authority having jurisdiction.

A.8.1 There is no substitute for a diligent, capable, well-trained operations and maintenance staff; therefore, operators of equipment involved in safety-critical processes or effects are the primary safety and control element and should have a full understanding of the system, including the possible dangers and the required responses.

A.8.4 The flame effect operator is defined as the person who has overall responsibility for the flame effect. Attendants and assistants can be less than 21 years of age.

A.9.2 In Table 9.2, Group VI, positive manual enable (PME) is sometimes known as "Man in the Loop."

A.9.3.1 Enabling the safety-critical effect could require coordination of the emergency stop systems of independent subsystems developed by separate vendors or contractors. This requirement applies only when an emergency stop button is pressed. Generally, conditions internal or local to a single subsystem (other than pressing an emergency stop button) that cause an automatic safety shutdown of one subsystem need not cause a shutdown of other subsystems. After a safety shutdown resulting from a pressed emergency stop button, and after the offending button has been reset, individual subsystems can be brought out of the shutdown condition, as long as no emergency stop button remains pressed.

A.9.3.1.5(6) Examples of monitored conditions are as follows:

(1) Loss of purge airflow to electrical enclosures in classified areas
(2) Loss or impairment of required ventilation systems
(3) Detection of flammable gas
(4) Loss of "proof of vacancy" in areas that present a serious hazard to personnel
(5) Loss of proof of the safe state of any valve or other protective device that is required to maintain the protective nature of the system
(6) Detection of a person in an unsafe area
(7) Detection of unsafe environmental conditions
(8) Detection of equipment in an unsafe state, condition, or position
(9) Wind or other weather conditions that create unsafe conditions
(10) System errors that should be addressed or acknowledged prior to a restart of the system

A.9.3.2.4.1(3) As shown in Figure A.9.3.2.4.1(3), an example of a supervisor station can include the following:

(1) Two safety valves in series, each with proof of closure, should be provided in the gas line to the main burners. An automatic vent valve should be provided between the two valves.
(2) Where the automatic vent valve is prohibited by the authority having jurisdiction, two safety shutoff valves in series, each with an interlock switch, supervised by a listed automatic valve proving system, should be provided in the

Copyright 2019 National Fire Protection Association (NFPA®). Licensed, by agreement, for individual use and download on 05/07/2019 to Hairball Productions for designated user Hairball Productions. No other reproduction or transmission in any form permitted without written permission of NFPA®. For inquiries or to report unauthorized use, contact licensing@nfpa.org.

gas line to the burners. Valve proving should be performed either after every burner shutdown or prior to every burner light-off.

(3) Where flame effect fuel piping systems are subdivided into zones, each zone should be separated from other zones by a zone station. A zone station should consist of a manual fuel shutoff valve at the point of connection to the fuel supply piping and upstream of any other station components, and an automatic zone valve. The zone station shuts off all fuel to or from the flame effect zone when closed. When opened during the enable process, this station should be held open by a maintained signal from the flame effect control system.

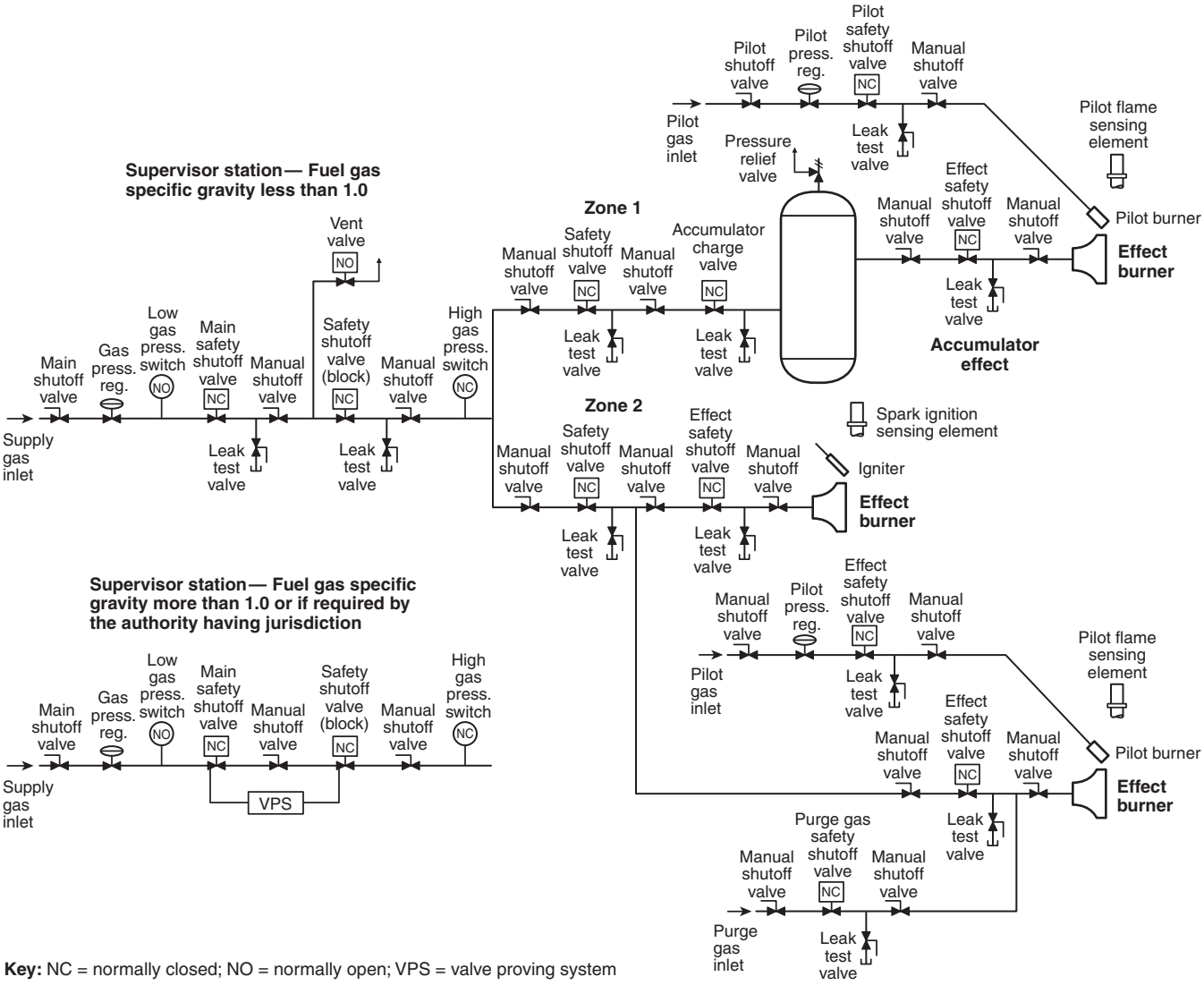
The zone valve should automatically close in the event of the loss of the hold-open signal. The zone valve should only be opened as close to the time of the actual arming and firing of the flame effects as is practical. The zone valve should be provided with a means to test the seat-tightness of the valve at operating pressure.

A.9.3.2.6 The operating characteristics of some flame effects require that fuel be released at a rate greater than can be delivered by the fuel supply. To do so requires that quantities of fuel be temporarily accumulated at the location of the effect.

A.9.3.2.6(1)(a) For applications outside of the United States, equivalent national standards can be used.

A.9.3.2.6(2) The standard requires that the amount of fuel in an accumulator tank never be more than what is required to produce the effect. However, that amount deserves some consideration, as producing the desired effect can sometimes require that more fuel be stored in the accumulator than is actually discharged during the effect. Three examples of situations where it is necessary to store more fuel in the accumulator than is actually consumed are as follows:

(1) The creation of perfectly round fireballs — those without a tail — often requires that the effect valve be shut while the gas is still exiting the burner nozzle at relatively high velocity. This means that significant residual pressure is



Key: NC = normally closed; NO = normally open; VPS = valve proving system

FIGURE A.9.3.2.4.1(3) Example of Various Flame Effect Control and Piping Components.

Copyright 2019 National Fire Protection Association (NFPA®). Licensed, by agreement, for individual use and download on 05/07/2019 to Hairball Productions for designated user Hairball Productions. No other reproduction or transmission in any form permitted without written permission of NFPA®. For inquiries or to report unauthorized use, contact licensing@nfpa.org.

left in the accumulator after the effect is complete; in other words, to produce round fireballs it is required to have an amount of fuel in the accumulator in excess of that consumed.

(2) Bursts of multiple fireballs or jet flames are often required to be produced rapidly, sometimes without sufficient interval between each discharge to allow the accumulator to recharge. This situation occurs often in temporarily installed or portable flame effect appliances, particularly when the fuel supply is not capable of supporting high flow rates during the charge cycle. In this case, the accumulator must store more fuel than is consumed in a single discharge, although it is expected that the bulk of the fuel will be consumed over the course of a full burst.

(3) It is considered good practice to maintain a fuel-rich atmosphere inside the accumulator at all times, one that is well above the upper flammable limit. In order to do so it is necessary to shut the effect valve before all of the pressure in the accumulator is exhausted, trapping some fuel in the accumulator in excess of the amount consumed.

It is important to realize that even when an accumulator is sized exactly to the amount of fuel to be consumed, there are some situations where the accumulator will be left with an excess of fuel. Take, for example, an accumulator that has been charged, but for any number of reasons — performer off the mark, detected failure of the igniter, and so forth — the flame effect is not discharged. The result is a fully charged accumulator that can or cannot be consumed during the subsequent course of the performance. This scenario points out the necessity of providing each accumulator with a means of venting the fuel to a safe point of discharge, as required in 9.3.2.6(6).

A.9.3.3 Some of the operating parameters that can be enabled or monitored during the enabling of the flame effect control system include the following:

(1) Control power
(2) Main fuel supply
(3) Safety interlocks
(4) Ventilation airflow interlock (where used)
(5) Support services (compressed air, hydraulic pressure, etc.)
(6) Other parameters as required by the authority having jurisdiction

A.9.3.3.2 Where required for operation and maintenance, control systems can have separate sources of control power to allow operation in distinct modes; for example, they can have one source for automatic (normal) operation and a second for limited operation of the flame effects for the purpose of maintenance and testing. Where multiple sources of control power are available, the design of the flame effect control system should meet the following minimum criteria:

(1) One mode of operation should be "off," which should remove all control power from the flame effect control system.

(2) System operation should be such that the selection of one mode of operation disables all other modes of operation. It should not be possible to change from one mode of operation to another without turning all control power off. The flame effect control system should operate safely during the transition from one mode to any other mode of operation.

(3) All control power, regardless of source and mode of operation, should be interrupted by actuation of the emergency stop system. Loss of control power should bring the flame effect system to a safe state.

(4) When a main show control system is used, the status of the control power (mode of operation) should be automatically sent to the show control system at all times. Where a main show control system is used, and the mode of operation is in any mode other than that of normal automatic operation, or "off," the sending of any command from the show control system to the flame effect control system should automatically actuate the emergency stop system and bring the flame effect system to a safe state.

Circumstances for consideration include the following:

(1) Particular position, mode, or state for the proper operation of a safety-critical system.
Example: A fire-breathing dragon that needs to be in a particular position before fire is initiated. Similarly, other set pieces might have to be out of the area of the fire before fire is initiated.
Example: A fire on a set that is on a lift and that is not to be initiated until the lift is confirmed to be in the fully raised position.

(2) Effects on vision or hearing that could prevent the safe operation of systems or the related procedures or operations.
Example: A fog or other atmospheric effects system that could obscure egress routes or interfere with monitoring an effect fire or with taking corrective action in case of an incident.

(3) Conditions that can be confused with conditions or events of the safety-critical system.
Example: Other effect systems that create the appearance of fire, smoke, or heat.

Personal computers, single-board controllers, and other systems that have control capability but that are not routinely used in protective applications should not be used as life safety controllers. Only effect safety controllers should be used to prevent any safety-critical action. Non-effect safety controllers should not be used to allow, trigger, or request safety-critical action unless the signals of these non-effect safety controllers are intercepted and qualified by an effect safety controller that has responsibility for allowing safety-critical actions. Personal computers and single-board controllers can be used in related applications such as the display, logging, and trending of process variables, environmental conditions, status, faults, and other information.

Show controllers, including stage, lighting, pyrotechnics, animation, automation, and audio controllers that are used to control overall show timing relationships or that provide synchronization with audio, lighting, and unrelated effects, should be permitted to provide timing information to a flame effect safety controller but should not directly control safety-critical processes. The flame effect safety protective controller then should use this information, and other safety-related information, to control safety-critical effects.

The flame effect control system that is responsible for control of safety-critical effects should not provide control of general show timing or of non-safety-critical effects, except as follows:

Copyright 2019 National Fire Protection Association (NFPA®). Licensed, by agreement, for individual use and download on 05/07/2019 to Hairball Productions for designated user Hairball Productions. No other reproduction or transmission in any form permitted without written permission of NFPA®. For inquiries or to report unauthorized use, contact licensing@nfpa.org.

(1) Timing internal to a single effect, such as to create phases or sub-effects, should be permitted to be programmed into the flame effect control system.
(2) The protective flame effect control system should be permitted to provide control of a limited number of small non-safety-critical effects with limited and simple timing needs. In such cases, there should be a division of the safety-critical and non-safety-critical functions of the system.

The purpose of the requirement in 9.3.3.2 is to prevent equipment that is being used for protective control purposes from being utilized for general show control purposes when doing so would partially obscure the protective control purpose of the system, distracting the designers and operators from devoting attention to the safety-critical aspects of the system, which are of primary concern.

A.9.3.3.4 Examples of interlocks that can be included in the flame effect control systems are as follows:

(1) Wind speed and direction
(2) Critical temperatures
(3) Opacity instrumentation
(4) Purge airflow and/or damper positions
(5) Combustion airflow
(6) Position indicator switches for animated figures and sets
(7) Cast position confirmation switches
(8) Audience position/ride vehicle position indicators
(9) Others as required by the operation of the show

A.9.3.4.4 Some of the sensors that are currently in use for monitoring these characteristics are as follows:

(1) Ultraviolet flame detector in combination with a listed primary safety control
(2) Infrared flame detector in combination with a listed primary safety control
(3) Flame rod in combination with a listed primary safety control
(4) Thermocouple temperature sensor in combination with a listed primary safety control or as part of a listed automatic valve assembly
(5) Other devices directly sensitive to the characteristics of the means of ignition and acceptable to the authority having jurisdiction

A.9.3.5 The firing of the flame effect is normally achieved through the release of the fuel into ambient air where the mixture is ignited by an ignition device. Normally, this is achieved by the opening of a manual or electrically actuated fuel release valve. Other methods of fuel release are acceptable on the approval of the local authority. Examples of firing methods for flame effects are as follows:

(1) Manual firing by cast member or technician
(2) Firing by a timer and/or programmable logic controller (PLC)
(3) Firing by a PLC with PME

A.9.3.5.3 Certain venues can have areas, both visible to and out of sight of the technical director, in which a person who is present in the area during the firing of the effects might be exposed to the possibility of injury. These areas should be supervised by an intrusion monitor and alarm system during all times when the effects are enabled.

A.9.3.5.4 Certain venues can have areas, both visible to and out of sight of the technical director, where during the enable process one of the following can occur:

(1) Cast members can be present immediately before or after the firing of the effect.
(2) Members of the audience might enter the area during the firing of the effect.
(3) Moving set pieces can affect the safe operation of the effect.

A PME of the flame effect control system should be maintained by a qualified operator with a clear view of the operating area of the effect during the entire process of the enabling, arming, and firing of the effect.

Where the technical director does not have a clear view of the hazard area, additional PME devices should be installed and operated by qualified operators who are in such a position that they have a clear view of the area. Cast members who can be present immediately before the arming and firing of the effect should have additional PME devices that have to be actuated before the flame effect can be fired.

These PME devices should have the following characteristics:

(1) The PME device should consist of a momentary contact push button switch that will close a normally open isolated contact when depressed, thereby sending a confirming signal to show control.
(2) These enable operators should be located in positions such that the technician or cast member can view the effects area and/or confirm that they are safely out of harm's way.
(3) Manual enable operators should be clearly identified as to function. Indicator lights can be provided in the push button or adjacent to the push button to confirm to the operator that the enable signal has been sent to show control.
(4) In the event that any PME signal is not sent or is removed during the arming and firing sequence of an effect, a non-recycling shutdown of that effect or group of effects should occur. The effects can be returned to service only following the removal of the effect enable input and restarting the process. Other flame effects and show elements can continue to operate normally for the remainder of the show.

Repetitive protective operations by human operators are of limited value due to the acclimatization of the operator. When repetitive enabling of an effect is required, appropriate steps should be taken to assure that the operator remains alert for every action.

Although each situation is different and multiple remedies could be required in some situations, steps that can be used to address this concern include the following:

(1) Use two individually monitored buttons, each serving the same enabling function, separated by a distance such that the operator has to be facing the area of safety concern when the buttons are pressed.
(2) Activate the buttons upon an indication in the vicinity of the area of safety concern. For example, rather than illuminating the enable buttons, illuminate an indicator near the flame so that the operator will be encouraged to look in the direction of the flame to determine when to press the enable button.

Copyright 2019 National Fire Protection Association (NFPA®). Licensed, by agreement, for individual use and download on 05/07/2019 to Hairball Productions for designated user Hairball Productions. No other reproduction or transmission in any form permitted without written permission of NFPA®. For inquiries or to report unauthorized use, contact licensing@nfpa.org.

(3) Vary the timing of the effect to the extent possible within the creative constraints of the show.

A.11.2.1 The following steps are recommended as part of the fire hazards evaluation procedure:

(1) List and describe the following:
   (a) Sources of ignition
   (b) Spread of fire
   (c) Potential duration of fire
   (d) Smoke generation
   (e) Potential collection or drift of flammable vapors and gases
   (f) Exposure of personnel to decomposition products
   (g) The time required for emergency evacuation of the audience
   (h) Extinguishment potential of supplemental standby fire equipment
   (i) The additional fire load from the flame effect
   (j) Existing building fire protection systems
   (k) Other factors specific to the flame effect
(2) Prepare a general description of the fire prevention and fire protection systems that exist and that will be provided. Define the fire hazards that can exist and state the loss-limiting criteria to be used in the design of the flame effect.
(3) Conduct an exposure analysis to determine safe distances of the flame effect from adjacent facilities. Consider the use and effect of noncombustible fire-retardant and heat-resistant materials.
(4) Review and describe the control and operating room areas, if applicable, and the detection and extinguishing systems that will be provided for these areas.

A.11.3 Supplemental fire protection equipment can consist of charged handlines, hand portable extinguishers, wheeled extinguishers, pre-engineered or engineered systems capable of properly extinguishing the flame effect, and any combustible materials within the immediate area. The manufacturer of the equipment should be consulted for assistance on fire extinguishing equipment and agents.

Annex B Design of Flame Effects

This annex is not a part of the requirements of this NFPA document but is included for informational purposes only.

B.1 Design Plan. The design plan for flame effects should be based on the criteria outlined in B.1.1 through B.1.2.

B.1.1 Location.

B.1.1.1 The design plan for outdoor flame effects should include the following:

(1) Weather (e.g., wind), with safety provisions provided to halt the effect where safe operation of a flame effect can be influenced by hazardous weather conditions
(2) Intrusion (security)
(3) Egress
(4) Clearance to combustibles
(5) Fire protection

B.1.1.2 The design plan for indoor flame effects should include the following:

(1) Ventilation (where used to exhaust the products of combustion of a flame effect), with means provided to prevent fuel flow in the event that the source of ventilation air is interrupted
(2) Clearance to combustibles
(3) Egress
(4) Environment
(5) Fire protection
(6) Life safety provisions
(7) Intrusion (security)

B.1.2 Flame Effect Operator Participation.

B.1.2.1 The design plan for attended effects should include the following:

(1) Control by the operator or performer during start-up, operation, and shutdown
(2) Operator in attendance during effect
(3) Training of operators

B.1.2.2 The design plan for unattended effects should include the following:

(1) Design for unattended operation
(2) Supervision by automatic systems
(3) Audience proximity/audience intrusion prevention
(4) Control type — automatic
   (a) Show events cued by a control system (mechanical or electrical)
   (b) Different levels of automatic operation
   (c) Requirements to be developed for flame effect control systems
(5) Manual control type — supervision of the performance of the device by the operator or technician with the flame effect in open view
(6) Control location
   (a) Local control — a flame effect controlled by an operator who has a clear view of the flame effect area
   (b) Remote control
(7) Fuel supply and fuel additives
   (a) Portable
   (b) Fixed

Annex C Inspection Guidelines

This annex is not a part of the requirements of this NFPA document but is included for informational purposes only.

C.1 General. The following guidelines are provided as a possible inspection routine that can be used as a model.

C.2 Inspection and Re-Verification of Flame Effects Function. Following issuance of the use permit by the local authority having jurisdiction *(see 5.3.1)* and completing the Approval Requirements *(see Section 5.2)*, the flame effect(s) show action equipment should be subjected to a periodic functional verification and calibration of critical components according to the requirements of a written test plan/procedure as created by the designer of the effects or other responsible individual. A written report and/or completed checklist in a format acceptable to the local jurisdiction should be made a permanent part of the effects documentation.

C.2.1 Temporary Flame Effects Installations. Temporary flame effects installations should be evaluated on a periodic basis by a qualified technician/operator according to the guidelines outlined in C.2.1.1 and C.2.1.2.

Copyright 2019 National Fire Protection Association (NFPA®). Licensed, by agreement, for individual use and download on 05/07/2019 to Hairball Productions for designated user Hairball Productions. No other reproduction or transmission in any form permitted without written permission of NFPA®. For inquiries or to report unauthorized use, contact licensing@nfpa.org.

C.2.1.1 Daily Inspection and Testing. Any critical deficiencies and/or malfunctions are to be corrected and noted in the show documentation prior to the operation of the effects in the show. Inspection should include the following:

(1) Visual inspection of fuel storage area, which includes verifying that the fuel supply is properly secured, that general housekeeping is according to proper standards, whether there is accumulation of flammable materials, convenient access to critical areas, and the absence of any items not directly related to the storage or management of the fuel supply.
(2) Visual inspection of performance area(s), which includes general housekeeping, accumulation of incidental flammable materials, condition of sets and props, convenience of access, and any other condition relating to the proper operation of the effects.
(3) Visual inspection of fire effects equipment to verify that the components are functional. Significant degradation or damage should be noted and repaired or replaced as necessary.
(4) As part of the daily preset for the show, the effect(s) should be operated according to the procedure established by the designer of the effect to verify the proper operation of the enable and arming as designed. Any discrepancies in the normal operation of the effect should be noted and corrected prior to the operation of the effect during the show.
(5) Verification that all provisions for the emergency shutdown of the effect, including fuel management and fire suppression measures, are present and/or operating normally.
(6) Observation of the operation of the effect during the show to verify that it is functioning according to the expected operating profile.

C.2.1.2 Weekly and Monthly Inspection and Testing. Weekly and monthly inspection and testing should be conducted and noted as dictated by the design and operation of the effects and the duration of the temporary installation.

C.2.2 Permanent Flame Effects Installations. Permanent flame effects installations should be evaluated on a periodic basis by a qualified operator according to the guidelines outlined in C.2.2.1 through C.2.2.4.

C.2.2.1 Daily Inspection and Testing. Any critical deficiencies and/or malfunctions are to be corrected and noted in the show documentation prior to the operation of the effects during the show. Inspection should include the following:

(1) Visual inspection of fuel storage area, which includes verifying that the fuel supply is properly secured, that general housekeeping is according to proper standards, whether there is accumulation of flammable materials, convenient access to critical areas, and the absence of any items not directly related to the storage or management of the fuel supply.
(2) Visual inspection of performance area(s), which includes general housekeeping, accumulation of incidental flammable materials, condition of sets and props, convenience of access, and any other condition relating to the proper operation of the effects.
(3) Visual inspection of fire effects equipment to verify that the components are functional. Significant degradation or damage should be noted and repaired or replaced as necessary.
(4) Verification that all primary limits [lower explosive limit (LEL) sensors, airflow switches, fuel pressure switches, etc.] are conditioned in the proper control profile and that they indicate a proper operating level of the parameter being monitored.
(5) As part of the daily preset for the show, the effect(s) should be operated according to the procedure established by the designer of the effect to verify the proper operation of the enable and arming as designed. Any discrepancies in the normal operation of the effect should be noted and corrected prior to the operation of the effect during the show.
(6) Verification that all provisions for the emergency shutdown of the effect, including fuel management and fire suppression measures, are present and/or operating normally.
(7) Observation of the operation of the effect during the show to verify that it is functioning according to the expected operating profile.

C.2.2.2 Monthly Inspection and Testing. In addition to the recommended tests as stated in C.2.2.1, the following tests and inspections should be performed as required:

(1) Test and calibrate any limit or interlock control device that could be subject to a change in the measured value as a normal part of the operation of the device over a period of time according to the recommendations of the manufacturer.
(2) Perform a leak test of any primary fuel supply shutoff valves according to the recommendations of the manufacturer.
(3) Verify that any intrusion and/or position interlocks are operating properly and the actuation of any such device results in the desired control system response.
(4) Other test sequences as recommended by the effects designer or other cognizant individual.

C.2.2.3 Quarterly Inspection and Testing. In addition to the recommended tests as stated in C.2.2.1 and C.2.2.2, the following tests and inspections should be performed as required:

(1) Calibrate all primary limit or interlock control devices, which could be subject to a change in the measured value as a normal part of the operation of the device over a period of time.
(2) Actuate all primary limit or interlock control devices to confirm proper function, control response, and confirmation of actuation.
(3) Actuate any central fire alarm system to verify that the actuation will result in the emergency stop of the effects control system.
(4) Actuate all show emergency stop operators to confirm their proper function and confirmation of actuation. Furthermore, selected emergency stop operators should be actuated during the operation of the effects to verify the proper emergency shutdown of the effects.
(5) Operate the fuel supply enable control circuit to verify the proper function of the fuel limits and valves.
(6) Enable and arm randomly selected effects to verify the proper operation of the ignition management control circuit, including safe start check, trial for ignition, flame failure response time, and non-recycling operation as necessary. The number of effects to be tested should be a minimum of 3 or 20 percent of the total number of flame effects in the control system. Where the design of the

Copyright 2019 National Fire Protection Association (NFPA®). Licensed, by agreement, for individual use and download on 05/07/2019 to Hairball Productions for designated user Hairball Productions. No other reproduction or transmission in any form permitted without written permission of NFPA®. For inquiries or to report unauthorized use, contact licensing@nfpa.org.

controls includes multiple zones, at least one effect in each zone should be tested.

(7) Test the PME operator during the operation of the effects to verify that the effects will not enable, arm, and fire without the presence of the PME and that the removal of the PME during the enabling, arming, and firing sequence of the effects will shut down the effects operation as designed.

(8) Operate the effects in the normal show mode to verify that they are enabling, arming, and firing in the expected sequence according to the normal show profile.

(9) Other test sequences as recommended by the effects designer or other cognizant individual.

C.2.2.4 Annual Inspection. The annual inspection of the flame effects will verify the proper function of all effects control components and serve as a certification of the condition and operation of the effects control system for the renewal of the operating permit as issued by the local jurisdiction. The test sequence should include those sequences as stated in C.2.2.1, C.2.2.2, and C.2.2.3, to such an extent that all control systems and components are tested, verified, and functioning properly, and that any other tests as recommended by the effects designer or other cognizant individual are performed.

Annex D Informational References

D.1 Referenced Publications. The documents or portions thereof listed in this annex are referenced within the informational sections of this standard and are not part of the requirements of this document unless also listed in Chapter 2 for other reasons.

D.1.1 NFPA Publications. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471.

NFPA 30, *Flammable and Combustible Liquids Code*, 2015 edition.

NFPA 54, *National Fuel Gas Code*, 2015 edition.

NFPA 55, *Compressed Gases and Cryogenic Fluids Code*, 2016 edition.

NFPA 58, *Liquefied Petroleum Gas Code*, 2014 edition.

NFPA 59A, *Standard for the Production, Storage, and Handling of Liquefied Natural Gas (LNG)*, 2013 edition.

NFPA *101®*, *Life Safety Code®*, 2015 edition.

NFPA 400, *Hazardous Materials Code*, 2016 edition.

NFPA 495, *Explosive Materials Code*, 2013 edition.

NFPA 1122, *Code for Model Rocketry*, 2013 edition.

NFPA 1123, *Code for Fireworks Display*, 2014 edition.

NFPA 1125, *Code for the Manufacture of Model Rocket and High Power Rocket Motors*, 2012 edition.

NFPA 1126, *Standard for the Use of Pyrotechnics Before a Proximate Audience*, 2016 edition.

NFPA 1127, *Code for High Power Rocketry*, 2013 edition.

D.1.2 Other Publications.

D.1.2.1 ICAS Publications. The International Council of Air Shows (ICAS), 751 Miller Drive, SE., Suite F-4, Leesburg, Virginia 20175.

Guidelines for the Use of Pyrotechnics and Special Effects at Air Shows.

D.2 Informational References. (Reserved)

D.3 References for Extracts in Informational Sections.

NFPA 1126, *Standard for the Use of Pyrotechnics Before a Proximate Audience*, 2016 edition.

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 06-14-2023

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER

PROFESSIONAL PROGRAM INSURANCE BROKERAGE
DIVISION OF SPG INSURANCE SOLUTIONS, LLC
1304 SOUTHPOINT BLVD., #101
PETALUMA CA, 94954

CONTACT NAME:
PHONE (A/C, No, Ext): 415-475-4300 **FAX (A/C, No):** 415-475-4304
E-MAIL ADDRESS: info@ppibcorp.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : Certain Underwriters at Lloyd's, London	AA-1128623
INSURER B :	
INSURER C :	
INSURER D :	
INSURER E :	
INSURER F :	

INSURED

Hairball Productions LLC
3751 Culver Court
Faribault, MN 55021

COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	**GENERAL LIABILITY** [X] COMMERCIAL GENERAL LIABILITY [ ] CLAIMS-MADE [X] OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: [X] POLICY [ ] PRO-JECT [ ] LOC	X		PY/23-0006	02/11/2023	02/11/2024	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 2,000,000 $ 50,000 $ $ $ 2,000,000 $
	AUTOMOBILE LIABILITY [ ] ANY AUTO [ ] ALL OWNED AUTOS [ ] SCHEDULED AUTOS [ ] HIRED AUTOS [ ] NON-OWNED AUTOS						COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ $ $ $
	[ ] **UMBRELLA LIAB** [ ] OCCUR [ ] **EXCESS LIAB** [ ] CLAIMS-MADE [ ] DED [ ] RETENTION $						EACH OCCURRENCE AGGREGATE	$ $
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y / N [ ] **(Mandatory in NH)** If yes, describe under DESCRIPTION OF OPERATIONS below	N / A					[ ] WC STATU-TORY LIMITS [ ] OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ $ $

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

Bally's Quad Cities; City of Rock Island and its agents ATIMA are Additional Insured as respects the Special Effects display(s) on 7/7/2023 located at 777 Bally Blvd, Rock Island, IL 61201. This policy provides a two-year extended reporting period from the date of the display. 30-day notice of cancellation applies; 10-day notice for non-payment.

CERTIFICATE HOLDER

Bally's Quad Cities
777 Bally Blvd
Rock Island IL 61201

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE Susan Etter

© 1988-2010 ACORD CORPORATION. All rights reserved.

POLICY NUMBER: PY/23-0006 **PYROTECHNIC LIABILITY**

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

ADDITIONAL INSURED

Underwriter's at Lloyd's, London: Referred to in this endorsement as either the “Insurer” or the “Underwriters”

This endorsement modifies insurance provided under the following:

SECTION III. PERSONS INSURED

In consideration of the premium charged for the Policy, it is hereby understood and agreed that the following entity(ies) is an additional insured pursuant to Section III. e), but only as respects the specific Display or Special Effects listed on the attached Certificate of Insurance:

Name of Person or Organization (Additional Insured):

Bally’s Quad Cities
777 Bally Blvd
Rock Island IL 61201

Any coverage afforded to any above person or entity as an Additional Insured shall apply only with respect to **Bodily Injury** or **Property Damage** directly resulting from (1) the **Named Insured’s** ongoing operations performed for such specific person and entity; or (2) acts or omissions of the Additional Insured in connection with their general supervisions of the **Named Insured’s** ongoing operations. Coverage for such person or entity as an Additional Insured does not apply to:

(i) **Personal Injury** and **Advertising Injury** Liability;

(ii) Fire Legal Liability;

(iii) Employee Benefits Liability;

(iv) **Bodily Injury** or **Property Damage** which the person or entity is obligated to pay as damages by reason of the assumption of liability under a contract or agreement but this shall not apply to liability for damages the person or entity would have in the absence of the contract or agreement;

(v) **Property Damage** to: (1) property owned, used or occupied by or rented to such person or entity; (2) property in the care custody, or control of such person or entity or over which such person or entity is for any purpose exercising physical control; or (3) any work, including materials, parts or equipment furnished in connection with such work, which is performed for the person or entity by or on behalf of the **Named Insured**.

(vi) **Products-Completed Operations Hazards;**

(vii) Any obligation assumed by the Additional Insured in any contract related to the Display or Special Effects listed in the attached Certificate of Insurance.

(viii) Such other **Claims, Accidents**, offenses, damages and/or liabilities which may be excluded pursuant to Section V. Exclusions of the Policy.

All other terms, exclusions and conditions of this Policy remain unchanged.