NOTICE OF MEETING

CITY OF PACIFIC GROVE

CITY COUNCIL

REGULAR MEETING AGENDA

Wednesday, October 5, 2022, 6:00 P.M.

Council Chamber – City Hall – 300 Forest Avenue, Pacific Grove, CA

The Council will not begin consideration of any item on this agenda later than 10:00 p.m. unless such consideration is approved. Any items on this agenda not considered this evening will be continued to a future meeting.

Copies of the agenda packet are available for review at the Pacific Grove Library, in the Finance Department, and electronically at www.cityofpacificgrove.org/agendas. The most effective method of communication with the City Council is by sending an email to citycouncil@cityofpacificgrove.org. In order to allow the City Council adequate time to review communication related to an agenda item, it is recommended that the communication be sent no later than 9:00 AM on the day prior to the City Council meeting.

THIS MEETING WILL BE HELD IN PERSON AND VIRTUALLY (HYBRID).

CHAMBER CAPACITY SEATING IS LIMITED AND PROVIDED ON A FIRST COME, FIRST SERVED BASIS.

THE VIRTUAL MEETING IS COMPLIANT WITH THE GOVERNOR'S EXECUTIVE ORDERS ALLOWING FOR A DEVIATION OF TELECONFERENCE RULES REQUIRED BY THE BROWN ACT.

JOIN THE ZOOM WEBINAR TO PARTICIPATE LIVE AT:
https://us02web.zoom.us/j/209579290

To participate telephonically, call any number below:

888 788 0099 US (Toll-free)
877 853 5247 US (Toll-free)
669 900 9128
669 219 2599

Webinar ID: 209 579 290#
If prompted to enter a participant ID, press #.

Help Line 831-648-3128

MEETING INSTRUCTIONS

The public may also view the meeting on the Peninsula Channel 25.

AGENDA

CALL TO ORDER

PLEDGE OF ALLEGIANCE: Councilmember McAdams

1. **APPROVAL OF AGENDA**

2. **PRESENTATIONS**

   A. Public Service Award Presentation to Heath Braddock, Aimee Johns, and Paul Bandy, by Chief Cathy Madalone

   B. Cal AM Central Coast Update, by External Affairs Manager Josh Stratton **PG 7**
   Reference: Josh Stratton, External Affairs Manager
   Recommended Action: Receive presentation.
   CEQA: Does not constitute a "Project" per California Environmental Quality Act Guidelines Section 15378

   C. Monterey County Convention & Visitors Bureau Update, by Amrish Patel **PG 16**
   Reference: Amrish Patel
   Recommended Action: Receive update.
   CEQA: Does not constitute a "Project" per California Environmental Quality Act Guidelines Section 15378

3. **COUNCIL AND STAFF ANNOUNCEMENTS (City-Related Items Only)**

   A. Report on Closed Session by City Attorney

   B. Other

4. **GENERAL PUBLIC COMMENT**
   General Public Comment must deal with matters subject to the jurisdiction of the City and the Council that are not on the Regular Agenda. This is the appropriate place to comment as to items on the Consent Agenda, only if you do not wish to have the item pulled for individual consideration by the Council. Comments from the public will be limited to three minutes and will not receive Council action. Comments regarding items on the Regular Agenda shall be heard prior to Council's consideration of such items at the time such items are called. Whenever possible, written correspondence should be submitted to the Council in advance of the meeting, to provide adequate time for its consideration.

CONSENT AGENDA

The Consent Agenda deals with routine and non-controversial matters, and may include action on resolutions, ordinances, or other public hearings for which testimony is not anticipated. The vote on the Consent Agenda shall apply to each item that has not been removed. Any member of Council, staff, or the public may remove an item from the Consent Agenda for individual consideration. When items are pulled for discussion, they will be automatically placed at the end of their respective section within the Regular Agenda. One motion shall be made to adopt all non-removed items on the Consent Agenda.

5. APPROVAL OF CITY COUNCIL MEETING MINUTES

Items pulled from this section will be placed under 12. Unfinished and Ongoing Business

A. Minutes of the September 21, 2022 City Council Special and Regular Meetings **PG 38**
Reference: Sandra Kandell, City Clerk
Recommended Action: Approve minutes.
CEQA: Does not constitute a "Project" per California Environmental Quality Act Guidelines Section 15378

6. RESOLUTIONS

Items pulled from this section will be placed under 12. Unfinished and Ongoing Business or 13. New Business

7. ORDINANCES

Items pulled from this section will be placed under 11. Public Hearings

A. Ordinance Amending the Salary Classification Schedule - POA Classifications Action
Reference: Leticia Livian, Human Resources Director **PG 46**
Recommended Action: Hold second reading and adopt an ordinance to amend the salary classification schedule, modify salary range for Police Officer and Police Sergeant and approve the amendment.
CEQA: Does not constitute a "Project" per California Environmental Quality Act Guidelines Section 15378

B. Fire Engine Repairs & Ordinance Amending the FY22/23 Budget **PG 50**
Reference: Daniel Gho, Public Works Director / Deputy City Manager
Recommended Action: Hold second reading and adopt an ordinance amending the FY22/23 Budget.
CEQA: Does not constitute a "Project" per California Environmental Quality Act Guidelines Section 15378

8. REPORTS – INFORMATION ONLY

Items pulled from this section will be placed under 12. Unfinished and Ongoing Business or 13. New Business

A. 2022 CalCities Annual Conference Report **PG 57**
Reference: Nick Smith, Councilmember
Recommended Action: Receive report.
CEQA: Does not constitute a "Project" per California Environmental Quality Act Guidelines Section 15378

B. Report from Attendance at 2022 League of California Cities and International City/County Management Association Conferences. **PG 58**
Reference: Ben Harvey, City Manager
Recommended Action: Receive the report.
CEQA: Does not constitute a "Project" per California Environmental Quality Act Guidelines Section 15378

9. **REPORTS – REQUIRING ACTION**
Items pulled from this section will be placed under 12. Unfinished and Ongoing Business or 13. New Business

A. Ratification of New Local Emergency Actions **PG 59**
Reference: Ben Harvey, City Manager
Recommended Action: Receive report of emergency directives/modifications.
CEQA: Does not constitute a "Project" per California Environmental Quality Act Guidelines Section 15378

B. Renew a Contract with 4LEAF, Inc. for Building Services **PG 61**
Reference: Anastacia Wyatt, Community Development Director
Recommended Action: Authorize the City Manager to renew a Contract with 4LEAF, Inc. for Building Services, including and not limited to, building permit issuance, building inspection services, building plan review services with Building Official oversight and allow the contract to be based on permit activity and associated revenues.
CEQA: Does not constitute a "Project" per California Environmental Quality Act Guidelines Section 15378

10. **MEETING MINUTES OF COMMISSIONS, BOARDS, AND COMMITTEES**
Items pulled from this section will be placed under 13. New Business

REGULAR AGENDA

11. PUBLIC HEARINGS

For public hearings involving a quasi-judicial determination by the Council, the proponent of an item may be given 10 minutes to speak and others in support of the proponent's position may be given three minutes each. A designated spokesperson for opposition to the item may be given 10 minutes to speak and all others in opposition may be given three minutes each. Very brief rebuttal and surrebuttal may be allowed in the sole discretion of the Council. In public hearings not involving a quasi-judicial determination by the Council, all persons may be given three minutes to speak on the matter. Public hearings on non-controversial matters or for which testimony is not anticipated may be placed on the Consent Agenda, but shall be removed if any person requests a staff presentation or wishes to be heard on the matter.

A. Appeal of Coastal Development Permit (CDP) 22-0125 for 120 17th Street, APN 6-153-010 **PG 85**

Reference: Joseph Sidor, Contract Planner

Recommended Action: City Council deny the appeal, find the project categorically exempt per CEQA Guidelines Section 15303, and approve Coastal Development Permit 22-0125, subject to the required findings and recommended conditions of approval.

CEQA: Categorical Exemption, CEQA Guidelines Section 15303, Class 3, Construction or Conversion of Small Structures

12. UNFINISHED AND ONGOING BUSINESS

A. PERC Water Extension **PG 119**

Reference: Daniel Gho, Public Works Director / Deputy City Manager

Recommended Action: 1. Authorize an extension to the agreement with PERC Water for Operations & Maintenance of the Pacific Grove Local Water Project not to exceed 1 year (November 1, 2022 –October 31, 2022) at a monthly fixed cost of $26,188 and a flow based variable unit price of $247.24 per acre foot of influent.

2. Authorize staff to begin contract negotiations with PERC Water and return to City Council no later than May 2023 with new negotiated contract terms

CEQA: Does not constitute a "Project" per California Environmental Quality Act Guidelines Section 15378

13. NEW BUSINESS

A. Concept Review: New Fire Engine **PG 141**

Reference: Gaudenz Panholzer, Fire Chief

Recommended Action: Provide direction to staff on whether to purchase an electric or diesel-powered fire engine and authorize the purchase.

CEQA: Does not constitute a "Project" per California Environmental Quality Act Guidelines Section 15378

B. Empty Home Tax **PG 293**

Reference: Jenny McAdams, Councilmember

Recommended Action: Convene a conceptual discussion on an "Empty Homes Tax" in the City of Pacific Grove and direct staff to gather information and return to council regarding this concept.

CEQA: Does not constitute a "Project" per California Environmental Quality Act Guidelines Section 15378

14. **FULL PRESENTATIONS**

15. **CLOSED SESSION**

A. Public Employment, (Government Code § 54957) ***Discussion on this item to commence at 8:00 p.m.***
Title: City Manager Performance Evaluation

ADJOURNMENT

NOTICE OF ADA COMPLIANCE: Pursuant to Title II of the Americans with Disabilities Act (Codified At 42 United States Code Section 12101 and 28 Code of Federal Regulations Part 35), and Section 504 of the Rehabilitation Act of 1973, the City of Pacific Grove does not discriminate on the basis of race, color, religion, national origin, ancestry, sex, disability, age or sexual orientation in the provision of any services, programs, or activities. The City of Pacific Grove does not discriminate against persons with disabilities. City Hall is an accessible facility. A limited number of assisted listening devices will be available at this meeting. Notification 48 hours prior to the meeting will enable the City to make reasonable arrangements to ensure accessibility to this meeting or provide the requested agenda format.

CITY OF PACIFIC GROVE

300 Forest Avenue, Pacific Grove, California 93950

AGENDA REPORT

TO: Honorable Mayor and Members of the City Council

FROM: Sandra Kandell, City Clerk/DEI Coordinator

MEETING DATE: October 5, 2022

SUBJECT: Cal AM Central Coast Update, by External Affairs Manager Josh Stratton

CEQA: Does not constitute a "Project" per California Environmental Quality Act Guidelines Section 15378

RECOMMENDATION

Receive presentation.

Attachments

PPT



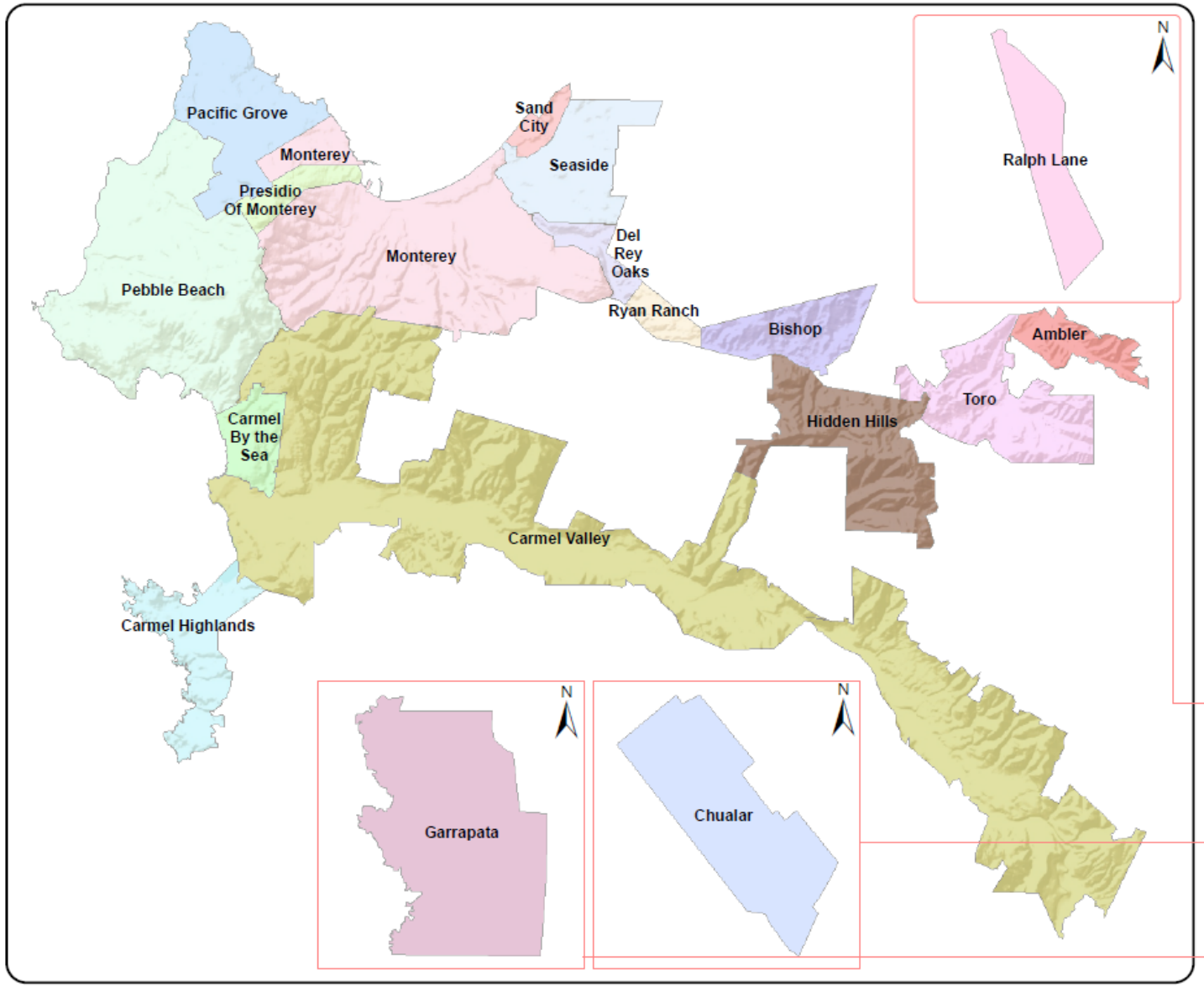
CALIFORNIA
AMERICAN WATER

WE KEEP LIFE FLOWING™

CALIFORNIA AMERICAN WATER

Pacific Grove City Council

Central Division – Water Systems



Basins within Service Area:

Seaside Basin

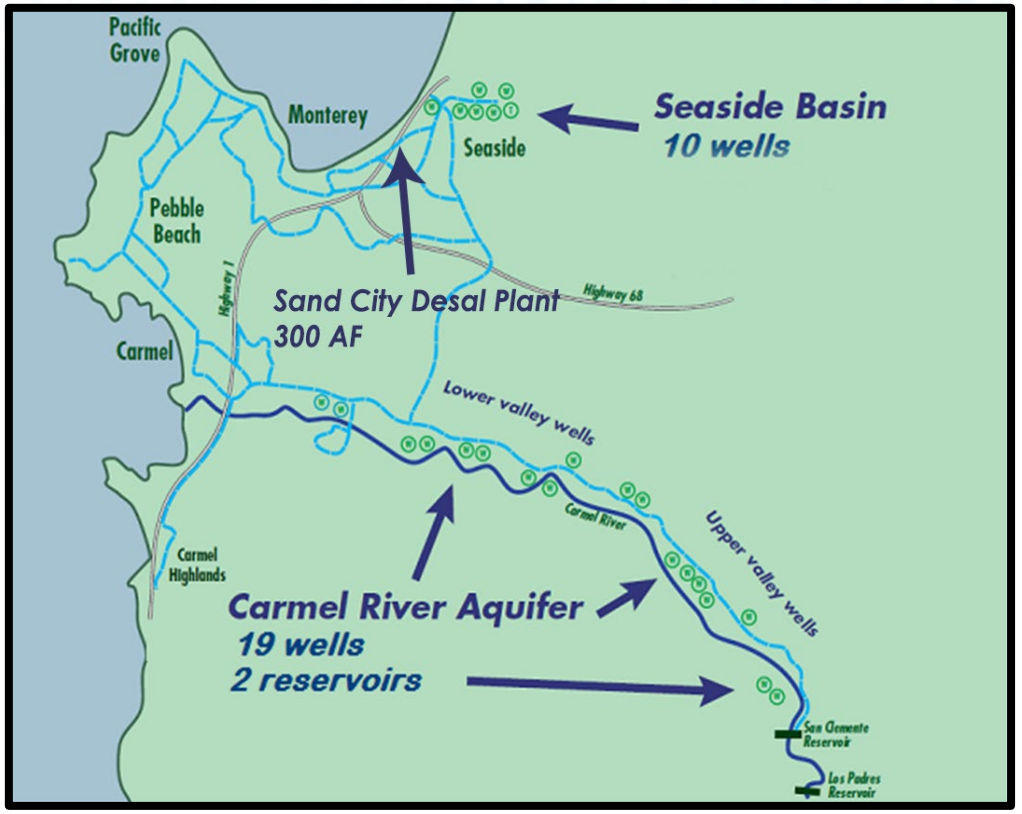
Monterey Subbasin

180/400 Aquifer

Langley Area

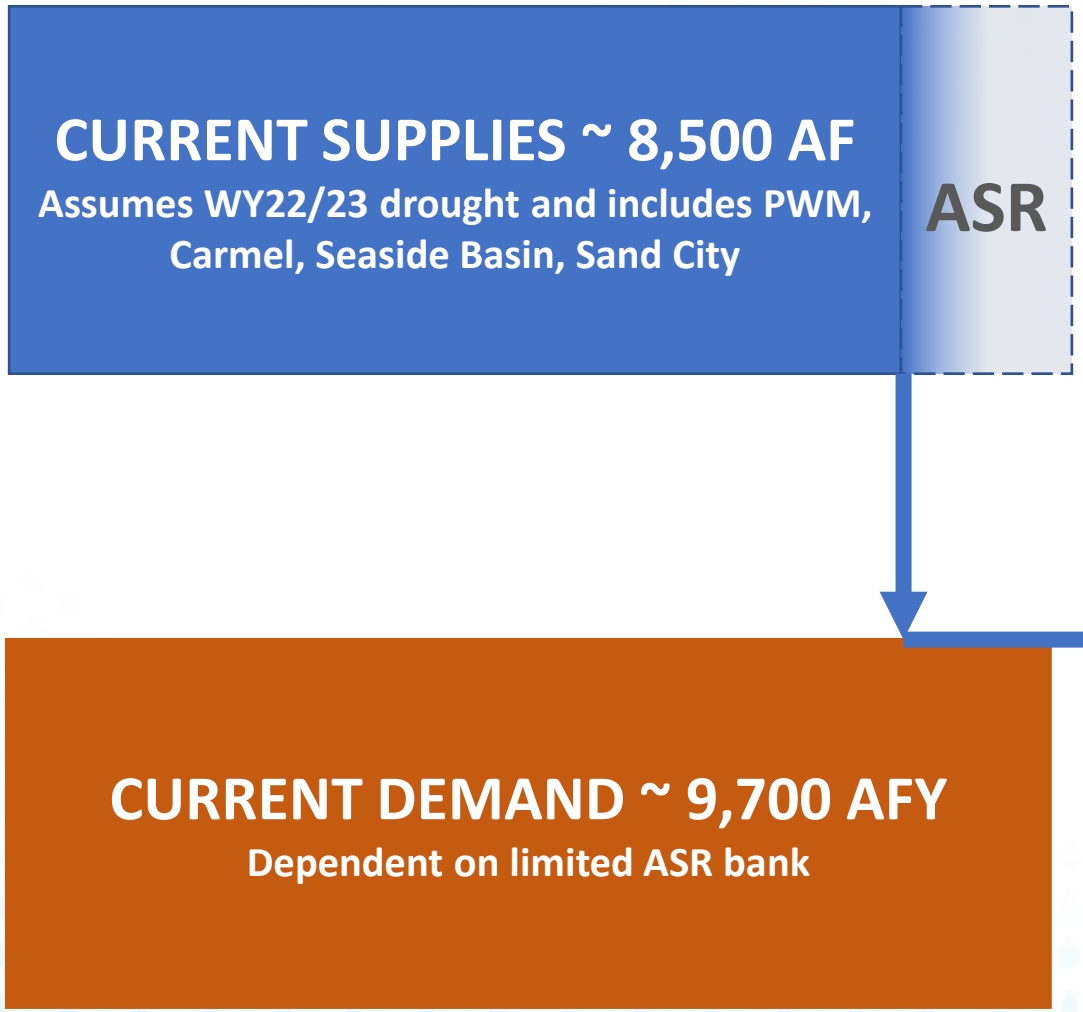
Water Supply Constraints

- **Carmel River** – State ordered withdrawals reduced by more than 50%
- **Seaside Basin** – Court-ordered withdrawal reduction by more than 50%
- **Drought** – Currently in multi-year emergency drought with minimal rain



The required cutbacks to existing supplies cannot be met without replacement water sources

Today's Supplies at a Critical Juncture



Need sufficient long-term supplies to address critical needs such as:

- Future Demand
- Climate Change & Drought
- Operation Supply Buffer
- Seaside Basin Protection

Monterey Peninsula Water Supply Project – Path Forward

CALIFORNIA AMERICAN WATER

Climate Resilience

- Droughtproof ability to preserve Carmel River habitat

Environmental Considerations

- Carbon free energy
- Slant wells
- Existing outfall

Affordability

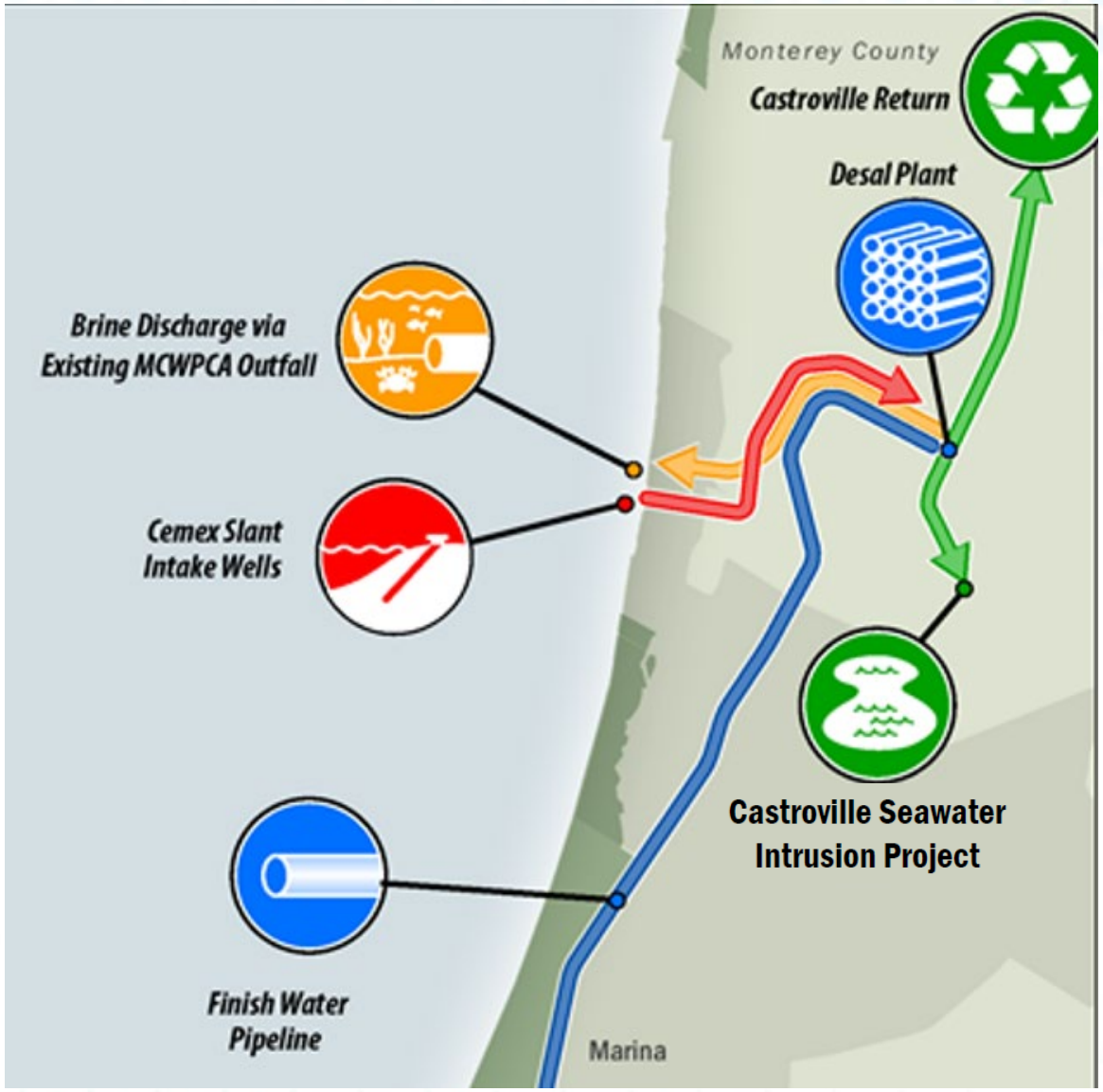
- Affordable housing
- Customer Assistance, Crisis Assistance and LIHWAP

Regional Approach

- Return water to Castroville/CSIP

Status and Timeline

- CCC hearing schedule for November
- Can be in service within next 5 years



FUTURE SOURCES



Desal

ASR ePWM

Monterey Conservation Program

Peninsula Residents are already among the most water-efficient in the State

- Monterey's combined indoor and outdoor GPCD at ~60 GPCD

- Community proactive engagement in conservations programs such rebates, education programs, and water wise house calls



Affordability

Current Programs

Customer Assistance Program

LIHWAP

Crisis Fund

Statewide Program Funding

After Construction

Remove 4th Tier

Increase assistance eligibility

Multi-Family unit support

Public grants to lower project cost

Connection fees


For more information visit:
www.californiaamwater.com

CITY OF PACIFIC GROVE

300 Forest Avenue, Pacific Grove, California 93950

AGENDA REPORT

TO: Honorable Mayor and Members of the City Council

FROM: Sandra Kandell, City Clerk/DEI Coordinator

MEETING DATE: October 5, 2022

SUBJECT: Monterey County Convention & Visitors Bureau Update, by Amrish Patel

CEQA: Does not constitute a "Project" per California Environmental Quality Act Guidelines Section 15378

RECOMMENDATION

Receive update.

Attachments

PPT

MONTEREY
GRAB LIFE BY THE MOMENTS

MCCVB Update
October 5, 2022



INVESTMENT HIGHLIGHTS

MARKETING COMMUNICATIONS

LEISURE CAMPAIGN





CALIFORNIA connect

MONTEREY COUNTY CONVENTION & VISITORS BUREAU

NOW IS THE MOMENT TO TAKE THE SCENIC ROUTE

Home to 99 miles of breathtaking coastline, rich history and amazing culinary experiences, Monterey County is as epic and inspiring as ever. Watch awe-inspiring sunsets on Carmel Beach, sip local wines in the Salinas Valley, play golf on the courses at world-renowned Pebble Beach and visit the world-famous Monterey Bay Aquarium.

NEED TO KNOW

For advisors, Monterey County CVB offers a variety of services to help travel professionals create memorable experiences for their clients, including inspiration for itinerary planning, distribution of travel industry sales







NEW STRATEGIC ROADMAP

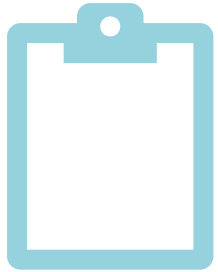
STRATEGIC PLANNING



COMMUNITY INPUT SESSIONS



STAKEHOLDER ROUNDTABLES



SURVEYS

COMMUNITY INPUT



STRATEGIC PLANNING TASKFORCE MEETINGS



1:1 INTERVIEWS

MONTEREY

TEAM INPUT SESSIONS

MCCVB Vision & Mission 2022 & Beyond

Vision: A thriving tourism economy that enriches Monterey County's economic vitality and quality of life.

Mission: To generate community prosperity for Monterey County through the responsible promotion and growth of the tourism economy

WE VALUE

CONNECTIVITY
Relational not transactional approach

COLLABORATION
Seek opportunities to build effective partnerships with the community

AGILITY
Creative, nimble, embrace change, and invite new ideas and innovation

ACCOUNTABILITY
Reliable stewards of the resources entrusted to us

INCLUSIVITY
Committed to DEI – how we operate and how we promote

SUSTAINABILITY
Responsible promotion to protect the product and our quality of life

STRATEGIC IMPERATIVES

I. Contribute to the long-term viability of the tourism economy	**Be a contributor, collaborator and catalyst**
II. Generate the ideal visitation for Monterey County	**Focus on off season, longer stays, balanced mix, and rebranded experience**
III. Enhance community and member engagement	**Work to enrich partnerships, engage residents, educate the community**
IV. Ensure long term organizational financial stability	**Ensure renewed Tourism Improvement District, Enhanced Jurisdiction Investment and Elevated Accountability**
V. Cultivate MCCVB's strong organizational culture	**Shift to "Evolutionized" Leadership Culture, Context Over Control, Reinvented Board Culture**

MCTID RENEWAL

TOURISM ECONOMICS

TID Funding Analysis

Monterey, California

Prepared for:

MONTEREY

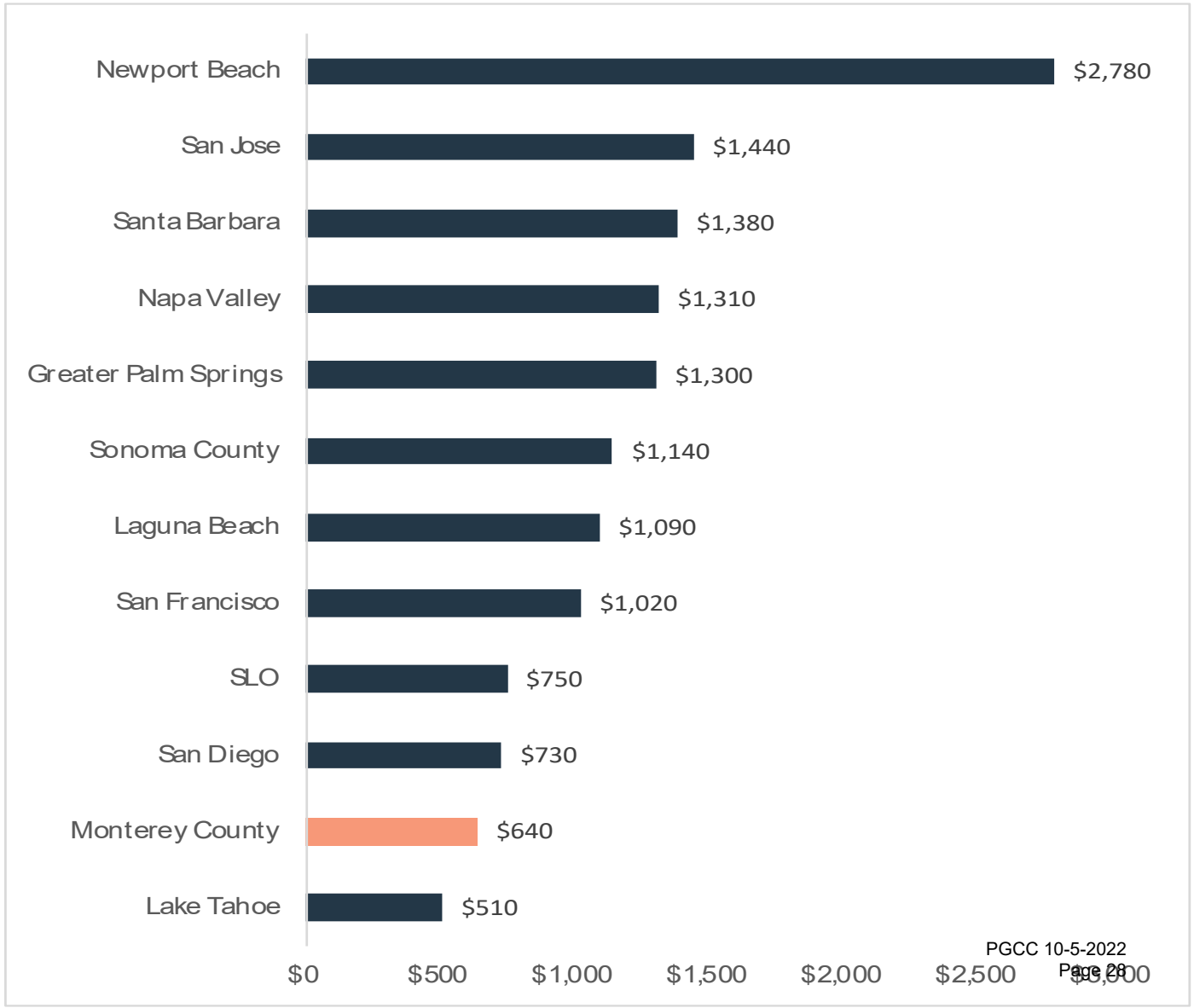
GRAB LIFE BY THE MOMENTS®

CURRENT SITUATION

WORLD CLASS DESTINATION

SECOND CLASS BUDGET

COMPETITIVE ANALYSIS



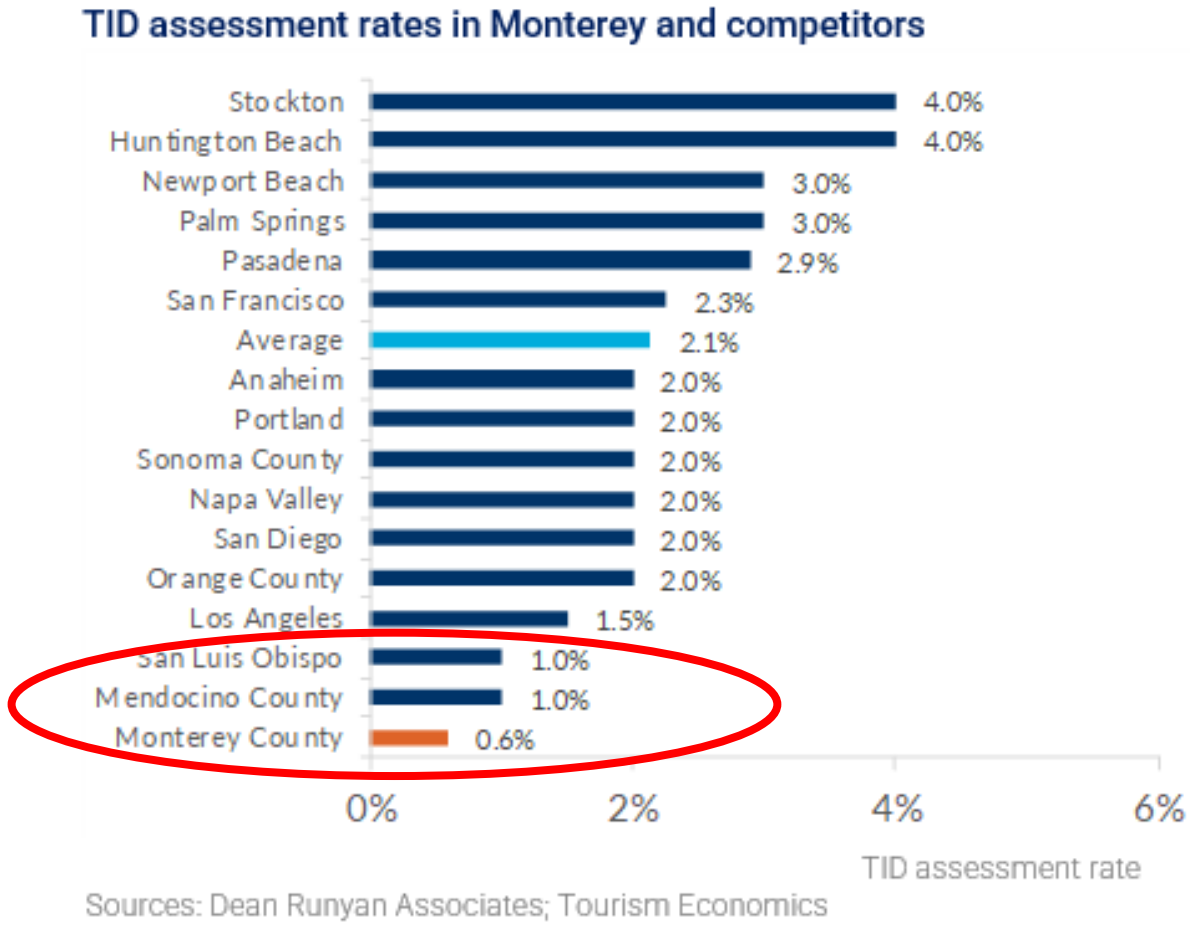
CURRENT SITUATION

Monterey's TID assessment of 0.6%* is much lower than the competitive set average of 2.1%

Includes MCCVB's competitive set and additional DMOs that disclosed their assessment rate DI.

Since the assessment is a major source of revenue for MCCVB (and the majority of other DMOs on this list), this results in a limited tourism promotion budget for Monterey County. Increasing the TID assessment rate could generate additional funding and provide competitive funding for tourism promotion in Monterey County.

*Monterey's per room assessment scheme results in an overall rate of 0.6% of room revenue.



The Community Steps In & Steps Up

MCTID MDP

CURRENT DISTRICT 2019-2023	RENEWAL DISTRICT 2023-2032
Five-Year Term	Ten-Year Term
Expires December 2023	Ideally, new District in place by July 1, 2023
Boundaries: The unincorporated areas of Monterey County and the cities of Carmel-by-the-Sea, Del Rey Oaks, Marina, Monterey, Pacific Grove, Salinas, Sand City, and Seaside.	Boundaries: The unincorporated areas of Monterey County and the cities of Carmel-by-the-Sea, Del Rey Oaks, Gonzales, Greenfield, King City, Marina, Monterey, Pacific Grove, Salinas, Sand City, Seaside, and Soledad
Assessment rates (per occupied room night)*: $1 limited service $2 full service	Assessment rates (per occupied room night)*: $1.50 limited service $4.50 non-luxury full service $7.00 luxury service
Escalators: Decided annually by MCTID Oversight Committee; $.15 and $.30 respectively; rates not changed since 2011	Escalators: Automatically increases biennially beginning in FY2025-26 by $.20, $.60 and $.90 respectively. Committee can decide to not implement.

ASSESSMENT TIERS

$1.50

Limited-Service Lodging Business means:

- Lodging business that offers limited facilities and amenities, typically without a full-service restaurant.
- Limited-service lodging businesses are often in the economy, midscale, or upper midscale class as defined by Smith Travel Research.

$4.50

Full-Service Lodging Business means:

- Lodging business with a wide variety of onsite amenities, such as restaurants, meeting spaces, exercise rooms, or spas.
- Non-luxury full-service lodging businesses are often in the upscale or upper upscale class as defined by Smith Travel Research.

$7.00

Luxury Lodging Business means:

- Lodging business with premium services and the highest quality ratings.
- Luxury lodging businesses may have restaurants, meeting spaces, exercise rooms, or spas, and have characteristics of five (5) star hotels. The luxury lodging business type includes properties classified as all-inclusive, boutique, and destination resorts - STR

$2.2 BILLION

INCREMENTAL VISITOR SPENDING 2023 – 2032

$58.3 MILLION

INCREMENTAL T.O.T. GAINED 2023 – 2032

ONE MORE PERCENT



$852,950
T.O.T.

$692,968
Local Tax Receipts

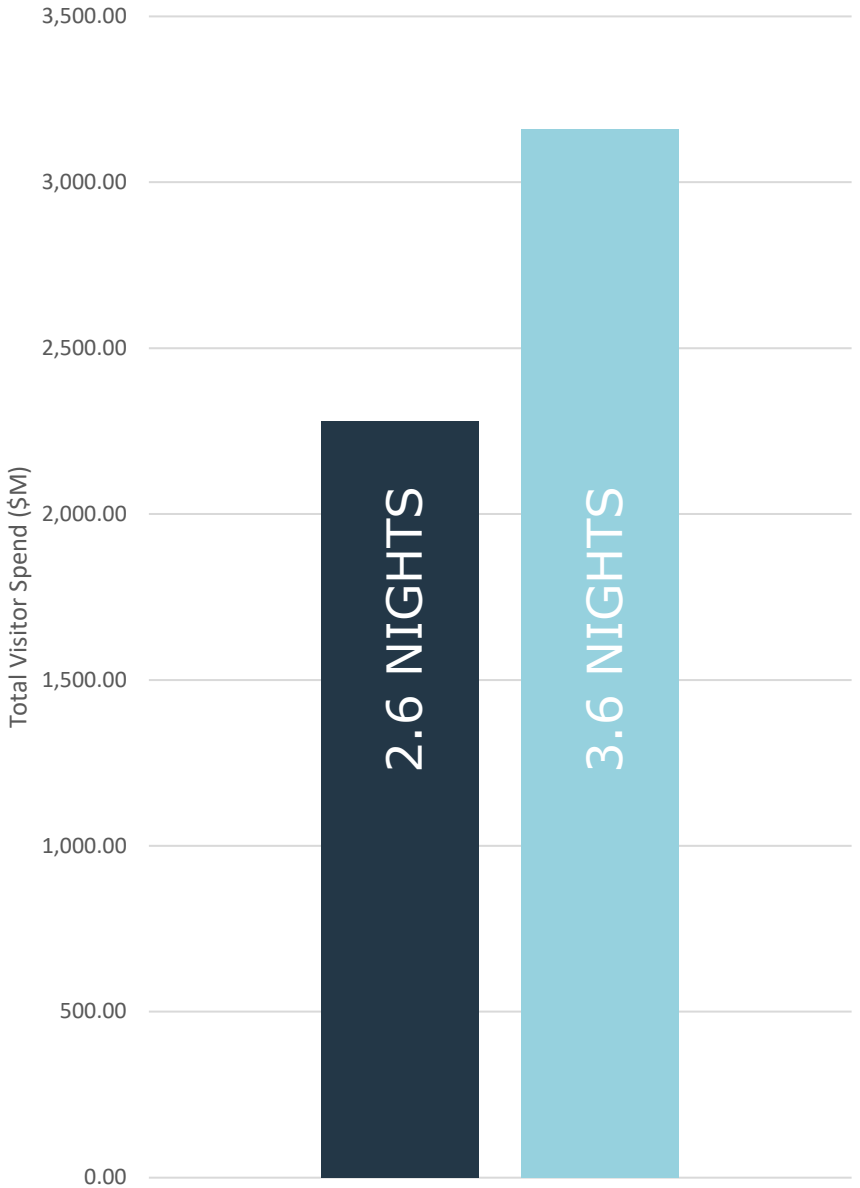
$33,747,179
Visitor Spending

PEAK SEASON
MAY – SEPT. ↑80%

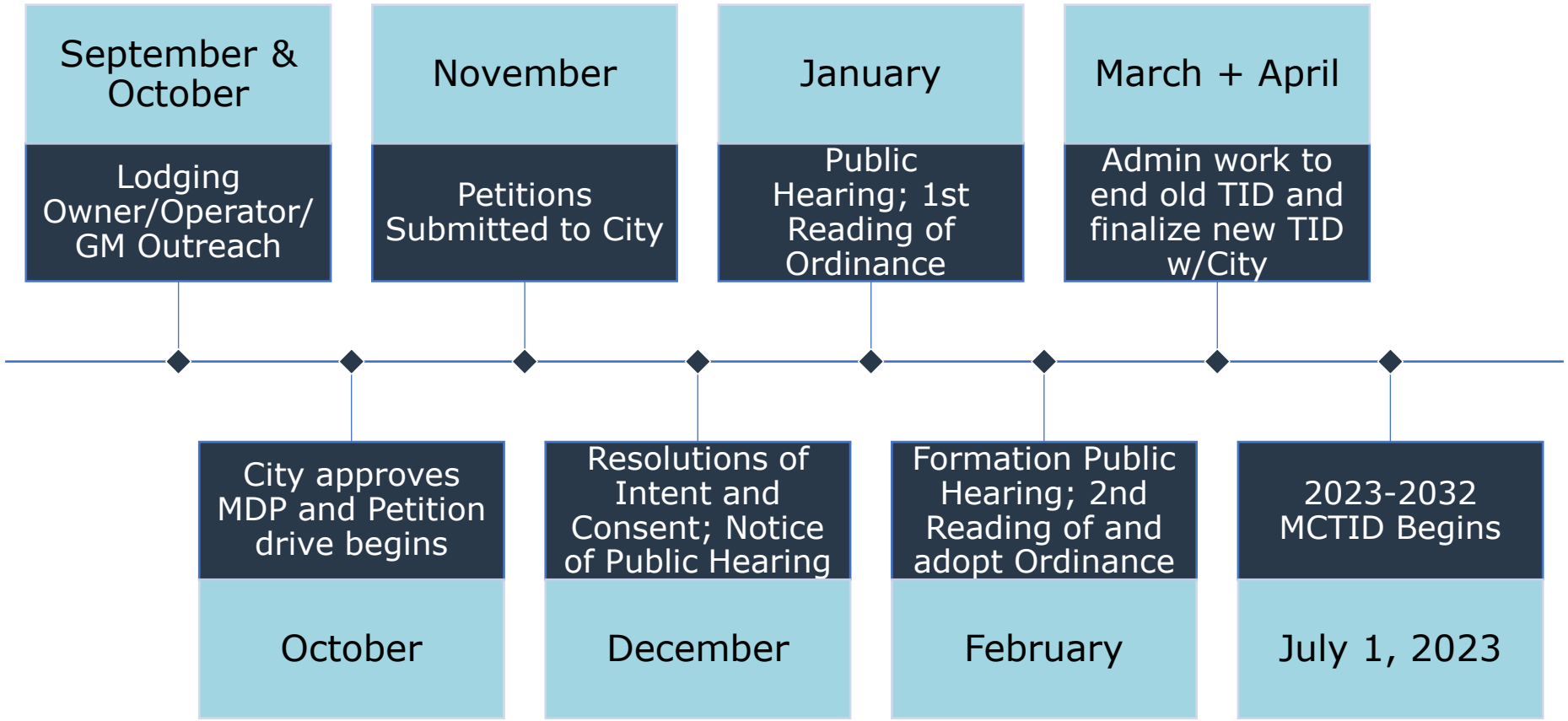
OFF SEASON
OCT. - APRIL ↓65%

ONE MORE NIGHT

$877
MILLION
INCREASE IN
VISITOR SPEND
PER YEAR



RENEWAL TIMELINE



Thank you!

CITY OF PACIFIC GROVE

300 Forest Avenue, Pacific Grove, California 93950

AGENDA REPORT

TO: Honorable Mayor and Members of the City Council

FROM: Sandra Kandell, City Clerk/DEI Coordinator

MEETING DATE: October 5, 2022

SUBJECT: Minutes of the September 21, 2022 City Council Special and Regular Meetings

CEQA: Does not constitute a "Project" per California Environmental Quality Act Guidelines Section 15378

RECOMMENDATION

Approve minutes.

Attachments

Draft Minutes

DRAFT MEETING MINUTES

CITY OF PACIFIC GROVE

CITY COUNCIL

CLOSED SESSION MEETING

Wednesday, September 21, 2022, 5:00 P.M.
Council Chamber – City Hall – 300 Forest Avenue, Pacific Grove, CA

THIS MEETING WILL BE HELD IN PERSON AND VIRTUALLY (HYBRID).
CHAMBER CAPACITY SEATING IS LIMITED AND PROVIDED ON A FIRST COME, FIRST SERVED BASIS.
THE VIRTUAL MEETING IS COMPLIANT WITH THE GOVERNOR'S EXECUTIVE ORDERS ALLOWING FOR A DEVIATION OF TELECONFERENCE RULES REQUIRED BY THE BROWN ACT.

Join the Zoom Meeting to participate live at:
https://us02web.zoom.us/j/692219855

DRAFT

CALL TO ORDER
Mayor Peake called the meeting to order at 5:00 p.m. City Clerk Kandell conducted roll call with the following Council present in Chamber: Mayor Peake, Mayor Pro Tem Amelio, Councilmembers McAdams, Poduri, Smith, and Tomlinson. Absent: Councilmember Coletti.

APPROVAL OF AGENDA

Action: Upon motion by Councilmember Smith and seconded by Mayor Pro Tem Amelio, Council voted to approve the agenda.

Motion carried 6-0-1, by the following roll call vote:

AYES:	Mayor Peake, Mayor Pro Tem Amelio, Councilmembers McAdams, Poduri, Smith, and Tomlinson.
NOES:	None.
ABSENT:	Councilmember Coletti.

CLOSED SESSION

PUBLIC COMMENT ON CLOSED SESSION MATTERS
No public comment was received.

A. Public Employment, (Government Code § 54957)
Title: City Manager Performance Evaluation

Councilmember McAdams declared a conflict of interest and stated she would not participate in the discussion.

B. Conference with Legal Counsel – Initiation of Litigation Government Code §54956.9(d)(4))
Number of Cases: One

DRAFT MEETING MINUTES

CITY OF PACIFIC GROVE

CITY COUNCIL

REGULAR MEETING

Wednesday, September 21, 2022, 6:00 P.M.
Council Chamber – City Hall – 300 Forest Avenue, Pacific Grove, CA

**THIS MEETING WILL BE HELD IN PERSON AND VIRTUALLY (HYBRID).
CHAMBER CAPACITY SEATING IS LIMITED AND PROVIDED ON
A FIRST COME, FIRST SERVED BASIS.
THE VIRTUAL MEETING IS COMPLIANT WITH THE GOVERNOR'S EXECUTIVE
ORDERS ALLOWING FOR A DEVIATION OF
TELECONFERENCE RULES REQUIRED BY THE BROWN ACT.**

JOIN THE ZOOM WEBINAR TO PARTICIPATE LIVE AT:
https://us02web.zoom.us/j/209579290

DRAFT

CALL TO ORDER
Mayor Peake called the meeting to order at 6:00 p.m. City Clerk Kandell conducted roll call with the following Council present in Chamber: Mayor Peake, Mayor Pro Tem Amelio, Councilmembers Coletti, McAdams, Poduri, Smith, and Tomlinson.

PLEDGE OF ALLEGIANCE:
Councilmember Coletti led the pledge of allegiance.

1. **APPROVAL OF AGENDA**
Action: Upon motion by Councilmember Smith and seconded by Mayor Pro Tem Amelio, Council voted to approve the agenda.

Motion carried 7-0, by the following roll call vote:

AYES:	Mayor Peake, Mayor Pro Tem Amelio, Councilmembers Coletti, McAdams, Poduri, Smith, and Tomlinson.
NOES:	None.
ABSENT:	None.

2. **PRESENTATIONS**
A. Mayor's Proclamation: Hispanic Heritage Month
Action: Council received proclamation.
CEQA: Does not constitute a "Project" per California Environmental Quality Act Guidelines Section 15378

3. **COUNCIL AND STAFF ANNOUNCEMENTS (City-Related Items Only)**

A. Report on Closed Session by City Attorney

Public Employment, (Government Code § 54957)
Title: City Manager Performance Evaluation

Conference with Legal Counsel – Initiation of Litigation Government Code §54956.9(d)(4)) Number of Cases: One

City Attorney Pierik had no report.

B. Council made general announcements.

4. **GENERAL PUBLIC COMMENT**

Public comment was received from an unnamed speaker, Sally Moore, John Hasselbauer, Michelle Raine, and Lisa Ciani.

CONSENT AGENDA

Action: Consent Agenda item 8A was pulled and considered as Regular Agenda item 12B.

Action: Upon motion by Councilmember Smith and seconded by Councilmember Poduri, Council voted to approve the Consent Agenda, as amended.

Motion carried 7-0, by the following roll call vote:

AYES:	Mayor Peake, Mayor Pro Tem Amelio, Councilmembers Coletti, McAdams, Poduri, Smith, and Tomlinson.
NOES:	None.
ABSENT:	None.

5. **APPROVAL OF CITY COUNCIL MEETING MINUTES**

A. Minutes of the September 7, 2022 City Council Regular Meeting
Action: Approved minutes.
CEQA: Does not constitute a "Project" per California Environmental Quality Act Guidelines Section 15378

6. **RESOLUTIONS**

7. **ORDINANCES**

8. **REPORTS – INFORMATION ONLY**

A. Check Register Report – August 2022 ***This item was pulled and considered as Regular Agenda item 12B.***
Reference: Tori Hannah, Administrative Services Director / Assistant City Manager
Recommended Action: Receive the report.
CEQA: Does not constitute a "Project" per California Environmental Quality Act Guidelines Section 15378

DRAFT

B. Core Revenue Reports for August 2022
Action: Received the Core Revenue Reports for August 2022.
CEQA: Does not constitute a "Project" per California Environmental Quality Act Guidelines Section 15378

C. League of California Cities Annual Conference and Expo Summary
Action: Received report.
CEQA: Does not constitute a "Project" per California Environmental Quality Act Guidelines Section 15378

D. Association of Monterey Bay Area Governments Board of Directors Meeting Minutes of June 15, 2022
Action: Received minutes.
CEQA: Does not constitute a "Project" per California Environmental Quality Act Guidelines Section 15378

E. Monterey Salinas Transit Board of Director Meeting Minutes of July 11, 2022
Action: Received minutes.
CEQA: Does not constitute a "Project" per California Environmental Quality Act Guidelines Section 15378

F. Community Survey
Action: Received the report.
CEQA: Does not constitute a "Project" per California Environmental Quality Act Guidelines Section 15378

9. **REPORTS – REQUIRING ACTION**

A. Ratification of New Local Emergency Actions
Action: Received report of emergency directives/modifications.
CEQA: Does not constitute a "Project" per California Environmental Quality Act Guidelines Section 15378

B. Sanitary Sewer Management Plan
Action: Adopted Sewer System Management Plan (SSMP) Revision #3 and authorized staff to certify the document in the California Integrated Water Quality System (CIWQS).
CEQA: Does not constitute a "Project" per California Environmental Quality Act Guidelines Section 15378

C. Agreement with Harris & Associates, Inc.
Action: Authorized the Mayor to sign an agreement with Harris & Associates, Inc. for the preparation and execution of the 6th Cycle Housing Element Environmental Review in an amount not to exceed $55,000.
CEQA: Does not constitute a "Project" per California Environmental Quality Act Guidelines Section 15378

10. **MEETING MINUTES OF COMMISSIONS, BOARDS, AND COMMITTEES**

A. Diversity, Equity and Inclusion Meeting Minutes: August 15, 2022 Special Meeting and August 15, 2022 Special Study Session
Action: Received minutes.

DRAFT

CEQA: Does not constitute a "Project" per California Environmental Quality Act Guidelines Section 15378

REGULAR AGENDA

11. **PUBLIC HEARINGS**

A. Ordinance Amending the Salary Classification Schedule - POA Classifications ***Action Required by September 21, 2022.***

No public comment was received.

Action: Upon motion by Mayor Pro Tem Amelio and seconded by Councilmember McAdams, the Council requested the City Attorney read the title of the ordinance; and voted to waive further reading of the ordinance; introduce and hold first reading of an ordinance to amend the salary classification schedule; modify salary range for Police Officer and Police Sergeant; approve the amendment; and direct that a summary of a proposed ordinance be published as approved by the City Attorney.

Motion carried 7-0, by the following roll call vote:

AYES:	Mayor Peake, Mayor Pro Tem Amelio, Councilmembers Coletti, McAdams, Poduri, Smith, and Tomlinson.
NOES:	None.
ABSENT:	None.

CEQA: Does not constitute a "Project" per California Environmental Quality Act Guidelines Section 15378

B. Fire Engine Repairs & Ordinance Amending the FY22/23 Budget

No public comment was received.

Action: Upon motion by Councilmember Tomlinson and seconded by Councilmember McAdams, Council requested the City Attorney read the title of the ordinance; and voted to waive further reading of the ordinance; introduce and hold first reading of an ordinance amending the FY22/23 Budget; direct that publication of the ordinance will be satisfied by publication of a summary approved by the City Attorney; and authorize Hi-Tech EVS, Inc. to make repairs to Fire Engine 6414 in an amount not to exceed $75,304.54 plus a 15% contingency.

Motion carried 7-0, by the following roll call vote:

AYES:	Mayor Peake, Mayor Pro Tem Amelio, Councilmembers Coletti, McAdams, Poduri, Smith, and Tomlinson.
NOES:	None.
ABSENT:	None.

CEQA: Does not constitute a "Project" per California Environmental Quality Act Guidelines Section 15378

12. **UNFINISHED AND ONGOING BUSINESS**

A. Purchasing Authorization Procedures

DRAFT

No public comment was received.

Action: Upon motion by Councilmember Smith and seconded by Councilmember McAdams, Council directed the City Attorney to return with a draft ordinance to clarify purchasing authorization procedures and resolution for approval of standard contracts.

Motion carried 7-0, by the following roll call vote:

AYES:	Mayor Peake, Mayor Pro Tem Amelio, Councilmembers Coletti, McAdams, Poduri, Smith, and Tomlinson.
NOES:	None.
ABSENT:	None.

CEQA: Does not constitute a "Project" per California Environmental Quality Act Guidelines Section 15378

B. Check Register Report – August 2022 ***This item was pulled from the Consent Agenda.***
Public comment was received from Debby Beck.

Action: Council received the report.
CEQA: Does not constitute a "Project" per California Environmental Quality Act Guidelines Section 15378

13. **NEW BUSINESS**

A. Friends of Perkins Park
No public comment was received.

Action: Council received report and encouraged staff to continue work with the Friends of Perkins Park to enhance existing park conditions utilizing donations received by the Friends.
CEQA: Does not constitute a "Project" per California Environmental Quality Act Guidelines Section 15378

B. Discussion on City Efforts Regarding the 29 Pacific Grove Homeless Residents
Public comment was received from Debby Beck, Darla Vining, Lisa Ciani, and Andrew Kubica.

Action: Council held a discussion regarding the 29 homeless residents that live in the City of Pacific Grove and the City's efforts to address our unhoused residents and provided staff general direction on next steps.
CEQA: Does not constitute a "Project" per California Environmental Quality Act Guidelines Section 15378

C. Automatic Funding Mechanism for TAKE PART Program
No public comment was received.

Action: Council held a discussion regarding implementing an automatic funding mechanism for Fund 25 in the amount of $10,000 to sustain the TAKE PART Program and provided staff with direction.

DRAFT

CEQA: Does not constitute a "Project" per California Environmental Quality Act Guidelines Section 15378

14. **FULL PRESENTATIONS**

15. **CLOSED SESSION**

ADJOURNMENT
Council adjourned the regular meeting at 8:04 p.m. and returned to unfinished closed session agenda items A and B. Council adjourned the closed session meeting at 9:30 p.m.

Respectfully Submitted,

Sandra Kandell
City Clerk

Approved by Mayor: _____ Date_____

Attest by City Manager: _____ Date_____

DRAFT

CITY OF PACIFIC GROVE

300 Forest Avenue, Pacific Grove, California 93950

AGENDA REPORT

TO:	Honorable Mayor and Members of the City Council
FROM:	Leticia Livian, Human Resources Director
MEETING DATE:	October 5, 2022
SUBJECT:	Ordinance Amending the Salary Classification Schedule - POA Classifications Action
CEQA:	Does not constitute a "Project" per California Environmental Quality Act Guidelines Section 15378

RECOMMENDATION

Hold second reading and adopt an ordinance to amend the salary classification schedule, modify salary range for Police Officer and Police Sergeant and approve the amendment.

DISCUSSION

No changes were made between the first and second reads. The City Clerk caused a summary of the ordinance to be published on September 29, 2022.

On August 27, 2022, the Council adopted Resolution 22-045 to authorize the city manager to execute all documents and to perform all other necessary City acts to implement the Memorandum of Understanding (MOU) between the City of Pacific Grove (City) and the Pacific Grove Police Officers Association (POA).

The MOU approved increases to the salary range. The salary increases and the effective dates are listed below.

- 3% salary increase effective July 24, 2022; and
- 2% salary increase effective the first full pay period in July 2023.

The City salary classification schedule identifies the job classifications approved by Council (e.g., Police Officer) and the hourly rates of pay for each classification at each step authorized by the Personnel Rules. To implement a salary increase, the salary classification schedule must be amended to incorporate the salary increase for the effective dates outlined in the MOU between the City and the POA. The action proposed in this Agenda Report completes the salary change for the 3% COLA approved by City Council.

Pursuant to Charter Article 25 and Pacific Grove Municipal Code (PGMC) Section 4.20.280, approval and amendment to the classification schedule must be adopted by the Council.

The requested changes are for Police Officer and Police Sergeant classifications only, all other

classifications in the salary schedule remain the same. To view the entire salary schedule, please refer to the City's website, http://www.cityofpacificgrove.org/about-city/human-resources/salaries-benefits-and-mous.

City Of Pacific Grove
Proposed New Salary Schedule - POA Hourly Rate

	Classification	Step 1A	Step 2B	Step 3C	Step 4D	Step 5E	Step 6F	Step 7G
Current Hourly	Police Sergeant	50.96	53.50	56.18	58.99	61.94	64.26	66.67
New Hourly	Police Sergeant	52.48	55.11	57.86	60.76	63.80	66.19	68.67
Current Hourly	Police Officer	44.10	46.31	48.62	51.06	53.61	55.62	57.70
New Hourly	Police Officer	45.42	47.69	50.08	52.58	55.21	57.28	59.43

OPTIONS

Provide alternative direction to staff.

FINANCIAL IMPACT:

The projected annual fiscal impact to the General Fund is listed below:

Year 1 FY 22/23	$103,000 is budgeted for the FY 22/23 for the 3% COLA.	$103,000
Year 2 FY 23/24	$70,000 will be budget for the FY 23/24 for the 2% COLA.	$68,500
	Total projected cost for multi-year agreement:	$171,500

GOAL ALIGNMENT: Not Applicable.

Attachments

Draft Ordinance

ORDINANCE NO. 22-____

ORDINANCE OF THE CITY COUNCIL OF THE CITY OF PACIFIC GROVE AMENDING THE CLASSIFICATION SCHEDULE FOR POLICE SERGEANT AND POLICE OFFICER

Findings

1. The City of Pacific Grove (City) entered into a new Memorandum of Understanding (MOU) with the Pacific Grove Police Officer Association; and

2. The MOU is effective from July 1, 2022 through June 30, 2024; and

3. The MOU contains two salary adjustments; and

4. The first salary adjustment takes effect on July 24, 2022; and

5. The second salary adjustment takes effect the first full pay period of July 2023; and

6. Modifications to the salary classification plan are for Police Officer and Police Sergeant Classifications only; and

7. Modifications to the salary classification plan must be amended for each described date; and

8. Amendment to the classification plan must be adopted by the City Council pursuant to Charter Article 25 and Pacific Grove Municipal Code (PGMC) Section 4.20.280; and

9. The City Council ratified the MOU and its implementation measures, including salary adjustment; and In the enactment of this ordinance, the City followed the guidelines adopted by the State of California and published in the California Code of Regulations, Title 14, Section 15000, et seq. Enactment of this ordinance action does not constitute a "project" as defined by California Environmental Quality Act (CEQA) because it is an organizational or administrative activity that will not result in direct or indirect physical changes in the environment pursuant Section 15378.

Ordinance

NOW, THEREFORE, THE COUNCIL OF THE CITY OF PACIFIC GROVE DOES ORDAIN AS FOLLOWS:

SECTION 1. The foregoing findings of the City Council are incorporated into this Ordinance as if set forth in full.

SECTION 2. The position classification plan approved and adopted by the City Council pursuant to Charter Article 15 and PGMC § 4.20.280 is amended for the POA positions, with the following salary schedule:

City Of Pacific Grove

Proposed New Salary Schedule - POA Hourly Rate

Eff.	Classification	Step 1A	Step 2B	Step 3C	Step 4D	Step 5E	Step 6F	Step 7G
July 24, 2022	524-001 Police Sergeant	52.48	55.11	57.86	60.76	63.80	66.19	68.67
Eff.	**Classification**	**Step 1A**	**Step 2B**	**Step 3C**	**Step 4D**	**Step 5E**	**Step 6F**	**Step 7G**
July 24, 2022	516-001 Police Officer	45.42	47.69	50.08	52.58	55.21	57.28	59.43

SECTION 3. The City Manager is directed to execute all documents and to perform all necessary City acts to implement this Ordinance.

SECTION 4. In accord with Article 15 of the City Charter, this ordinance shall become effective July 24, 2022.

PASSED AND ADOPTED BY THE COUNCIL OF THE CITY OF PACIFIC GROVE this_____day of_____, 2022, by the following vote:

AYES:
NOES:
ABSENT:

APPROVED:

_____
BILL PEAKE, Mayor

ATTEST:
DATED:_____

_____
SANDRA KANDELL, City Clerk

APPROVED AS TO FORM:

_____
BRIAN PIERNIK, City Attorney

CITY OF PACIFIC GROVE
300 Forest Avenue, Pacific Grove, California 93950

AGENDA REPORT

TO: Honorable Mayor and Members of the City Council

FROM: Daniel Gho, Public Works Director / Deputy City Manager

MEETING DATE: October 5, 2022

SUBJECT: Fire Engine Repairs & Ordinance Amending the FY22/23 Budget

CEQA: Does not constitute a "Project" per California Environmental Quality Act Guidelines Section 15378

RECOMMENDATION

Hold second reading and adopt an ordinance amending the FY22/23 Budget.

DISCUSSION

No changes were made between the first and second reads. The City Clerk caused a summary of the ordinance to be published on September 29, 2022.

Since December of 2008, the City of Pacific Grove has contracted with the City of Monterey for fire services. Additionally, Pacific Grove has an agreement with Monterey to provide supplemental fire equipment maintenance services when repairs cannot be made at the Public Works Corporation Yard with in-house mechanics. Periodically, repairs exceed the capabilities of both the Pacific Grove and Monterey mechanical divisions and require the services of a large equipment mechanical facility. This is the case with the Pacific Grove fire engine 6414.

Engine 6414 is a Pierce Type 1 engine with approximately 119,000 miles. This engine is the City first out when calls come through the PG fire house. The engine began to experience issues in July of 2022, and was sent to Monterey's mechanical division for initial diagnosis. It was quickly determined that the repairs would be extensive and needed to be sent to a large equipment mechanical shop for the repairs. Monterey sent the engine to Hi-Tech EVS, Inc in Oakdale to diagnose the issues and provide the City with a quote for the repairs (Attachment 1).

The engine needs the following repairs:
· Water pump replacement for fire suppression equipment
· Steering box needs to be replaced and all suspension parts

These repairs are complex and require numerous parts, fluids, valves, filters, gaskets and various other components to ensure proper and safe operation. The Pacific Grove and Monterey mechanical Divisions have reviewed the repair quote. Additionally, Monterey's mechanical staff have been to the Hi-tech facility to go and review the required repairs with Hi-Tech's staff. It is the recommendation of both teams that the repairs be authorized.

City staff is in the process of seeking quotes and reviewing options to purchase a new fire apparatus. These options will be before City Council for consideration at a meeting soon. However, purchasing a new unit will take, at a minimum, two (2) years to build and deliver. As a result, timely repairs to 6414 are essential.

OPTIONS

1. Do not authorize the repairs. Note: Failure to authorize vital repairs for Engine 6414 will result in the City's first out engine, which is vital for emergency response, to be inoperable and unavailable for future use.
2. Provide alternate direction.

FINANCIAL IMPACT:

The estimated impact to the General Fund is $86,601. While the City is still in the process of closing the Fiscal Year 22/23 accounting records, it is anticipated that there should be sufficient funds in the Unrestricted General Fund Balance to support these repairs.

GOAL ALIGNMENT: City Asset Stewardship: Repair, maintain and improve City assets, including streets, sidewalks, sewer systems, buildings, and parks and trails.

Attachments

Quote

Budget Modification Ordinance

Hi-Tech EVS, Inc.

PO Box 1616
Oakdale, CA 95361-1616
US
Phone: (209) 847-3042
Fax: (209) 847-2110

Quotation

Date	Page
Jul 26, 2022	1
Order Number	
171177	

Sold To:

City of Monterey Fire Department
25 Ryan Ranch Rd
Monterey, CA 93940-5703
US

Ship To:

City of Monterey Fire Department
25 Ryan Ranch Rd
Monterey, CA, 93940-5703
US

Reference	PO Number	Customer No.	Salesperson	Order Date	Ship Via	Terms
14652		10220	BENR	Jul 26, 2022		1

Qty. Ord.	Qty. Shp.	Qty. B/O	Item Number	Description	Unit Price	UOM	Extended Price
3.0000	0.0000	3.0000	140051-1	AUTOMATIC TRANSMISSION FLUID (Gallon)	22.24	Gallon	66.72
1.5000	0.0000	1.5000	140056-1	HYDRAULIC FLUID AW32	26.15	GALLON	39.23
1.0000	0.0000	1.0000	140552-1	5-281 1810 FULL ROUND UJOINT	123.72	EACH	123.72
1.0000	0.0000	1.0000	900094-1	K 667-8 PACKING KIT	261.52	EACH	261.52
1.0000	0.0000	1.0000	200078-1	AKRON VALVE KIT 3" 9206	58.74	EACH	58.74
2.0000	0.0000	2.0000	101514-1	14GA BRUSHED S.S. 48 X 96	20.74	SQ. FT.	41.48
2.0000	0.0000	2.0000	610192-1	1/4" COMP. X 1/4" MNPT DOT STR	4.43	EACH	8.86
1.0000	0.0000	1.0000	801132-1	1/4" BRASS TEE	9.34	EACH	9.34
1.0000	0.0000	1.0000	131505-1	DT 04 4 P DEUTSCH 4 PIN RECP.	1.80	each	1.80
1.0000	0.0000	1.0000	131530-1	W4 P DEUTSCH LOCK	0.18	Each	0.18
20.0000	0.0000	20.0000	131141-1	16 GAUGE WIRE GXL	0.22	FEET	4.40
20.0000	0.0000	20.0000	131205-1	1/4" PLASTIC LOOM #3231	0.08	FEET	1.60
1.0000	0.0000	1.0000	700243-1	ESP12 OILLESS PRIMING PUMP 501-3090-0(	1,192.38	EACH	1,192.38
2.0000	0.0000	2.0000	1801	3303274 LINK TOE CONTROL ADJUST	475.02	EACH	950.04
1.0000	0.0000	1.0000	1801	3582900 LINK TIE CONTROL	478.63	EACH	478.63
1.0000	0.0000	1.0000	1801	K 1182-1 VALVE CONVERSION KIT PRIMING	1,413.00	EACH	1,413.00
1.0000	0.0000	1.0000	1801	62811 GEAR SECTOR	176.00	EACH	176.00
1.0000	0.0000	1.0000	1801	W75006-28 SCREW SHLDER SOC HEAD	1.80	EACH	1.80
1.0000	0.0000	1.0000	1801	W79005 LOCKNUT FLEX TOP	3.90	EACH	3.90
1.0000	0.0000	1.0000	1801	PUMP PARTS	3,816.40	EACH	3,816.40
1.0000	0.0000	1.0000	1306	SHIPPING & HANDLING	558.78	EACH	558.78
1.0000	0.0000	1.0000	1380	SUBLET PARTS STEERING BOX PARTS LOWER CONTROL ARM ASSY TIE ROD ENDS POWER STEERING HOSES ENGINE OIL PAN & FILTERS LOWER LEFT AND RIGHT TAK 4 A ARMS	25,459.28	EACH	25,459.28
1.0000	0.0000	1.0000	1385	SUBLET LABOR 1. REPLACE STEERING BOXES. 2. REPLACE LOWER CONTROL ARM ASSY.	20,011.76	EACH	20,011.76

Quotation continued on next page ...

Hi-Tech EVS, Inc.

PO Box 1616
Oakdale, CA 95361-1616
US
Phone: (209) 847-3042
Fax: (209) 847-2110

Quotation

Date	Page
Jul 26, 2022	2
Order Number	
171177	

Sold To:

City of Monterey Fire Department
25 Ryan Ranch Rd
Monterey, CA 93940-5703
US

Ship To:

City of Monterey Fire Department
25 Ryan Ranch Rd
Monterey, CA, 93940-5703
US

Reference	PO Number	Customer No.	Salesperson	Order Date	Ship Via	Terms
14652		10220	BENR	Jul 26, 2022		1

Qty. Ord.	Qty. Shp.	Qty. B/O	Item Number	Description	Unit Price	UOM	Extended Price
				3. REPLACE TIE ROD ENDS AND ADJUST. 4. REPLACE POWER STEERING HOSES AS NEEDED. 5. REPLACE ENGINE OIL PAN AND FILTERS. 6. REPLACE LOWER LEFT AND RIGHT TAK 4 A ARMS. 7. PROGRAM ECM. **********			
1.0000	0.0000	1.0000	1310	FUEL	222.62	EACH	222.62
1.0000	0.0000	1.0000	1390	TRANSPORT	345.00	EACH	345.00
102.000	0.0000	102.00	1340	LABOR 1. PUMP SHIFT PROBLEMS: SHIFTED FROM ROAD TO PUMP, GEAR BOX GRINDS. DROPPED FRONT AND REAR DRIVELINES, DISCONNECTED PRIMER AND HYD PUMP OFF BACK OF GEAR BOX. REMOVED GEAR BOX, WATER IN GEAR BOX OIL. TOOK GEAR BOX APART, ORDERED PARTS AND PUT GEAR BOX BACK TOGETHER WITH ALL NEW BEARINGS, SEALS, GASKETS, AND ORINGS ON LOWER END. REPLACED BAD SHIFT FORK, SECTOR GEAR, TAIL SHAFT AND MAIN DRIVE GEAR. 2. REPACKED PUMP. 3. REMOVED/REBUILT TANK TO PUMP VALVE.	165.00	HOUR	16,830.00

Quotation continued on next page ...

Hi-Tech EVS, Inc.

PO Box 1616
Oakdale, CA 95361-1616
US
Phone: (209) 847-3042
Fax: (209) 847-2110

Quotation

Date	Page
Jul 26, 2022	3
Order Number	
171177	

Sold To:

City of Monterey Fire Department
25 Ryan Ranch Rd
Monterey, CA 93940-5703
US

Ship To:

City of Monterey Fire Department
25 Ryan Ranch Rd
Monterey, CA, 93940-5703
US

Reference	PO Number	Customer No.	Salesperson	Order Date	Ship Via	Terms
14652		10220	BENR	Jul 26, 2022		1

Qty. Ord.	Qty. Shp.	Qty. B/O	Item Number	Description	Unit Price	UOM	Extended Price
				4. MODELED AND LASER CUT COVER PLATES. 5. CHANGED OUT DEPARTMENT SUPPLIED PRESSURE GOVERNOR. 6. CHANGED OUT PULL PRIMER TO ELECTRIC PRIMER. 7. FRONT WANDERS WHILE DRIVING: INSPECTED FRONT END. FOUND LOOSE TIE RODS AT CENTER LINK AND LEFT SIDE INNER AND OUTER. ********** PIERCE PUMPER S/N: 17678 UNIT: 6414 MILEAGE: 118938 HR METER: 12931			

Comments:

** Thank you for your Business **

Tax Summary:

AVATAX	3,227.36

Less Included Tax	**0.00**
Order Discount	**0.00**
Subtotal	**72,077.18**
Total sales tax	**3,227.36**
Total order	**75,304.54**

ORDINANCE NO. 22-____

ORDINANCE OF THE CITY COUNCIL OF THE CITY OF PACIFIC GROVE AMENDING THE APPROVED BUDGET FOR THE FISCAL YEAR 2022-23

FACTS

1. The City Council approved the Fiscal Year 2022-23 Budget on June 15, 2022.

2. It is customary to amend the budget to adjust revenues and expenditures to reflect updated information since the adoption of the Fiscal Year 2022-23 Budget.

3. The City Manager is recommending amendments to the FY 2022-23 Budget to reflect the City Council's goals for the fiscal year budget.

4. The Council has determined it is appropriate to amend the approved budget for FY 2022-23.

5. Pursuant to Charter Article 15, an amendment of the budget must be approved by ordinance,

6. A summary of the Ordinance, approved by the City Attorney, was published on _____.

7. In the enactment of this ordinance, the City followed the guidelines adopted by the State of California and published in the California Code of Regulations, Title 14, Section 15000, et seq.

8. Enactment of this ordinance action does not constitute a "project" as defined by California Environmental Quality Act (CEQA) Guidelines Section 15378 because it is an organizational or administrative activity that will not result in direct or indirect physical changes in the environment.

NOW, THEREFORE, THE COUNCIL OF THE CITY OF PACIFIC GROVE DOES ORDAIN AS FOLLOWS:

SECTION 1. The foregoing Facts are adopted as findings of the City Council as set forth fully within the body of this ordinance.

SECTION 2. The revenue and expenditure budget for the following funds is amended, as stated herein, which by this reference are incorporated as set forth in its entirety.

		Increase/Decrease
Expenditures		
1	General Fund	$86,601

SECTION 3. The Fiscal Year 22/23 estimated fund balances are based on preliminary information; and adjusted for this amendment, are referenced herein:

Fiscal Year 22/23 Estimated Ending Fund Balance, After Proposed Budget Amendments

		Beginning Fund Balance FY 22/23 (1)	Revenue FY 22/23	Expenditures FY 22/23	Preliminary Estimated Ending Fund Balance FY 22/23
1	General Fund	$ 10,054,161	$30,380,119	$30,564,738	$ 9,869,542

(1) Reflects estimated beginning fund balance. Final numbers will not be available until the end of September due to accruals. Preliminary information for Fiscal Year 22/23 is indicating that revenues will exceed expenditures.

SECTION 4. In accord with Article 15 of the City Charter, this ordinance shall become effective upon adoption hereof.

PASSED AND ADOPTED BY THE COUNCIL OF THE CITY OF PACIFIC GROVE this _____ day of _____, _____, by the following vote:

AYES:

NOES:

ABSENT:

APPROVED:

_____
BILL PEAKE, Mayor

ATTEST:

_____
SANDRA KANDELL, City Clerk

APPROVED AS TO FORM:

_____
BRIAN A. PIERIK, City Attorney

CITY OF PACIFIC GROVE
300 Forest Avenue, Pacific Grove, California 93950

AGENDA REPORT

TO: Honorable Mayor and Members of the City Council
FROM: Nick Smith, Councilmember
MEETING DATE: October 5, 2022
SUBJECT: 2022 CalCities Annual Conference Report
CEQA: Does not constitute a "Project" per California Environmental Quality Act Guidelines Section 15378

RECOMMENDATION
Receive report.

DISCUSSION
On September 7-9, I attended the CalCities Annual Conference 2002 in Long Beach, California.

During the conference, I attended a number of lectures and courses related to city governance and policy. Topics included: land use, CEQA, affordable housing, equity, ethics, and municipal litigation. The courses covered leading-edge issues facing cities statewide with broad relevance to some of the issues we face here in Pacific Grove.

The CalCities conference is also a great opportunity to network with other local leaders from our region and service providers. I attended the CalCities Monterey Bay Division luncheon. I also had the opportunity to visit the expo area and meet some of our service providers.

I am grateful for the opportunity to attend this conference and apply important points I learned in my Council service.

OPTIONS
n/a

FINANCIAL IMPACT:
n/a

GOAL ALIGNMENT: Not Applicable.

CITY OF PACIFIC GROVE

300 Forest Avenue, Pacific Grove, California 93950

AGENDA REPORT

TO:	Honorable Mayor and Members of the City Council
FROM:	Ben Harvey, City Manager
MEETING DATE:	October 5, 2022
SUBJECT:	Report from Attendance at 2022 League of California Cities and International City/County Management Association Conferences.
CEQA:	Does not constitute a "Project" per California Environmental Quality Act Guidelines Section 15378

RECOMMENDATION

Receive the report.

DISCUSSION

This past month, I attended both the 2022 League of California Cities (League) and the International City/County Management Association (ICMA) conferences. The League Conference took place in Long Beach, California and the ICMA Conference was held in Columbus, Ohio. As has been the case for some time, both conferences were a combination of educational seminars, issue discussion forums, professional networking opportunities and municipal vendor displays. Attendees at the League Conference are a mixture of elected officials and appointed employees, while the ICMA Conference is comprised of City and County executive officers, assistants and deputies - as well as those graduate students who aspire to serve in these roles. Participation at both conferences is beneficial for continuing education purposes, emerging issue awareness/understanding, reinforcement of best practices, and consultation and interaction with professional colleagues from across the state (League) and country (ICMA).

OPTIONS

N/A; receive the report.

FINANCIAL IMPACT:

Funding for City Manager attendance at both the League and ICMA Conferences was allocated for within the City's adopted Fiscal Year 22-23 budget.

GOAL ALIGNMENT: Not Applicable.

CITY OF PACIFIC GROVE

300 Forest Avenue, Pacific Grove, California 93950

AGENDA REPORT

TO: Honorable Mayor and Members of the City Council

FROM: Ben Harvey, City Manager

MEETING DATE: October 5, 2022

SUBJECT: Ratification of New Local Emergency Actions

CEQA: Does not constitute a "Project" per California Environmental Quality Act Guidelines Section 15378

RECOMMENDATION

Receive report of emergency directives/modifications.

DISCUSSION

The City Manager during this Local Emergency is authorized to directly mitigate effects of the Local Emergency to protect life or property.

This report apprises the City Council of emergency directives taken under the continuing local emergency proclaimed by Resolution 20-007. This report fulfills the City Council's review obligation under that Resolution and Government Code 8630. This agenda item also enables ratification of select actions taken since the City Council's last review.

City expenditures for legal services related to COVID-19 issues (specifically to related to COVID 19-COM (Communications); COVID 19-TRN (Training); COVID 19-LAW (Legal Support); and COVID-19 (Other)) are eligible for State and Federal Emergency Service reimbursement, including but not limited to FEMA or other emergency grant funding.

Actions not subject to Ratification. Since the time of the revised Monterey County Shelter in Place Order issued Friday, April 3, 2020, the City Manager has taken the following new or modified actions pursuant to the Emergency Proclamation:

- None to report at this time.

No action is necessary with respect to the above new or modified measures, as each is responsive to requirements of the revised Monterey County Shelter in Place Order falling within the regular management discretion of the City Manager.

Actions subject to Ratification. Certain mitigation measures that have been enacted by the City Manager in response to the Monterey County Shelter in Place Order issued Friday, May 8, 2020, and in accord with Council's Local Emergency under Article 19, subparagraph l, of the Pacific Grove City Charter, and Chapter 3.20 of the Pacific Grove Municipal Code (PGMC), are subject to ratification. Any mitigation measures that qualify are subject to ratification as required by Government Code 8630

and City Council Resolution 20-007, and are listed below:

1. None to report at this time.

Discussion of Circumstances Needing Emergency Response. The discussion part of this item allows comment on circumstances which may benefit from further or different emergency responses. Matters identified will be referred to the City Manager for appropriate consideration in accord with the Emergency Management System protocols set by PGMC Chapter 3.20. These delegate exclusive emergency management response authority to the City Manager.

CEQA Exemption. Actions taken to prevent or mitigate an emergency are exempt from CEQA pursuant to section 15260 of the CEQA Guidelines.

OPTIONS

Actions not subject to ratification are reported for information only.

FINANCIAL IMPACT:

There is no financial impact in receiving the report.

GOAL ALIGNMENT: Not Applicable.

CITY OF PACIFIC GROVE

300 Forest Avenue, Pacific Grove, California 93950

AGENDA REPORT

TO: Honorable Mayor and Members of the City Council

FROM: Anastacia Wyatt, Community Development Director

MEETING DATE: October 5, 2022

SUBJECT: Renew a Contract with 4LEAF, Inc. for Building Services

CEQA: Does not constitute a "Project" per California Environmental Quality Act Guidelines Section 15378

RECOMMENDATION

Authorize the City Manager to renew a Contract with 4LEAF, Inc. for Building Services, including and not limited to, building permit issuance, building inspection services, building plan review services with Building Official oversight, and response not to exceed $928,000.

DISCUSSION

In September of 2019, the City was authorized by City Council to enter into a contract with 4LEAF, Inc. (4LEAF) for building permit issuance, building inspection services, and building plan review services with Building Official oversight and response. The agreement was signed for three years, expiring September 30, 2022, and had a provision to automatically renew for an additional three years to September 30, 2025 unless terminated by either party. As the City has recently updated its Professional Services Agreements in July, staff is bringing forward the renewal to Council for review and approval. This agreement is recommending a contract with a "do not exceed" amount in the FY 22/23 budgeted amount of $928,000 and billed based on a percentage of plan review fees and staff augmentation costs (hourly costs). Staff will track progress on the 4LEAF agreement through verifying hourly costs and the cost recovery of 70% for plan review fees.

Since that time, the City's experience with 4LEAF has been positive, as has feedback from the community, contractors, developers and other members of the public who regularly interface with 4LEAF personnel within the City's Community Development Department. In February 2021, City Council authorized Amendment #1 to the original 2019 4LEAF Agreement for continued contract building division services.

Building division work and staffing is based primarily on permit demand and building and construction activity has been consistently higher over the last several fiscal years. Major projects such as the P.G. Hotel and 520 Lighthouse create additional demand for 4LEAF plan review services. Additionally, the City has seen increased demand to build Accessory Dwelling Units (ADU's) that require additional permitting. Since 2019, when the State streamlined ADU development through legislation, 103 final permits for ADU's have been issued. There have been a total of 152 ADU permit applications. The 4LEAF contract needs to be adjusted to reflect ongoing work and costs. Building permit fees both for 1) plan check; and, 2) building permit issuance and associated inspections, cover the cost of the service

provided including related City overhead.

COVID increased construction activity
Since, the beginning of the COVID-19 pandemic starting in March 2020, the City's Community Development Department, has experienced increased building activity and reinvestment in the community.

Proposed Contract Renewal
Properly staffing the Building Division is vital to ensure that permits are not unnecessarily delayed, and property owners have incentive and low barriers to obtain a building permit in order to ensure construction is compliant with the current Building Code and safe.

The Contract (Attachment 1) includes scope of services and personnel assigned to conduct building services activities with the City reimbursing 4LEAF on a time and materials basis in an amount not to exceed $928,000. The Scope of Services includes: assignment of a City Building Official; building counter services staffed by two building permit technicians, one building inspector (International Code Council certified); building plan review services for private residential and commercial building projects and public works projects; inspection services for private residential and commercial building projects and Public Works projects; and additional building related, and civil engineering services requested by the CDD Director and/or City Manager.

The Contract will be effective October 5, 2022, if approved and with an auto-renew clause for three years. Contract costs may vary due to building permit activity, which is generally closely tied to overall development demands within the City.

One of 4LEAF's attributes in providing building & safety and related services is their ability to scale up, or scale down, as the City's needs require.

On April 20, 2022, a contract amendment was approved with 4Leaf, Inc. in the amount of $230,000 for services related to Interim Community Development Director, Tree Permit Audit, Senior Inspector, Planning Services, and Estimated Plan Check work for a large-scale project submittal. Additional large-scale projects, such as P.G. Hotel increase the need for staffing services to review, comment and correct plan documents. These costs are reimbursed to the City through fees paid by the applicant at the time of plan submittal.

The 4LEAF draft contract with the associated Fee Schedule is attached.

OPTIONS

1. Do not approve the contract renewal. This would result in building services ceasing and building permit applications would be redirected to Monterey County for processing for the remainder of the fiscal year which may result in a lower level of service.
2. Direct staff to explore the costs to provide building permit services by City staff including a Chief Building Official, Building Inspector, Building permit technician, and supplement the staffing as needed with a contract with 4LEAF or another vendor depending on building permit activity.
3. Direct staff to examine a contract with the another local government jurisdiction to provide building services similar to the City's prior contract with the City of Monterey.

FINANCIAL IMPACT:

The 4LEAF contract is budgeted in the FY 22/23 Adopted Budget for $928,000. This budgeted amount is expected to accommodate the projected amount needed for 4LEAF services for FY 22/23.

GOAL ALIGNMENT: Transparency, Accountability and Communication: Implement programs, processes, revisions, and training to improve and advance the City's efforts.

Attachments

Draft 4Leaf Agreement

CITY OF PACIFIC GROVE
PROFESSIONAL SERVICES AGREEMENT

This PROFESSIONAL SERVICE AGREEMENT ("PSA") FOR NON-CONSTRUCTION PROJECTS ("Agreement"), is made and effective as of October 5th, 2022, between the City of Pacific Grove ("City"), a municipal corporation and 4LEAF Inc, a corporation ("CONSULTANT"). In consideration of the mutual covenants and conditions set forth herein, the parties agree as follows:

1. TERM

   a. **Initial Term.** The initial term of this Agreement shall be from October 1, 2022 through September 30, 2025.

   b. **Automatic Renewal of Agreement for Three (3) Year Terms.**

      i. Upon the conclusion of the initial Term and of each Term thereafter, this Agreement shall be automatically extended for additional three (3) year Terms unless either Party gives the other Party written notice of its intent to allow this Agreement to lapse.

      ii. If either Party does not wish for this Agreement to be automatically extended for an additional Term pursuant to this section, that Party shall give the other Party written notice of its intent to allow the Agreement to lapse no later than the March 1 immediately preceding the end of that Term of the Agreement. Written notification of intent to allow the Agreement to lapse shall be in the form of a Resolution of the respective City Council and shall be provided to the City Manager of the affected City with duplicate notification to the Chief Building Official.

   c. **Termination.** Notwithstanding Section 5.1 or Section 5.2 of this Agreement, either party may terminate this Agreement by providing six (6) months' written notification to the other party, and the term of this Agreement or any extension thereof shall be shortened accordingly. Written notification of termination shall be in the form of a Resolution of the respective City Council and shall be provided to the City Manager of the affected City with duplicate notification to the Chief Building Official. Upon termination of this Agreement, 4LEAF will deliver to Pacific Grove any City vehicles or equipment described in Article III herein, reasonable wear and tear excepted.

2. SCOPE OF WORK

CONSULTANT shall perform the tasks and services ("Services") described and set forth in Exhibit A, Scope of Services, attached hereto and incorporated herein as though set forth in full. CONSULTANT shall complete the tasks according to the schedule of performance which is also set forth in Exhibit A. To the extent that Exhibit A is a proposal from CONSULTANT, such proposal is incorporated only for the description of the Scope of Services and no other terms and conditions from any such proposal shall apply to this Agreement unless specifically agreed to in writing.

3. PERFORMANCE

CONSULTANT shall at all times faithfully, competently and to the best of their ability, experience, and talent, perform all Services described herein. CONSULTANT shall employ, at a minimum, generally accepted standards and practices utilized by persons engaged in providing similar services as are required of CONSULTANT hereunder in meeting their obligations under this Agreement.

4. CITY MANAGEMENT

The City Manager, or their designee, shall represent City in all matters pertaining to the administration of this Agreement, review and approval of all products submitted by CONSULTANT, but not including the authority to enlarge the Scope of Work or change the compensation due to CONSULTANT. The City Manager shall be authorized to act on City's behalf and to execute all necessary documents that enlarge the Scope of Work or change CONSULTANT's compensation, subject to Section 6 hereof.

5. PAYMENT

a. The City agrees to pay CONSULTANT monthly, in accordance with the payment rates and terms and the Payment Schedule as set forth in Exhibit B, attached hereto and incorporated herein by this reference as though set forth in full, based upon actual time spent on the above tasks. The amount shall not exceed $928,000 annually for the term of the Agreement unless an additional payment is approved as provided in this Agreement.

b. The City Manager's contract authority is limited to $39,999.99, which includes all costs. Contracts, including any contract amendments that exceed the total threshold, require City Council approval. Any contracts, including contract amendments that exceed the total threshold, which do not have City Council approval, shall be void.

c. CONSULTANT shall not be compensated for any Services rendered in connection with its performance of this Agreement that are in addition to those set forth herein, unless such additional services are authorized in advance and in writing by the City Manager or the City Council. CONSULTANT shall be compensated for any additional services in the amounts and in the manner as agreed to by City Manager and CONSULTANT at the time City's written authorization is given to CONSULTANT for the performance of said services.

d. CONSULTANT shall submit invoices monthly for actual Services performed. Invoices shall be submitted on or about the first business day of each month, or as soon thereafter as practical, for Services provided in the previous month. Payment shall be made within thirty (30) days of receipt of each invoice as to all non-disputed fees. If the City disputes any of CONSULTANT's fees it shall give written notice to CONSULTANT within thirty (30) days of receipt of an invoice of any disputed fees set forth on the invoice. Any final payment under this Agreement shall be made within forty-five (45) days of receipt of an invoice therefore.

6. INSPECTION

City shall at all times have the right to inspect the work and materials. CONSULTANT shall furnish all reasonable aid and assistance required by City for the proper examination of the work and all parts thereof. Such inspection shall not relieve CONSULTANT from any obligation to perform said work strictly in accordance with the specifications or any modifications thereof and in compliance with the law.

7. SUSPENSION OR TERMINATION OF AGREEMENT WITHOUT CAUSE

a. The City may at any time, for any reason, without cause, suspend or terminate this Agreement, or any portion hereof, by serving upon CONSULTANT at least thirty (30) days prior written notice. Upon receipt of said notice, CONSULTANT shall immediately cease all Services under this Agreement, unless the notice provides otherwise. If the City suspends or terminates a portion of this Agreement such suspension or termination shall not make void or invalidate the remainder of this Agreement.

b. In the event this Agreement is terminated pursuant to this Section, the City shall pay to CONSULTANT the actual value of the Services performed up to the time of termination, provided that the Services performed are of value to the City. Upon termination of the Agreement pursuant to this Section, CONSULTANT will submit an invoice to the City pursuant to Section 6.

8. DEFAULT OF CONSULTANT

a. CONSULTANT's failure to comply with the provisions of this Agreement shall constitute a default. In the event that CONSULTANT is in default for cause under the terms of this Agreement, City shall have no obligation or duty to continue compensating CONSULTANT for any Services performed after the date of default and can terminate this Agreement immediately by written notice to the CONSULTANT. If such failure by the CONSULTANT to make progress in the performance of Services hereunder arises out causes beyond the CONSULTANT's control, and without fault or negligence of the CONSULTANT, it shall not be considered a default.

b. If the City Manager or designee determines CONSULTANT is in default in the performance of any of the terms or conditions of this Agreement, they shall cause to be served upon CONSULTANT a written notice of the default. The CONSULTANT shall

have ten (10) days after service upon it of said notice in which to cure the default by rendering a satisfactory performance. In the event CONSULTANT fails to cure its default within such period of time or fails to present City with a written plan for the cure of the default, City shall have the right, notwithstanding any other provision of this Agreement, to terminate this Agreement without further notice and without prejudice to any other remedy to which it may be entitled at law, in equity or under this Agreement.

9. OWNERSHIP OF DOCUMENTS

a. CONSULTANT shall maintain complete and accurate records with respect to sales, costs, expenses, receipts, and other such information required by City that relate to the performance of Services under this Agreement. CONSULTANT shall maintain adequate records of Services provided in sufficient detail to permit an evaluation of Services. All such records shall be maintained in accordance with generally accepted accounting principles and shall be clearly identified and readily accessible. CONSULTANT shall provide free access to the representatives of City or its designees at reasonable times to such books and records; shall give City the right to examine and audit said books and records; shall permit City to make transcripts or copies therefrom as necessary; and shall allow inspection of all work, data, documents, proceedings, and activities related to this Agreement. If there is a substantial billing deviation adverse to City, then the cost of an audit shall be borne by CONSULTANT. Such records, together with supporting documents, shall be maintained for a period of five (5) years after receipt of final payment.

b. Upon completion of, or in the event of termination or suspension of this Agreement, all original documents, designs, drawings, maps, models, computer files, surveys, notes, and other documents prepared in the course of providing the Services to be performed pursuant to this Agreement shall become the sole property of City and may be used, reused, or otherwise disposed of by City without the permission of CONSULTANT. With respect to computer files, CONSULTANT shall make available to City, at CONSULTANT's office and upon reasonable written request by City, the necessary computer software and hardware for purposes of accessing, compiling, transferring, copying and/or printing computer files. CONSULTANT hereby grants to City all right, title, and interest, including any copyright, in and to the documents, designs, drawings, maps, models, computer files, surveys, notes, and other documents prepared by CONSULTANT in the course of providing the Services under this Agreement.

10. RECORD AUDIT

In accordance with Government Code, Section 8546.7, for expenditures of greater than $10,000, records of both City and CONSULTANT shall be subject to examination and audit by the Auditor General for a period of three (3) years after final payment.

11. INDEMNIFICATION AND DEFENSE

Indemnity

To the fullest extent permitted by law, CONSULTANT shall indemnify and hold harmless City and any and all of its officers, employees and agents ("Indemnified Parties") from and against any and all losses, liabilities, damages, costs and expenses, including legal counsel's fees and costs, caused in whole or in part by the negligent or wrongful act, error or omission of CONSULTANT, its officers, agents, employees or subconsultants (or any City or individual that CONSULTANT shall bear the legal liability thereof) in the performance of Services under this Agreement. CONSULTANT's duty to indemnify and hold harmless City shall not extend to the City's sole or active negligence.

Duty to defend

In the event City, its officers, employees, agents and/or volunteers are made a party to any action, lawsuit, or other adversarial proceeding arising from the performance of the Services encompassed by this Agreement, and upon demand by City, CONSULTANT shall defend City at CONSULTANT's cost or at City's option, to reimburse City for its costs of defense, including reasonable attorney's fees and costs incurred in the defense of such matters to the extent the matters arise from, relate to or are caused by CONSULTANT's negligent acts, errors or omissions. Payment by City is not a condition precedent to enforcement of this indemnity. In the event of any dispute between CONSULTANT and City, as to whether liability arises from the sole or active negligence of the City or its officers, employees, or agents, CONSULTANT will be obligated to pay for City's defense until such time as a final judgment has been entered adjudicating the City as solely or actively negligent. CONSULTANT will not be entitled in the absence of such a determination to any reimbursement of defense costs including but not limited to attorney's fees, expert fees and costs of litigation.

12. INSURANCE

CONSULTANT shall maintain prior to the beginning of and for the duration of this Agreement insurance coverage as specified in Exhibit C attached to and part of this Agreement.

13. INDEPENDENT CONSULTANT

a. CONSULTANT is and shall at all times remain as to City a wholly independent consultant and/or independent contractor. The personnel performing the Services under this Agreement on behalf of CONSULTANT shall at all times be under CONSULTANT's exclusive direction and control. Neither City nor any of its officers, employees, or agents shall have control over the conduct of CONSULTANT or any of CONSULTANT's officers, employees, or agents, except as set forth in this Agreement. CONSULTANT shall not at any time or in any manner represent that it or any of its officers, employees, or agents are in any manner officers, employees, or agents of City. CONSULTANT shall not incur or have the power to incur any debt, obligation, or liability whatever against City, or bind City in any manner.

b. No employee benefits shall be available to CONSULTANT in connection with the performance of this Agreement. Except for the fees paid to CONSULTANT as

provided in the Agreement, City shall not pay salaries, wages, or other compensation to CONSULTANT for performing Services hereunder for City. City shall not be liable for compensation or indemnification to CONSULTANT for injury or sickness arising out of performing Services hereunder.

14. LEGAL RESPONSIBILITIES

CONSULTANT shall keep itself informed of State and Federal laws and regulations that in any manner affect those employed by it or in any way affect the performance of its Services pursuant to this Agreement. CONSULTANT shall at all times observe and comply with all such laws and regulations. City, and its officers, employees, and agents shall not be liable at law or in equity occasioned by failure of the CONSULTANT to comply with this Section.

15. UNDUE INFLUENCE

CONSULTANT declares and warrants that no undue influence or pressure was used against or in concert with any officer, employee or agent of City in connection with the award, terms or implementation of this Agreement, including any method of coercion, confidential financial arrangement, or financial inducement. No officer, employee or agent of City has or will receive compensation, directly or indirectly, from CONSULTANT, or from any officer, employee or agent of CONSULTANT, in connection with the award of this Agreement or any Services to be performed as a result of this Agreement. Violation of this Section shall be a material breach of this Agreement entitling City to any and all remedies at law or in equity.

16. NO BENEFIT TO ARISE TO CITY OFFICERS AND EMPLOYEES

No officer, employee of City, or their designees or agents, and no public official who exercises authority over or responsibilities with respect to the Services performed under the Agreement during their tenure or for one year thereafter, shall have any interest, direct or indirect, in any agreement or sub-agreement, or the proceeds thereof, for work to be performed in connection with the Services performed under this Agreement.

17. RELEASE OF INFORMATION/CONFLICTS OF INTEREST

a. All information gained by CONSULTANT in performance of this Agreement shall be considered confidential and shall not be released by CONSULTANT without City's prior written authorization. CONSULTANT, its officers, employees, agents, or subconsultants, shall not without written authorization from the City Manager or unless requested by the City Attorney, voluntarily provide declarations, letters of support, testimony at depositions, response to interrogatories, or other information concerning the work performed under this Agreement or relating to any project or property located within the City. Response to a subpoena or court order shall not be considered "voluntary" provided CONSULTANT gives City notice of such court order or subpoena.

b. CONSULTANT shall promptly notify CITY should CONSULTANT, its officers, employees, agents, or subconsultants be served with any summons, complaint, subpoena, notice of deposition, request for documents, interrogatories, request for

admissions, or other discovery request ("Discovery"), court order, or subpoena from any person or party regarding this Agreement and the work performed there under or with respect to any project or property located within the City, unless City is a party to any lawsuit, arbitration, or administrative proceeding connected to such Discovery, or unless CONSULTANT is prohibited by law from informing City of such Discovery. City retains the right, but has no obligation, to represent CONSULTANT and/or be present at any deposition, hearing, or similar proceeding as allowed by law. Unless City is a party to the lawsuit, arbitration, or administrative proceeding and is adverse to CONSULTANT in such proceeding, CONSULTANT agrees to cooperate fully with City and to provide the opportunity to review any response to discovery requests provided by CONSULTANT. However, City's right to review any such response does not imply or mean the right by City to control, direct, or rewrite said response.

c. If City determines CONTRACTOR comes within the definition of Contractor under the Political Reform Act (Government Code §87100 et seq.), CONTRACTOR shall complete and file and shall require any other person doing Work under this Agreement to complete and file a "Statement of Economic Interest" with CITY disclosing CONTRACTOR's and/or such other person's financial interests.

18. DISCRIMINATION

CONSULTANT agrees that in the performance of this Agreement, neither CONSULTANT nor any person acting on CONSULTANT's behalf shall discriminate against any person on the basis of race, religious creed, color, national origin, ancestry, disability, medical condition, genetic information, marital status, sexual orientation, sex, gender identity, gender expression, military or veteran status or age.

19. NOTICES

Any notices which either party may desire to give to the other party under this Agreement must be in writing and may be given either by (i) personal service, (ii) delivery by a reputable document delivery service, such as but not limited to, Federal Express, which provides a receipt showing date and time of delivery, or (iii) mailing in the United States Mail, by first class mail, addressed to the address of the party as set forth below or at any other address as that party may later designate by notice:

To City:

City of Pacific Grove
300 Forest Avenue
Pacific Grove, CA 93950
Attention: City Clerk

To CONSULTANT:

4LEAF, Inc
Kevin Duggan
2126 Rheem Drive

Pleasanton, CA 94588

Notice is effective on the date of personal service, or 5 days following deposit in a United States mailbox, or date of postmark. The parties may agree to service by email.

20. THIRD PARTY BENEFICIARIES

Nothing contained in this Agreement shall be construed to create, and the parties do not intend to create, any rights in third parties.

21. ASSIGNMENT

CONSULTANT shall not assign the performance of this Agreement, nor any part thereof, nor any monies due hereunder, without prior written consent of CITY. Because of the personal nature of the Services to be rendered pursuant to this Agreement, only CONSULTANT shall perform the Services described in this Agreement. CONSULTANT may use assistants, under their direct supervision, to perform some of the Services under this Agreement.

22. LICENSES

At all times during the term of this Agreement, CONSULTANT shall have in full force and effect, all licenses required of it by law for the performance of the Services described in this Agreement. CONSULTANT shall obtain a valid City Business License and shall maintain said Business License for the term of this Agreement and any extensions.

23. GOVERNING LAW

City and CONSULTANT understand and agree that the laws of the State of California shall govern the rights, obligations, duties, and liabilities of the parties to this Agreement and also govern the interpretation of this Agreement. Any litigation concerning this Agreement shall take place in Monterey County, or federal district court with jurisdiction over City. CONSULTANT agrees not to commence or prosecute any dispute arising out of or in connection with this Agreement other than in the aforementioned courts and irrevocably consents to the exclusive personal jurisdiction and venue of the aforementioned courts.

24. ENTIRE AGREEMENT

This Agreement contains the entire understanding between the parties relating to their obligations described in this Agreement. All prior or contemporaneous agreements, understandings, representations, and statements, oral or written and pertaining to the subject of this Agreement or with respect to the terms and conditions of this Agreement, are merged into this Agreement and shall be of no further force or effect. Each party is entering into this Agreement based solely upon the representations set forth herein and upon each party's own independent investigation of any and all facts such party deems material. No amendment shall be valid unless in writing, executed by both parties.

25. DISPUTE RESOLUTION; ATTORNEY'S FEES

CONSULTANT shall continue to perform under this Agreement during any dispute. CONSULTANT and City hereby agree to make good faith efforts to resolve disputes as quickly as possible. In the event any dispute arising from or related to this Agreement results in litigation or arbitration, the prevailing party shall be entitled to recover all reasonable costs incurred, including court costs, attorney fees, expenses for expert witnesses (whether or not called to testify), expenses for accountants or appraisers (whether or not called to testify), and other related expenses. Recovery of these expenses shall be as additional costs awarded to the prevailing party, and shall not require initiation of a separate legal proceeding.

26. WORK SCHEDULED/TIME OF COMPLETION

City and CONSULTANT agree that time is of the essence in this Agreement.

27. AUTHORITY TO EXECUTE THIS AGREEMENT

The person or persons executing this Agreement on behalf of CONSULTANT warrants and represents that they have the authority to execute this Agreement on behalf of the CONSULTANT and have the authority to bind CONSULTANT to the performance of its obligations hereunder.

28. INTERPRETATION OF CONFLICTING PROVISIONS

In the event of any conflict or inconsistency between the provisions of this Agreement and the Provisions of any exhibit or other attachment to this Agreement, the provisions of this Agreement shall prevail and control.

29. SEVERABILITY

If any term of this Agreement is held invalid by a court of competent jurisdiction or arbitrator the remainder of this Agreement shall remain in effect.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed the day and year first above written.

CITY OF PACIFIC GROVE	CONSULTANT
By:_____	By:_____
Department Director	Consultant
Date: _____	Date: _____
By: _____	By: _____
City Manager or Mayor	City Administrative Services Department
Date: _____	Date: _____

Approved As To Form: _____
City Attorney

_____
Date

Attachments:

Exhibit A	Scope of Services
Exhibit B	Payment Schedule
Exhibit C	Insurance Requirements

EXHIBIT A

SCOPE OF SERVICES

SCOPE OF SERVICES AND STAFF FUNCTIONS

4LEAF shall provide the following Building Department staff functions:

- Building Official
- Plans Examiners
- Building Inspectors
- Public Works Inspectors
- Technical counter assistance
- Administrative assistance
- On-call civil engineering

4LEAF shall provide the following services:

1. *Building Official:*

- An ICC certified Building Official shall be available during all hours of operation, except for normal absences.
- Staff meetings with the Pacific Grove staff to coordinate all inter-department interactions as needed.

2. *Building Counter Services:*

- Weekday counter hours. There shall be ICC certified Building Inspectors/Counter Technicians available at City Hall trained to issue building permits. Staff shall be available by phone to answer questions during all hours of operation.
- Plan check applications received during hours specified.
- Plans routed to all appropriate departments.
- Money collected for building related activity.
- Permits issued during hours specified.
- Respond to public inquiries on the phone and in person.

3. *Plan Review Services:*

- Plan review services under the direction of ICC certified plan reviewers. This also includes coordination with all applicable Monterey County outside agencies (water, health, air pollution, sewer, source, etc.).
- Provide plan review for conformance to regulations contained in Pacific Grove's

adopted codes.

- Provide applicant or designee with a list of plan check correction comments to achieve conformance with Pacific Grove's adopted codes.
- Expedited plan reviews available with prior approval.
- Provide all necessary liaisons with applicant or designee regarding plan check comments.
- Perform review of revisions to plans that have been previously approved for permit issuance.
- Plan check turnaround times to be specified.

4. Building Inspection Services:

- Manage all aspects of Building inspection services such as scheduling with 24-hour lead time.
- Local inspectors are preferred
- All inspectors shall be ICC certified.
- Ensure compliance with approved plans and applicable codes.
- Emergency response 24/7. All responders will be ICC certified inspectors. A list of inspectors will be provided to dispatch for afterhours response.
- After hours, weekends and holiday emergency inspections available with 72-hour minimum notice and prior approval.
- Respond and report as required to Building Code violations or any other code enforcement matter upon request.
- Conduct 8-12 inspections per day at an average of 45 minutes per inspection.

5. Public Works Inspection Services:

- In coordination with Public Works provide inspection services with 24-hour lead time for:
    - Street opening permits;
    - Driveway and sidewalk permits;
    - Temporary encroachment permits;
    - Permanent underground and permanent aboveground encroachment permits; and
    - Storm water field inspections as part of issued permits.

6. Public Works and Planning Permit Review:

- Permit plan review by a P.E. for:
    - Grading;
    - Public right of way improvements;
    - Post-construction storm-water controls in compliance with the City's NPDES permit;
    - Subdivision; and
    - On-call surveyor.

7. Miscellaneous Services Performed by Consultant:

- Assist with address change processes and clerical support related to Building Department activity.
- Staff available to attend Pacific Grove City Council and site review meetings, code enforcement hearing or any other board or commission meeting as needed.
- Firm to set up and provide fax or electronic permits for all approved over-the-counter type permits.
- Prepare and submit monthly building activity reports to the City and other appropriate agencies.
- Train City staff on building service matters as needed.
- Any other building service requested by the City Manager.

EXHIBIT B

PAYMENT SCHEDULE

2022-2023 FEE SCHEDULE & BASIS OF CHARGES

For the City of Pacific Grove

All Rates are Subject to Basis of Charges

NATURE OF BUILDING SERVICES	COST STRUCTURE
Plan Review & CASp Services	Plan Review Percentage Cost: 70% Plan Review Hourly Cost: $120 Non-Structural Review $145 Structural Review **Percentages excludes Civil & Fire plan review, which is billed on an hourly basis.* **Fee includes initial review and two (2) rechecks. Hourly charges apply after three (3) or more rechecks.* **Fee includes shipping, courier, and electronic service.*

Fee Structure for Personnel

Interim Chief Building Official $148/hour

Senior Combination Building Inspector (Building Inspector III) $120/hour

Commercial Building Inspector (Building Inspector II) $115/hour

Residential Building Inspector (Building Inspector I) $98/hour

Code Enforcement Officer $102/hour

Senior Code Enforcement Officer $118/hour

Administrative Support $65/hour

Permit Technician $75/hour

Senior Permit Technician $85/hour

Permit / Counter Manager $96/hour

On-Site Structural Plan Review Engineer $145/hour

On-Site Non-Structural Plans Examiner $120/hour

Civil Review $155/hour

Fire Review	$155/hour
Fire Inspector I	$110/hour
Fire Inspector II	$120/hour
Fire Prevention Officer	$148/hour
Fire Protection Engineer	$180/hour
Public Works Inspector	$155/hour
CASp Inspection / Review	$155/hour
Project Inspector/Inspector of Record	$145/hour
OSHPD Inspection / Review	$145/hour
Traffic Engineer	$190/hour
Principal Planner	$165/hour
Senior Planner	$155/hour
Associate Planner	$135/hour
Assistant Planner	$110/hour
Planning Technician	$98/hour
Project Manager	$160/hour
Director	$175/hour
Principal-in-Charge	$185/hour
Hourly overtime charge per inspector	1.5 x hourly rate
Mileage (for inspections performed within the City)	IRS Rate + 20%

Rates will be communicated with the City Management at time of request. Rates will vary based on the qualifications and experience of the personnel. The rates listed in this fee schedule are valid for one (1) year from the effective date of contract.

Larger complex plan reviews can be negotiated to achieve the best possible pricing. 4LEAF has a proven track record of working with municipalities to provide expedited reviews with special discounted pricing when applicable.

BASIS OF CHARGES

Rates are inclusive of "tools of the trade" such as forms, telephones, and consumables.

- All invoicing will be submitted monthly.
- Staff Augmentation work (excluding plan review) is subject to 4-hour minimum charges unless stated otherwise. Services billed in 4-hour increments.
- Most plan reviews will be done in 10 business days or less and 5 business days or less for re-checks. This is not inclusive of holidays or the day of the pick-up of plans.
- Expedited reviews will be billed:
    - *Scenario #1 (Applicant requested)*: at 1.5x the plan review fee listed in the Rate Schedule.
    - *Scenario #2 (City requested)*: at no additional cost to the City.
- Plan review of deferred submittals & revisions will be billed at the hourly rates listed the Rate Schedule.
- All plan review services will be subject to a $250.00 minimum fee if percentage-based fee or two (2) hour minimum charge if hourly rates apply.
- All plan review services are billed on a percentage basis and includes the initial review and two (2) rechecks.
    - Plan reviews will be billed on an hourly basis only after the initial review and two (2) rechecks unless otherwise agreed upon on a case-by-case basis.

    - Fire and Civil Reviews are billed on an hourly basis and are not included in our plan review percentage.
- 4LEAF assumes that these rates reflect the 2022-2023 contract period.
- Overtime and Premium time will be charged as follows:
    - *Nighttime (work begun after 4PM or before 5AM)* *1.125x hourly rate*
    - *Overtime (over 8-hour M-F or Saturdays)* *1.5x hourly rate*
    - *Overtime (over 8 hours Sat or 1st 8-hour Sun)* *2x hourly rate*
    - *Overtime (over 8 hours Sun or Holidays)* *3x hourly rate*
- Overtime will only be billed with prior authorization of the Chief Building Official, Public Works Director, or other responsible designated City personnel.
- All work with less than 8 hours of rest between shifts will be charged the appropriate overtime rate.
- In accordance with California's Meal Break and Rest Break Law requirements, Client will be billed one (1) additional hour per day at the regular time rate for each missed meal or rest break due to Client- directed tasks or requirements. Client should allow 4LEAF's non-exempt, hourly employees the opportunity to take their entitled rest and meal breaks during each work shift.
- If 4LEAF is requested or otherwise required to conform to Client's alternative work week schedule ("AWW"), Client hereby agrees to compensate or reimburse 4LEAF for all overtime paid to its employees who work an AWW.
    - If 4LEAF's affected employment group approves an AWW election and the same is registered, the overtime compensation/reimbursement shall not be required.
- Mileage driven during Inspections will be charged at cost plus 20%.
- Payment due on receipt. All payments over 30 days will be assessed a 1.5% interest charge.
- Client shall pay attorneys' fees, or other costs incurred in collecting delinquent amounts.
- Client agrees that 4LEAF's liability will be limited to the value of services provided.

EXHIBIT C

INSURANCE REQUIREMENTS

Without limiting CONSULTANT's indemnification of City, and prior to commencement of Work, CONSULTANT shall obtain, provide and maintain at its own expense during the term of this Agreement, policies of insurance of the type and amounts described below and in a form satisfactory to City.

General liability insurance. CONSULTANT shall maintain commercial general liability insurance with coverage at least as broad as Insurance Services Office form CG 00 01, in an amount not less than $1,000,000 per occurrence, $2,000,000 general aggregate, for bodily injury, personal injury, and property damage. The policy must include contractual liability that has not been amended. Any endorsement restricting standard ISO "insured contract" language will not be accepted.

Automobile liability insurance. CONSULTANT shall maintain automobile insurance at least as broad as Insurance Services Office form CA 00 01 covering bodily injury and property damage for all activities of the Consultant arising out of or in connection with Work to be performed under this Agreement, including coverage for any owned, hired, non-owned or rented vehicles, in an amount not less than $1,000,000 combined single limit for each accident.

Professional liability (errors & omissions) insurance. CONSULTANT shall maintain professional liability insurance that covers the Services to be performed in connection with this Agreement, in the minimum amount of $1,000,000 per claim and in the aggregate. Any policy inception date, continuity date, or retroactive date must be before the effective date of this Agreement and CONSULTANT agrees to maintain continuous coverage through a period no less than three (3) years after completion of the Services required by this Agreement.

Workers' compensation insurance. CONSULTANT shall maintain Workers' Compensation Insurance (Statutory Limits) and Employer's Liability Insurance (with limits of at least $1,000,000).

CONSULTANT shall submit to CITY, along with the certificate of insurance, a Waiver of Subrogation endorsement in favor of CITY, its officers, agents, employees and volunteers.

Umbrella or excess liability insurance. CONSULTANT shall obtain and maintain an umbrella or excess liability insurance policy with limits that will provide bodily injury, personal injury and property damage liability coverage at least as broad as the primary coverages set forth above, including commercial general liability, automobile liability, and employer's liability. Such policy or policies shall include the following terms and conditions:

- A drop down feature requiring the policy to respond if any primary insurance that would otherwise have applied proves to be uncollectible in whole or in part for any reason;
- Pay on behalf of wording as opposed to reimbursement;
- Concurrency of effective dates with primary policies;
- Policies shall "follow form" to the underlying primary policies; and

- Insureds under primary policies shall also be insureds under the umbrella or excess policies.

Other provisions or requirements

Proof of insurance. CONSULTANT shall provide certificates of insurance to City as evidence of the insurance coverage required herein, along with a waiver of subrogation endorsement for workers' compensation. Insurance certificates and endorsements must be approved by City's Risk Manager prior to commencement of performance. Current certification of insurance shall be kept on file with City at all times during the term of this contract. City reserves the right to require complete, certified copies of all required insurance policies, at any time.

Duration of coverage. CONSULTANT shall procure and maintain for the duration of the contract insurance against claims for injuries to persons or damages to property, which may arise from or in connection with the performance of the Work hereunder by CONSULTANT, his agents, representatives, employees or subconsultants.

Primary/noncontributing. Coverage provided by CONSULTANT shall be primary and any insurance or self-insurance procured or maintained by City shall not be required to contribute with it. The limits of insurance required herein may be satisfied by a combination of primary and umbrella or excess insurance. Any umbrella or excess insurance shall contain or be endorsed to contain a provision that such coverage shall also apply on a primary and non-contributory basis for the benefit of City before the City's own insurance or self-insurance shall be called upon to protect it as a named insured.

City's rights of enforcement. In the event any policy of insurance required under this Agreement does not comply with these specifications or is canceled and not replaced, City has the right but not the duty to obtain the insurance it deems necessary and any premium paid by City will be promptly reimbursed by CONSULTANT or City will withhold amounts sufficient to pay premium from CONSULTANT payments. In the alternative, City may cancel this Agreement.

Acceptable insurers. All insurance policies shall be issued by an insurance company currently authorized by the Insurance Commissioner to transact business of insurance or is on the List of Approved Surplus Line Insurers in the State of California, with an assigned policyholders' Rating of A- (or higher) and Financial Size Category Class VI (or larger) in accordance with the latest edition of Best's Key Rating Guide, unless otherwise approved by the City's Risk Manager.

Waiver of subrogation. All insurance coverage maintained or procured pursuant to this agreement shall be endorsed to waive subrogation against CITY, its elected or appointed officers, agents, employees and volunteers or shall specifically allow CONSULTANT or others providing insurance evidence in compliance with these specifications to waive their right of recovery prior to a loss. CONSULTANT hereby waives its own right of recovery against City, and shall require similar written express waivers and insurance clauses from each of its subconsultants.

Enforcement of contract provisions (non estoppel). CONSULTANT acknowledges and agrees that any actual or alleged failure on the part of the City to inform CONSULTANT of non-compliance with any requirement imposes no additional obligations on the City nor does it waive any rights hereunder.

Requirements not limiting. Requirements of specific coverage features or limits contained in this Section are not intended as a limitation on coverage, limits or other requirements, or a waiver of any coverage normally provided by any insurance. Specific reference to a given coverage feature is for purposes of clarification only as it pertains to a given issue and is not intended by any party or insured to be all inclusive, or to the exclusion of other coverage, or a waiver of any type. If the Consultant maintains higher limits than the minimums shown above, the City requires and shall be entitled to coverage for the higher limits maintained by the Consultant. Any available insurance proceeds in excess of the specified minimum limits of insurance and coverage shall be available to the City.

Notice of cancellation. Consultant agrees to oblige its insurance agent or broker and insurers to provide to CITY with a thirty (30) day notice of cancellation (except for nonpayment for which a ten (10) day notice is required) or nonrenewal of coverage for each required coverage.

Additional insured status. General liability policies shall provide or be endorsed to provide that City and its officers, employees, agents, and volunteers shall be additional insureds under such policies. This provision shall also apply to any excess/umbrella liability policies.

Prohibition of undisclosed coverage limitations. None of the coverages required herein will be in compliance with these requirements if they include any limiting endorsement of any kind that has not been first submitted to City and approved of in writing.

Separation of insureds. A severability of interests provision must apply for all additional insureds ensuring that Consultant's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the insurer's limits of liability. The policy(ies) shall not contain any cross-liability exclusions.

Pass through clause. CONSULTANT agrees to ensure that its subconsultants, subcontractors, and any other party involved with the project who is brought onto or involved in the project by CONSULTANT, provide the same minimum insurance coverage and endorsements required of CONSULTANT. CONSULTANT agrees to monitor and review all such coverage and assumes all responsibility for ensuring that such coverage is provided in conformity with the requirements of this section. CONSULTANT agrees that upon request, all agreements with consultants, subcontractors, and others engaged in the project will be submitted to City for review.

City's right to revise specifications. The City reserves the right at any time during the term of the contract to change the amounts and types of insurance required by giving the CONSULTANT ninety (90) days advance written notice of such change. If such change results in substantial additional cost to the CONSULTANT, the City and CONSULTANT may renegotiate CONSULTANT's compensation.

Self-insured retentions. Any self-insured retentions must be declared to and approved by City. City reserves the right to require that self-insured retentions be eliminated, lowered, or replaced by a deductible. Self-insurance will not be considered to comply with these specifications unless approved by City.

Timely notice of claims. CONSULTANT shall give City prompt and timely notice of claims made or suits instituted that arise out of or result from CONSULTANT's performance under this Agreement, and that involve or may involve coverage under any of the required liability policies.

Additional insurance. CONSULTANT shall also procure and maintain, at its own cost and expense, any additional kinds of insurance, which in its own judgment may be necessary for its proper protection and prosecution of the work.

CITY OF PACIFIC GROVE

300 Forest Avenue, Pacific Grove, California 93950

AGENDA REPORT

TO:	Honorable Mayor and Members of the City Council
FROM:	Joseph Sidor, Contract Planner
MEETING DATE:	October 5, 2022
SUBJECT:	Appeal of Coastal Development Permit (CDP) 22-0125 for 120 17th Street, APN 006-153-010
CEQA:	Categorical Exemption, CEQA Guidelines Section 15303, Class 3, Construction or Conversion of Small Structures

RECOMMENDATION

City Council deny the appeal, find the project categorically exempt per CEQA Guidelines Section 15303, and approve Coastal Development Permit 22-0125, subject to the required findings and recommended conditions of approval.

DISCUSSION

Project Description

The proposed project involves the construction of an 827 square foot one-story detached accessory dwelling unit (ADU) with a 34 square foot covered entry porch, associated site improvements, and demolition of an existing shed and deck area.

Background and Summary of Appeal Contentions

The Planning Commission (PC) considered the project at the July 14, 2022, public hearing, and voted unanimously (6 yes, 0 noes, and 1 absent) to approve the project (PC Permit attached). On July 15, 2022, the appellant submitted a timely appeal (attached) of the Planning Commission's decision to approve the Coastal Development Permit (CDP). The appellant contended that the project, as approved, did not comply with Pacific Grove Municipal Code (PGMC) sections 23.90.80 and 23.90.180 regarding lot coverage, that the site plan was not complete or accurate and did not fully comply with the requirements of the CDD Submittal Checklist. The appellant also contended that the City should have required submittal of a landscape plan per PGMC section 23.90.60(a)(1)(b). In response to these contentions, CDD staff requested the applicant submit a revised site plan and project datasheet (both attached) to clearly identify the project's conformance with applicable development standards and regulations, including building and site coverage.

CDD staff determined that the submitted application materials, as revised, satisfy the checklist requirements necessary for the proposed project. Not all items listed on the checklist are applicable or required for every project. In this case, the submitted application materials provided sufficient information to determine whether the project complies with relevant/applicable policies and development standards.

Regarding the contention related to the requirement for a landscape plan, the CDD application checklist only requires submittal of a landscape plan for multifamily residential or non-residential projects. Also, PGMC section 23.90.160.B.2 only requires a landscape plan for projects that may impact public views. The proposed project involves a one-story structure on an interior lot. CDD staff reviewed LUP Figure 4 (Scenic Areas), aerial and street view imagery, and conducted a site visit on May, 17, 2022, and determined the site and proposed development are not within a designated scenic view area or corridor, and would not adversely impact public views. Therefore, in this case, a landscape plan is not required or warranted.

Site Description
The 3,600 square foot interior parcel is located between 17th and 18th Streets, and is currently developed with a 973 square foot one-story single-family residence (main dwelling). The property is located in the Coastal Zone, in an archaeologically sensitive area, in the City's Area of Special Biological Significance, and the property is listed on the City's Historic Resources Inventory (HRI).

Surrounding Land Uses
The parcel is located in an area consisting of small- and medium-sized, one- and two-story residences in the Pacific Grove Retreat residential neighborhood. The adjacent properties on either side of the subject site are developed with one- and two-story residences.

Applicable General Plan Policies
The neighborhood is designated Medium Density Residential with an allowed density of 10-20 dwelling units per acre. The Pacific Grove General Plan provides a framework for future growth and development within the City. The Land Use Element includes goals and polices that call for the orderly, well-planned, and balanced development, consistent with the historic nature of Pacific Grove, the capacity of the City's infrastructure, and ability to assimilate new growth. This proposed residential project is consistent with applicable General Plan policies, including the following:

Chapter 2, Land Use
Policy 2: Ensure that new development is compatible with adjacent existing development.
Policy 4: Continue to preserve Pacific Grove's character and regulate development.

Chapter 3, Housing
Policy 8: Strive to provide the City's share of the region's housing needs.

The policies above are implemented through the R-3-PGR zoning district which allows single- and multiple-family development in areas with adequate public services.

Applicable Land Use Plan Policies
The Pacific Grove Land Use Plan (LUP), certified on March 11, 2020, provides a framework for future growth and development within the City's Coastal Zone. The subject residential neighborhood is designated Medium Density Residential with an allowed density of 10-20 dwelling units per acre in LUP Figure 6. The proposed residential project is consistent with applicable LUP policies, including the following:

DES-1: All new development shall be consistent with requirements of the certified Local Coastal Program, including the certified Land Use Designations figure (Figure 6).
LUD-6: Allowed uses for Coastal Zone areas designated MHD 10-20.
CRS-6: All proposed development actions, including City public works projects, shall be consistent with maintaining the current scale and character of the Pacific Grove Retreat.
CRS-8: Design review shall be required as part of the Coastal Development process in order to maintain

historical continuity and visual harmony of new development within the Pacific Grove Retreat and other neighborhoods in the Coastal Zone.

Applicable Zoning Code Regulations
As proposed, the project complies with the zoning regulations and development standards set forth in Pacific Grove Municipal Code (PGMC) Chapters 23.26 (R-3-PGR), 23.90 (Coastal Implementation Plan or IP), and 23.80 (ADU Ordinance). This includes, but is not limited to, height, setbacks, building and site coverages, and gross floor area. Per PGMC section 23.90.180.C.2.c, *Off-Street Parking*, the property satisfies the requirement for lots 2,701 square feet or greater to have at least one off-street parking space. As proposed, the project would retain one uncovered parking space in front of the ADU.

The applicant provided a Project Data Sheet (attached) indicating the development standards of the zoning district, existing conditions, and proposed conditions.

Coastal Development Permit (CDP)
An application was filed with the Community Development Department (CDD) on May 2, 2022. The application submittal is consistent with PGMC section 23.90.060. Findings and related conditions of approval are included in the draft resolution (attached). Due to the scope (i.e., new construction), the proposed project is not eligible for the standard residential CDP exemption per PGMC section 23.90.040.A, and CDD staff forwarded a CDP Determination to the California Coastal Commission on May 5, 2022.

Architecture and Design Consideration
The proposed project would allow the construction of an 827 square foot one-story detached accessory dwelling unit (ADU). As proposed, the project would be compatible with the neighborhood comprised of small- and medium-sized, one- and two-story residences of varying architectural styles, alignments, and scales. The proposed ADU will use exterior colors and materials that will blend with the surrounding natural street scape (i.e., off-white horizontal wood siding, light green wood trim, painted wood windows and doors, and dark gray metal roof). As designed, the facade avoids large blank areas facing the street and the project would not result in any adverse visual impacts. The architectural style, materials and site design are in substantial conformance with the IP's Residential Design Standards in PGMC 23.90.180(c)(2). Off-street parking is not required because the project involves construction of an ADU located in a residential neighborhood, and the residential parking needs in the area do not conflict with public parking needs.

Lighting
Exterior lighting shall comply with LUP Policy DES-6, and is required as a condition of approval.

Archaeological Resources
Per PGMC section 23.90.200, Cultural Resources, the application includes a Phase 1 Preliminary Archaeological Assessment (January 28, 2022) and a Phase II Subsurface Testing (March 14, 2022), both reports prepared by qualified archaeologists (Susan Morley, Registered Professional Archaeologist, and Brenna Wheelis). The reports determined that no potentially significant resources are present in the project area and that the potential for adverse impacts to cultural resources is low. Although no significant cultural resources were identified or observed on the subject property, the archaeologists recommended cultural resources sensitivity training for construction personnel, and monitoring during all ground-disturbing activities. The project is conditioned to in include these recommendations and to address inadvertent discovery of human remains or cultural artifacts.

Historic Resources
As noted above, the property is currently listed on the City's Historic Resources Inventory (HRI).

However, per State law and PGMC section 23.80.060(f), *Historical Protections*, historic review is only required if a property is listed on the California Register of Historic Resources. Therefore, in this case, submittal of an historic report is not required.

Biological Resources
Per PGMC section 23.90.170, *Biological Resources*, CDD staff reviewed LUP Figure 5, Land Habitat Sensitivity Map, aerial imagery, and conducted a site inspection on May 17, 2022. This review determined the proposed development would not have the potential to affect biological resources or environmentally sensitive habitat area (ESHA), and that the site is not within 100 feet of ESHA. The area of proposed development is covered by non-native grass and ice plant. LUP Figure 5 identifies the site as having a low habitat value, and the property is a previously-developed site in a residentially zoned district surrounded by residential structures and 18th Street. As designed and conditioned, the project will not impact natural habitats or resources; therefore, in this case, submittal of an initial site assessment for biological resources is not required or warranted.

Stormwater
Per PGMC section 23.90.150, Water Quality and Marine Resources, the City did not require a water quality assessment because the proposed new development is under 2,500 square feet of new site coverage, and will fall within the City's Municipal Permit.

Coastal Hazards
Per PGMC section 23.90.140, Coastal Hazards, CDD staff reviewed LUP Figure 3 (Coastal Hazards and Areas of Potential Sea Level Rise), aerial and topographic imagery, and conducted a site visit on May, 17, 2022, and determined the site and proposed development would not be subject to coastal hazards over its lifetime. The parcel's topographic elevation is approximately 63 feet above mean sea level.

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)
In reviewing this action, the City has followed the CEQA statute adopted by the State of California as published in the California Public Resources Code, Division 13, §21000, et seq., and the California Code of Regulations, Title 14, §15000, et seq. (i.e., CEQA Guidelines). The proposed project is found to be categorically exempt under CEQA Guidelines Section 15303, Class 3, New Construction, which allows construction of new, small structures including second dwelling units in a residential zone. The proposed project is consistent with the General Plan, and the neighborhood within which the project is located is not environmentally sensitive. The exceptions to exemptions in Section 15300.2 of the CEQA Guidelines pertaining to location, cumulative impacts, significant effects, scenic highways, hazardous waste sites, and historical resources do not apply to this project. Specifically, in this case, the project would not cause a substantial adverse change in the significance of a historical resource.

OPTIONS
1. Approve the appeal of the Planning Commission's decision and deny the proposed project.
2. Direct the applicant to revise the proposed project subject to Council direction.

FINANCIAL IMPACT:
The proposed project would have no impact on the City's fiscal operations.

GOAL ALIGNMENT: Increase Affordable Housing: Determine policies, projects and programs that will advance the effort to create new affordable housing in the City.

Attachments

Draft Resolution
Appeal Form & Supplemental Letter
Application
CDP Application & Checklist
Project Data Sheet
CEQA Exemption Form
Planning Commission Permit dated July 14, 2022
Plan Set

RESOLUTION NO. 22-

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF PACIFIC GROVE APPROVING FILE NUMBER CDP 22-0125 FOR THE DEVELOPMENT OF AN ACCESSORY DWELLING UNIT AT 120 17TH STREET

FACTS

1. The applicant proposes construction of an 827 square foot one-story detached accessory dwelling unit with a 34 square foot covered porch, associated site improvements, and demolition of an existing shed and deck area.
2. The subject site is located at 120 17th Street, Pacific Grove, 93950; APN 006-153-010.
3. The approximately 3,600 square foot project site has an existing 973 square foot one-story single-family residence, 80 square foot shed, and 180 square foot deck.
4. The subject site has a land use designation of Medium High Density Residential (10-20 du/ac) in the adopted City of Pacific Grove Coastal Land Use Plan (LUP Figure 6).
5. The project site is located in the R-3-PGR zoning district.
6. The property is located in an archaeologically sensitive area (per LUP Figure 7), in the City's Area of Special Biological Significance (ASBS), within the Coastal Zone, and listed on the City's Historic Resources Inventory (HRI).
7. Per PGMC § 23.90.140, Coastal Hazards, Community Development Department (CDD) staff reviewed LUP Figure 3 (Coastal Hazards and Areas of Potential Sea Level Rise), aerial and topographic imagery, and conducted a site visit on May, 17, 2022, and determined the site and proposed development would not be subject to coastal hazards over its lifetime. The parcel's topographic elevation is approximately 63 feet above mean sea level.
8. Per PGMC § 23.90.150, Water Quality and Marine Resources, the City did not require a water quality assessment because the proposed new development is under 2,500 square feet of new site coverage, and will fall within the City's Municipal Permit.
9. Per PGMC § 23.90.160, Scenic Resources, CDD staff reviewed LUP Figure 4 (Scenic Areas), aerial and street view imagery, and conducted a site visit on May, 17, 2022. This review determined the site and proposed development are not within a designated scenic view area or corridor, and would not adversely impact public views.
10. Per PGMC § 23.90.170, Biological Resources, CDD staff reviewed LUP Figure 5, Land Habitat Sensitivity Map, aerial imagery, and conducted a site inspection on May 17, 2022. This review determined the proposed development would not have the potential to affect biological resources or environmentally sensitive habitat area (ESHA), and that the site is not within 100 feet of ESHA. The area of proposed development is covered by non-native grass and ice plant. LUP Figure 5 identifies the site as having a low habitat value, and the property is a previously-developed site in a residentially zoned district surrounded by residential structures and 18th Street. As designed and conditioned, the project will not impact natural habitats or resources; therefore, in this case, submittal of an initial site assessment for biological resources is not required or warranted.

11. Per PGMC § 23.90.200, Cultural Resources, the application includes a Phase 1 Preliminary Archaeological Assessment (January 28, 2022) and a Phase II Subsurface Testing (March 14, 2022), both reports prepared by qualified archaeologists (Susan Morley, Registered Professional Archaeologist, and Brenna Wheelis). The reports determined that no potentially significant resources are present in the project area and that the potential for adverse impacts to cultural resources is low. Although no significant cultural resources were identified or observed on the subject property, the archaeologists recommended cultural resources sensitivity training for construction personnel, and monitoring during all ground-disturbing activities. The project is conditioned to in include these recommendations and to address inadvertent discovery of human remains or cultural artifacts.

12. The City's Planning Commission reviewed the proposed project at a noticed public hearing on July 14, 2022, and unanimously approved CDP 22-0125.

13. On July 15, 2022, the appellant submitted a timely appeal of the Planning Commission's decision.

14. The project has been determined to be Categorically Exempt per CEQA Guidelines Section 15303, Class 3, New Construction, and the exceptions to the exemptions in Section 15300.2 of the CEQA Guidelines do not apply.

FINDINGS

Coastal Development Permit Findings per PGMC Section 23.90.080

1. LCP Consistency. The project is consistent with the LCP (Local Coastal Program).

   The project meets the requirements of the LCP including, but not limited to, the applicable Coastal Resource Protection Standards (PGMC § 23.90.130) of the Implementation Plan (IP) and the Biological, Cultural, Scenic, and Community Design policies of the Land Use Plan (LUP). These standards and policies are addressed further in the following findings.

2. Public Views. The project protects or enhances public views.

   Per LUP Figure 4, Scenic Areas, the project site is not located within a designated Scenic View Area or view corridor. As designed, the project would not impact public views and is consistent with the height and massing of buildings in the immediate vicinity of the project area.

3. Habitat Protection. The project protects vegetation, natural habitats, and natural resources consistent with the LCP.

   Per LUP Figure 5, Land Habitat Sensitivity Map, the project site is identified as having a low habitat value, and the property is a previously-developed site in a residentially zoned district surrounded by residential structures and 18th Street. As designed and conditioned, the project will not impact natural habitats or resources and is consistent with the LCP, including PGMC § 23.90.170 regarding biological resources and/or environmentally sensitive habitat areas.

4. Design Consistency. The design, location, size, and operating characteristics of the proposed development is consistent with applicable LCP design requirements, including design plans and area plans incorporated into the LCP.

   The project conforms to all applicable LUP polices and IP community design standards (PGMC 23.90.180, Coastal Community Design).

5. Coastal Access. The project protects or enhances public access to and along the coast.

   As designed, the project will have no effect on public coastal access to or along the coast.

6. Visitor Serving. The project supports the LCP goal of providing for visitor-serving needs as appropriate, including providing low and no cost visitor and recreational facilities.

   The project includes development of an accessory dwelling unit and will have no visitor-serving features, yet may qualify for a Short-Term Rental (STR) license given its location within the coastal zone. As of this date, there is no indication that the applicant intends to pursue an STR license.

7. Appropriate Use. The project is consistent with the allowed LCP uses associated with the property.

   Per LUP Figure 6, the subject property has a Coastal Zone Land Use Designation of Medium High Density Residential 10-20 du/ac (MHD 10-20). LUP Policy LUD-6 identifies second housing units as an allowed use in areas designated MHD 10-20. Therefore, the proposed use is consistent.

8. Coastal Resources. The proposed development protects or enhances coastal resources, where applicable.

   The 3,600 square foot project site is currently developed with an existing 973 square foot one-story residence (main dwelling). As proposed and designed, the project will not impact coastal resources. See also previous Facts 7 – 11 and supporting information.

In approving the permit, the following conditions of approval are imposed and deemed reasonable and necessary to ensure that the approval will comply with the findings cited above.

CONDITIONS OF APPROVAL

1. **Permit Expiration.** This permit shall expire and be null and void if a building permit has not been applied for within two (2) years from and after the date of approval. Application for extension of this approval must be made prior to the expiration date.

2. **Conformance to Plans.** Development and uses of the site shall conform to the approved plans prepared for the "Crumb ADU" project dated September 21, 2022, on file with the Community Development Department and to the Building Code,with the exception of any subsequently approved changes.

3. **Construction Compliance.** All construction shall occur in general compliance with the proposal as set forth in the application, subject to any special conditions of approval herein. Any deviation from approvals must be reviewed and approved by staff, and may require subsequent Architectural Review Board, Planning Commission, and/or City Council approval.

4. **Terms and Conditions.** These terms and conditions shall run with the land and bind to all future owners and possessors of the subject property, unless amended. Amendments to this permit may be achieved only if an application is made and approved, pursuant to the Zoning Code.

5. **Public Works, Fire and Building.** Review and approval by the Public Works and Fire Department, and Building Division, are required prior to issuance of a building permit. Any work taking place in the public right-of-way shall require an encroachment permit prior to issuance of the building permit.

6. **Building Plans.** All conditions of approval for the Planning permit(s) shall be printed on a full-size plan sheet and included with the construction plan set submitted to the Building Division.

7. **Exterior Lighting.** All exterior lighting must conform to LUP Policy DES-6.

8. **Archaeology and Inadvertent Discovery.** When human remains or other cultural artifacts are exposed, the Health and Safety Code § 7050.5 requires that no further excavation or disturbance occurs in the area and that the county coroner is called so that the coroner can verify that the remains are not subject to medical jurisprudence. Within 24 hours of notification, the coroner calls the Native American Heritage Commission if the remains are known or thought to be Native American. The Native American Heritage Commission selects the Most Likely Descendant (MLD) from a rotating list of MLDs. The MLD has 24 hours to respond. All work will halt with a 50-yard radius until an osteologist can examine the remains, and a treatment plan for any said remains has been provided according to the MLD.

9. **Cultural and/or Archaeological Artifacts.** If such artifacts are unexpectedly discovered during ground disturbing activities, work shall be halted until the item(s) can be evaluated by a qualified professional archaeologist. If the find is determined to be significant, appropriate mitigation will be formulated, with the approval of the lead agency, and implemented prior to recommencement of work.

10. **Archaeologist and Tribal Monitoring.** A qualified archaeological monitor and Native American monitor shall be present to observe all ground disturbing activities of the project and to investigate and report on any unexpected findings.

11. **Cultural Resource Sensitivity Training.** Cultural resource sensitivity training led by a qualified archaeologist and a tribal cultural monitor shall be conducted prior to any ground disturbing activities and shall repeat with all new construction personnel on site throughout the life of the project.

12. **Rental Period.** Pursuant to PGMC section 23.80.050(c), the ADU may not be rented for a term less than 30 days.

13. **Permeable Parking Surface.** The proposed parking area must be composed of a permeable material.

14. **Encroachment Permit.** Per Condition of Approval No. 5 above, any work taking place in the public right-of-way shall require an encroachment permit prior to issuance of the building permit. If required, the applicant shall apply for an encroachment permit for the parking space access from 18th Street.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF PACIFIC GROVE:

1. The Council determines that each of the Facts and Findings set forth above is true and correct, and by this reference incorporates those Facts and Findings as an integral part of this Resolution.
2. The Council denies the appeal, and affirms the decision of the Planning Commission to approve CDP 22-0125.
3. The Council finds the project categorically exempt per CEQA Guidelines Section 15303, Class 3, New Construction, and finds that the exceptions to the exemptions in Section 15300.2 of the CEQA Guidelines do not apply.
4. The Council APPROVES this permit (Application No. 22-0125) to allow construction of an 827 square foot one-story detached accessory dwelling unit with a 34 square foot covered porch, associated site improvements, and demolition of an existing shed and deck area.
5. The required Findings and Conditions of Approval are hereby approved and incorporated herein by reference.
6. This Resolution shall become effective immediately following passage and adoption thereof.

PASSED AND ADOPTED BY THE COUNCIL OF THE CITY OF PACIFIC GROVE this 5th day of October, 2022, by the following votes:

AYES:

NOES:

ABSENT:

ABSTAIN:

APPROVED:

_____
BILL PEAKE, Mayor

ATTEST:

_____
SANDRA KANDELL, City Clerk

APPROVED AS TO FORM:

_____
BRIAN PIERIK, City Attorney

CITY OF PACIFIC GROVE

Community Development Department – Planning Division

300 Forest Avenue, Pacific Grove, CA 93950

T :: 831.648.3190 • F :: 831.648.3184 • www.ci.pg.ca.us/cdd

Appeal Form

Appeal #: CDP 22-0125
Date: July 15, 2022
Received By:
Total Fee:

Project Information

Project Address: 120 17th Street APN: 006-153-010
☐On HRI/☐Not on HRI
Application & No.: CDP 22-0125
Applicant Name: Adam Jeselnick AIA Phone #: (831) 620-5164
Mailing Address: 24398 Portola Ave., Carmel, CA 93923
Email Address: AEJARCH@GMAIL.COM
Owner Name: Richard Crumb Phone #: (802) 989-8314
Mailing Address:
Email Address: richardcrumb@gmail.com

Action[1]

☐ARB: Architectural Review Board
☐CDD: Planning Staff
☐HRC:Historic Resources Committee
■PC: Planning Commission
☐NRC: Natural Resources Committee
☐SPRC: Site Plan Review Committee
☐ZA: Zoning Administrator

Date of Action: July 14, 2022
Action Taken: Approved CDP with condition to require a driveway encroachment permit

Appeal Information

Appellant Name: Anthony A. Ciani Phone #: (858) 454-7141
Mailing Address: 220 Walnut Street, Pacific Grove, CA 93950
Email Address: aciani@cianiarchitecture.com
Appeal Deadline: 5:00 p.m. on 07 (?) /25 (?) /2022
Grounds for Appeal: Project fails to comply with maximum lot coverage per PGMC 23.90.180 (c)(2)(a) & PGMC 23.90.080 (a) and (d)
Failed to provide complete and accurate site plan and landscape plan per PGMC 23.90.060 (a)(1)(b); and,
Failed to comply with CDD Submittal Checklist Section II (Site Plan and Landscape Plan requirements (See attached)

Anthony Ciani Digitally signed by Anthony Ciani Date: 2022.07.15 13:49:32 -07'00'
Appellant Signature

July 15, 2022
Date

Anthony A. Ciani

[1] See Table 23.70.012-1 in the Pacific Grove Zoning Code, which identifies roles of review authorities as they relate to appeals.

Anthony A. Ciani 220 Walnut Street Pacific Grove, California 93950
ARCHITECTURE - PLANNING - HISTORIC PRESERVATION - COASTAL CONSULTANT

July 15, 2022

Joe Sidor, Planner
Community Development Department
City of Pacific Grove
300 Forest Avenue
Pacific Grove CA 93950

RE: SUPPLEMENT TO APPEAL OF CDP NO. 22–0125
120 17TH STREET, PACIFIC GROVE, CA 93950

Dear Joe,

This letter outlines reasons supporting my appeal of the above referenced Coastal Development Permit (CDP) as follows:

(1) The applicants plan set was insufficient lacking the minimum information required by PGMC 23.90.060 (a) and (a)(1) Application Submittal, and the "City of Pacific Grove Community Development Department Submittal Checklist". Specifically, it failed to depict:

*"**Features in the right-of-way adjacent to the project site at the edge of street paving (curb cuts, curb, gutter, sidewalk, driveway approaches**, utility poles, fire hydrants, water meters, etc.)".*

*"**Show the boundary of all driveways, parking pads, and back-up areas and dimension each. Indicate the type of surface** and whether or not parking spaces are garage spaces, carport spaces, or uncovered parking pad spaces. If project involves a multi-family development or commercial project number all spaces and circle the last (highest) number**. Label all walkways, patios, trash enclosures**, water features, garden structures and other similar features (indicate height of features and type of building materials). Please include the boundary areas of all patios and walkways and indicate the type of surface. **Label all areas to remain unpaved**, e.g., garden/planted areas, grass areas, etc. Label all major site features such as rock outcroppings, dunes, swales and drainage patterns, and provide photo documentation of these features."*

*"**Depict all** cut and fill (including calculations), existing and proposed contours and grade changes, **gradients of driveways, walkways, sidewalks**, drainage, and all finished pad elevations."*

Landscape Plan, [including]: ***All areas to be landscaped. Location, size and identification of each tree, shrub, ground cover and other landscape feature.*** *All items on the Tree Plan requirements listed above. All property lines and street names.* ***Location of existing and proposed walks, driveways, fences****, pools, ponds, water features, retaining walls. Standards for class of irrigation pipe, depth of pipe and backflow preventers. Typical details of spray, ground cover, shrub, and tree irrigation installations.*

2) Applicant's plans are inaccurate and fail to indicate the entry walkway and steps to the house on 17th Street; the patio in the front yard on 17th Street; and the concrete walkway in the front yard on 17th Street that extends through the side yard on the north side of the lot. The plans failed to provide the dimensions for walkways and patio or the area calculations for those features. (PGMC 23.90.060 (a) and (a)(1) Application Submittal)

3) Applicant's plans did not label or provide dimensions for the proposed parking place or depict and dimension the driveway to the parking place. The plans did not specify the material for the parking space or driveway or provide an area calculation for the parking space. (PGMC 23.90.060 (a) and (a)(1) Application Submittal)

4) Applicant's failure to provide the information in items 1, 2 and 3 above, mislead the Planning Staff's recommendation and the Planning Commission to make erroneous findings that the project complies with the City's minimum site development requirements for the Coastal Zone, including to comply with maximum lot coverage per PGMC 23.90.180 (c)(2)(a); & PGMC 23.90.080 (a) & (d).

5) PGMC Section 23.90.180 (c)(2)(a) "In no case shall building coverage exceed 50 percent of total lot area, **and in no case shall site coverage exceed 60 percent of total lot area." Therefore, the allowable lot coverage is .6 x 3,600 SF = 2,160 SF Max.** Applicant's plans state:

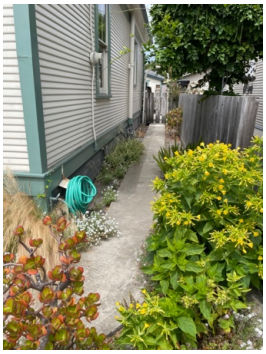
> SITE COVERAGE CALCULATIONS:
> EXISTING
> (E) HOUSE 973 SF
> (E) SHED 80 SF TOTAL,
> (E) 1,053 SF
>
> PROPOSED
> (P) HOUSE + ADU 1,800 SF
> TOTAL, (P) 1,834 SF
> (50,94% OUT OF TOTAL LOT AREA)

However, Existing House (973 SF) + ADU (827 SF) + ADU Porch (34 SF) + Existing House Entry Walk and Steps (21 SF) + Existing House front and north side yard concrete walk (+/- 106 SF) + Existing House front yard concrete garden walls (=/- 18 SF) + Existing House Paved Rear Patio Area and walks (+/- 120 SF)[1] + 10'x20' Proposed Parking area (120 SF) = **+/- <u>2,219 SF TOTAL SITE COVERAGE.</u>**



120 17th Street (Google street view)





Front Yard Entry, Paving and Walks, etc.

In conclusion, complete and accurate architectural drawings (site plan and landscape plan) and data are required to address this issue. This issue was raised but not adequately addressed during the Planning Commission's hearing of the matter on July 14, 2022, therefore, the Commission's finding that the project complies with the policies and sections outlined above and complies with PGMC Section 23.90.080 Required Findings for CDP Approval - **cannot be made.**

Moreover, fail to require applicants to comply with the basic submittal checklist requirements and provide adequate information could set a precedent that would undermine the accuracy and creditability of the staff reports and Planning Commission's decisions.

Therefore, I request the matter be returned to the Planning Commission for reconsideration of complete and accurate plans as outlined in the City's Submittal Checklist. If that is not administratively possible, then please accept the attached appeal form.

Sincerely,
Anthony A. Ciani

Cc: Planning Commission

[1] Estimated Area based on Google aerial view and as seen from street/north side yard

$ PAID 2,875.90

CITY OF PACIFIC GROVE

Community Development Department – Planning Division
300 Forest Avenue, Pacific Grove, CA 93950
Tel: 831.648.3190 • Fax: 831.648.3184 • www.cityofpacificgrove.org

Permit Application

Application # CDP 22-0125
Date: 05-02-2022
Total Fees: $ 2,875.90

APPLICANT/OWNER:

Project Address: 120 17th STREET **APN:** 006-153-010

Project Description: CONSTRUCTION NEW (DETACHED) 827 SF ACCESSORY DWELLING UNIT IN THE REAR YARD OF AN EXISTING SINGLE FAMILY DWELLING.

Will the project create, add, or replace impervious surface? [X] Yes [ ] No

Will the project impact any tree(s) on site? [ ] Yes [X] No

Applicant	Owner
Name: ADAM JESELNICK AIA	Name: RICHARD CRUMB
Phone: 831-620-5164	Phone: 802-989-8314
Email: AEJARCH@GMAIL.COM	Email: RICHARDCRUMB@GMAIL.COM
Mailing Address: 24398 PORTOLA AVENUE CARMEL, CA 93923	Mailing Address:

PLANNING STAFF USE ONLY:

Permit Request:

- [ ] CRD: Counter Determination
- [ ] AP: Architectural Permit
- [ ] AAP: Administrative AP
- [ ] ADC: Arch Design Change
- [ ] ASP: Admin Sign Permit
- [ ] SP: Sign Permit
- [ ] UP: Use Permit
- [ ] AUP: Administrative UP
- [X] CDP: Coastal Dev. Permit
- [ ] LLA: Lot Line Adjustment
- [ ] IHS: Initial Historic Screening
- [ ] HPP: Historic Preservation
- [ ] A: Appeal
- [ ] TPD: Tree Permit W/ Dev't
- [X] CDP Waiver/Admin. CDP
- [ ] VAR: Variance
- [ ] MMP: Mitigation Monitoring
- [ ] Water Entitlement
- [ ] Other: _____
- [ ] Other: _____

CEQA Determination:

- [X] Exempt
- [ ] Initial Study & Mitigated Negative Declaration
- [ ] Environmental Impact Report

Review Authority:

- [ ] Staff
- [ ] ZA
- [ ] SPRC
- [X] ARB
- [ ] HRC
- [X] PC
- [ ] CC
- [ ] _____

Active Permits:

- [ ] Active Planning Permit
- [ ] Active Building Permit
- [ ] Active Code Violation
  Permit #: _____

Overlay Zones:

- [ ] Butterfly Zone
- [X] Area of Special Biological Significance (ASBS)
- [ ]

Property Information

Lot: 19 & 20 Block: 51 Tract: Pacific Grove Retreat
ZC: R-3-PGR GP: HDR 19.8 du/ac Lot Size: 3,600

- [X] Historic Resources Inventory
- [X] Archaeologically Sensitive Area
- [ ] CDP Appeal Jurisdiction

Staff Use Only:

Received by: J. Sidor
Assigned to: J. Sidor

RECEIVED
MAY 2 2022
CITY OF PACIFIC GROVE
COMMUNITY DEV DEPT

Application # CDP 22-0125

INDEMNIFICATION CONDITION

In consideration for City review and approval of application in this matter, the Owner/Applicant shall indemnify, defend, protect and hold harmless the City, its elected and appointed officials, officers, agents, and employees (collectively "Indemnitees"), using counsel approved in writing by the City, from and against, any and all liabilities, claims, actions, causes of action, proceedings, suits, damages, judgments, liens, levies, costs and expenses of whatever nature, including reasonable attorneys' fees and disbursements which may accrue against Indemnitees by reason of the City's processing, approval or denial of the request and application in this matter. Indemnification shall include, but shall not be limited to any action, or proceeding brought to attack, set aside, void, annul, limit, or inhibit the approval of the application referenced above, and shall expressly include causes of action under the California Environmental Quality Act (CEQA), the National Environmental Policy Act (NEPA), or the CA Coastal Act.

The obligation to indemnify shall include, but not be limited to, all costs relating to preparing administrative records, investigations, responses to discovery, retention of experts, and other costs, including attorney's fees or obligations related to this matter, including actions brought by the Owner/Applicant and extend to any expense incurred in establishing the City's right to indemnification. City expenses shall be paid by Owner/Applicant upon City request notwithstanding final disposition of the matter has not yet occurred. If the City is later determined to not be entitled to indemnification, the City shall repay amounts so advanced.

This indemnification condition is the Owner/Applicant's inducement to the City to process and approve the application, which approval would otherwise be withheld by City due to its concern for liability or expense that may result from performance of the City's duties. Should any dispute arise regarding interpretation of this condition, the prevailing party shall recover all reasonable costs incurred, including court costs, attorney fees and related expenses. Recovery of expenses shall be as additional costs awarded to the prevailing party and shall not require initiation of a separate legal proceeding.

This indemnification condition shall not require the Owner/Applicant to indemnify the City or other Indemnities: (a) to the extent that an obligation is actually paid by an insurer pursuant to an insurance policy; (b) in connection with any remuneration paid to the City, if it shall be finally adjudged that such remuneration was in violation of law; or (c) on account of the City's misconduct if such misconduct shall be finally adjudged to have been knowingly fraudulent, deliberately dishonest or willful.

Any permit or other approval given by the City to the Owner/Applicant Guarantor shall be valid only so long as this indemnification condition is given full force and effect. If this indemnification condition is revoked, the permit or other approval of the City shall then become null and void.

Owner/Applicant represents it (and any subsidiary) is (a) duly formed and organized, (b) validly existing and in good standing under state law, and (c) has all necessary power to execute and deliver this document and perform its obligations. Owner/Applicant also represents it is authorized to enter into this agreement by all requisite partnership, corporate or other action, and its terms are a valid and legally binding obligation. Neither execution nor delivery of this document nor performance of its obligations will violate any law or provision of any agreement, articles of incorporation, by-laws or other organizational or governing documents relating to Owner/Applicant, nor conflict with any court order relating to Owner/Applicant.

Applicant Signature: _____ **Date:** 3/24/2022

Owner Signature (Required): _____ **Date:** 3/24/2022

CITY OF PACIFIC GROVE
COASTAL DEVELOPMENT PERMIT
APPLICATION & SUBMITTAL CHECKLIST

Instructions

Please submit a complete application packet including this form with all of the items checked below. If one or more of the items is not applicable to your project, please mark with "not applicable" or "n/a". All exhibits must be clear, legible, and to scale where appropriate.

Incomplete applications will not be accepted for filing.

Checklist

This checklist is provided for the convenience of applicants in gathering necessary application materials. Additional material may be required prior to issuance of a Coastal Development Permit (CDP). For example, preliminary title reports, land surveys, biological/archaeological/botanical reports, restoration plans, and other reports or plans may be required based on the scope of the project.

- ☐ A completed standard City of Pacific Grove Community Development **Planning Permit Application** including the **Indemnification Form** signed by the applicant and property owner
- ☐ The **Plan Set** shall include: a **Site Plan** meeting the requirements of the **Submittal Checklist Form**; **Architectural Elevations** of all sides of the structure and including accessory buildings; (1) oblique street-view architectural rendering if the site is flat or a minimum of (2) views if the site is located in the Asilomar Dunes Residential Area (ADRA), including at least (1) view from Sunset Dr.; and a completed **Project Data Sheet**. *Note that the installation of story poles and netting will be required during the public notice period*.
- ☐ One (1) full-size (24" x 36") scaled plan set, two (2) 11" x 17" scaled sets, and a digital set of plans (thumb drive, disc, or email). Please include digital versions of ALL of the application materials as part of your **Electronic Submittal**. Include a **Vicinity Map** on the site plan. Additional copies may be needed for hearings.
- ☐ Required **Technical Reports** (biological/archaeological/botanical reports, geotechnical reports, grading plan, etc.)
- ☐ **Filing Fee**
- ☐ **Project Description:** (Describe the project in detail including secondary improvements such as grading, removal or alteration of septic tanks, roads, driveways, tree removal and/or pruning, accessory buildings, fences, etc. Attach additional pages as necessary)

CONSTRUCTION OF A NEW (DETACHED) 827 SF ACCESSORY DWELLING UNIT IN THE REAR YARD OF EXISTING SINGLE FAMILY DWELLING.

■ **Project Location:** 120 17TH STREET **Assessor Parcel No:** 006-153-010
(street address)

■ **Present Use** of the property:

Are there existing buildings? ■ Yes ☐ No If yes, please describe: EXISTING SINGLE FAMILY RESIDENTIAL DWELLING

☐ Will any existing buildings be **removed** or **demolished**? ☐ Yes ■ No If yes, please describe:

☐ Is the proposed development governed by a **Development Agreement**? ☐ Yes ■ No

☐ Has any application for development on this site been made in the past to the CA Coastal Commission or the CA Coastal Zone Conservation Commission? ☐ Yes ■ No

If yes, please list application #s: _____

☐ **Coastal Access:** Is the proposed development within the first public road and the sea or Monterey Bay? ☐ Yes ■ No If yes, is there currently public access to the shoreline on or near the site? Please describe:

☐ **Waters:** Does the project involve diking, filling, draining, dredging or placing structures in open coastal or Monterey Bay waters, wetlands, or estuaries? ☐ Yes ■ No

If yes, state the amount of fill in cubic yards (cy) _____. What is the location of the fill receiving site? _____

Is an **Army Corps** (USACE) permit required? ☐ Yes ■ No

☐ Will the project effect **Public Access** to and along the shoreline, either directly or indirectly (i.e., removing parking used for access to the beach)? ☐ Yes ■ No

If yes, describe the impact: _____

☐ Please check the following **Utilities** that will need to be extended to the proposed development:

■ Water ■ Sewer ■ Electrical ☐ Natural Gas ☐ Telephone

☐ Is the proposed development in or near the **Asilomar Dunes Residential Area** (ADRA)? ☐ Yes ■ No If yes, additional technical reports will be required.

☐ Is the development within an **Environmentally Sensitive Habitat Area** (ESHA) including areas with state or federally listed **rare, threatened, or endangered species**, or candidate species?

☐ Yes ■ No If yes, additional technical reports will be required.

☐ If the development is proposed to: a) alter a spring or stream in any way; or b) effect an existing well (either onsite or offsite), contact the Planning Department for additional requirements.

☐ Will the proposed development be **visible from Sunset Drive** or other mapped **scenic resource areas**? ☐ Yes ■ No

☐ Include any **Tree Removal** or **Pruning** required (a separate permit may be required). Note the number, size, species of tree (s), and whether heavy equipment will be necessary for tree project (refer to the Tree Permit requirements on City's Public Works website)

☐ Is the development in or near a park or other recreation area? ☐ Yes ■ No

☐ Is this a City **Public Works** project or a project being undertaken by another public agency? ☐ Yes ■ No If yes, please contact the Planning Division for additional requirements relating to grading, dredging, fill, use of heavy equipment, additional non-City permit requirements, etc.

☐ Will the development extend onto or adjoin any beach, tidelands, submerged lands, or public trust lands? ☐ Yes ■ No If yes, please consult with Planning staff for additional requirements.

☐ If the site contains any of the following resources, attach an explanation:
- ■ Buildings on the City's Historic Resources Inventory (HRI) or more than 50 years old; EXISTING DWELLING IS ON THE HRI LIST.
- ■ Archaeological resources; and/or SEE ATTACHED ARCHAEOLOGICAL REPORT.
- ☐ Paleontological resources

☐ Does the project include the development of new **Lodging** or the alteration of existing **Low-Cost Visitor Accommodations and/or Recreation Facilities**? ☐ Yes ■ No If yes, describe how the project complies with the requirements of PGMC Sec. 23.90.220 _____

_____

☐ Will the development provide public or private recreational opportunities?
☐ Yes ■ No

■ Is any Grading proposed? ☐ Yes ☐ No If yes, complete the following table:

a) Amount of cut: 48 cubic yards (cy) b) Amount of fill: - cy c) Amount of **import** or **export**: 48 cy (circle which one)	d) Max. height of cut slope: 1 ft. e) Max. Height of fill slope: - ft. f) Location of borrow or disposal: ___ ft.

Note: grading, stormwater, and erosion control plans must be attached when applicable

☐ If the project is multi-family residential, indicate:

Number of Units			***Total # of bedrooms per unit (existing and proposed)***	***Type of ownership proposed***
Existing # of Units	Proposed # of Units	Net # of units upon completion		☐ Rental ☐ Condo ☐ Stock Coop ☐ Timeshare ☐ Other

■ Estimated cost of the proposed development (not including the cost of land) $400,000

☐ Parking and Utilities

Number of parking spaces required NO NEW PARKING REQUIRED FOR ADU. 1 EXISTING PARKING SPACE FOR SINGLE FAMILY DWELLING TO BE MAINTAINED.		
Existing spaces	Proposed new spaces	Net # of spaces on completion of project
1	0	1

■ Project Height: (Max. height of structure as defined in the IP: *the vertical distance measured between the legally established existing grade and the top-most portion of development above existing grade, unless otherwise specified*)

a. Above existing (natural) grade 13'-4" ft.
b. Above finished grade 13'-4" ft.
c. As measured from centerline of frontage road 13' ft.

■ Total # of floors in structure, including subterranean floors, lofts, and mezzanines 1

■ Gross Floor Area (GFA) in sq. ft. (includes garages and accessory buildings) 827 sq. ft.

■ Lot Area 3600 sq. ft.

☐ If the project includes **Subdivision** or a **Lot Line Adjustment**, indicate:

Number of Lots			***Size of lots to be created (indicate gross <u>and</u> net lots size)***	
Existing # of Lots	Proposed # of Lots	Net # of lots upon completion	Existing	Proposed

☐ If the project is a **Lot Line Adjustment** or a request for **Certificates of Subdivision Compliance**, please provide the following:

1. "Creation documents" for all affected properties. These documents would include grant deeds or certain maps recorded prior to the effective date of the Coastal Act (Jan. 1, 1976) that include a legal description describing the property as it exists today;
2. A prelim. title report less than six (6) months old; and
3. Current grant deeds for each affected property.

PROJECT DATA SHEET

Project Address: 120 17th Street **Submittal Date:** 9/2/2022

Applicant(s): ADAM JESELNICK ARCHITECT **Permit Type(s) & No(s):** CDP

	REQUIRED/ Permitted	Existing Condition	Proposed Condition	Notes
Zone District	R-3-PGR	-	-	
Building Site Area	3600 sf	3600	3600	
Density (multi-family projects only)				
Building Coverage	1800 sf	1053 sf	1800 sf	
Site Coverage	2160 sf	1858 sf	2160 sf	new d.g. parking pad
Gross Floor Area	2400 sf	973	1800	
Square Footage not counted towards Gross Floor Area		N/A	N/A	
Impervious Surface Area Created and/or Replaced		312 sf	360 sf	
Exterior Lateral Wall Length to be demolished in feet & % of total*	N/A	_____	___ft/___%	
Exterior Lateral Wall Length to be built	_____	_____	131 SF	ADU
Building Height	16'-0"	0	13'-4"	ADU
Number of stories	2	1	1	
Front Setback		-	8'-0"	new ADU
NORTH **Side Setback (specify side)**		5'-7"	3'-6"	new ADU
SOUTH **Side Setback (specify side)**		3'-0"	3'-0"	no change
Rear Setback			N/A	NO REAR YARD
Garage Door Setback			N/A	
Covered Parking Spaces			0	
Uncovered Parking Spaces		1	1	new d.g. parking pad
Parking Space Size (Interior measurement)	9' x 20'		10' X 20'	
Number of Driveways	1	1	1	
Driveway Width(s)		12'	10'	
Back-up Distance			N/A	
Eave Projection (Into Setback)	3' maximum		1'	
Distances Between Eaves & Property Lines	3' minimum	2'-6"	2'-6"	existing condition
Open Porch/Deck Projections			N/A	
Architectural Feature Projections				
Number & Category of Accessory Buildings		1	1	DEMOLISH EXISTING STORAGE SHED
Accessory Building Setbacks				
Distance between Buildings			17'-6"	
Accessory Building Heights			13'-4"	
Fence Heights			6' MAX.	

**If project proposes demolition to an HRI structure, also indicate % of proposed demolition of the surface of all exterior walls facing a public street or streets, if applicable.*

[Rev. 01/14/14]

CITY OF PACIFIC GROVE

Community Development Department – Planning Division

300 Forest Avenue, Pacific Grove, CA 93950

T: 831.648.3190 • F: 831.648.3184 • www.ci.pg.ca.us/cdd

NOTICE OF EXEMPTION FROM CEQA

Property Address/Location: 120 17th St, Pacific Grove, CA 93950

Project Description: CDP 220125

Description: Construction of an 827 square foot one-story detached accessory dwelling unit.

APN: 006153010000

ZC: R-3-PGR

Lot Size: 3,600 square feet

Applicant Name:	Adam Jeselnick	Phone #:	(831) 620-5164
Mailing Address:	24398 Portola Avenue, Carmel, CA 93923		
Email Address:	aejarch@gmail.com		

Public Agency Approving Project: City of Pacific Grove, Monterey County, California

Exempt Status (Check One):

- ☐ Ministerial (Sec. 21080(b)(1):15268))
- ☐ Declared Emergency (Sec. 21080(b)(3): 15269(a))
- ☐ Emergency Project (Sec. 21080(b)(4); 15269(b)(c))
- ☑ Categorical Exemption
  Type and Section Number: Class 3, §15303
- ☐ Statutory Exemption
  Type and Section Number:
- ☐ Other:

Exemption Findings:

The proposed project does not present any unusual circumstances that would result in a potentially significant environmental impact. This class of exemption is subject to exceptions from the exemption under §15300.2 of the CEQA Guidelines pertaining to location, cumulative impacts, significant effects, scenic highways, hazardous waste sites, and historical resources. In this case, none of these exceptions apply, and the proposed project qualifies for the Class 3 categorical exemption. Specifically, in this case, the project would not cause a substantial adverse change in the significance of a historical resource.

Contact: Joe Sidor, Planning Department, City of Pacific Grove

Contact Phone: (831) 648-3183

Signature: _____ **Date:** _____

DocuSign Envelope ID: ECB52AFF-816F-4A76-8E52-8360B6EC339B

CITY OF PACIFIC GROVE

Community Development Department – Planning Division

300 Forest Avenue, Pacific Grove, CA 93950

T : 831.648.3183 • F : 831.648.3184 • www.ci.pg.ca.us/cdd

COASTAL DEVELOPMENT PERMIT (CDP 22-0125) FOR A PROPERTY LOCATED AT 120 17TH STREET TO ALLOW CONSTRUCTION OF AN 827 SQUARE FOOT ONE-STORY DETACHED ACCESSORY DWELLING UNIT.

FACTS

1. The subject site is located at 120 17th Street, Pacific Grove, 93950; APN 006-153-010.
2. The subject site has a land use designation of Medium High Density Residential 10-20 du/ac (MHD 10-20) in the adopted City of Pacific Grove Coastal Land Use Plan (LUP Figure 6).
3. The subject site is located in the R-3-PGR zoning district.
4. The subject site is approximately 3,600 square feet in size, and is currently developed with a 973 square foot one-story residence (main dwelling).
5. The property is located in an archaeologically sensitive area (per LUP Figure 7), in the City's Area of Special Biological Significance (ASBS), within the Coastal Zone, and listed on the City's Historic Resources Inventory (HRI).
6. Per PGMC § 23.90.140, Coastal Hazards, Community Development Department (CDD) staff reviewed LUP Figure 3 (Coastal Hazards and Areas of Potential Sea Level Rise), aerial and topographic imagery, and conducted a site visit on May, 17, 2022, and determined the site and proposed development would not be subject to coastal hazards over its lifetime. The parcel's topographic elevation is approximately 63 feet above mean sea level.
7. Per PGMC § 23.90.150, Water Quality and Marine Resources, the City did not require a water quality assessment because the proposed new development is under 2,500 square feet of new site coverage, and will fall within the City's Municipal Permit.
8. Per PGMC § 23.90.160, Scenic Resources, CDD staff reviewed LUP Figure 4 (Scenic Areas), aerial and street view imagery, and conducted a site visit on May, 17, 2022. This review determined the site and proposed development are not within a designated scenic view area or corridor, and would not adversely impact public views.
9. Per PGMC § 23.90.170, Biological Resources, CDD staff reviewed LUP Figure 5, Land Habitat Sensitivity Map, aerial imagery, and conducted a site inspection on May 17, 2022. This review determined the proposed development would not have the potential to affect biological resources or environmentally sensitive habitat area (ESHA), and that the site is not within 100 feet of ESHA. The area of proposed development is covered by non-native grass and ice plant. LUP Figure 5 identifies the site as having a low habitat value, and the property is a previously-developed site in a residentially zoned district surrounded by residential structures and 18th Street. As designed and conditioned, the project will not impact natural habitats or resources; therefore, in this case, submittal of an initial site assessment for biological resources is not required or warranted.
10. Per PGMC § 23.90.200, Cultural Resources, the application includes a Phase 1 Preliminary Archaeological Assessment (January 28, 2022) and a Phase II Subsurface Testing (March 14, 2022), both reports prepared by qualified archaeologists (Susan Morley, Registered Professional Archaeologist, and Brenna Wheelis). The reports determined that no potentially significant resources are present in the project area and that the potential for adverse impacts to cultural resources is low. Although no significant cultural resources were identified or observed on the subject property, the archaeologists recommended cultural resources sensitivity training for construction personnel, and monitoring during all ground-disturbing activities. The

DocuSign Envelope ID: ECB52AFF-816F-4A76-8E52-8360B6EC339B

project is conditioned to in include these recommendations and to address inadvertent discovery of human remains or cultural artifacts.

11. This project has been determined to be categorically exempt per CEQA Guidelines Section 15303, Class 3, New Construction, and the exceptions to the exemptions in Section 15300.2 of the CEQA Guidelines do not apply.

FINDINGS

For the Coastal Development Permit per PGMC Section 23.90.080

1. LCP Consistency. The project is consistent with the LCP. (Local Coastal Program)

   The project meets the requirements of the LCP including, but not limited to, the applicable Coastal Resource Protection Standards (PGMC § 23.90.130) of the Implementation Plan (IP) and the Biological, Cultural, Scenic, and Community Design policies of the Land Use Plan (LUP). These standards and policies are addressed further in the following findings.

2. Public Views. The project protects or enhances public views.

   Per LUP Figure 4, Scenic Areas, the project site is not located within a designated Scenic View Area or view corridor. As designed, the project would not impact public views and is consistent with the height and massing of buildings in the immediate vicinity of the project area.

3. Habitat Protection. The project protects vegetation, natural habitats, and natural resources consistent with the LCP.

   Per LUP Figure 5, Land Habitat Sensitivity Map, the project site is identified as having a low habitat value, and the property is a previously-developed site in a residentially zoned district surrounded by residential structures and 18th Street. As designed and conditioned, the project will not impact natural habitats or resources and is consistent with the LCP, including PGMC § 23.90.170 regarding biological resources and/or environmentally sensitive habitat areas.

4. Design Consistency. The design, location, size, and operating characteristics of the proposed development is consistent with applicable LCP design requirements, including design plans and area plans incorporated into the LCP.

   The project conforms to all applicable LUP polices and IP community design standards (PGMC 23.90.180, Coastal Community Design).

5. Coastal Access. The project protects or enhances public access to and along the coast.

   As designed, the project will have no effect on coastal access to or along the coast.

6. Visitor Serving. The project supports the LCP goal of providing for visitor-serving needs as appropriate, including providing low and no cost visitor and recreational facilities.

   The project includes development of an accessory dwelling unit and will have no visitor-serving features, yet may qualify for a Short-Term Rental (STR) license given its location within the coastal zone. As of this date, there is no indication that the applicant intends to pursue an STR license.

7. Appropriate Use. The project is consistent with the allowed LCP uses associated with the property.

   Per LUP Figure 6, the subject property has a Coastal Zone Land Use Designation of Medium High Density Residential 10-20 du/ac (MHD 10-20). LUP Policy LUD-6 identifies second housing units as an allowed use in areas designated MHD 10-20. Therefore, the proposed use is consistent.

DocuSign Envelope ID: ECB52AFF-816F-4A76-8E52-8360B6EC339B

8. Coastal Resources. The proposed development protects or enhances coastal resources, where applicable.

   The 3,600 square foot project site is currently developed with an existing 973 square foot one-story residence (main dwelling). As proposed and designed, the project will not impact coastal resources. See also previous Facts 6 – 10 and supporting information.

PERMIT

Coastal Development Permit (CDP 22-0125) to allow construction of an 827 square foot one-story detached accessory dwelling unit with a 34 square foot covered porch, associated site improvements, and demolition of an existing shed.

CONDITIONS OF APPROVAL

1. **Conformance to Plans.** Development and uses of the site shall conform to the approved plans prepared for the "Crumb ADU" project dated May 18, 2022, on file with the Community Development Department and to the Building Code,with the exception of any subsequently approved changes.
2. **Permit Expiration.** This permit shall expire and be null and void if a building permit has not been applied for within two (2) years from and after the date of approval. Application for extension of this approval must be made prior to the expiration date.
3. **Construction Compliance.** All construction shall occur in general compliance with the proposal as set forth in the application, subject to any special conditions of approval herein. Any deviation from approvals must be reviewed and approved by staff and may require subsequent Planning Commission approval.
4. **Terms and Conditions.** These terms and conditions shall run with the land and bind to all future owners and possessors of the subject property, unless amended. Amendments to this permit may be achieved only if an application is made and approved, pursuant to the Zoning Code.
5. **Building Plans.** All conditions of approval for the Planning permit(s) shall be printed on a full-size plan sheet and included with the construction plan set submitted to the Building Division.
6. **Public Works, Fire and Building.** Review and approval by the Public Works and Fire Departments, and Building Division, are required prior to issuance of a building permit. Any work taking place in the public right-of-way shall require an encroachment permit prior to issuance of the building permit.
7. **Exterior Lighting**. All exterior lighting must conform to LUP Policy DES-6.
8. **Archaeology and Inadvertent Discovery.** When human remains or other cultural artifacts are exposed, the Health and Safety Code § 7050.5 requires that no further excavation or disturbance occurs in the area and that the county coroner is called so that the coroner can verify that the remains are not subject to medical jurisprudence. Within 24 hours of notification, the coroner calls the Native American Heritage Commission if the remains are known or thought to be Native American. The Native American Heritage Commission selects the Most Likely Descendant from a rotating list of MLDs. The MLD has 24 hours to respond. All work will halt with a 50-yard radius until an osteologist can examine the remains, and a treatment plan for any said remains has been provided according to the Most Likely Descendant.
9. **Cultural and/or Archaeological Artifacts.** If such artifacts are unexpectedly discovered during ground disturbing activities, work shall be halted until the item(s) can be evaluated by a qualified professional archaeologist. If the find is determined to be significant, appropriate mitigation will be formulated, with the approval of the lead agency, and implemented prior to recommencement of work.

DocuSign Envelope ID: ECB52AFF-816F-4A76-8E52-8360B6EC339B

10. **Archaeologist/Tribal Monitoring.** A qualified archaeological monitor and Native American monitor shall be present to observe all ground disturbing activities of the project and to investigate and report on any unexpected findings.
11. **Cultural Resource Sensitivity Training.** Cultural resource sensitivity training led by a qualified archaeologist and a tribal cultural monitor shall be conducted prior to any ground disturbing activities and shall repeat with all new construction personnel on site throughout the life of the project.
12. **Rental Period.** Pursuant to PGMC section 23.80.050(c), the ADU may not be rented for a term less than 30 days.
13. **Permeable Parking Surface.** The proposed parking area must be composed of a permeable material.
14. **Encroachment Permit.** Per Condition of Approval No. 6 above, any work taking place in the public right-of-way shall require an encroachment permit prior to issuance of the building permit. The applicant shall apply for an encroachment permit for the parking space access from 18th Street.

NOW, THEREFORE, BE IT RESOLVED BY THE PLANNING COMMISSION OF THE CITY OF PACIFIC GROVE:

1. The Planning Commission determined that each of the Findings set forth above is true and correct, and by this reference incorporates those Findings as an integral part of this Permit.
2. The Planning Commission approves CDP 22-0125 as conditioned and pursuant to a Class 3, Section 15303, CEQA categorical exemption for new construction.
3. This permit shall become effective upon the expiration of the 10-day appeal period.
4. This permit shall not take effect until the owner acknowledges and agrees to all terms and conditions and agrees to conform to and comply with those terms and conditions.

PASSED AND ADOPTED AT A REGULAR MEETING OF THE PLANNING COMMISSION OF THE CITY OF PACIFIC GROVE ON THE 14TH DAY OF JULY, 2022, BY THE FOLLOWING VOTE:

AYES:	Murphy, Sawyer, Aeschliman, Beck, Fredrickson, and Nodzenski
NOES:	None
RECUSED:	None
ABSENT:	Lilley

APPROVED:

DocuSigned by:
Donald Murphy
91F038C4674F42F...
Don Murphy, Vice Chair

The undersigned hereby acknowledge and agree to the approved terms and conditions, and agree to fully conform to, and comply with, said terms and conditions.

DocuSigned by:
Richard Mather Crumb
A112EA51F6534AD...
Richard Mather Crumb, Trustee,
Crumb Family Trust dated August 25, 2021

7/22/2022
Date

DocuSign Envelope ID: ECB52AFF-816F-4A76-8E52-8360B6EC339B

DocuSigned by:
Kerstyn H. Crumb
A112EA51F6534AD...

7/22/2022

Kerstyn H. Crumb, Trustee,
Crumb Family Trust dated August 25, 2021

Date

GENERAL NOTES

1. VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS AT THE SITE; CONFIRM ANY VARIATIONS OR CONFLICTING OR MISSING DIMENSIONS OR DATA PRIOR TO COMMENCING WORK. USE WRITTEN DIMENSIONS ONLY; DO NOT SCALE DRAWINGS FOR THE PURPOSE OF DETERMINING A DIMENSION DURING CONSTRUCTION.

2. CONSTRUCTION DETAILS NOT SPECIFICALLY SHOWN ON THE DRAWINGS SHALL BE BUILT TO CONFORM TO SIMILAR CONSTRUCTION, IN ACCORDANCE WITH THE BEST COMMON PRACTICE AND/OR MANUFACTURER'S SPECIFICATIONS FOR THE INSTALLATION OF THEIR MATERIALS OR ITEMS.

3. ALL CONSTRUCTION (MATERIALS, WORKMANSHIP & METHODS) SHALL COMPLY WITH TITLE 24 AND THE **2019 CALIFORNIA RESIDENTIAL BUILDING** CODE (CBC); CALIFORNIA PLUMBING CODE (CPC), CALIFORNIA MECHANICAL CODE (CMC), CALIFORNIA ELECTRICAL CODE (CEC), CALIFORNIA ENERGY CODE, FIRE CODE, AND CALGREEN; AND ALL LOCAL AMENDMENTS AS ADOPTED BY COUNTY ORDINANCE.

4. THE OWNER-CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR SAFETY ON THE JOB SITE AND MUST ADHERE TO ALL FEDERAL, STATE LOCAL AND O.S.H.A. SAFETY REGULATIONS.

5. DEMOLITION: CONFIRM ALL DEMOLITION REQUIREMENTS WITH THE OWNER. VERIFY WITH OWNER WHICH ITEMS, IF ANY, HE/SHE WISHES TO RETAIN FOR HIS/HER USE. ALL OTHER ITEMS TO BECOME PROPERTY OF THE CONTRACTOR AND ARE TO BE PROPERLY REMOVED FROM THE PREMISES. SEE DEMOLITION PLANS FOR ADDITIONAL INFORMATION.

6. THE OWNER-CONTRACTOR SHALL BE RESPONSIBLE FOR ALL BRACING AND SHORING REQUIRED DURING CONSTRUCTION UNTIL ALL CONSTRUCTION IS COMPLETE.

7. DO NOT STORE CONSTRUCTION MATERIALS, OR OPERATE CONSTRUCTION EQUIPMENT IN SUCH A MANNER THAT DESIGN LIVE LOADS OF THE STRUCTURES ARE EXCEEDED. DO NOT STORE CONSTRUCTION MATERIALS ON OVERHANGING FRAMING.

8. IF DURING THE COURSE OF CONSTRUCTION, CULTURAL, ARCHAEOLOGICAL, HISTORICAL, OR PALEONTOLOGICAL RESOURCES ARE UNCOVERED AT THE SITE (SURFACE OR SUBSURFACE RESOURCES) WORK SHALL BE HALTED IMMEDIATELY WITHIN 50 METERS (150 FEET) OF THE FIND UNTIL A QUALIFIED PROFESSIONAL ARCHAEOLOGIST CAN EVALUATE IT. MONTEREY COUNTY - RMA PLANNING AND A QUALIFIED ARCHAEOLOGIST (I.E. AN ARCHAEOLOGIST REGISTERED WITH THE REGISTER OF PROFESSIONAL ARCHAEOLOGISTS) SHALL BE IMMEDIATELY CONTACTED BY THE RESPONSIBLE INDIVIDUAL PRESENT ON-SITE. WHEN CONTACTED, THE PROJECT PLANNER AND THE ARCHAEOLOGIST SHALL IMMIEDIATELY VISIT THE SITE TO DETERMINE THE EXTENT OF THE RESOURCES AND TO DEVELOP PROPER MITIGATION MEASURES REQUIRED FOR RECOVERY.

9. COORDINATE NEW UNDERGROUND ELECTRICAL SERVING WITH PG&E.

10. NEW FIRE SPRINKLERS TO BE INSTALLED UNDER SEPARATE PERMIT.

SHEET INDEX

A0 TITLE (PROJECT DATA AND SITE LOCATION)
A1 EXISTING AND PROPOSED SITE PLANS
A2 EXISTING AND PROPOSED FLOOR PLANS
A3 EXISTING AND PROPOSED ROOF PLANS
A4 PROPOSED ELEVATIONS

EXISTING SITE PHOTOGRAPHS



BACK OF EXISTING HOUSE (VACANT LOT)



FRONT OF EXISTING HOUSE (BACK)

REVISION # 1 9/2/2022 SITE PLAN REVISION

PROJECT DATA

SCOPE OF WORK:

BUILD A NEW 1-STORY ACCESSORY DWELLING UNIT INCLUDING A NEW LIVING ROOM. KITCHEN, BATHROOM AND 2 BEDROOMS. NEW WALKWAYS AND SITE IMPROVEMENTS.

CONSTRUCTION TYPE:	V-B
OCCUPANCY:	R-3 / U
FIRE SPRINKLERS:	YES
WATER:	CAL AM
SEWER:	MONTEREY ONE WATER
TREE REMOVAL:	NONE
GRADING:	NONE

SITE COVERAGE CALCULATIONS:

LOT SIZE **3,600 SF**

MAX. ALLOWABLE FLOOR AREA = 1,800 SF (50%)
MAX. ALLOWABLE SITE COVERAGE = 2,160 SF (60%)

FLOOR AREA CALCULATIONS:

EXISTING

(E) HOUSE	973 SF
TOTAL, (E) (27,02% OUT OF TOTAL LOT AREA)	**973 SF**

PROPOSED

(E) HOUSE	973 SF
(P) ADU	827 SF
TOTAL, (P) (50% OUT OF TOTAL LOT AREA)	**1,800 SF**

1

SITE COVERAGE CALCULATIONS:

EXISTING

(E) HOUSE	973 SF
(E) SHED	80 SF
(E) FRONT WALK WAY, PLANTER WALLS	24 SF
(E) SIDE WALK WAY	108 SF
(E) DECK	180 SF
(E) DRIVEWAY AND PARKING	493 SF
TOTAL, (E)	**1,858 SF**

PROPOSED

(P) HOUSE + ADU	1,800 SF
(E) FRONT WALK WAY, PLANTER WALLS	24 SF
(E) SIDE WALK WAY	108 SF
(N) ADU PORCH	34 SF
(N) PARKING SPACE	194 SF
TOTAL, (P)	**2,160 SF**

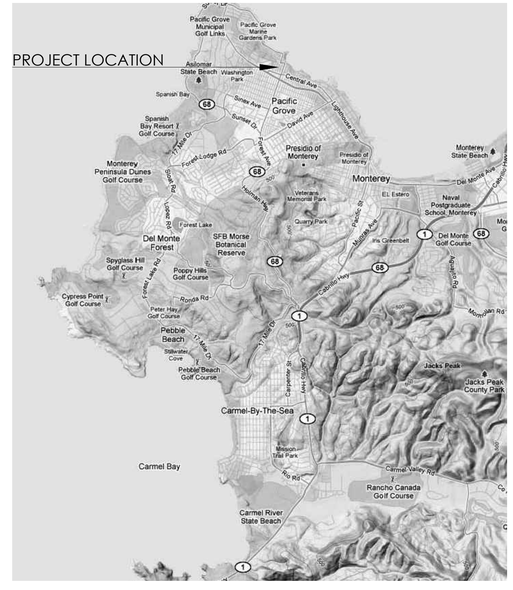
(60% OUT OF TOTAL LOT AREA)

PROJECT DATA

ADDRESS:	120 17TH STREET, PACIFIC GROVE, CALIFORNIA 93950
A.P.N.	006-153-010
YEAR BUILT	1910
ZONING	R-3-PGR

OWNER: **RICHARD AND KERSTYN CRUMB**
120 17TH STREET
PACIFIC GROVE, CALIFORNIA 93950
PHONE: (802) 989.8314
EMAIL: richardcrumb@gmail.com

ARCHITECT: **ADAM JESELNICK ARCHITECT**
24398 PORTOLA AVENUE
CARMEL, CA 93923
PHONE: (831) 620.5164 m
CONTACT: ADAM JESELNICK AIA
EMAIL: aejarch@gmail.com



1 VICINITY MAP
SCALE: N.T.S

ADAM JESELNICK ARCHITECT

LICENSED ARCHITECT ADAM JESELNICK No. C33090 Renew 3/31/23 STATE OF CALIFORNIA

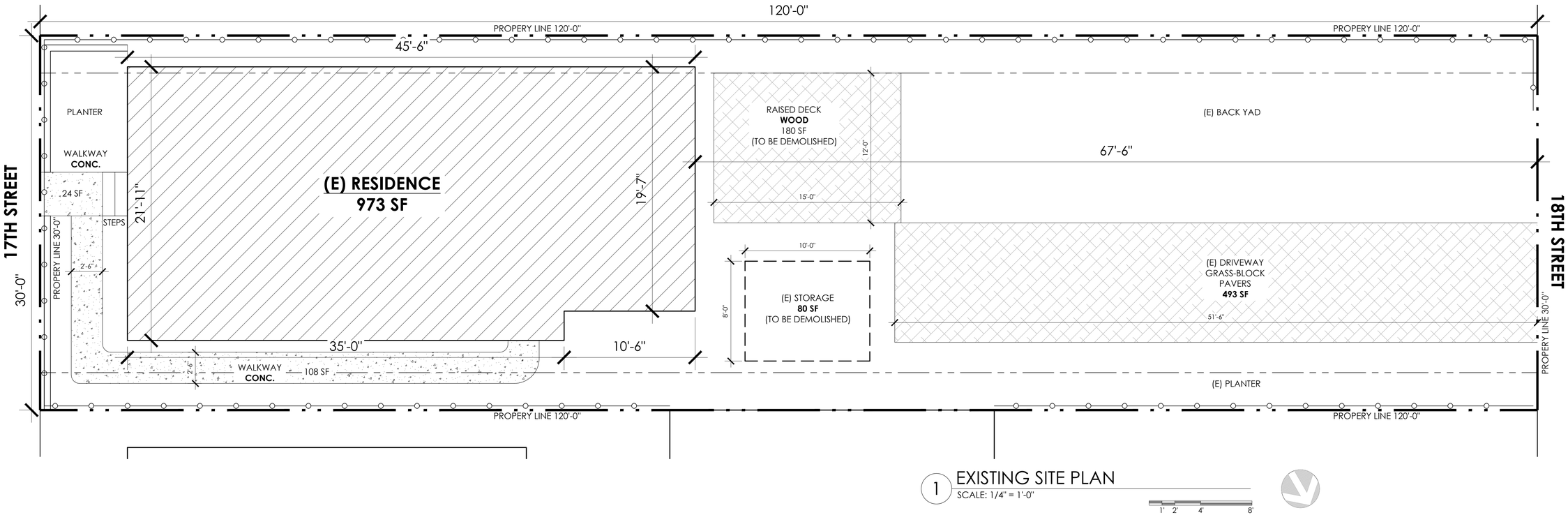
CRUMB ADU
120 17TH STREET
PACIFIC GROVE, CALIFORNIA 93950

TITLE SHEET

9/21/2022

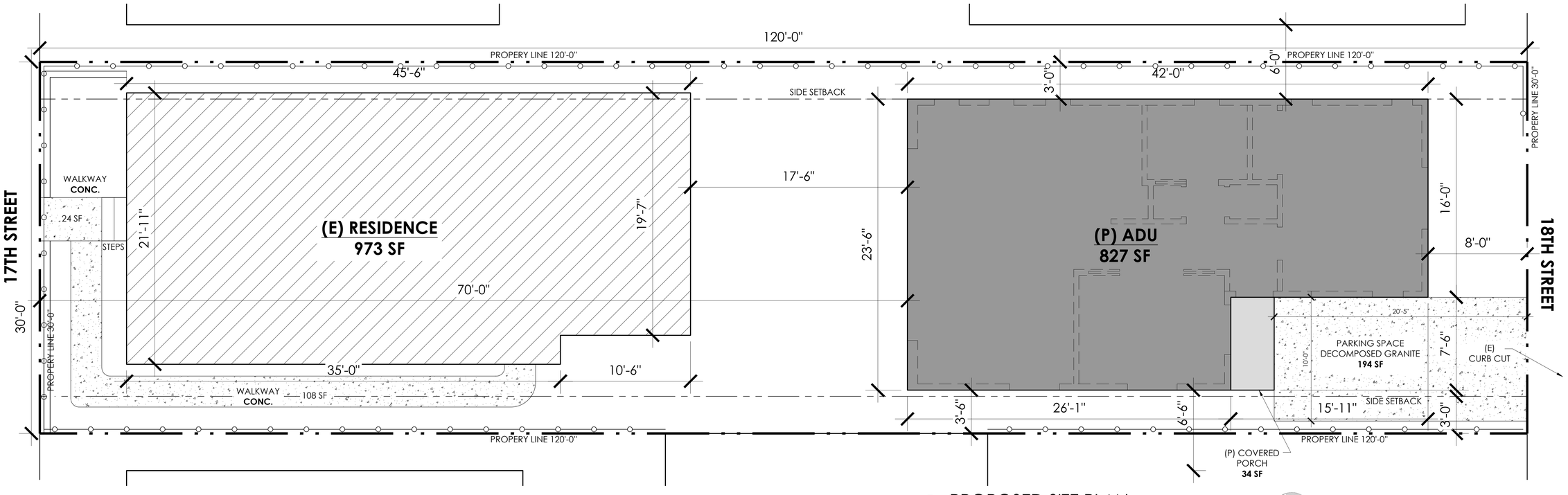
N.T.S.

A0



1 EXISTING SITE PLAN
SCALE: 1/4" = 1'-0"

1' 2' 4' 8'



2 PROPOSED SITE PLAN
SCALE: 1/4" = 1'-0"

1' 2' 4' 8'

ADAM JESELNICK ARCHITECT

LICENSED ARCHITECT
ADAM JESELNICK
No. C33090
Renew 3/31/23
STATE OF CALIFORNIA

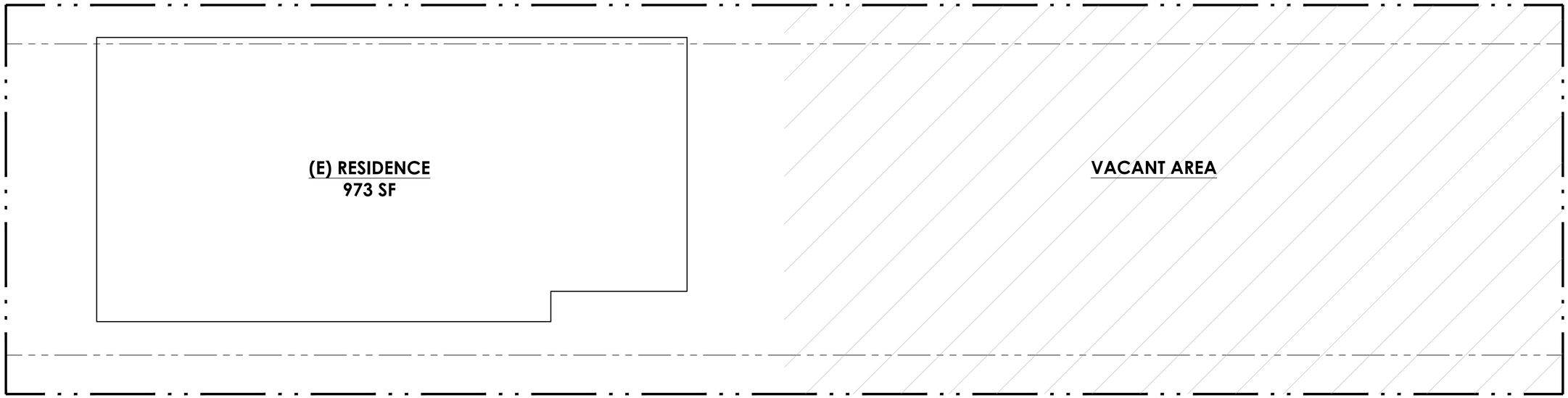
CRUMB ADU
120 17TH STREET
PACIFIC GROVE, CALIFORNIA 93950

EXISTING AND PROPOSED SITE PLANS

9/21/2022

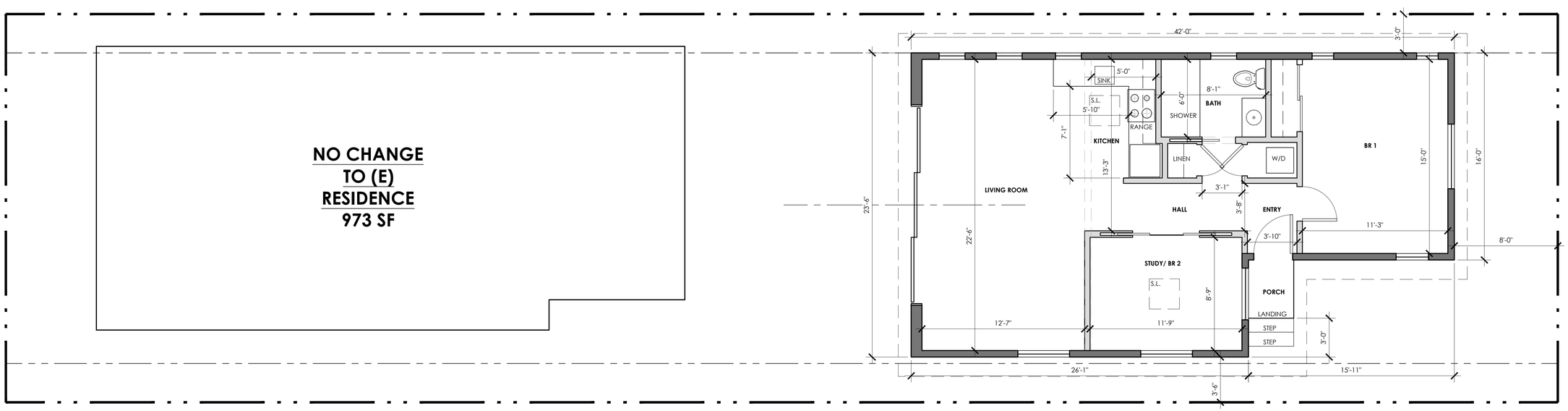
1/4" = 1'-0"

A1



1 EXISTING FLOOR PLAN
SCALE: 1/4" = 1'-0"

1' 2' 4' 8'



2 PROPOSED FLOOR PLAN
SCALE: 1/4" = 1'-0"

1' 2' 4' 8'

ADAM JESELNICK ARCHITECT

LICENSED ARCHITECT
ADAM JESELNICK
No. C33090
Renew 3/31/21
STATE OF CALIFORNIA

CRUMB ADU
120 17TH STREET
PACIFIC GROVE, CALIFORNIA 93950

EXISTING AND PROPOSED FLOOR PLANS

5/18/2022

1/4" = 1'-0"

A2

2 PROPOSED ROOF PLAN
SCALE: 1/4" = 1'-0"

1' 2' 4' 8'

ADAM JESELNICK ARCHITECT

LICENSED ARCHITECT
ADAM JESELNICK
No. C33090
Renew 3/31/21
STATE OF CALIFORNIA

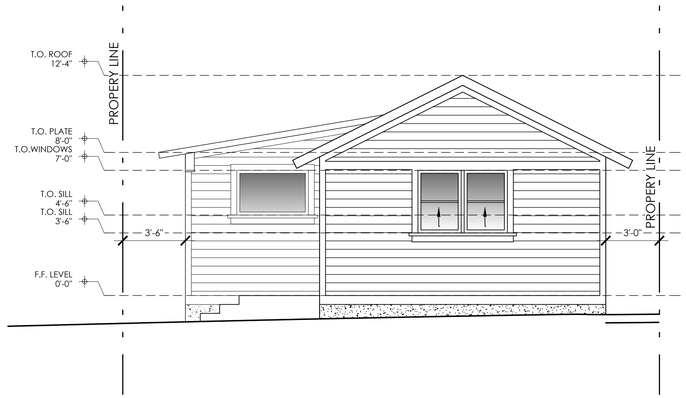
CRUMB ADU
120 17TH STREET
PACIFIC GROVE, CALIFORNIA 93950

EXISTING AND PROPOSED ROOF PLANS

5/18/2022

1/4" = 1'-0"

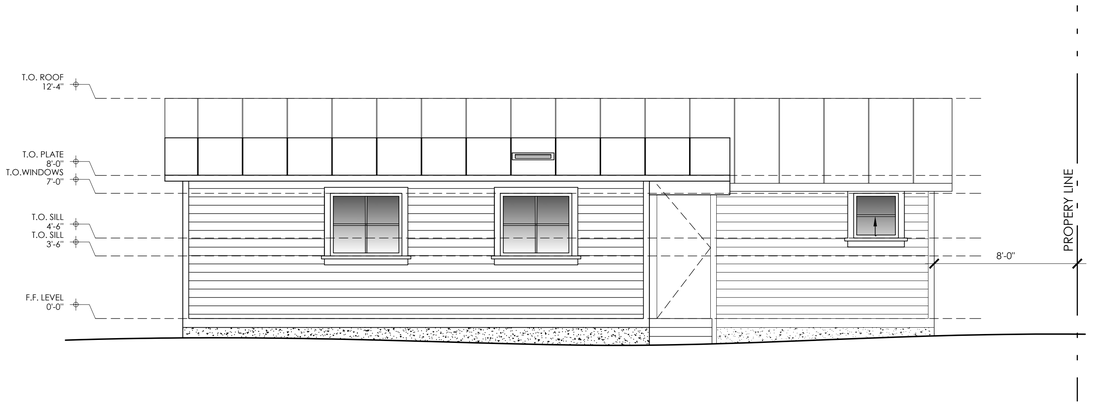
A3



1 PROPOSED WEST (FRONT) ELEVATION

SCALE: 1/4" = 1'-0"

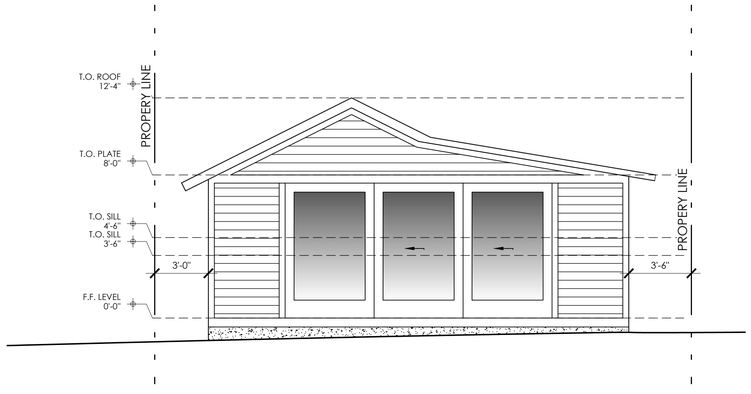
1' 2' 4' 8'



2 PROPOSED NORTH (SIDE) ELEVATION

SCALE: 1/4" = 1'-0"

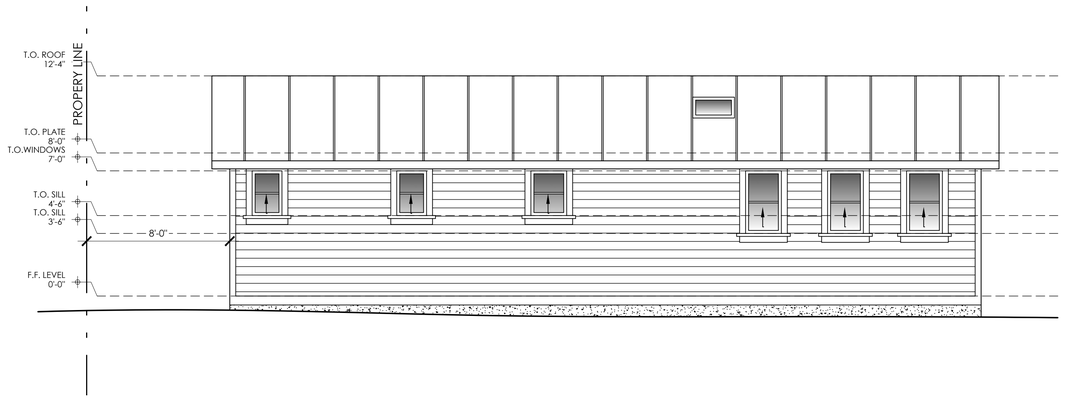
1' 2' 4' 8'



3 PROPOSED EAST (BACK) ELEVATION

SCALE: 1/4" = 1'-0"

1' 2' 4' 8'



4 PROPOSED SOUTH (SIDE) ELEVATION

SCALE: 1/4" = 1'-0"

1' 2' 4' 8'

ADAM JESELNICK
ARCHITECT

LICENSED ARCHITECT
ADAM JESELNICK
No. C33090
Renew 3/31/21
STATE OF CALIFORNIA

CRUMB ADU

120 17TH STREET

PACIFIC GROVE, CALIFORNIA 93955

PROPOSED ELEVATIONS

5/18/2022

1/4" = 1'-0"

A4



PAINTED WOOD WINDOWS

EXTERIOR



PERMEABLE PAVERS

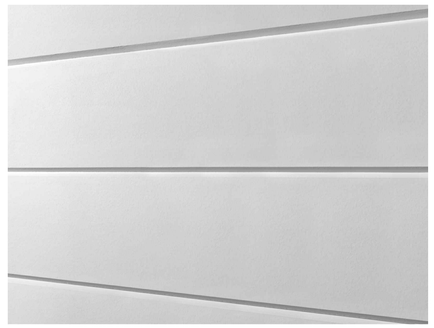
PATIOS, WALKWAYS



WOOD TRIM

EXTERIOR WALL SURFACES

COLOR: LIGHT GREEN



HORIZONTAL V-RUSTIC WOOD SIDING

EXTERIOR WALL SURFACES

COLOR: OFF-WHITE



STANDING SEAM METAL

SLOPED ROOF

1 COLOR AND MATERIAL PALETTE

SCALE: N.T.S.

REVISION # ⚠1 --/-- ---

ADAM JESELNICK ARCHITECT

LICENSED ARCHITECT ADAM JESELNICK No. C33090 Renew 3/31/23 STATE OF CALIFORNIA

CRUMB ADU

120 17TH STREET

PACIFIC GROVE, CALIFORNIA 93950

COLORS AND MATERIALS

5/18/2022

N.T.S.

A5

CITY OF PACIFIC GROVE

300 Forest Avenue, Pacific Grove, California 93950

AGENDA REPORT

TO: Honorable Mayor and Members of the City Council

FROM: Daniel Gho, Public Works Director / Deputy City Manager

MEETING DATE: October 5, 2022

SUBJECT: PERC Water Extension

CEQA: Does not constitute a "Project" per California Environmental Quality Act Guidelines Section 15378

RECOMMENDATION

1. Authorize an extension to the agreement with PERC Water for Operations & Maintenance of the Pacific Grove Local Water Project not to exceed 1 year (November 1, 2022 –October 31, 2022) at a monthly fixed cost of $26,188 and a flow based variable unit price of $247.24 per acre foot of influent

2. Authorize staff to begin contract negotiations with PERC Water and return to City Council no later than May 2023 with new negotiated contract terms

DISCUSSION

PERC Water Corporation (PERC) was founded in January 1998 as an entity that provides services from initial design through construction of wastewater treatment and recycling facilities, and long-term operations for wastewater and recycling projects. In August 2015, the City entered into an agreement with PERC for the final design and construction of the Local Water Project (LWP). In November 2017, the City entered into an Asset Management Services Agreement with PERC for the operations and maintenance of the LWP for a term of 5 years (Attachment 1).

The term of the original agreement is approaching expiration on October 31, 2022. Section 2, "Term," of the agreement specifies that 9 months before the expiration of the operations period, PERC and the City will meet to discuss, in good faith an extension, upon the same terms and conditions of the Asset Management Services Agreement with such revisions as mutually agreed to by both parties.

In March 2022, City staff was approached by PERC and discussions began. The City requested PERC review their current operations and costs, as well as assess any operational efficiencies that could be implemented to decrease costs. Multiple discussion occurred with PERC. During these discussions, PERC shared those operational expenditures had increased to significant increases in costs associated with the process chemicals, labor, fuel, monitoring and sampling, and operational facets.

PERC originally proposed a flat fee for services. The flat fee service proposal equated to a 17.4% increase in cost. Due to the notable increase in costs, staff rejected this proposal.

PERC revised their proposal to include a payment scheme that mirrors the existing agreement, a

monthly fixed fee with a flow-based variable based on influent. This proposal equates to a 9.7% increase in cost. This increase includes an escalation, based on the Rider Levett Bucknall Quarterly Construction Cost Report local to Los Angeles, which will go into effect in November based on the terms of the original agreement.

Fees	Current	Proposed	Difference Monthly	Difference Annually
Monthly Service Fee	$23,815.86	$26,188.00	$2,372.14	$28,465.68
Variable Unit Fee	$231.50	$247.24	N/A	$1,569.28*
Annual Cost	$308,870.87	$338,905.82	N/A	$30,034.95

**This cost estimate is based on the 2021 figure of 99.7 acre feet sold.*

The LWP requires that the operations have a Grade IV Wastewater Certified Operator to oversee the plant. PERC has the qualifications, knowledge, necessary skills, insurances, and workforce to continue operations of the LWP, the City does not have this level of expertise.

City staff recommends continued operations at the fees noted above for 6 months to allow for the City and PERC to negotiate a new term to the existing agreement. If authorized by Council, City Staff will promptly begin negotiating terms for a new operations and maintenance agreement with PERC. Staff will return to the Council by May 2023, with the proposed negotiated terms for discussion and review.

At the time of review, the City Council could opt to accept the new terms with PERC or request staff to issue a Request for Qualifications (RFQ) for operations and maintenance. Bringing this forward to City Council in May of 2023, will grant staff with 6 months to negotiate with PERC and if negotiations are not successful, then staff will have 6 months to proceed through the RFQ process and solidify a new agreement with a vendor.

OPTIONS

1. Do nothing; This is not recommended as the City will not have an operator for the Local Water Project, and the plant will not be able to produce irrigation water for the golf course, cemetery, and lighthouse grounds.
2. Provide alternate direction.

FINANCIAL IMPACT:

$310,000 was allocated through the FY22/23 operating budget for the LWP operations & maintenance contract. It is anticipated that a $19,000 increase will need to be brought forward for a budget adjustment as part of the FY22/23 mid-year budget process to accommodate a portion of this increase. The budget for the remaining increase for this annual extension will be included for City Council consideration as part of the FY23/24 budget process.

GOAL ALIGNMENT: City Asset Stewardship: Repair, maintain and improve City assets, including streets, sidewalks, sewer systems, buildings, and parks and trails.

Attachments

Operations Agreement

Extension Proposal

ASSET MANAGEMENT SERVICES AGREEMENT

THIS ASSET MANAGEMENT SERVICES AGREEMENT ("**Asset Management Agreement**") is made and entered into as of November 1, 2017 (the "**Effective Date**"), by and between **PERC WATER CORPORATION,** a California Corporation ("**PERC**") and **CITY OF PACIFIC GROVE** ("**City**") (PERC and City are sometimes collectively referred to herein as the "**Parties**" and individually as a "**Party**").

RECITALS:

A. City and PERC have entered into that certain Design-Build Agreement dated August 6, 2015 (the "**DB Agreement**") for the design and construction of The Pacific Grove Local Water Project, including a new water recycling facility and other infrastructure, pumps and pump stations, storage tanks, system inter-ties, operational controls and software, other equipment and other structures used therein or connected thereto (collectively, the "**System**" or the "**Facility**") All capitalized terms not otherwise defined in this Asset Management Agreement shall have the meaning set forth in the DB Agreement.

B. City and PERC desire to enter into this Asset Management Agreement to provide for the operation, management and maintenance of the Facility owned by City and located in City upon the terms and conditions set forth herein.

C. Commencing on the Commencement Date of Operations and for a period of five (5) years (the "**Operations Period**"), City desires to engage PERC to perform the Services (as defined herein) and PERC desires to perform the Services upon the terms and conditions set forth herein.

NOW, THEREFORE, City and PERC mutually agree as follows:

1. **Services**. Subject to the terms and conditions of this Asset Management Agreement, PERC shall furnish to City the services specified in Exhibit "A" attached hereto (the "**Services**") with respect to the Facility during the Operations Period.

2. **Term**. This Asset Management Agreement shall commence as of the Commencement Date of Operations and shall continue until the expiration of the Operations Period or as sooner terminated as provided herein. No later than nine (9) months before the expiration of the Operations Period PERC and City will meet to discuss in good faith an extension of the term of this Asset Management Agreement substantially upon the same terms and conditions of this Asset Management Agreement with such revisions as mutually agreed to by the Parties.

3. **Termination.**

3.1. **For Cause.** Either party hereto may terminate this Asset Management Agreement following thirty (30) calendar days written notice to the other Party following an uncured material default by the other Party of such other Party's obligations under this Asset Management Agreement. The defaulting Party may cure such default during such thirty (30) calendar-day period (or ten (10) calendar-day period if the default is the nonpayment of money). If such default is not timely cured, this Asset Management Agreement shall terminate immediately without further notice upon the expiration of such cure period.

3.2. **Post Termination.** Following any termination of this Asset Management Agreement, PERC shall return to City all of City's materials and information received by PERC and City shall promptly pay to PERC all amounts due hereunder. Thereafter, this Asset Management Agreement shall terminate and be of no further force and effect except that Sections 11, 12 and 14 through 28, inclusive, shall survive such termination.

4. **Price and Payment Terms**. Subject to the terms and conditions of this Asset Management Agreement, PERC will render the Services for the compensation (the "**Fees**") set forth on Exhibit "B" attached hereto (the "**Fee Schedule**"). The Fees shall be paid as set forth in the Fee Schedule.

5. **Additional Terms of Performance**.

5.1. **General Provisions.** The Services performed by PERC hereunder shall be rendered only upon the terms and conditions contained in this Asset Management Agreement.

5.2. **Qualifications.** Each employee, consultant or other agent of PERC shall be well qualified to perform the Services and shall satisfy the applicable requirements set forth in Exhibit "A" attached hereto.

5.3. **PERC's Representations.** PERC warrants, represents, and covenants that: (i) PERC has the ability to perform the Services in compliance with this Asset Management Agreement; (ii) that Services shall be performed in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions; (iii) the execution, delivery and performance by PERC hereunder has been duly authorized and approved and will not conflict with or breach any other agreement or obligation of PERC; and (iv) this Asset Management Agreement has been duly executed and delivered by an authorized representative of PERC.

6. **Covenants of City.** During the Term, City shall provide such reasonable assistance and cooperation as PERC may reasonably request in connection with performance of the Services including, without limitation, the following:

(i) Provide payment for disposal of the dewatered grit and screenings and the waste water sludge ("**WAS**") generated by the operation of the Facility. The WAS will be pumped to the Coral Street wastewater pump station;

(ii) Provide payment for replacement and repair parts and equipment, as needed;

(iii) Provide potable water to the Facility as needed;

(iv) Provide payment for all utilities used in connection with the operation of the Facility including, without limitation, gas, electricity, water, diesel fuel, and high speed internet service;

(v) Obtain from the appropriate agency or agencies, and pay all fees and costs in connection with, any permits or licenses necessary and required to enable PERC, or its agent or independent contractors, to operate and maintain the Facility; provided, however, that PERC shall be solely responsible for obtaining and maintaining the Grade IV Wastewater Operator Certification as well as the State of California Contractor Operator Certification Number CO-0115 issued by the California State Water Resources Control Board;

(vi) City shall provide the right of entry upon the premises of the Facility to personnel of PERC, or its agents or independent contractors, as applicable, to perform the Services, subject to the observation of all safety, security and other rules of City applicable to the Facility. In addition to the foregoing, City shall provide for permanent clearances for immediate entry to and upon the Facility of a designated and identified number of personnel employed by PERC, or its agents or independent contractors, as applicable, to repair or service the Facility in the event of an emergency. The existence of an emergency necessitating immediate entry of said personnel to and upon the Facility shall be determined in the reasonable discretion of PERC, or its agent or independent contractor, as applicable; and

(vii) City will comply with all federal, state, and local laws, ordinances, statutes, rules, regulations and standards applicable to the Facility including, without limitation, all permits, easements, licenses and orders.

7. **Compliance with Laws**. PERC warrants that PERC's performance of the Services will comply with all applicable federal, state, and local laws, ordinances, statutes, rules, regulations and standards. PERC shall obtain and maintain in full force and effect all permits, approvals and licenses necessary to complete the performance of the Services.

8. **Ownership of Effluent and Materials.** All materials, documents, information, effluent and biosolids produced or generated by or in connection with the operation of the Facility and the System shall at all times be owned solely by City; provided, however, that ownership and the right to use the Construction Documents shall be determined in accordance with the DB Agreement.

9. **Warranties**. During the Operations Period and so long as PERC is performing the Services and City timely and completely performs all of its obligations under this Asset Management Agreement, PERC warrants to City that with respect to the Facility, all Acceptable Influent included within the parameters set forth in Exhibit "C" attached hereto shall be treated to produce and discharge Compliant Effluent within the parameters set forth in Exhibit "C" attached hereto (the "**Acceptable Influent Warranty**"). PERC makes no such warranty with respect to any influent received by the Facility that is not Acceptable Influent ("**Unacceptable Influent**") and City retains sole responsibility for the discharge of any effluent generated from all Unacceptable Influent ("**Noncompliant Effluent**"). The Acceptable Influent Warranty is the sole warranty made by PERC in connection with the Services and there are no other express or implied warranties made by PERC including, without limitation, any warranty of merchantability or fitness for a particular purpose or any warranty as to the compliance of the Facility under any applicable permit, regulation or order.

10. **Insurance Requirements.** PERC shall maintain 'and shall require all of its subcontractors, consultants, and other agents to maintain the insurance listed below. Any requirement for insurance to be maintained after completion of the work shall survive this Asset Management Agreement. City reserves the right to review any and all of the required insurance policies and/or endorsements, but has no obligation to do so. Failure to demand evidence of full compliance with the insurance requirements set forth in this Asset Management Agreement or failure to identify any insurance deficiency shall not relieve PERC from, nor be construed or deemed a waiver of, its obligation to maintain the required insurance at all times during the performance of this Asset Management Agreement.

10.1 Workers Compensation & Employers Liability Insurance.

- Workers Compensation insurance with statutory limits as required by the Labor Code of the State of California.
- Employers Liability with limits of $1,000,000 per Accident; $1,000,000 Disease per employee; $1,000,000 Disease per policy.
- The policy shall include a written waiver of the insurer's right to subrogate against City.
- Required Evidence of Coverage:
  1. Subrogation waiver endorsement; and
  2. Properly completed Certificate of Insurance.

10.2 General Liability Insurance.

- Commercial General Liability Insurance no less broad than Insurance Services Office (ISO) form CG 00 01.
- Coverage shall be on a standard occurrence form. Claims-Made forms are not acceptable without prior written consent. Modified, limited or restricted Occurrence forms are not acceptable without prior written consent.
- Minimum Limits: $10,000,000 per Occurrence; $10,000,000 General Aggregate; $10,000,000 Products/Completed Operations Aggregate. The General Aggregate shall apply separately to each project. The required limits may be provided by a combination of General Liability Insurance and Commercial Excess or Umbrella Liability Insurance. If PERC maintains higher limits than the specified minimum limits, City requires and shall be entitled to coverage for the higher limits maintained by PERC.
- Any deductible or self-insured retention shall be shown on the Certificate of Insurance. If the deductible or self-insured retention exceeds $25,000 it must be approved in advance by City. PERC is responsible for any deductible or self-insured retention and shall fund it upon City's written request, regardless of whether PERC has a claim against the insurance or is named as a party in any action involving City.
- Coverage shall be continued for one (1) year after performance by PERC of the Services has ceased.
- City shall be endorsed as an additional insured for liability arising out of ongoing and completed operations by or on behalf of PERC. City shall continue to be an additional insured for completed operations for (1) year after performance by PERC of the Services has ceased.
- The policy definition of "insured contract" shall include assumptions of liability arising out of both ongoing operations and the products-completed operations hazard ("f" definition of insured contract in ISO form CG 00 01, or equivalent).
- The insurance provided to the additional insureds shall be primary to, and non-contributory with, any insurance or self-insurance program maintained by them.
- The policy shall cover inter-insured suits and include a "Separation of Insureds" or "severability" clause which treats each insured separately.
- The policy shall be endorsed to include a written waiver of the insurer's right to subrogate against all persons or entities that are, or are required to be, additional insureds.
- The policy shall not contain a Contractors' Warranty or other similar language which eliminates or restricts insurance because of a subcontractor's failure to carry specific insurance or to supply evidence of such insurance.
- Required Evidence of Coverage:
  1. Copy of the additional insured endorsement or policy language granting additional insured status;
  2. Copy of the endorsement or policy language indicating that coverage applicable to the additional insureds is primary and non-contributory;
  3. Properly completed Certificate of Insurance; and
  4. Completed and signed Agent/Broker Questionnaire with supporting documentation as required.

10.3 Automobile Liability Insurance.

- Minimum Limit: $1,000,000 combined single limit per accident.
- Coverage shall apply to all owned, hired and non-owned vehicles.
- City shall qualify as an insured.
- Required Evidence of Coverage:
  1. Copy of the endorsement or policy language indicating that City is an insured; and
  2. Properly completed Certificate of Insurance.

10.4 PERC's Pollution Liability Insurance.

- Minimum Limits: $1,000,000 per Pollution Incident; $1,000,000 Aggregate;
- Coverage shall apply to pollution incidents at or from any location at which PERC is performing work under this Asset Management Agreement.
- Any deductible or self-insured retention shall be shown on the Certificate of Insurance. If the deductible or self-insured retention exceeds $25,000 it shall be approved in advance by City. PERC is responsible for any deductible or self-insured retention and shall fund it upon City's written request, regardless of whether PERC has a claim against the insurance or is named as a party in any action involving City.
- City shall be endorsed as an additional insured for liability arising out of ongoing and completed operations by or on behalf of the PERC. Additional insured status shall continue for one (1) year after performance by PERC of the Services has ceased.
- The insurance provided to the additional insureds shall apply on a primary and non-contributory basis with respect to any insurance or self-insurance program maintained by them.
- If the insurance is on a Claims-Made basis, the retroactive date shall be no later than the Commencement Date of Operations.
- The insurance shall be continued for one (1) year after performance by PERC of the Services has ceased. If the insurance is on a Claims-Made basis, the continuation coverage may be provided by: (a) renewal of the existing policy; (b) an extended reporting period endorsement; or (c) replacement insurance with a retroactive date no later than the Commencement Date of Operations.
- Required Evidence of Coverage:
  1. Copy of the additional insured endorsement or policy language granting additional insured status;
  2. Copy of the endorsement or policy language indicating that coverage for the additional insureds is primary and non-contributory;
  3. Properly completed Certificate of Insurance.

10.5 Professional Liability/Errors & Omissions Insurance.

- Minimum Limits: $3,000,000 per claim or per occurrence; $3,000,000 annual aggregate.
- Any deductible or self-insured retention shall be shown on the Certificate of Insurance. If the deductible or self-insured retention exceeds $25,000 it must be approved in advance by City.
- If the insurance is on a Claims-Made basis, the retroactive date shall be no later than the Commencement Date of Operations.
- Coverage applicable to the work performed under this Asset Management Agreement shall be continued for five (5) years after performance by PERC of the Services has ceased. Such continuation coverage may be provided by one of the following: (1) renewal of the existing policy; (2) an extended reporting period endorsement; or (3) replacement insurance with a retroactive date no later than the Commencement Date of Operations.
- Required Evidence of Coverage: Properly completed Certificate of Insurance.

10.6 Standards for Insurance Companies and Documentation.

- Insurers, other than the California State Compensation Insurance Fund, shall have an A.M. Best's rating of at least A:VII.
- The Certificate of Insurance shall include the following reference:
  City of Pacific
  Local Water Project
- The name and address for Additional Insured endorsements and Certificates of Insurance is:
  City of Pacific Grove
  300 Forest Ave.
- Pacific Grove, CA. 93950
- PERC shall provide immediate written notice if: (1) any of the required insurance policies is terminated; (2) the limits of any of the required policies are reduced; or (3) the deductible or self-insured retention is increased.
- Current Evidence of Coverage shall be provided for the entire required period of insurance.
- Upon written request, certified copies of required insurance policies shall be provided within thirty (30) days.

Concurrent with the execution of this Asset Management Agreement, and not less than annually thereafter, PERC will provide written evidence satisfactory to City showing proof of insurance for the coverages required under this Section.

11. Indemnification; Limitation of Liability

11.1. **Indemnification**. PERC shall defend, indemnify and hold City, its officials, officers, employees, volunteers and agents free and harmless from any and all claims, demands, causes of action, costs, expenses, liability, loss, damage or injury, in law or equity, to property or persons, including wrongful death, in any manner which actually or allegedly arise out of or are incident to any alleged negligent acts, omissionsor willful misconduct of PERC, its directors, officials, officers, employees, agents, and subcontractors arising out of or in connection with the performance of this Asset Management Agreement, including without limitation the payment of all attorney's fees and other related costs and expenses except where caused by the active negligence, sole negligence, or willful misconduct of City, its officers, officials, employees and volunteers. PERC shall defend, at PERC's own cost, expense and risk, any and all such aforesaid suits, actions or other legal proceedings of every kind that may be brought or instituted against City, its officials, officers, employees, agents or volunteers. PERC shall pay and satisfy any judgment, award or decree that may be rendered against City, or its officials, officers, employees, agents or volunteers, in any such suit, action or other legal proceeding. PERC shall reimburse City and its officials, officers, employees, agents and/or volunteers, for any and all legal expenses and costs incurred by each of them in connection therewith or in enforcing the indemnity herein provided. PERC's obligation to indemnify shall not be restricted to insurance proceeds, if any, received by City, its officials, officers, employees, agents or volunteers.

11.2. **Duty to Defend; Exceptions to Indemnification.** The duty to defend shall be a separate and distinct obligation from the duty to indemnify and hold harmless and is enforceable regardless of fault or negligence of the indemnified party; provided, however, that to the extent the claim for which City is being defended results from the sole negligence, or willful misconduct of City, its officers, officials, employees and volunteers City shall promptly reimburse PERC for all costs, fees and attorneys' fees expended by PERC. PERC shall defend all claims and pay all costs and expenses incidental thereto, but City shall have the right, at its option and its sole cost, to participate in such defense without relieving PERC of any obligation under this Asset Management Agreement; provided, however, that PERC shall not be liable for any settlement terms or amounts agreed to by City without the prior written consent of PERC.

11.3. **Insurance.** The provisions of this Section shall not be construed to relieve any insurer of its obligations to pay any insurance claims in accordance with the provisions of any valid insurance policy.

12. **Limitation of Liability.** Notwithstanding anything to the contrary contained herein, and provided that PERC has maintained the insurance in accordance with Section 10 hereof, PERC shall not be liable under this Asset Management Agreement for: (i) any amount that exceeds the greater of: (A) Two Hundred Fifty Thousand Dollars ($250,000); or (B) all insurance proceeds available for the payment of any claim against PERC; or (ii) any consequential, indirect, punitive or exemplary damages including, without limitation, loss of profits. **Notices**. All notices and correspondence between parties shall be in writing and shall be personally delivered, sent via facsimile, electronic mail or overnight courier, or by United States registered mail addressed to the party to be served at the address set forth below, or such other address as may be designated by such party in a written notice to the other party.

If to PERC:	PERC Water Corporation 959 South Coast Drive Costa Mesa, California 92626 Attention: Brian D. Cullen, President Fax No.: (714) 352-7765 Email: bcullen@percwater.com
If to City:	City of Pacific Grove 300 Forest Ave Pacific Grove, CA 93950 Email: dgho@cityofpacificgrove.org

All notices hereunder shall be deemed given upon the earliest of: (i) receipt; (ii) one (1) business day after confirmed facsimile transmission, electronic mail transmission that is not rejected, or delivery to commercial overnight courier for next business day delivery; or (iii) three (3) calendar days after deposit in mail with sufficient postage.

13. **Assignment**. Neither party hereto shall assign or otherwise transfer its rights or obligations under this Asset Management Agreement, whether by operation of law or otherwise, or delegate any duties, nor assign any rights or claims under this Asset Management Agreement, or for breach of this Asset Management Agreement, without the prior written consent of the other party, which consent shall not be unreasonably withheld, conditioned or delayed; provided, however, that no such consent shall be required if substantially all of the assets of such party are purchased or such party is a party to a merger in which such party is not the surviving company or in connection with any assignment of this Asset Management Agreement by City.

14. **Binding on Successors and Assigns**. Each and all of the provisions hereof shall be binding upon and inure to the benefit of the parties hereto and their respective heirs, executors, administrators, successors and permitted assigns.

15. **Confidentiality**. PERC shall maintain in strict confidence, and shall use and disclose only as authorized by City, all information of a confidential or proprietary nature (collectively, "**Confidential Information**") that PERC receives in connection with the Services performed hereunder. PERC shall require its personnel to agree to do likewise. City shall take reasonable steps to identify for the benefit of PERC and its personnel all Confidential Information, including by using confidentiality notices in written material where appropriate. These restrictions shall not be construed to apply to: (i) information generally available to the public; (ii) information released by City generally without restriction; (iii) information independently developed or acquired by PERC or its personnel without reliance in any way on other protected information of City; or (iv) information approved for the use and disclosure of PERC or its personnel without restriction. Notwithstanding the foregoing restrictions, PERC and its personnel may use and disclose any information: (A) to the extent required by an order of any court or other governmental authority; or (B) as necessary for it or them to protect their interest in this Asset Management Agreement, but in each case only after City has been so notified in writing and has had the opportunity, if possible, to obtain reasonable protection for such information in connection with such disclosure.

16. **Independent Contractor**. PERC is an independent contractor and shall be deemed to be an independent contractor in all its operations and activities under this Asset Management Agreement. Neither PERC nor any of its employees, agents, or representatives of agents, employees, or representatives of City, and nothing in this Asset Management Agreement shall be construed to change the nature of the relationship between the parties. PERC shall not make any commitment or incur any charge or expense in City's name. Any employee furnished by PERC to perform the Services shall be deemed to be PERC's employee exclusively, without any relation whatsoever to City as employee or as independent contractor, and any such employee shall be paid by PERC. PERC shall be responsible for all insurance, obligations and reports relating to any such employee, social security, unemployment insurance, worker's compensation, income tax, and any other reports and deductions required by law or regulation.

17. **Force Majeure**. PERC shall not be liable for failure to perform Services when such performance is hindered by a Force Majeure Event.

18. **Severability.** Any invalidity, in whole or in part, of any provision of this Asset Management Agreement shall not affect the validity of any other of its provisions.

19. **Cumulative Remedies.** All rights and remedies under this Asset Management Agreement or in law or equity shall be cumulative and additional; and no right or remedy shall be exclusive of any other or further rights and remedies provided in this Asset Management Agreement or in law or equity.

20. **Entire Agreement; Conflict**. The terms and conditions of this Asset Management Agreement, the documents referred to herein and the Exhibits attached hereto, all of which are hereby incorporated by reference, constitute the entire agreement of the parties and supersede all previous negotiations, representations and agreements between the parties, whether written or oral. In the event there is a conflict or inconsistency between this Asset Management Agreement and any other document referred to herein including, without limitation, the DB Agreement, this Asset Management Agreement shall control.

21. **Amendment**. This Asset Management Agreement may be modified only by a written document executed by both City and PERC.

22. **Counterparts; Signatures**. This Asset Management Agreement may be executed in multiple counterparts, each of which shall be deemed an original but all of which taken together shall constitute but one and the same Asset Management Agreement. The exchange of copies of this Asset Management Agreement and of signature pages by facsimile or other electronic means shall constitute effective execution and delivery of this Asset Management Agreement by the parties. Signatures of the parties transmitted by facsimile or other electronic means shall be deemed to be their original signatures for all purposes.

23. **Governing Law**. This Asset Management Agreement shall be construed and enforced in accordance with the laws of the State of California.

24. **Dispute Resolution.** All claims, disputes and other matters in question between the City and PERC arising out of, or relating to this Asset Management Agreement or any breach under this Asset Management Agreement shall, if the Parties cannot resolve their differences, be resolved by Mediation followed by commencement of legal proceedings if such mediation is not successful. All mediations or legal proceedings shall occur in Monterey County.

25. **Mediation.** Disputes between the Parties shall be submitted to non-binding mediation. If the Parties cannot agree to an alternative form of mediation, then mediation will be administered by the American Arbitration Association. The Parties may, but are not required to be, represented by counsel in mediation. The requirement for mediation will not alter or modify the time limitations otherwise provided for claims under applicable law.

26. **Further Assurances.** Each of the parties hereto agrees on behalf of such party and such party's successors and assigns, that such party will, without further consideration, execute, acknowledge and deliver such

other documents and take such other action as may be necessary or convenient to carry out the purposes of this Asset Management Agreement.

27. **Waiver**. No delay or failure by either party to exercise any right, power or remedy with regard to any breach or default under this Asset Management Agreement by the other party shall impair any such right, power or remedy, and shall not be construed to be a waiver of any breach or default of the same or any other provision of this Asset Management Agreement. Any waiver, consent or approval of any party of or to any breach or default by the other party shall be effective only if in writing, and shall not be construed to be a waiver, consent or approval of or to any succeeding breach, default or waiver of any provision of this Asset Management Agreement.

28. **Due Authority**. Each of the signatories of the parties represent and warrant that they have the authority to duly execute and deliver this Asset Management Agreement on behalf of such party and that such party has duly authorized the execution, delivery and performance of this Asset Management Agreement.

[Signature Page Follows]

IN WITNESS WHEREOF, the parties hereto have duly executed this Asset Management Agreement as of the date first above written.

CITY

City of Pacific Grove., a _____ Municipal Corporation

By: _____
Ben Harvey, City Manager

Title: City Manager

PERC

PERC WATER CORPORATION, a California Corporation

By: _____
Brian D. Cullen, President

EXHIBIT "A"

THE SERVICES

Staffing

- Staff the facility approximately six hours per day during weekdays and approximately two hours per day on weekends and holidays.
- Onsite staff will remotely monitor the Facility twenty-four (24) hours per day seven (7) days per week with emergency call out as needed.

Operation, Maintenance & Management

In performance of the operation, maintenance and management of the Facility, PERC Water shall provide:

- Operate, maintain and or remotely monitor the facility seven days per week, 24 hours per day.
- Respond to alarms and callouts seven days per week, 24 hours per day with no more than 30 minute onsite response time if necessary.
- Communicate effectively with recycled water users at the Pacific Grove Golf Links and the City staff.
- Coordinate recycled water production and distribution with recycled water users
- Provide sample collection and analysis for in-house process control.
- Provide sample collection and transportation to Certified Lab for sample analysis for regulatory reporting. PERC Water will be using Monterey Bay Analytical Services for compliance sample analysis.
- Provide proper screenings management and disposal.
- Assist the City in applying for acquiring and maintaining all approvals required for the disposal of waste activated sludge (WAS).
- Manage WAS operations in compliance with Regional Water Pollution Control Agency (MRWPCA) requirements.
- Maintain and update Emergency Response Plan (ERP) Contingency Plan to address spills overflows and system failures annually. Provide copies of all plans to the City of Pacific Grove Public Works Department.
- Prepare and maintain site specific safety plan and adhere to Occupational Safety and Health Administration (OSHA) requirements. Adopt and implement an OSHA Compliance Plan.
- Develop and implement Best Management Practices (BMPs) for the operation of the facility which will comply with all regulatory requirements.
- Purchase and manage the usage of chemicals required for the operation of the facility and the cleaning of the membranes.
- Maintain site security, including security alarms, entrance gates and proper signage. Verify alarm functionality monthly and confirm successful operation in the monthly Report of Operation.
- Maintain facility access for City personnel and Public Works Staff. Provide keys to the facility and security alarm codes as required.
- Operate the WRF in conformance with the original equipment manufacturer (OEM) recommendations and maintain the equipment warranties to maximize equipment life cycle.

Maintenance and Repair

- Identify, track, enforce and comply with all equipment warranties and guarantees.
- Provide and establish a Computerized Maintenance Management Software (CMMS) program for all preventive, predictive and corrective maintenance for all facility equipment and structures. PERC Water typically uses a computerized software program called e-Maint, a cloud based software product designed

for Wastewater Utilities. We will provide access to the system for one designated City employee for transparency purposes.

- All vendor submittals, shop drawings, record drawings and schematics will be provided to the City as required.
- Perform preventive maintenance (PM) per OEM recommendations to maximize the life cycle of all facility equipment. PM costs are included in the Service Fee as detailed in Exhibit B.
- Participate in annual budget process providing input for annual maintenance costs, repair, replacements and capital improvements.
- Provide "out of scope" capital improvement above the repair limit as mutually agreed. Cost based on actual equipment material and sub contractor costs, Operator standard hourly rate and a maximum 10% administrative fee.
- Develop and maintain an all-inclusive asset inventory.
- Develop, populate and maintain a CMMS program.
- Provide equipment maintenance work orders per OEM recommendations and perform adequate operation and monitoring.
- Track all CMMS work orders and percent complete with a summary report to be included in then monthly report of operations.
- Work orders shall also be completed for buildings and hardscapes.
- At all times keep the facility clean, neat and safe by removal and disposal of trash and debris including parking areas and perimeter fencing.

Monitoring, Reporting and Compliance

- Triple remote monitoring of critical alarms and processes (Operator in Charge, Chief Operator and Division VP).
- Maintain a detailed site specific log book of all facility operation, maintenance and repair activities. Standard log book entries will include facility visitors, security issues, odor issues if any occur, communication with off takers (Golf Course, Cemetery, etc.).
- Provide a monthly report of operation to be presented to the City of Pacific Grove at an in-person monthly meeting and presented to City Council if desired. The Monthly report of operations shall include at a minimum:
    - A detailed narrative summarizing the O&M activities that took place during the month.
    - All equipment repairs and preventive maintenance tasks.
    - Water quality data for the month and for the preceding twelve months as available for comparison purposes. Identify any constituents of regulatory concern and discussion of a plan of action to respond to the concerns.
    - Disinfection effectiveness and log reduction graph.
    - Monthly discharge schedules (Golf Course, Cemetery etc.).
    - Monthly power consumption and rolling twelve-month comparison as available – discussion on possible conservation opportunities
    - Waste Activated Sludge discharged to MRWPCA including concentration and any other requirements of MRWPCA. Provide a rolling twelve-month comparison.
    - Visitor log and safety and security report.
    - Membrane operational parameters and rolling twelve-month comparison to help estimate remaining membrane life.
    - Facility maintenance summary.
    - Work orders issued, completed and remaining open.
    - Equipment out of service.
    - Reclaimed water production and irrigation use.
    - Reclaimed water used by trucks.

Exhibit "A"

- Status of all capital improvements, maintenance and repairs performed or coordinated during the month.

- Prepare and submit monthly and annual regulatory reports in accordance with the Waste Discharge Requirements (WDR) and Monitoring and Reporting Plan. Meet all reporting and monitoring requirements of the Central Coast Region Water Quality Control Board. Upload reports top Geotracker as required.
- Comply with all monitoring requirements of the Air Pollution Control District.
- Provide alarm monitoring and response s needed with no more than 30 minute response time.
- Prepare and submit quarterly and annual laboratory reports as required by applicable law.
- Maintain monthly log of operation maintenance and laboratory analysis.
- Maintain monthly odor complaints and callout response log.
- Provide any additional reports required by law.
- Upon request provide any report required by City.
- Provide maintenance and operation of all monitoring equipment.
- Provide calibration of all monitoring equipment annually at a minimum and accordance with all regulatory requirements.
- Provide verification of accuracy and calibration of analytic monitoring equipment in accordance with EPA State and Laboratory QA/QC Program.
- Provide an annual comprehensive assessment of facility equipment condition, projected life expectancy and estimated replacement cost of key equipment and components of each system.

Miscellaneous

- Maintain all site landscape.
- Maintain all documents, manuals and reports in electronic format and available to the City of Pacific Grove through PERC Water Client Portal.
- Remove and dispose of all trash and debris on the site including parking lots.
- Maintain storm water site compliance.
- Coordinate with City Staff to open, maintain and operate the recycled water storage and pickup station for commercial customers. PERC Water staff will check permits and licenses to ensure proper operation and monitoring of recycled water station and maintain all required records of recycled water distribution.

Exhibit "A"

EXHIBIT "B"

FEE SCHEDULE

In consideration of the performance of the Services, City will pay to PERC monthly for the services provided as detailed below. Beginning on the first day of the month after the Commencement Date of Operations (pro rated for any partial month) PERC shall submit an invoice for the service provided during the preceding month and then continuing on the first (1st) day of each month thereafter during the Term, the amounts set forth below (the "**Fees**"). The City, or its Assignee, will pay each invoice within fifteen (15) days of submittal less any disputed amounts. Any disputed amounts shall be paid within fifteen (15) days following resolution of such dispute.

Monthly Fees

Monthly Fixed Services Fee	$20,164.00 per month
Flow Based Variable Unit Price	$196.00 per Acre Foot of all Influent (Acceptable Influent and Unacceptable Influent)

The amount of the Fees is current as of the date of this Asset Management Agreement. The amount of the Fees shall be adjusted annually as soon as possible following each anniversary of the Commencement Date of Operations based on Rider Levett Bucknall Quarterly Construction Cost Report local to Los Angeles as of the Third Quarter Report 2017. Any additional amount payable by City, as a result of the increase to the Fees, shall be paid by City with the next monthly payment of the Fees following calculation of the new Fees amount.

If City and PERC agree in writing, PERC will perform Services in addition to the Services hereunder and the time for such performance and the amount to be paid or reimbursed to PERC thereunder will be agreed to before any such additional work is commenced (the "**Additional Services**"). In addition, if necessary in the reasonable opinion of PERC due to an emergency situation related to public health or safety or regulatory compliance, PERC takes any action without prior notice to City in connection with the Facility, City agrees to reimburse PERC for all costs and expenses incurred in connection with such emergency together with an amount equal to fifteen percent (15%) of such amount reimbursed. Any amounts payable under this paragraph shall be paid to PERC no later than thirty (30) calendar days after receipt by City of an invoice for such amount.

If any payment required to be made hereunder is not paid when due, such payments shall bear interest thereon from the date such payment was due to the date of receipt of payment by PERC. Late payments shall bear interest at the rate of eight percent (8%) per annum. Additionally, if a sum that is not being disputed is not paid within thirty (30) calendar days after written notice that it is due, then a late charge equal to one percent (1%) per month of the sum past due shall be payable by City, and such late charge shall be paid within ten (10) calendar days after written demand from PERC.

Costs for equipment and other Facility replacement costs, fees and expenses are excluded from the Fees and will be paid by City as needed. The operations, replacement and maintenance of any other equipment, facilities or systems connected to or used by the Facility are excluded from the Services.

EXHIBIT "C"

ACCEPTABLE INFLUENT CHARACTERISTICS

Influent Design Parameters

Average Dry Weather Flow	0.30 MGD
Maximum Month Day Flow	0.30 MGD
Maximum Day Flow	0.30 MGD
Peak Hour Hydraulic Flow	0.30 MGD
Average BOD^5 (mg/L)	250 mg/L
Maximum BOD^5 (lbs/day)	521 lbs/d
Average TSS (mg/L)	340mg/L
Maximum TSS (lbs/day)	709 lbs/d
Maximum Ammonia (mg/L)	40 mg/L
Maximum Ammonia (lbs/day)	83lbs/d

The table above sets forth the Acceptable Influent characteristics that will be treated by the Facility and from which the Facility will produce Compliant Effluent that meet the Effluent Design Parameters below.

Effluent Design Parameters

Average Dry Weather Flow	0.30 MGD
Maximum Month Day Flow	0.30 MGD
Maximum Day Flow	0.30 MGD
Peak Hour Hydraulic Flow	0.30 MGD
BOD^5 (mg/L)	<5 mg/L
TSS (mg/L)	<2.5 mg/L
Ammonia (mg/L)	<1.5 mg/L
Turbidity (NTU)	0.2 NTU

August 29, 2022

Mr. Daniel Gho, Public Works Director
City of Pacific Grove
300 Forest Avenue
Pacific Grove, CA 93950

PERC Water Corporation (PERC Water) is pleased to provide this proposal to the City of Pacific Grove (City) to extend the current contract for the Operation Services of the Local Water Project.

PERC Water has provided operation and maintenance of the facility since startup completion in 2017. The current contract included a term of five years and is approaching its expiration. Accordingly, we have initiated conversations with City staff to discuss contract extension. As requested, we have reviewed the current cost of operation in an effort to identify potential efficiencies. We have researched several cost saving measures with little success. The fee for the scope of service we currently provide is largely based on the cost of labor and, in the current labor market, cost of qualified operators has significantly increased. The increased cost of process chemicals has also contributed to the higher cost of operation. The current contract includes an escalation clause, which is intended to adjust the service fee annually in an effort to allow for inflation, however during these times when costs are rising in higher-than-normal rates it does not suffice. We have re-evaluated the cost of operation and are providing this proposed new pricing for the operation and maintenance of the Local Water Project.

Alternate Term Approach

During our recent discussion you suggested extending the Service Agreement for a one-year period (Nov. 1, 2022 to Oct. 30, 2023) to allow sufficient time for us, together with City staff, to evaluate all needs of the project and prepare a detailed all-inclusive cost budget for the coming three to five years. This budget will provide a complete cost picture for the facility and allow for forward planning with confidence. PERC Water would be interested to discuss this approach in partnership with the City.

For the extended period (Nov. 1, 2022 to Oct. 30, 2023) we would propose a small fee increase to allow for inflation. We have provided the proposed fee schedule below for your consideration.

Monthly Fixed Fee	$26,188
Annual Fixed Fee $	$314,256

Flow Based Variable Unit Price $247.24 per Acre Foot of all Influent

Scope of Service

PERC Water will operate the Local Water Project for the extended period per the Scope of Services as detailed below, including staffing the facility approximately six hours per day during weekdays and approximately two hours per day on weekends and holidays.

- Operate, maintain and or remotely monitor the facility seven days per week, 24 hours per day.
- Respond to alarms and callouts seven days per week, 24 hours per day with no more than 60 minute onsite response time if necessary.
- Communicate effectively with recycled water users at the Pacific Grove Golf Links and the City staff.
- Coordinate recycled water production and distribution with recycled water users
- Provide certified operators as required by regulatory requirements
- Provide sample collection and analysis for in-house process control.
- Provide sample collection and transportation to Certified Lab for sample analysis for regulatory reporting. PERC Water will be using Monterey Bay Analytical Services for compliance sample analysis.
- Provide proper screening management and disposal.
- Manage WAS operations in compliance with Regional Water Pollution Control Agency (MRWPCA) requirements.
- Maintain and update Emergency Response Plan (ERP) Contingency Plan to address spills overflows and system failures annually. Provide copies of all plans to the City of Pacific Grove Public Works Department.
- Prepare and maintain site specific safety plan and adhere to Occupational Safety and Health Administration (OSHA) requirements. Adopt and implement an OSHA Compliance Plan.
- Develop and implement Best Management Practices (BMPs) for the operation of the facility which will comply with all regulatory requirements.
- Purchase and manage the usage of chemicals required for the operation of the facility and the cleaning of the membranes.
- Maintain site security, including security alarms, entrance gates and proper signage. Verify alarm functionality monthly and confirm successful operation in the monthly Report of Operation.
- Maintain facility access for City personnel and Public Works Staff. Provide keys to the facility and security alarm codes as required.
- Maintain, update and store accessibly the Facility O&M Manual, Standard Operating Procedures (SOPs), site-specific log book, design plans, permits and all other documents specific to the facility including PERC Water's Contract Operator Certification issued by the Office of Operator Certification.
- Operate the WRF in conformance with the original equipment manufacturer (OEM) recommendations and maintain the equipment warranties to maximize equipment life cycle.
- Provide and establish a Computerized Maintenance Management Software (CMMS) program for all preventive, predictive and corrective maintenance for all facility equipment and structures. PERC Water typically uses a computerized software program called e-Maint, a cloud based software product designed for Wastewater Utilities. We will provide access to the system for one designated City employee for transparency purposes.

- Perform PMs per OEM recommendations to maximize the life cycle of all facility equipment. PM costs are included in the Service Fee.
- Participate in annual budget process providing input for annual maintenance costs, repair, replacements, and capital improvements.
- Provide "out of scope" tasks as mutually agreed. Cost based on actual equipment material and sub-contractor costs, Operator standard hourly rate and a maximum 10% administrative fee.
- Develop and maintain an all-inclusive asset inventory.
- Develop, populate and maintain a CMMS program.
- Provide work orders per OEM recommendations and perform adequate operation and monitoring.
- Track all CMMS work orders and percent complete with a summary report to be included in the monthly report of operations.
- Work orders shall also be completed for buildings and hardscapes.
- At all times keep the facility clean, neat and safe by removal and disposal of trash and debris including parking areas and perimeter fencing.

Monitoring, Reporting and Compliance

- Remote monitoring of critical alarms and processes (Operator in Charge, Chief Operator and Division VP).
- Arrange for sample collection, delivery, and analysis by ELAP Certified Lab.
- Maintain a detailed site specific log book of all facility operation, maintenance and repair activities. Standard log book entries will include facility visitors, security issues, odor issues if any occur, communication with off takers (Golf Course, Cemetery, etc.).
- Provide and maintain a laboratory quality assurance program as well as a laboratory manual including standard operating procedures.
- Provide a monthly report of operation to be presented to the City of Pacific Grove at a monthly in-person meeting and presented to City Council if desired. The Monthly report of operations shall include at a minimum:
    - A detailed narrative summarizing the O&M activities that took place during the month.
    - All equipment repairs and preventive maintenance tasks.
    - Water quality data for the month and for the preceding twelve months for comparison purposes. Identify any constituents of regulatory concern and discussion of a plan of action to respond to the concerns.
    - Disinfection effectiveness and log reduction graph.
    - Monthly discharge schedules (Golf Course, Cemetery etc.).
    - Monthly power consumption and rolling twelve-month comparison – discussion on possible conservation opportunities
    - Waste Activated Sludge discharged to MRWPCA including concentration and any other requirements of MRWPCA. Provide a rolling twelve-month comparison.
    - Visitor log and safety and security report.
    - Membrane operational parameters and rolling twelve-month comparison to help estimate remaining membrane life.
    - Facility maintenance summary.
    - Work orders issued, completed, and remaining open.

  - Equipment out of service.
  - Reclaimed water production and irrigation use.
  - Reclaimed water used by trucks.
  - Status of all capital improvements, maintenance and repairs performed or coordinated during the month.
- Prepare and submit monthly and annual regulatory reports in accordance with the Waste Discharge Requirements (WDR) and Monitoring and Reporting Plan. Meet all reporting and monitoring requirements of the Central Coast Region Water Quality Control Board. Upload reports top Geotracker as required.
- Comply with all monitoring requirements of the Air Pollution Control District.
- Provide alarm monitoring and response s needed with no more than 30 minute response time.
- Prepare and submit quarterly and annual laboratory reports as required by applicable law.
- Maintain monthly log of operation maintenance and laboratory analysis.
- Maintain monthly odor complaints and callout response log.
- Provide any additional reports required by law.
- Upon request provide any report required by City.
- Provide maintenance and operation of all monitoring equipment.
- Provide calibration of all monitoring equipment annually at a minimum and accordance with all regulatory requirements.
- Provide verification of accuracy and calibration of analytic monitoring equipment in accordance with EPA State and Laboratory QA/QC Program.
- Provide an annual comprehensive assessment of facility equipment condition, projected life expectancy and estimated replacement cost of key equipment and components of each system.

Miscellaneous

- Maintain all site landscape.
- Maintain all documents, manuals, and reports in electronic format and available to the City of Pacific Grove through PERC Water Client Portal.
- Remove and dispose of all trash and debris on the site including parking lots.
- Maintain storm water site compliance.
- Coordinate with City Staff to open, maintain and operate the recycled water storage and pickup station for commercial customers. PERC Water staff will check permits and licenses to ensure proper operation and monitoring of recycled water station and maintain all required records of recycled water distribution.

Project Needs

During the extended one-year term PERC Water will work in partnership with the City to evaluate the possibility and cost of increasing production to enhance the revenue stream generated by sale of reuse effluent. We have outlined a few examples below.

Plant Capacity

The current facility capacity is 250,000 GPD. However, the diurnal flow in the supply does not provide 250,00 GPD. The overnight flow (12:00am to 6:00am) drops off significantly making it difficult to receive design capacity. Accordingly, we produce approximately 175,000 to 195,000 GPD. A solution is to add an equalization tank at the influent pump station allowing storage of influent flow from the sewer during the day and the ability to supplement lower influent flow overnight, thus increasing the supply capacity.

Membrane System Capacity

During recent communication with Koch Membrane Systems (KMS), it was confirmed the Facility's membrane modules have an additional 25% capacity (75,000 GPD) as the existing system can accommodate the installation of additional membranes. This option will allow the facility to produce more reuse water for sale to increase the City's revenue stream. The increased cost to produce this additional reuse water would be nominal and would not require any additional labor.

Spare parts inventory

PERC Water will work with City staff to create a comprehensive spare parts inventory. The spare parts will include instruments and mechanical parts (UV bulbs, sleeves and miscellaneous parts and instruments). A proper spare parts inventory will minimize equipment downtime and water production interruption.

Thank you for providing PERC Water with the opportunity to continue providing our O&M services to the City of Pacific Grove. We look forward to having the opportunity to work in partnership with you and your staff.

Sincerely,

PERC Water Corporation



Robert Nespeca, Vice President

CITY OF PACIFIC GROVE
300 Forest Avenue, Pacific Grove, California 93950

AGENDA REPORT

TO: Honorable Mayor and Members of the City Council
FROM: Gaudenz Panholzer, Fire Chief
MEETING DATE: October 5, 2022
SUBJECT: Concept Review: New Fire Engine
CEQA: Does not constitute a "Project" per California Environmental Quality Act Guidelines Section 15378

RECOMMENDATION
Provide direction to staff on whether to purchase an electric or diesel-powered fire engine and authorize the purchase.

DISCUSSION
The City of Pacific Grove presently owns two fire engines that are leased to the Monterey Fire Department to use under the contract for Fire Services between the cities of Pacific Grove and Monterey. One engine is a 2006 Pierce (with 119,000 miles on it) and is currently in front-line status. The second engine is a 1997 Pierce (with 87,000 miles on it) that serves in reserve status.

Fire engine replacement cycles are driven by several factors including age, miles, and maintenance costs. An engine typically serves well for 15 years in front-line service and can be in reserve status for an additional 10+ years. Pacific Grove's front-line engine is over 15 years old and has shown signs of having more significant maintenance costs (a ~$75,000 repair being the most recent). The reserve engine is 25 years old; because of its age, the reserve engine does not meet current safety and emissions standards. For these reasons it should be retired. Due to normal build time and compounded by supply-chain challenges, a new fire engine will not be delivered until about 24 months after a purchase contract is executed. In that time frame, the present two engines will have aged and incurred additional maintenance costs.

Electric Engine
Based on Council direction to look for opportunities to electrify the Pacific Grove fleet, staff has researched electric fire engines as an alternative to a conventional diesel-powered one. Electric fire engines are new with only a handful in service worldwide. Presently, two manufacturers have products ready for ordering. Rosenbauer, and Austrian manufacturer with production facilities in the United States, has an electric engine that has been in service in Europe and, most recently, has delivered one to the Los Angeles Fire Department. Pierce Manufacturing, a U.S. based fire apparatus manufacturer, has one engine in service in Maddison, Wisconsin, and has recently delivered one to Portland, Oregon. Both manufacturers' engines have very little field use experience to be able to determine long-term viability.

The electric engines have comparable specifications (water tank size, pump capacity, driving range,

etc.) as diesel engines that were evaluated. The units provide a diesel back-up to the battery to ensure adequate range and continued functionality on longer incidents. The technologies employed vary between the two manufacturers, but both rely on tested products in use in other large vehicle commercial applications. Electric vehicles inherently have lower maintenance and operational costs but, because large vehicle applications are still new, there may be unknown future challenges. The large capacity batteries have an anticipated life of 10 to 15 years and likely will cost over $100,000 to replace.

Should Council decide to pursue the purchase of an electric fire engine, staff believes that the Rosenbauer engine is the better option for Pacific Grove.

Diesel Engine

Pacific Grove's current fire apparatus are all diesel powered. Similarly, the entire fleet used by the Monterey Fire Department is diesel powered. Current infrastructure and maintenance facilities are set up to support this fleet. A diesel engine will have a higher annual operations and maintenance cost than an electric engine.

OPTIONS

1. Direct staff to initiate the purchase of a conventional, diesel-powered fire engine.
2. Direct staff to initiate the purchase of an electric fire engine.
3. Direct staff to bring forward a financing agreement for the purchase of the fire engine from Community Leasing Partners
4. Direct staff to issue a Request for Proposal for additional financing proposals
5. Provide alternate direction.

FINANCIAL IMPACT:

Staff has obtained a quote for a conventional diesel-powered fire engine and has asked for one for an electric fire engine. Both Pierce and Rosenbauer have not provided a firm quote on the electric engine as they are just now becoming available for their sales force. Both have said that they anticipate the cost to be in the $1.7M to $1.9M range. The quote for the diesel engine based on making the purchase using a purchasing cooperative (HGAC) is as follows:

One (1) Pierce Manufacturing, Inc. Enforcer 1500 GPM Pumper *(HGAC Consortium Purchase – Contract FS12-19, Product Code FS19VC07)*	$ 857,371.02
100% Prepayment discount	**(46,669.43)**
SUBTOTAL	810,701.59
8.75% Sales tax	70,936.39
California tire fee	10.50
TOTAL	**$ 881,648.48**

If the Council were to opt to purchase the electric engine, there would be additional up-front costs to install the required charging system in the station. Staff estimates that that will be about $150,000 bringing the total cost to close to $2M.

Operational costs of a diesel engine can be expected to run about $15,000 per year (initially) for maintenance and repairs and current infrastructure can support the use of one. Over the life of the engine, those costs can be expected to increase. Fleet maintenance staff presently used by Pacific Grove are trained and equipped to provide the routine maintenance and other repair facilities are readily available for potential major repairs.

An electric engine will have reduced operational costs estimated to be $5,000 per year but will require substantial infrastructure modifications to the fire station to provide the necessary high-capacity charging system. Until more repair facilities for large electric vehicles are available, Pacific Grove would be dependent on the manufacturer's service facilities for maintenance of electric drive-train components. Fleet maintenance staff would likely need additional training to provide some routine services. Some systems could involve increased future costs and the large battery will likely have to be replaced after 10 to 12 years at a substantial cost.

A 20-year projection of maintenance and operations costs that includes assumptions of increased maintenance costs in future years, annual inflation at 3%, and replacing the electric engine's battery once during that time yields the following total cost for the 20-year period:

- Electric engine - $343,300
- Diesel engine - $477,800

The city previously set aside funds for the eventual purchase of a new fire engine; however due to the impacts of COVID-19 and changing priorities, the funds were transitioned back to the General Fund or allocated to capital projects. Staff has conducted preliminary research on options for financing the purchase of a new engine. The information included in Attachment 2 was provided by Community Leasing Partners (CLP), a lender that specializes in fire equipment financing. These rates include the following:

- Gas-Powered Fire Engine
  - Seven, ten, and fifteen year lease-purchase financing, with payments beginning in August 2023. This includes scenarios with and without a down-payment.
  - Ten or fifteen year terms, with financing allocated over 9 or 14 years. The first payment would be due in August of 2024. This includes scenarios with and without a down-payment.
- Electric-Powered Fire Engine
  - Ten-year options, with payments due in either August 2023 or August 2024. This also includes scenarios with and without a down-payment.

    (At this time, CLP is not financing electric-powered fire engines beyond ten years. This is primarily due to restrictions on lending that are placed on new technologies.)

The final interest rates may be dependent upon the financing source and changes in lending rates. A no-cost/no-obligation hold was previously placed on the ten-year option, with the first payment due in August of 2023. There are no documentation or closing fees associated with this proposal; however depending on the complexity of the agreement, the City Attorney may request a special bond counsel to review the final documents.

Interest rates recently increased due to actions made by the Federal Reserve. Staff is in the process of conducting additional research to review current lending rates. A formal RFP could also be issued; however there has been some discussion that the Federal Open Market Committee may increase the Federal Funds interest rates in November. This is likely to impact lending rates.

Funds have not been appropriated in the Fiscal Year 22/23 Budget for the purchase of a new fire engine or a down payment. A budget amendment will be needed for any additional appropriations in this fiscal year.

GOAL ALIGNMENT: Environmental Stewardship: Adopt and develop policies and ordinances that preserve and protect the environment.

Attachments

Proposal Package
Financing Options

GOLDEN STATE
FIRE APPARATUS

goldenstatefire.com
7400 Reese Road
Sacramento, CA 95828
Office 916.330.1638
Fax 916.330.1649

September 15, 2022

Mr. Gaudenz Panholzer, *Fire Chief*
City of Pacific Grove
600 Pine Avenue
Pacific Grove, CA 93950

Dear Chief Panholzer:

I am enclosing our proposal for one (1) new 1500 GPM Pumper with this cover letter. Based on your department's input, we have selected the *Pierce Enforcer* chassis on which to base this proposal. Some of the noteworthy features you will find include:

- ✓ 525 horsepower Cummins X12 motor with an Allison EVS 4500 transmission
- ✓ 1,500 GPM Hale single stage pump with 500-gallon water tank
- ✓ Pierce Husky 3 single agent foam system with refill and draft features
- ✓ All emergency lighting is LED

The cost of the unit described in this proposal is dependent on how the city may choose to purchase it. As noted in the assorted options, Pierce deducts certain prepayment credits from the final invoice, depending on the selected purchasing option. Please look at the information and figures attached.

The total price shown includes California Sales Tax at the rate of 8.75% and includes two (2) factory inspection trips as outlined in the specification. Price is based on delivery F.O.B. to the Pacific Grove at the address shown above.

If the city elects to purchase the proposed apparatus and would like to submit a purchase order, please address it to the following:

Golden State Fire Apparatus Inc.
7400 Reese Road
Sacramento, CA 95828

This quote will be valid until October 31, 2022.

We appreciate the opportunity to submit this information and look forward to going over any questions you might have. Let me know if there is anything else I can do and feel free to give me a call anytime. My cell number is (831) 251-8931 and thank you again.

Sincerely,

Rich Myers
Sales Consultant

PRODUCT PROPOSAL

Exhibit “A”

Bid #905



OPTION A

100% Pre-Payment or Lease Purchase

This will be the price of the Product(s) contingent upon the Customer paying 100% of the Grand Total to GSFA within 15 days of Contract Signing (or issuance of Purchase Order).

This discount is also available contingent upon a 3rd Party (Leasing Company) paying 100% of the Grand Total on behalf of the Customer within 15 days of Contract Signing (or issuance of Purchase Order).

GOLDEN STATE
FIRE APPARATUS

PROPOSAL PREPARED FOR
City of Pacific Grove
Pierce Manufacturing, Inc.
Enforcer 1500 GPM Pumper
HGAC FS12-19, Code FS19VC07
September 16, 2022

SALES CONSULTANT
Rich Myers
Golden State Fire Apparatus, Inc.
7400 Reese Road
Sacramento, CA 95828
831.251.8931 Cell
rich@goldenstatefire.com

PARTS, SERVICE & SUPPORT
Golden State Emergency Vehicle Service, Inc.
7400 Reese Road
Sacramento, CA 95828
916.330.1638 Office
parts@goldenstatefire.com

GOLDEN STATE
FIRE APPARATUS

www.goldenstatefire.com
7400 Reese Road
Sacramento, CA 95828
Office 916.330.1638
Fax 916.330.1649

PROPOSAL PREPARED FOR:

City of Pacific Grove
600 Pine Avenue
Pacific Grove, CA 93950

Submitted Date:	September 16, 2022
Proposal Number:	40916-22A
Expiration Date:	*October 31, 2022*
Sales Consultant:	Rich Myers

We hereby propose and agree to furnish, after your acceptance of this proposal and the proper execution by the CITY OF PACIFIC GROVE, hereinafter called "Customer" and an officer of Golden State Fire Apparatus, Inc., hereinafter called "GSFA", the following fire apparatus and equipment, hereinafter called "Product":

#	Description	Unit Price
A	One (1) Pierce Manufacturing, Inc. Enforcer 1500 GPM Pumper ***(HGAC Consortium Purchase – Contract FS12-19, Product Code FS19VC07)***	857,371.02
B	***Discount For 100% Pre-Payment at Time of Order***	***(46,669.43)***
C	SUBTOTAL	810,701.59
D	8.75% State Sales Tax	70,936.39
E	California Tire Fee	10.50
F	GRAND TOTAL	881,648.48

HGACBuy THE SMART PURCHASING SOLUTION Pierce.

PROPOSAL SUMMARY

This proposal includes the following items in accordance with the specifications hereto attached:

- Fire apparatus and equipment described herein
- Delivery to GSFA service center in Sacramento
- Pre-delivery inspection/services by GSFA
- Final delivery from service center to Customer

PRODUCT COMPLETION

Product shall be built in accordance with the specifications hereto attached, delays due to acts of God, strikes, war, or intentional conflict, failures to obtain chassis, materials, unusual weather conditions or other causes beyond GSFA's control not preventing, within approximately **930 to 960 CALENDAR DAYS** after receipt of this order and the acceptance thereof at our Sacramento, California office. Within thirty (30) calendar days after receipt of this order and acceptance thereof, GSFA shall submit to Customer a production schedule including tentative pre-construction conference, final inspection and final delivery dates.

DELIVERY LOCATION

Product shall be shipped in accordance with the specifications hereto attached and be delivered to you at **PACIFIC GROVE, CALIFORNIA**. Proof of insurance must be demonstrated by the Customer to GSFA prior to transferring of the Product(s).

ACCEPTING THIS PROPOSAL

In the event Customer wishes to purchase the Product described in this Proposal and the attached specifications, then, prior to the expiration date listed on page 2 of this Proposal, Customer shall sign and return this Proposal. Thereafter, GSFA and Customer will endeavor to enter into a purchase agreement incorporating this Proposal and including additional terms (a "Purchase Agreement"). If Customer returns a signed copy of this Proposal alone, GSFA will send Customer its form of Purchase Agreement for Customer's review and signature. **If Customer desires to use its standard form of purchase order as the Purchase Agreement, then Customer should return a signed copy of this Proposal along with a copy of such purchase order. All purchase orders shall be made out to GSFA**. GSFA will review such purchase order and contact the Customer regarding any required revisions. Only upon a full execution of a Purchase Agreement shall GSFA and Customer be obligated to purchase and sell the Product set forth in this Proposal.

TERMS AND CONDITIONS

The following Terms and Conditions are hereby made part of this Proposal:

1. Payment Terms (100% Pre-Payment at Time of Order) – Customer shall pay the amount listed on page one of this Proposal, which includes: (i) the total price for the Product (the "Purchase Price"), (ii) the estimated state sales tax on the Product, and (iii) the California tire fee (together with the Purchase Price and estimated state sales tax, the "Grand Total") within fifteen (15) calendar days from the date on which the Purchase Agreement is fully executed. The proposed delivery timeframe for the Product, which is outlined on page one of this Proposal, shall not begin until full payment of the Grand Total is received. In the event Customer does not pay GSFA the Grand Total in the timeframe set forth in this Section 1, GSFA may, in its sole discretion, cancel the Purchase Agreement entered into between the parties.

2. Multiple Unit Purchase – If the Purchase Price includes pricing for multiple units, the price stated on this Proposal shall only be valid if the quantity of Products being proposed are purchased at the same time, pursuant to the same Purchase Agreement.

3. Stock / Demo Units – If applicable, any stock/demo units, including those identified by this Proposal, are available for sale on an as-is, first-come and first served-basis. Regardless of this Proposal, the first Customer to enter into a Purchase Agreement identifying any such stock/demo unites shall obtain said units.

4. Order Changes – The Customer may request that GSFA incorporate a change to the Product or the Specifications for the Product by delivering a written change order to GSFA, which shall include a description of the proposed change sufficient to permit GSFA to evaluate the feasibility of such change (a "Change Order"). GSFA will provide Customer a written response (a "Response") stating (i) whether GSFA will accommodate such Change Order (which GSFA may decide in its sole and absolute discretion) and (ii) the terms of the modification to the order, including any increase or decrease in the Purchase Price resulting from such Change Order, and any effect on production scheduling or Delivery resulting from such Change Order. Customer shall have seven (7) days after receipt of the Response to notify GSFA as to whether Customer desires to make the changes GSFA has approved in the Response. In the event Customer counter-signs GSFA's Response, Customer shall pay the increase (or be refunded the decrease) in the Purchase Price prior to final delivery to Customer location.

5. Force Majeure – GSFA shall not be responsible nor deemed to be in default on account of delays in performance due to causes which are beyond GSFA's and manufacturer's control and which make GSFA's performance impracticable, including but not limited to wars, insurrections, strikes, riots, fires, storms, floods, other acts of nature, explosions, earthquakes, accidents, any act of government, delays in transportation, inability to obtain necessary labor supplies or manufacturing facilities, allocation regulations or orders affecting materials, equipment, facilities or completed products, failure to obtain any required license or certificates, acts of God or the public enemy or terrorism, failure of transportation, epidemics, quarantine restrictions, failure of vendors (due to causes similar to those within the scope of this clause) to perform their contracts or labor troubles causing cessation, slowdown, or interruption of work.

6. Cancellation/Termination – In the event Customer and GSFA enter into a Purchase Agreement and Customer thereafter cancels or terminates the Purchase Agreement, GSFA will charge a cancellation fee as follows: (a) 10% of the Purchase Price after order is accepted and entered by GSFA; (b) 20% of the Purchase Price after completion of the pre-construction phase of the order process; and (c) 50% of the Purchase Price after the requisition of any materials or commencement of any manufacturing or assembly of the Product by either GSFA or the manufacturer of the Product. The tier of cancellation fee applicable to any cancellation shall be in the sole and absolute discretion of GSFA.

7. State Sales Tax – Customer shall be responsible for the cost of state sales tax associated with, or attributable to the Product. The taxes owed by Customer for the Product is subject to adjustment for the applicable state sales tax rate in effect when the Product is delivered to the Customer. Therefore, the sales tax will be increased or decreased at the time of delivery if a change in the sales tax rate has occurred, in which case Customer shall pay GSFA (or be refunded by GSFA) the applicable change in sales tax.

8. Proposal Expiration – After the Expiration Date shown on page one of this Proposal, Customer shall require GSFA's written consent to accept this Proposal.

9. Governing Law – This Proposal is to be governed by and under the laws of the state of California.

Thank you for providing Golden State Fire Apparatus, Inc. with the opportunity to provide this proposal. If you have any questions regarding the options presented or need additional options, please contact me.

Sincerely,

Rich Myers
Golden State Fire Apparatus, Inc.

I, _____authorized representative of CITY OF PACIFIC GROVE agrees to purchase the proposed Product(s) and agree to the terms and conditions of this proposal and the specifications hereto attached.

SIGNATURE: _____

TITLE: _____ DATE: _____

OPTION B

Payment at Time of Delivery or Pickup

This will be the price of the Product(s) contingent upon the Customer paying 100% of the Grand Total to GSFA at time of delivery or pick up

GOLDEN STATE
FIRE APPARATUS

PROPOSAL PREPARED FOR
City of Pacific Grove
Pierce Manufacturing, Inc.
Enforcer 1500 GPM Pumper
HGAC FS12-19, Code FS19VC07
September 16, 2022

SALES CONSULTANT
Rich Myers
Golden State Fire Apparatus, Inc.
7400 Reese Road
Sacramento, CA 95828
831.251.8931 Cell
rich@goldenstatefire.com

PARTS, SERVICE & SUPPORT
Golden State Emergency Vehicle Service, Inc.
7400 Reese Road
Sacramento, CA 95828
916.330.1638 Office
parts@goldenstatefire.com

GOLDEN STATE
FIRE APPARATUS

www.goldenstatefire.com
7400 Reese Road
Sacramento, CA 95828
Office 916.330.1638
Fax 916.330.1649

PROPOSAL PREPARED FOR:

City of Pacific Grove
600 Pine Avenue
Pacific Grove, CA 93950

Submitted Date:	September 16, 2022
Proposal Number:	40916-22B
Expiration Date:	*October 31, 2022*
Sales Consultant:	Rich Myers

We hereby propose and agree to furnish, after your acceptance of this proposal and the proper execution by the CITY OF PACIFIC GROVE, hereinafter called "Customer" and an officer of Golden State Fire Apparatus, Inc., hereinafter called "GSFA", the following fire apparatus and equipment, hereinafter called "Product":

#	Description	Unit Price
A	One (1) Pierce Manufacturing, Inc. Enforcer 1500 GPM Pumper ***(HGAC Consortium Purchase – Contract FS12-19, Product Code FS19VC07)***	857,371.02
B	8.75% State Sales Tax	75,019.96
C	California Tire Fee	10.50
D	GRAND TOTAL	932,401.49

HGACBuy THE SMART PURCHASING SOLUTION Pierce

PROPOSAL SUMMARY

This proposal includes the following items in accordance with the specifications hereto attached:

- Fire apparatus and equipment described herein
- Delivery to GSFA service center in Sacramento
- Pre-delivery inspection/services by GSFA
- Final delivery from service center to Customer

PRODUCT COMPLETION

Product shall be built in accordance with the specifications hereto attached, delays due to acts of God, strikes, war, or intentional conflict, failures to obtain chassis, materials, unusual weather conditions or other causes beyond GSFA's control not preventing, within approximately **930 to 960 CALENDAR DAYS** after receipt of this order and the acceptance thereof at our Sacramento, California office. Within thirty (30) calendar days after receipt of this order and acceptance thereof, GSFA shall submit to Customer a production schedule including tentative pre-construction conference, final inspection and final delivery dates.

DELIVERY LOCATION

Product shall be shipped in accordance with the specifications hereto attached and be delivered to you at **PACIFIC GROVE, CALIFORNIA**. Proof of insurance must be demonstrated by the Customer to GSFA prior to transferring of the Product(s).

ACCEPTING THIS PROPOSAL

In the event Customer wishes to purchase the Product described in this Proposal and the attached specifications, then, prior to the expiration date listed on page 2 of this Proposal, Customer shall sign and return this Proposal. Thereafter, GSFA and Customer will endeavor to enter into a purchase agreement incorporating this Proposal and including additional terms (a "Purchase Agreement"). If Customer returns a signed copy of this Proposal alone, GSFA will send Customer its form of Purchase Agreement for Customer's review and signature. **If Customer desires to use its standard form of purchase order as the Purchase Agreement, then Customer should return a signed copy of this Proposal along with a copy of such purchase order. All purchase orders shall be made out to GSFA**. GSFA will review such purchase order and contact the Customer regarding any required revisions. Only upon a full execution of a Purchase Agreement shall GSFA and Customer be obligated to purchase and sell the Product set forth in this Proposal.

TERMS AND CONDITIONS

The following Terms and Conditions are hereby made part of this Proposal:

1. Payment Terms (Payment at Time of Delivery) – Customer shall pay the Grand Total at time of delivery or pick up of the Product to GSFA. It is the responsibility of the Customer to have full payment ready when the Product is complete and ready to deliver or pick up. If payment is late or delivery is delayed pending payment, a daily finance charge of $150.00 and a daily storage fee of $50.00 may apply until such payment is received. Due to insurance liability, the Product(s) will not be left at the Customer's location without full acceptance and payment or prior written agreement between the Customer and GSFA.

2. Multiple Unit Purchase – If the Purchase Price includes pricing for multiple units, the price stated on this Proposal shall only be valid if the quantity of Products being proposed are purchased at the same time, pursuant to the same Purchase Agreement.

3. Stock / Demo Units – If applicable, any stock/demo units, including those identified by this Proposal, are available for sale on an as-is, first-come and first served-basis. Regardless of this Proposal, the first Customer to enter into a Purchase Agreement identifying any such stock/demo unites shall obtain said units.

4. Order Changes – The Customer may request that GSFA incorporate a change to the Product or the Specifications for the Product by delivering a written change order to GSFA, which shall include a description of the proposed change sufficient to permit GSFA to evaluate the feasibility of such change (a "Change Order"). GSFA will provide Customer a written response (a "Response") stating (i) whether GSFA will accommodate such Change Order (which GSFA may decide in its sole and absolute discretion) and (ii) the terms of the modification to the order, including any increase or decrease in the Purchase Price resulting from such Change Order, and any effect on production scheduling or Delivery resulting from such Change Order. Customer shall have seven (7) days after receipt of the Response to notify GSFA as to whether Customer desires to make the changes GSFA has approved in the Response. In the event Customer counter-signs GSFA's Response, Customer shall pay the increase (or be refunded the decrease) in the Purchase Price prior to final delivery to Customer location.

5. Force Majeure – GSFA shall not be responsible nor deemed to be in default on account of delays in performance due to causes which are beyond GSFA's and manufacturer's control and which make GSFA's performance impracticable, including but not limited to wars, insurrections, strikes, riots, fires, storms, floods, other acts of nature, explosions, earthquakes, accidents, any act of government, delays in transportation, inability to obtain necessary labor supplies or manufacturing facilities, allocation regulations or orders affecting materials, equipment, facilities or completed products, failure to obtain any required license or certificates, acts of God or the public enemy or terrorism, failure of transportation, epidemics, quarantine restrictions, failure of vendors (due to causes similar to those within the scope of this clause) to perform their contracts or labor troubles causing cessation, slowdown, or interruption of work.

6. Cancellation/Termination – In the event Customer and GSFA enter into a Purchase Agreement and Customer thereafter cancels or terminates the Purchase Agreement, GSFA will charge a cancellation fee as follows: (a) 10% of the Purchase Price after order is accepted and entered by GSFA; (b) 20% of the Purchase Price after completion of the pre-construction phase of the order process; and (c) 50% of the Purchase Price after the requisition of any materials or commencement of any manufacturing or assembly of the Product by either GSFA or the manufacturer of the Product. The tier of cancellation fee applicable to any cancellation shall be in the sole and absolute discretion of GSFA.

7. State Sales Tax – Customer shall be responsible for the cost of state sales tax associated with, or attributable to the Product. The taxes owed by Customer for the Product is subject to adjustment for the applicable state sales tax rate in effect when the Product is delivered to the Customer. Therefore, the sales tax will be increased or decreased at the time of delivery if a change in the sales tax rate has occurred, in which case Customer shall pay GSFA (or be refunded by GSFA) the applicable change in sales tax.

8. Proposal Expiration – After the Expiration Date shown on page one of this Proposal, Customer shall require GSFA's written consent to accept this Proposal.

9. Governing Law – This Proposal is to be governed by and under the laws of the state of California.

Thank you for providing Golden State Fire Apparatus, Inc. with the opportunity to provide this proposal. If you have any questions regarding the options presented or need additional options, please contact me.

Sincerely,



Rich Myers
Golden State Fire Apparatus, Inc.

I, _____authorized representative of CITY OF PACIFIC GROVE agrees to purchase the proposed Product(s) and agree to the terms and conditions of this proposal and the specifications hereto attached.

SIGNATURE: _____

TITLE: _____ DATE: _____

PRODUCT SPECIFICATIONS

Exhibit “B”

Bid #905



Proposal Details Report

9/15/2022

Customer: Pacific Grove Fire Department **Bid Number:** 905
Representative Myers, Rich **Job Number:**
Requirements Manager: **Organization:** Golden State Fire Apparatus, Inc
Description: One (1) 1500 Enforcer Pumper (
Chassis: Enforcer Chassis
Body: Pumper, Medium, Aluminum, 2nd Gen

OptionCode	Type	Option	ProposalText
0766611		Boiler Plates, Pumper	GOLDEN STATE FIRE APPARATUS, INC.is pleased to submit a proposal to the City of Pacific Grove Fire Dept for a **Pierce® triple combination pumper** per your request for quotation. The following paragraphs will describe in detail the apparatus, construction methods, and equipment proposed. This proposal will indicate size, type, model and make of components parts and equipment, providing proof of compliance with each and every item (except where noted) in the departments advertised specifications. PIERCE MANUFACTURING was founded in 1913. Since then we have been building bodies with one philosophy, "BUILD THE FINEST". Our skilled craftsmen take pride in their work, which is reflected, in the final product. We have been building fire apparatus since the early "forties" giving Pierce Manufacturing over 75 years of experience in the fire apparatus market. Pierce Manufacturing has built and put into service more than 62,500 apparatus, including more than 33,900 on Pierce custom chassis designed and built specifically for fire and emergency applications. Our Appleton, Wisconsin facility has over 870,000 total square feet of floor space situated on approximately 105 acres of land. Our Bradenton, Florida facility has 300,000 square feet of floor space situated on approximately 38 acres of land. Our beliefs in high ethical standards are carried through in all of our commitments and to everyone with whom we do business. Honesty, Integrity, Accountability and Citizenship are global tenets by which we all live and work. Consequently, we neither engage in, nor have we ever been convicted of price fixing, bid rigging, or collusion in any domestic or international fire apparatus market. Pierce has only one brand of fire apparatus "Pierce", ensuring you are receiving top of the line product that meets your specification. In accordance with the current edition of NFPA 1901 standards, this proposal will specify whether the fire department, manufacturer, or apparatus dealership will provide required loose equipment. Images and illustrative material in this proposal are as accurate as known at the time of publication, but are subject to change without notice. Images and illustrative material is for reference only, and may include optional equipment and accessories and may not include all standard equipment. **GENERAL DESIGN AND CONSTRUCTION** To control quality, ensure compatibility, and provide a single source for service and warranty, the custom cab, chassis, pump module and body will be entirely designed, assembled/welded and painted in Pierce owned manufacturing facilities. This includes, but not limited to the cab weldment, the pumphouse module assembly, the chassis assembly, the body and the electrical system. **QUALITY AND WORKMANSHIP** Pierce has set the pace for quality and workmanship in the fire apparatus field. Our tradition of building the highest quality units with craftsmen second to none has been the rule right from the beginning and we demonstrate that ongoing commitment by: Ensuring all steel welding follows American Welding Society D1.1-2004 recommendations for structural steel welding. All aluminum welding follows American Welding society and ANSI D1.2-2003 requirements for structural welding of aluminum. All sheet metal welding follows American welding Society B2.1-2000 requirements for structural welding of sheet metal. Our flux core arc welding uses alloy rods, type 7000 and is performed to American Welding Society standards A5.20-E70T1. Furthermore, all employees classified as welders are tested and certified to meet the American welding Society codes upon hire and every three (3) years thereafter. Pierce also employs and American Welding Society certified welding inspector in plant during working hours to monitor weld quality. Pierce Manufacturing operates a Quality Management System under the requirements of ISO 9001. These standards sponsored by the International Organization for Standardization (ISO) specify the quality systems that are established by the manufacturer for design, manufacture, installation and service. A copy of the certificate of compliance is included with this proposal. In addition to the Quality Management system, we also employ a Quality Achievement Supplier program to insure the vendors and suppliers that we utilize meet the high standards we demand. That is just part of our overall "Quality at the Source" program at Pierce. To demonstrate the quality of our products and services, a list of at least twenty (20) fire departments/municipalities that have purchased vehicles for a second time is provided. **DELIVERY** The apparatus will be delivered under its own power to insure proper break-in of all components while the apparatus is still under warranty. A qualified delivery representative shall deliver the apparatus and remain for a sufficient length of time to instruct personnel in proper operation, care and maintenance of the equipment delivered. **MANUAL AND SERVICE INFORMATION** At time of delivery, complete operation and maintenance manuals covering the apparatus will be provided. A permanent plate will be mounted in the driver's compartment specifying the quantity and type of fluids required including engine oil, engine coolant, transmission, pump transmission lubrication, pump primer and drive axle. **SAFETY VIDEO** At the time of delivery Pierce will also provide one (1) 39-minute, professionally produced apparatus safety video, in DVD format. This video will address key safety considerations for personnel to follow when they are driving, operating, and maintaining the apparatus, including the following: vehicle pre-trip inspection, chassis operation, pump operation, aerial operation, and safety during maintenance. **PERFORMANCE TESTS** A road test will be conducted with the apparatus fully loaded and a continuous run of no less than ten (10) miles. During that time the apparatus will show no loss of power nor will it overheat. The

transmission drive shaft or shafts and the axles will run quietly and be free of abnormal vibration or noise. The apparatus when fully loaded will not have less than 25 percent nor more than 50 percent on the front axle, and not less than 50 percent nor more than 75 percent on the rear axle. The apparatus will meet NFPA 1901 acceleration and braking requirements.

SERVICE AND WARRANTY SUPPORT

Pierce dealership support will be provided by GOLDEN STATE EMERGENCY VEHICLE SERVICE, INC. by operating a Pierce authorized service center. The service center will have factory-trained mechanics on staff versed in Pierce fire apparatus. The service facility will be located within one hundred fifty (150) miles of the fire department.

In addition to the dealership, Pierce has service facilities located in both, Weyauwega, Wisconsin and Bradenton, Florida. Pierce also maintains a dedicated parts facility of over 100,000 square feet in Appleton, Wisconsin. The parts facility stocks in excess of $5,000,000 in parts dedicated to service and replacement parts. The parts facility employs a staff dedicated solely for the distribution and shipment of service and replacement parts.

Service parts for the apparatus being proposed can be found via Pierceparts.com which, is an interactive online tool that delivers information regarding your specific apparatus as well as the opportunity to register for training classes.

As a Pierce customer you have the ability to view the complete bill of materials for your specific apparatus, including assembly drawings, piece part drawings, and beneficial parts notations. You will also have the ability to search the complete Pierce item master through a parts search function which offers all Pierce SKU's and descriptions offered on all Pierce apparatus. Published component catalogs, which include proprietary systems along with an extensive operators manual library is available for easy reference.

Pierce Manufacturing maintains a dedicated service and warranty staff of over 35 personnel, dedicated to customer support, which also maintains a 24 hour 7 day a week toll free hot line, four (4) on staff EVTs, and offers hands-on repair and maintenance training classes multiple times a year.

LIABILITY

The successful bidder will defend any and all suits and assume all liability for the use of any patented process including any device or article forming a part of the apparatus or any appliance furnished under the contract.

INSURANCE PROVIDED BY BIDDER

COMMERCIAL GENERAL LIABILITY INSURANCE

The successful bidder will, during the performance of the contract and for three (3) years following acceptance of the product, keep in force at least the following minimum limits of commercial general liability insurance:

Each Occurrence $1,000,000

Products/Completed Operations Aggregate $1,000,000

Personal and Advertising Injury $1,000,000

General Aggregate $2,000,000

Coverage will be written on a Commercial General Liability form. The policy will be written on an occurrence form and will include Contractual Liability coverage for bodily injury and property damage subject to the terms and conditions of the policy. The policy will include Owner as an additional insured when required by written contract.

COMMERCIAL AUTOMOBILE LIABILITY INSURANCE

The successful bidder will, during the performance of the contract, keep in force at least the following minimum limits of commercial automobile liability insurance and coverage will be written on a Commercial Automobile liability form:

Each Accident Combined Single Limit: $1,000,000

UMBRELLA/EXCESS LIABILITY INSURANCE

The successful bidder will, during the performance of the contract and for three (3) years following acceptance of the product, keep in force at least the following minimum limits of umbrella liability insurance:

Aggregate: $3,000,000

Each Occurrence: $3,000,000

The umbrella policy will be written on an occurrence basis and at a minimum provide excess to the bidder's General Liability and Automobile Liability policies.

The required limits can be provided by one (1) or more policies provided all other insurance requirements are met.

Coverage will be provided by a carrier(s) rated A- or better by A.M. Best.

All policies will provide a 30-day notice of cancellation to the named insured. The Certificate of Insurance will provide the following cancellation clause: Should any of the above described polices be cancelled before the expiration date thereof, notice will be delivered in accordance with the policy provisions.

Bidder agrees to furnish owner with a current Certificate of Insurance with the coverages listed above along with the bid. The certificate will show the purchaser as certificate holder.

INSURANCE PROVIDED BY MANUFACTURER

PRODUCT LIABILITY INSURANCE

The manufacturer will, during the performance of the contract and for three (3) years following acceptance of the product, keep in force at least the following minimum limits of Product Liability insurance:

Each Occurrence $1,000,000

Products/Completed Operations Aggregate $1,000,000

Coverage will be written on a Commercial General Liability form. The policy will be written on an occurrence form. The manufacturer's policy will include the owner as additional insured when required by written contract between the Owner and a Pierce authorized dealer.

UMBRELLA/EXCESS LIABILITY INSURANCE

The manufacturer will, during the performance of the contract and for three (3) years following acceptance of the product, keep in force at least the following minimum limits of umbrella liability insurance:

		Each Occurrence: $25,000,000 **Aggregate: $25,000,000** **The umbrella policy will be written on an occurrence basis and provide excess to the manufacturer's General Liability/Products policies.** **The required limits can be provided by one (1) or more policies provided all other insurance requirements are met.** **Coverage will be provided by a carrier(s) rated A- or better by A.M. Best.** **All policies will provide a 30-day notice of cancellation to the named insured. The Certificate of Insurance will provide the following cancellation clause: Should any of the above described polices be cancelled before the expiration date thereof, notice will be delivered in accordance with the policy provisions.** **Manufacturer agrees to furnish owner with a current Certificate of Insurance with the coverages listed above along with the bid. The certificate will show the purchaser as the certificate holder.**
0661794	Single Source Compliance	**SINGLE SOURCE MANUFACTURER** Pierce Manufacturing, Inc. provides an integrated approach to the design and manufacture of our products that delivers superior apparatus and a dedicated support team. From our facilities, the chassis, cab weldment, cab, pumphouse (including the sheet metal enclosure, valve controls, piping and operators panel) and body will be entirely designed, tested, and hand assembled to the customer's exact specifications. The electrical system either hardwired or multiplexed, will be both designed and integrated by Pierce Manufacturing. The warranties relative to these major components (excluding component warranties such as engine, transmission, axles, pump, etc.) will be provided by Pierce as a single source manufacturer. Pierce's single source solution adds value by providing a fully engineered product that offers durability, reliability, maintainability, performance, and a high level of quality.
0584456	Manufacture Location, Appleton, Wisconsin	Your apparatus will be manufactured in Appleton, Wisconsin.
0584452	RFP Location: Appleton, Wisconsin	
0588609	Vehicle Destination, US	
0670275	Unit to be Similar in some Aspects, Excluding Pump Panel	**SPECIAL INSTRUCTIONS** The apparatus being proposed will be designed and built to match the 35147. However, some variation may be necessary due to changes in our manufacturing processes or our product offering. Revisions in NFPA guidelines and/or other regulations may also affect our ability to match the previous unit.
0610784	Comply NFPA 1901 Changes Effective Jan 1, 2016, With Exceptions	**NFPA 2016 STANDARDS** This unit will comply with the NFPA standards effective January 1, 2016, except for fire department directed exceptions. These exceptions will be set forth in the Statement of Exceptions. Certification of slip resistance of all stepping, standing and walking surfaces will be supplied with delivery of the apparatus. All horizontal surfaces designated as a standing or walking surface that are greater than 48.00" above the ground must be defined by a 1.00" wide line along its outside perimeter. Perimeter markings and designated access paths to destination points will be identified on the customer approval print and are shown as approximate. Actual location(s) will be determined based on materials used and actual conditions at final build. Access paths may pass through hose storage areas and opening or removal of covers or restraints may be required. Access paths may require the operation of devices and equipment such as the aerial device or ladder rack. A plate that is highly visible to the driver while seated will be provided. This plate will show the overall height, length, and gross vehicle weight rating. The manufacturer will have programs in place for training, proficiency testing and performance for any staff involved with certifications. An official of the company will designate, in writing, who is qualified to witness and certify test results.
0533347	Pumper/Pumper with Aerial Device Fire Apparatus	
0588611	Vehicle Certification, Pumper	

0661778	Agency, Apparatus Certification, Pumper/Tanker, U.L.	**NFPA COMPLIANCY** Apparatus proposed by the bidder will meet the applicable requirements of the National Fire Protection Association (NFPA) as stated in current edition at time of contract execution. Fire department's specifications that differ from NFPA specifications will be indicated in the proposal as "non-NFPA". **PUMP TEST** Underwriters Laboratory (UL) will test, approved, and certify the pump. The test results and the pump manufacturer's certification of hydrostatic test; the engine manufacturer's certified brake horsepower curve; and the pump manufacturer's record of pump construction details will be forwarded to the Fire Department. **GENERATOR TEST** If the unit has a generator, Underwriters Laboratory (UL) will test, approved, and certify the generator. The test results will be provided to the Fire Department at the time of delivery. **BREATHING AIR TEST** If the unit has breathing air, Pierce Manufacturing will draw an air sample from the air system and have the sample certified that the air quality meets the requirements of NFPA 1989, *Standard on Breathing Air Quality for Fire and Emergency Services Respiratory Protection.*
0891947	Certification, Vehicle Inspection Program, NFPA 1901	**VEHICLE INSPECTION PROGRAM CERTIFICATION** To assure the vehicle is built to current NFPA1901 standards, the apparatus, in its entirety, will be third-party, independent, audit-certified through Underwriters Laboratory (UL) that it is built and complies to all applicable standards in the current edition. The certification includes: all design, production, operational, and performance testing of not only the apparatus, but those components that are installed on the apparatus. A placard will be affixed in the driver's side area stating the third party agency, the date, the standard and the certificate number of the whole vehicle audit.
0092138	Highly Customized Product (HCP)	**PRODUCT CHANGES AND IMPROVEMENTS** Our components and processes, as described in this proposal document, are as accurate as known at the time of bid submission, but are subject to change for the purpose of product or process improvements, or changes in industry standards providing the change does not affect the meaning or definition of the bid specifications.
0620362	Consortium, HGAC	
0537375	Unit of Measure, US Gallons	
0030006	Bid Bond Not Requested	**BID BOND NOT REQUESTED** A bid bond will not be included. If requested, the following will apply: All bidders will provide a bid bond as security for the bid in the form of a 5% bid bond to accompany their bid. This bid bond will be issued by a Surety Company who is listed on the U.S. Treasury Departments list of acceptable sureties as published in Department Circular 570. The bid bond will be issued by an authorized representative of the Surety Company and will be accompanied by a certified power of attorney dated on or before the date of bid. The bid bond will include language, which assures that the bidder/principal will give a bond or bonds as may be specified in the bidding or contract documents, with good and sufficient surety for the faithful performance of the contract, including the Basic One (1) Year Limited Warranty, and for the prompt payment of labor and material furnished in the prosecution of the contract. Notwithstanding any document or assertion to the contrary, any surety bond related to the sale of a vehicle will apply only to the Basic One (1) Year Limited Warranty for such vehicle. Any surety bond related to the sale of a vehicle will not apply to any other warranties that are included within this bid (OEM or otherwise) or to the warranties (if any) of any third party of any part, component, attachment or accessory that is incorporated into or attached to the vehicle. In the event of any contradiction or inconsistency between this provision and any other document or assertion, this provision will prevail.
0582697	Performance Bond, 100% with Warranty Bond, 1 Yr, and Payment Bond	**PERFORMANCE BOND, 1 YEAR** The successful bidder will furnish a Performance and Payment bond (Bond) equal to 100 percent of the total contract amount within 30 days of the notice of award. Such Bond will be in a form acceptable to the Owner and issued by a surety company included within the Department of Treasury's Listing of Approved Sureties (Department Circular 570) with a minimum A.M. Best Financial Strength Rating of A and Size Category of XV. In the event of a bond issued by a surety of a lesser Size Category, a minimum Financial Strength rating of A+ is required. Bidder and Bidder's surety agree that the Bond issued hereunder, whether expressly stated or not, also includes the surety's guarantee of the vehicle manufacturer's Basic One (1) Year Limited Warranty period included within this proposal. Owner agrees that the penal amount of this bond will be simultaneously amended to 100% percent of the total contract amount upon satisfactory acceptance and delivery of the vehicle(s) included herein. Notwithstanding anything contained within this contract to the contrary, the surety's liability for any warranties of any type will not exceed one (1) year from the date of such satisfactory acceptance and delivery, or the actual Basic One (1) Year Limited Warranty period, whichever is shorter.

0000007	Approval Drawing	**APPROVAL DRAWING** A drawing of the proposed apparatus will be prepared and provided to the purchaser for approval before construction begins. The Pierce sales representative will also be provided with a copy of the same drawing. The finalized and approved drawing will become part of the contract documents. This drawing will indicate the chassis make and model, location of the lights, siren, horns, compartments, major components, etc. A "revised" approval drawing of the apparatus will be prepared and submitted by Pierce to the purchaser showing any changes made to the approval drawing.
0002928	Electrical Diagrams	**ELECTRICAL WIRING DIAGRAMS** Two (2) electrical wiring diagrams, prepared for the model of chassis and body, will be provided.
0649754	Enforcer Chassis	**ENFORCER CHASSIS** The Pierce Enforcer™ is the custom chassis developed exclusively for the fire service. Chassis provided will be a new, tilt-type custom fire apparatus. The chassis will be manufactured in the apparatus body builder's facility eliminating any split responsibility. The chassis will be designed and manufactured for heavy-duty service, with adequate strength, capacity for the intended load to be sustained, and the type of service required. The chassis will be the manufacturer's first line tilt cab.
0000110	Wheelbase	**WHEELBASE** The wheelbase of the vehicle will be 191.50".
0000070	GVW Rating	**GVW RATING** The gross vehicle weight rating will be 43,500.
0649713	Frame Rails, 10.25" x 3.50" x .375", Saber FR/Enf	**FRAME** The chassis frame will be built with two (2) steel channels bolted to five (5) cross members or more, depending on other options of the apparatus. The side rails will be heat-treated steel measuring 10.25" x 3.50" x 0.375". Each rail will have a section modulus of 16.00 cubic inches, yield strength of 120,000 psi, and a resisting bending moment (rbm) of 1,921,069 inch-pounds.
0648354	Frame Liner, Internal "C", 9.38" x 3.13" x .25", Saber FR/Enf, 26" Qval	**FRAME REINFORCEMENT** A full-length mainframe "C" liner will be provided. The liner will be an internal "C" design, heat-treated steel measuring 9.38" x 3.13" x 0.25". Each reinforcement member will have a section modulus of 3.90 cubic inches, yield strength of 120,000 psi and resisting bending moment (rbm) of 938,762 in-lb.
0630705	Axle, Front, Oshkosh TAK-4, Non Drive, 19,500 lb, Enforcer	**FRONT NON DRIVE AXLE** The Oshkosh TAK-4® front axle will be of the independent suspension design with a ground rating of 19,500 lb. Upper and lower control arms will be used on each side of the axle. Upper control arm castings will be made of 100,000-psi yield strength 8630 steel and the lower control arm casting will be made of 55,000-psi yield ductile iron. The center cross members and side plates will be constructed out of 80,000-psi yield strength steel. Each control arm will be mounted to the center section using elastomer bushings. These rubber bushings will rotate on low friction plain bearings and be lubricated for life. Each bushing will also have a flange end to absorb longitudinal impact loads, reducing noise and vibrations. There will be nine (9) grease fittings supplied, one (1) on each control arm pivot and one (1) on the steering gear extension. The upper control arm will be shorter than the lower arm so that wheel end geometry provides positive camber when deflected below rated load and negative camber above rated load. Camber at load will be zero degrees for optimum tire life. The ball joint bearing will be of low friction design and be maintenance free. Toe links that are adjustable for alignment of the wheel to the center of the chassis will be provided. The wheel ends must have little to no bump steer when the chassis encounters a hole or obstacle. The steering linkage will provide proper steering angles for the inside and outside wheel, based on the vehicle wheelbase. The axle will have a turning angle of up to 45 degrees.

0030264	Suspension, Front TAK-4, 19,500 lb, Qtm/AXT/Imp/Vel/Dash CF/Enf	**FRONT SUSPENSION** Front Oshkosh TAK-4™ independent suspension will be provided with a minimum ground rating of 19,500 lb. The independent suspension system will be designed to provide maximum ride comfort. The design will allow the vehicle to travel at highway speeds over improved road surfaces and at moderate speeds over rough terrain with minimal transfer of road shock and vibration to the vehicle's crew compartment. Each wheel will have torsion bar type spring. In addition, each front wheel end will also have energy absorbing jounce bumpers to prevent bottoming of the suspension. The suspension design will be such that there is at least 10.00" of total wheel travel and a minimum of 3.75" before suspension bottoms. The torsion bar anchor lock system allows for simple lean adjustments, without the use of shims. One can adjust for a lean within 15 minutes per side. Anchor adjustment design is such that it allows for ride height adjustment on each side. The independent suspension was put through a durability test that simulated 140,000 miles of inner city driving.
0087572	Shock Absorbers, KONI, TAK-4, Qtm/AXT/Imp/Vel/DCF/Enf	**FRONT SHOCK ABSORBERS** KONI heavy-duty telescoping shock absorbers will be provided on the front suspension.
0000322	Oil Seals, Front Axle	**FRONT OIL SEALS** Oil seals with viewing window will be provided on the front axle.
0802633	Tires, Front, Goodyear, Armor Max MSA, 385/65R22.50, 18 ply, Fire Ser. Load Rtg	**FRONT TIRES** Front tires will be Goodyear 385/65R22.5 radials, 18 ply Armor Max MSA tread, rated for 20,050 lb maximum axle load and 68 mph maximum speed.
0019611	Wheels, Front, Alcoa, 22.50" x 12.25", Aluminum, Hub Pilot	The tires will be mounted on Alcoa 22.50" x 12.25" polished aluminum disc type wheels with a ten (10)stud, 11.25" bolt circle.
0530457	Axle, Rear, Meritor RS23-186, 24,000 lb Saber/Enforcer	**REAR AXLE** The rear axle will be a Meritor™, Model RS-23-186, with a capacity of 24,000 lb.
0544253	Top Speed of Vehicle, 68 MPH	**TOP SPEED OF VEHICLE** A rear axle ratio will be furnished to allow the vehicle to reach a top speed of 68 mph.
0555350	Suspen, Rear, Hendrickson FMX 242 EX, Air Ride, 24,000 lb	**REAR SUSPENSION** Rear suspension will be a Hendrickson FMX 242 EX, air ride with a ground rating of 24,000 lb. The suspension will have the following features: - Heavy-duty shock absorbers to protect air springs from overextension - Heavy-duty torque rods and bushings - Premium, heavy-duty rubber bushings require no lubrication - Integrated stabilizer design results in greater stability - Low spring rate air springs for excellent ride quality - Dual height control valves to maintain level vehicle from side to side
0000485	Oil Seals, Rear Axle	**REAR OIL SEALS** Oil seals will be provided on the rear axle(s).
0587216	Tires, Rear, Goodyear, G622 RSD, 12R22.50, 16 ply, Single	**REAR TIRES** Rear tires will be four (4) Goodyear® 12R22.50 radials, 16 ply all season G622 RSD tread, rated for 27,120 lb maximum axle load and 75 mph maximum speed.
0019625	Wheels, Rear, Alcoa, 22.50" x 8.25", Aluminum, Hub Pilot, Single	The tires will be mounted on Alcoa 22.50" x 8.25" polished aluminum disc wheels with a ten (10) stud 11.25" bolt circle.
0568081	Tire Balancing, Counteract Beads	**TIRE BALANCE** All tires will be balanced with Counteract balancing beads. The beads will be inserted into the tire and eliminate the need for wheel weights.
0602747	No Tire Pressure Indicator, Fire Department Omits, Non-NFPA 2016 Compliant	**TIRE PRESSURE INDICATOR** NFPA 1901, 2016 edition, section 4.13.4 requires each tire be equipped with a visual indicator or monitoring system that indicates tire pressure. Per Fire Department specification, a tire pressure indicator is not on the apparatus as manufactured. This apparatus will be non-compliant to NFPA 1901 standards effective at time of contract execution.

0003245	Axle Hub Covers w/center hole, S/S, Front Axle	**FRONT HUB COVERS** Stainless steel hub covers will be provided on the front axle. An oil level viewing window will be provided.
0531133	Axle Hub Covers, Rear, S/S, High Hat, Real Wheel (Pair)	**HUB COVERS (rear)** A pair of stainless steel high hat hub covers will be provided on rear axle hubs. The covers will be manufactured by Real Wheels, Inc, and will come with the standard warranty.
0057936	Covers, Lug Nut, Chrome	**CHROME LUG NUT COVERS** Chrome lug nut covers will be supplied on front and rear wheels.
0002046	Mud Flap, Front and Rear, No Logo	**MUD FLAPS** Mud flaps will be installed behind the front and rear wheels. The mud flaps will be black.
0544802	Chocks, Wheel, SAC-44-E, Folding	**WHEEL CHOCKS** There will be one (1) pair of folding Ziamatic, Model SAC-44-E, aluminum alloy, Quick-Choc wheel blocks, with easy-grip handle provided.
0544806	Mounting Brackets, Chocks, SAC-44-E, Folding, Horizontal	**Wheel Chock Brackets** There will be one (1) pair of Zico, Model SQCH-44-H, horizontal mounting wheel chock brackets provided for the Ziamatic, Model SAC-44-E, folding wheel chocks. The brackets will be made of aluminum and consist of a quick release spring loaded rod to hold the wheel chocks in place. The brackets will be mounted forward of the left side rear tire and rearward of the left side rear tire.
0010670	ABS Wabco Brake System, Single rear axle	**ANTI-LOCK BRAKE SYSTEM** The vehicle will be equipped with a Meritor WABCO 4S4M, anti-lock braking system. The ABS will provide a 4-channel anti-lock braking control on both the front and rear wheels. A digitally controlled system that utilizes microprocessor technology will control the anti-lock braking system. Each wheel will be monitored by the system. When any particular wheel begins to lockup, a signal will be sent to the control unit. This control unit then will reduce the braking of that wheel for a fraction of a second and then reapply the brake. This anti-lock brake system will eliminate the lockup of any wheel thus helping to prevent the apparatus from skidding out of control.
0030185	Brakes, Knorr/Bendix 17", Disc, Front, TAK-4	**BRAKES** The service brake system will be full air type. The front brakes will be Knorr/Bendix disc type with a 17.00" ventilated rotor for improved stopping distance. The brake system will be certified, third party inspected, for improved stopping distance.
0509206	Brakes, Meritor, EX225, Disc Plus, Rear, Single Axle	The rear brakes will be Meritor™, Disc Plus, Model EX225, disc operated with automatic slack adjusters and a 17.00" ventilated rotor for improved stopping distance.
0731553	Air Compressor, Brake, Cummins/Wabco 25.9 CFM	**BRAKE SYSTEM AIR COMPRESSOR** The air compressor will be a Cummins/WABCO with 25.9 cubic feet per minute output.
0644232	Brake Reservoirs, 4,272 Cubic Inch Minimum Capacity, Saber FR/Enforcer	**BRAKE SYSTEM** The brake system will include: Brake treadle valve Heated automatic moisture ejector on air dryer Total air system minimum capacity of 4,272 cubic inches Two (2) air pressure gauges with a red warning light and an audible alarm, that activates when air pressure falls below 60 psi Spring set parking brake system Parking brake operated by a push-pull style control valve A parking "brake on" indicator light on instrument panel Park brake relay/inversion and anti-compounding valve, in conjunction with a double check valve system, with an automatic spring brake application at 40 psi A pressure protection valve to prevent all air operated accessories from drawing air from the air system when the system pressure drops below 80 psi (550 kPa) 1/4 turn drain valves on each air tank The air tank will be primed and painted to meet a minimum 750 hour salt spray test. To reduce the effects of corrosion, the air tank will be mounted with stainless steel brackets.
0568012	Air Dryer, Wabco System Saver 1200, Heater, 2010	**BRAKE SYSTEM AIR DRYER** The air dryer will be WABCO System Saver 1200 with spin-on coalescing filter cartridge and 100 watt heater.

0000790	Brake Lines, Nylon	**BRAKE LINES** Color-coded nylon brake lines will be provided. The lines will be wrapped in a heat protective loom in the chassis areas that are subject to excessive heat.
0617799	Inlet/Outlet, Air, w/Disconnect Fitting, 1/4 Turn Valve, Location	**AIR INLET/OUTLET** One (1) air inlet/outlet will be installed with the female coupling located DS pump panel. This system will tie into the "wet" tank of the brake system and include a check valve in the inlet line and an 85 psi pressure protection valve in the outlet line. The air outlet will be controlled by a 1/4 turn valve. A mating male fitting will be provided with the loose equipment. The air inlet will allow a shoreline air hose to be connected to the vehicle. This will allow station air to be supplied to the brake system of the vehicle to insure constant air pressure.
0699105	Drains, Manual Air Tank, Parker DC603, Brass IPOS	**AIR TANK DRAINS** Parker® model DC 603 manual drain valves will be provided on all air reservoirs. The valves will be brass with a 150 PSI rating.
0000845	Air Tank, Additional for Extra Capacity	**ADDITIONAL AIR TANK** An additional air tank with 1454 cubic inch displacement will be provided to increase the capacity of the main air brake system. This tank will be plumbed into the rear half of the brake system. The air tank will be primed and painted to meet a minimum 750 hour spray test. To reduce the effects of corrosion, the air tank will be mounted with stainless steel brackets. The output flow of the engine air compressor will vary with engine rpm. Full compressor output will only be achieved at governed engine speed. Engine speed will be limited by generators, pumps and other PTO driven options.
0675244	All Wheel Lock-up, Single Prk Brk Control	**ALL WHEEL LOCK-UP** An all wheel lock-up system will be installed which will apply air to the front brakes and use the spring brake at the rear. Front brakes will apply when standard rear parking brake control valve is activated.
0893805	Engine, Cummins X12, 525 hp, 1695 lb-ft, W/OBD, EPA 2021, Enforcer	**ENGINE** The chassis will be powered by an electronically controlled engine as described below: Make: Cummins Model: X12 Power: 525 hp at 1900 rpm Torque: 1695 lb-ft at 1000 rpm Governed Speed: 2000 rpm Emissions Level: EPA 2021 Fuel: Diesel Cylinders: Six (6) Displacement: 729 cubic inches (11.9L) Starter: Delco 39MT™ Fuel Filters: Spin-on style primary filter with water separator and water-in-fuel sensor. Secondary spin-on style filter. The engine will include On-board diagnostics (OBD), which provides self diagnostic and reporting. The system will give the owner or repair technician access to state of health information for various vehicle sub systems. The system will monitor vehicle systems, engine and after treatment. The system will illuminate a malfunction indicator light on the dash console if a problem is detected.
0730962	Filters, Remote Mounted, Oil, Fuel, X12, VEL/AXT, ENF, QTM	**REMOTE MOUNTED ENGINE FILTERS** The engine fuel and oil filters will be remote mounted for ease of maintenance.
0001244	High Idle w/Electronic Engine, Custom	**HIGH IDLE** A high idle switch will be provided, inside the cab, on the instrument panel, that will automatically maintain a preset engine rpm. A switch will be installed, at the cab instrument panel, for activation/deactivation. The high idle will be operational only when the parking brake is on and the truck transmission is in neutral. A green indicator light will be provided, adjacent to the switch. The light will illuminate when the above conditions are met. The light will be labeled "OK to Engage High Idle."

0687994	Engine Brake, Jacobs Compression Brake, Cummins Engine	**ENGINE BRAKE** A Jacobs® engine brake is to be installed with the controls located on the instrument panel within easy reach of the driver. The driver will be able to turn the engine brake system on/off and have a high, medium and low setting. The engine brake will activate when the system is on and the throttle is released. The high setting of the brake application will activate and work simultaneously with the variable geometry turbo (VGT) provided on the engine. The engine brake will be installed in such a manner that when the engine brake is slowing the vehicle the brake lights are activated. The ABS system will automatically disengage the auxiliary braking device, when required.
0552334	Clutch, Fan, Air Actuated, Horton Drive Master	**CLUTCH FAN** A Horton® fan clutch will be provided. The fan clutch will be automatic when the pump transmission is in "Road" position, and fully engaged in "Pump" position.
0640477	Air Intake, Metal Screen, Saber FR/Enforcer	**ENGINE AIR INTAKE** The engine air intake will be located above the engine cooling package. It will draw fresh air from the front of the apparatus through the radiator grille. A stainless steel metal screen will be installed at the inlet of the air intake system that will meet NFPA 1901 requirements. The air cleaner and stainless steel screen will be easily accessible by tilting the cab.
0794743	Exhaust System, 5", X12/X15, MX13, Engine, Horizontal, Right Side	**EXHAUST SYSTEM** The exhaust system will include a Single Module™ aftertreatment device to meet current EPA standards. The exhaust system will be stainless steel from the turbo to the inlet of the aftertreatment device, and will be 5.00" in diameter. An insulation wrap will be provided on all exhaust pipes between the turbo and aftertreatment device to minimize the heat loss to the aftertreatment device. The exhaust will terminate horizontally ahead of the right side rear wheels. A tailpipe diffuser will be provided to reduce the temperature of the exhaust as it exits. Heat deflector shields will be provided to isolate chassis and body components from the heat of the tailpipe diffuser.
0683310	Diffuser, Exhaust, Modified For Extraction, 5"x7"x5", Flush With Rub Rail, CARE	**EXHAUST MODIFICATION** The exhaust pipe will be 90 degrees to the body. The diffuser will be reduced to 5.00" in the center to accommodate the fire department's air recovery system. The 5.00" extension pipe coming out of the end of the diffuser will be flush with the body rub rail. There will be a minimum of 4.00" clearance between the top of the 5.00" extension and the bottom of the body. There will be a minimum of 2.50" from the exhaust pipe to the under side of the body heat shield. The last 7.00" of the exhaust will be free of hangers and/or clamps.
0788765	Radiator, Saber FR/Enforcer	**RADIATOR** The radiator and the complete cooling system will meet or exceed NFPA and engine manufacturer cooling system standards. For maximum corrosion resistance and cooling performance, the entire radiator core will be constructed using long life aluminum alloy. The radiator core will consist of aluminum fins, having a serpentine design, brazed to aluminum tubes. The radiator core will have a minimum front area of 1060 square inches. Supply tank will be made of heavy duty glass-reinforced nylon and the return tank will be mode of aluminum. Both tanks will be crimped onto the core assembly using header tabs and a compression gasket to complete the radiator core assembly. There will be a full steel frame around the inserts to enhance cooling system durability and reliability. The radiator will be compatible with commercial antifreeze solutions. The radiator assembly will be isolated from the chassis frame rails with rubber isolators to prevent the development of leaks caused by twisting or straining when the apparatus operates over uneven terrain. The radiator will include a de-aeration/expansion tank. For visual coolant level inspection, the radiator will have a built-in sight glass. The radiator will be equipped with a 15 psi pressure relief cap. A drain port will be located at the lowest point of the cooling system and/or the bottom of the radiator to permit complete flushing of the coolant from the system. Shields or baffles will be provided to prevent recirculation of hot air to the inlet side of the radiator.
0001090	Cooling Hoses, Rubber	**COOLANT LINES** Gates, or Goodyear, rubber hose will be used for all engine coolant lines installed by Pierce Manufacturing. Hose clamps will be stainless steel constant torque type to prevent coolant leakage. They will expand and contract according to coolant system temperature thereby keeping a constant clamping pressure on the hose.
0788718	Radiator Coolant, Peak Final Charge Global OAT, Red	**RADIATOR COOLANT** The radiator will be cooled with PEAK Final Charge® Global extended life coolant with organic acid technology (OAT). The color of the coolant will be red.

0021126		Fuel Tank, 50 Gallon, Left Side Fill	**FUEL TANK** A 50 gallon fuel tank will be provided and mounted at the rear of the chassis. The tank will be constructed of 12-gauge, hot rolled steel. It will be equipped with swash partitions and a vent. To eliminate the effects of corrosion, the fuel tank will be mounted with stainless steel straps. A .75" drain plug will be located in a low point of the tank for drainage. A fill inlet will be located on the left hand side of the body and is covered with a hinged, spring loaded, stainless steel door that is marked "Ultra Low Sulfur - Diesel Fuel Only". A .50" diameter vent will be installed from tank top to just below fuel fill inlet. The fuel tank will meet all FHWA 393.67 requirements including a fill capacity of 95 percent of tank volume.
0001129		Lines, Fuel	All fuel lines will be provided as recommended by the engine manufacturer.
0758340	SP	DEF Tank, 4.5 Gallon, DS Fill, Rearward of Rr Axle, Common Triangular Door	**DIESEL EXHAUST FLUID TANK** A 4.5 gallon diesel exhaust fluid (DEF) tank will be provided and mounted in the driver's side body rearward of the rear axle. A 0.50" drain plug will be provided in a low point of the tank for drainage. A fill inlet will be provided and marked "Diesel Exhaust Fluid Only". The fill inlet will be located adjacent to the engine fuel inlet behind a common painted door on the driver side of the vehicle. The tank will meet the engine manufacturers requirement for 10 percent expansion space in the event of tank freezing. The tank will include an integrated heater unit that utilizes engine coolant to thaw the DEF in the event of freezing.
0723716		Fuel Priming Pump, Electronic, Automatic, Cummins, No Swt Req'd	**FUEL PRIMING PUMP** A Cummins automatic electronic fuel priming pump will be integrated as part of the engine.
0552567		Shutoff Valve, Fuel Line @ Fuel Tank	**FUEL SHUTOFF** A shutoff valve will be installed in the fuel line, at the fuel tank.
0553019		Cooler, Engine Fuel, Imp/Vel, AXT/Qtm/Sab/DCF/SFR/Enf	**FUEL COOLER** An air to fuel cooler will be installed in the engine fuel return line.
0578959		Fuel/Water Separator, Racor Inline	**FUEL SEPARATOR** The engine will be equipped with a Racor in-line spin-on fuel and water separator in addition to the engine fuel filters.
0801886		Trans, Allison 6th Gen, 4500 EVS P, Imp/Vel/Enf	**TRANSMISSION** An Allison 6th generation, Model EVS 4500P, electronic, torque converting, automatic transmission will be provided. Two (2) PTO openings will be located on left side and top of converter housing (positions 8 o'clock and 1 o'clock). A transmission temperature gauge with amber light and buzzer will be installed on the cab instrument panel.
0644809		Transmission, Shifter, 6-Spd, Push Button, 4500 EVS, 4+2 Mode, AXT/Qtm/DCF/Enf	**TRANSMISSION SHIFTER** A six (6)-speed push button shift module with four (4) + two (2) "Mode" selector will be mounted to right of driver on console. Shift position indicator will be indirectly lit for after dark operation. The transmission ratio will be 1st - 4.70 to 1.00, 2nd - 2.21 to 1.00, 3rd - 1.53 to 1.00, 4th - 1.00 to 1.00, 5th - 0.76 to 1.00, 6th - 0.67 to 1.00, R - 5.55 to 1.00.
0684459		Transmission Oil Cooler, Modine, External	**TRANSMISSION COOLER** A Modine plate and fin transmission oil cooler will be provided using engine coolant to control the transmission oil temperature.
0565656		Fluid, 4000/4500 Series Transmission,TranSynd synthetic, IPOS, Custom	**TRANSMISSION FLUID** The transmission will be provided with TranSynd heavy duty synthetic transmission fluid.
0001375		Driveline, Spicer 1810	**DRIVELINE** Drivelines will be a heavy-duty metal tube and be equipped with Spicer® 1810 universal joints. The shafts will be dynamically balanced before installation. A splined slip joint will be provided in each driveshaft where the driveline design requires it. The slip joint will be coated with Glidecoat® or equivalent.

0669988	Steering, Sheppard M110 w/Tilt, TAK-4, Eaton Pump, w/Cooler	**STEERING** Dual Sheppard, Model M110, steering gears, with integral heavy-duty power steering, will be provided. For reduced system temperatures, the power steering will incorporate an air to oil cooler and an Eaton, Model VN20, hydraulic pump with integral pressure and flow control. All power steering lines will have wire braded lines with crimped fittings. A tilt and telescopic steering column will be provided to improve fit for a broader range of driver configurations.
0605356	Steering Wheel, 4 Spoke without Controls, Saber FR/Enforcer	**STEERING WHEEL** The steering wheel will be 18.00" in diameter, have tilting and telescoping capabilities, and a 4-spoke design.
0690274	Logo/Emblem, on Dash	**LOGO AND CUSTOMER DESIGNATION ON DASH** The dash panel will have an emblem containing the Pierce logo and customer name. The emblem will have three (3) rows of text for the customer's department name. There will be a maximum of eight (8) characters in the first row, 11 characters in the second row and 11 characters in the third row. The first row of text will be: CITY The second row of text will be: OF The third row of text will be: PACIFIC GROVE
0606557	Bumper, 13" Extended, Saber FR/Enforcer	**BUMPER** A one (1) piece, ten (10) gauge, 304-2B type polished stainless steel bumper, minimum of 10.00" high, will be attached to a bolted modular extension frame constructed of 50,000 psi tensile steel "C" channel mounted directly behind it to provide adequate support strength. The bumper will be extended 13.00" from front face of cab. **Gravel Pan** A gravel pan, constructed of bright aluminum treadplate, will be furnished between the bumper and cab face. The gravel pan will be properly supported from the underside to prevent flexing and vibration of the aluminum treadplate.
0639017	Tray, Hose, Center, 13" Bumper, Outside Air Horns	**CENTER HOSE TRAY** A hose tray, constructed of aluminum, will be placed in the center of the bumper extension. The tray will have a capacity of 100' of 1.50" double jacket cotton-polyester hose. Black rubber grating will be provided at the bottom of the tray. Drain holes are also provided.
0624826	Hose Restraint, Bumper Tray, 2.00" Straps, Fasteners, Pair	**Center Hose Tray Restraint** There will be one (1) pair of hose tray restraint straps located over the center mounted tray. The restraints will be 2.00" wide black nylon straps with seat belt buckle fasteners provided. The straps will be used to secure the hose in the tray.
0614646	No Lift & Tow Package, Imp/Vel, AXT, SFR/Enf	
0002270	Tow Hooks, Chrome	**TOW HOOKS** Two (2) chromed steel tow hooks will be installed under the bumper and attached to the front frame members. The tow hooks will be designed and positioned to allow up to a 6,000 lb straight horizontal pull in line with the centerline of the vehicle. The tow hooks will not be used for lifting of the apparatus.

0648332	Cab, Enforcer, 7010	**CAB** The Enforcer cab will be designed specifically for the fire service and manufactured by the chassis builder. The cab will be built by the apparatus manufacturer in a facility located on the manufacturer's premises. For reasons of structural integrity and enhanced occupant protection, the cab will be a heavy duty design, constructed to the following minimal standards. The cab will have 12 main vertical structural members located in the A-pillar (front cab corner posts), B-pillar (side center posts), C-pillar (rear corner posts), and rear wall areas. The A-pillar will be constructed of solid A356-T5 aluminum castings. The B-pillar and C-pillar will be constructed from 0.13" wall extrusions. The rear wall will be constructed of two (2) 2.00" x 2.00" outer aluminum extrusions and two (2) 2.00" x 1.00" inner aluminum extrusions. All main vertical structural members will run from the floor to 4.625" x 3.864" x 0.090" thick roof extrusions to provide a cage-like structure with the A-pillar and roof extrusions being welded into a 0.25" thick corner casting at each of the front corners of the roof assembly. The front of the cab will be constructed of a 0.13" firewall plate, covered with a 0.090" front skin (for a total thickness of 0.22"), and reinforced with a full width x 0.50" thick cross-cab support located just below the windshield and fully welded to the engine tunnel. The cross-cab support will run the full width of the cab and weld to each A-pillar, the 0.13" firewall plate, and the front skin. The cab floors will be constructed of 0.125" thick aluminum plate and reinforced at the firewall with an additional 0.25" thick cross-floor support providing a total thickness of 0.375" of structural material at the front floor area. The front floor area will also be supported with two (2) triangular 0.30" wall extrusions that also provides the mounting point for the cab lift. This tubing will run from the floor wireway of the cab to the engine tunnel side plates, creating the structure to support the forces created when lifting the cab. The cab will be 96.00" wide (outside door skin to outside door skin) to maintain maximum maneuverability. The forward cab section will have an overall height (from the cab roof to the ground) of approximately 99.00". The crew cab section will have a 10.00" raised roof, with an overall cab height of approximately 109.00". The overall height listed will be calculated based on a truck configuration with the lowest suspension weight rating, the smallest diameter tires for the suspension, no water weight, no loose equipment weight, and no personnel weight. Larger tires, wheels, and suspension will increase the overall height listed. The floor to ceiling height inside the crew cab will be 64.50" in the center and outboard positions. The crew cab floor will measure 46.00" from the rear wall to the back side of the rear facing seat risers. The medium block engine tunnel, at the rearward highest point (knee level), will measure 61.50" to the rear wall. The big block engine tunnel will measure 51.50" to the rear wall. The crew cab will be a totally enclosed design with the interior area completely open to improve visibility and verbal communication between the occupants. The cab will be a full tilt cab style. A 3-point cab mount system with rubber isolators will improve ride quality by isolating chassis vibrations from the cab. **CAB ROOF DRIP RAIL** For enhanced protection from inclement weather, a drip rail will be furnished on the sides of the cab. The drip rail will be painted to match the cab roof, and bonded to the sides of the cab. The drip rail will extend the full length of the cab roof. **INTERIOR CAB INSULATION** The cab will include 1.00" insulation in the ceiling, 1.50" insulation in the side walls, and 2.00" insulation in the rear wall to maximize acoustic absorption and thermal insulation. **FENDER LINERS** Full circular inner fender liners in the wheel wells will be provided. **PANORAMIC WINDSHIELD** A one (1)-piece safety glass windshield will be provided with over 2,775 square inches of clear viewing area. The windshield will be full width and will provide the occupants with a panoramic view. The windshield will consist of three (3) layers: outer light, middle safety laminate, and inner light. The outer light layer will provide superior chip resistance. The middle safety laminate layer will prevent the windshield glass pieces from detaching in the event of breakage. The inner light will provide yet another chip resistant layer. The cab windshield will be bonded to the aluminum windshield frame using a urethane adhesive. A custom frit pattern will be applied on the outside perimeter of the windshield for a finished automotive appearance. **WINDSHIELD WIPERS** Three (3) electric windshield wipers with washer will be provided that meet FMVSS and SAE requirements. The washer reservoir will be able to be filled without raising the cab.
0747442	Engine Tunnel, X12, MX13, Enforcer	**ENGINE TUNNEL** Engine hood side walls will be constructed of 0.375" aluminum. The top will be constructed of 0.125" aluminum and will be tapered at the top to allow for more driver and passenger elbow room. The engine hood will be insulated for protection from heat and sound. The noise insulation keeps the dBA level within the limits stated in the current NFPA1901 standards. The engine tunnel will be no higher than 17.00" off the crew cab floor.
0633594	Rear Wall, Interior, Adjustable Seating	**INTERIOR CREW CAB REAR WALL ADJUSTABLE SEATING (PATENT PENDING)** The interior rear wall of the crew cab will have mounting holes every 2.75" to allow for adjustability of the forward facing crew cab seating along the rear wall. Seats will be adjustable with use of simple hand tools allowing departments flexibility of their seating arrangement should their department needs change.

0632103	Rear Wall, Exterior, Cab, Saber FR/Enforcer	**CAB REAR WALL EXTERIOR COVERING** The exterior surface of the rear wall of the cab will be overlaid with bright aluminum treadplate that covers the entire rear wall.
0639727	Cab Lift, Elec/Hyd, Manual Override, Saber FR/Enforcer	**CAB LIFT** A hydraulic cab lift system will be provided consisting of an electric powered hydraulic pump, dual lift cylinders, and necessary hoses and valves. Hydraulic pump will have a manual override for backup in the event of electrical failure. Lift controls will be located on the right side pump panel or front area of the body in a convenient location. The cab will be capable of tilting 43 degrees to accommodate engine maintenance and removal. The cab will be locked down by a 2-point normally closed spring loaded hook type latch that fully engages after the cab has been lowered. The system will be hydraulically actuated to release the normally closed locks when the cab lift control is in the raised position and cab lift system is under pressure. When the cab is completely lowered and system pressure has been relieved, the spring loaded latch mechanisms will return to the normally closed and locked position. The hydraulic cylinders will be equipped with a velocity fuse that protects the cab from accidentally descending when the control is located in the tilt position. For increased safety, a redundant mechanical stay arm will be provided that must be manually put in place on the left side between the chassis and cab frame when the cab is in the raised position. This device will be manually stowed to its original position before the cab can be lowered. **Cab Lift Interlock** The cab lift system will be interlocked to the parking brake. The cab tilt mechanism will be active only when the parking brake is set and the ignition switch is in the on position. If the parking brake is released, the cab tilt mechanism will be disabled.
0695930	Grille, Bright Finished, Front of Cab, Enforcer	**GRILLE** A bright finished aluminum mesh grille screen, inserted behind a bright finished grille surround, will be provided on the front center of the cab.
0647932	Not Required, Trim, S/S Band, Across Cab Face, AXT/Dash CF/Saber/Enforcer	
0015440	No Chrome Molding, On side of cab	
0569263	Mirrors, Retrac, West Coast Style, Remote, w/Remote Convex	**MIRRORS** A Retrac Aerodynamic, Model 613295, dual vision, motorized, west coast style mirror with chrome finish will be mounted on each side of the front cab door with spring loaded retractable arms. The flat glass and convex glass will be adjustable with a remote control within reach of the driver.
0648170	Door, Half-Height, Saber FR/Enforcer 4-Door Cab, Raised Roof	**DOORS** To enhance entry and egress to the cab, the forward cab door openings will be a minimum of 37.50" wide x 63.37" high. The crew cab doors will be located on the sides of the cab and will be constructed in the same manner as the forward cab doors. The crew cab door openings will be a minimum of 34.30" wide x 73.25" high. The forward cab and crew cab doors will be constructed of extruded aluminum with a nominal material thickness of 0.093". The exterior door skins will be constructed from 0.090" aluminum. A customized, vertical, pull-down type door handle will be provided on the exterior of each cab door. The finish of the door handle will be chrome/black. The exterior handle will be designed specifically for the fire service to prevent accidental activation, and will provide 4.00" wide x 2.00" deep hand clearance for ease of use with heavy gloved hands. Each door will also be provided with an interior flush, open style paddle handle that will be readily operable from fore and aft positions, and be designed to prevent accidental activation. The interior handles will provide 4.00" wide x 1.25" deep hand clearance for ease of use with heavy gloved hands. The cab doors will be provided with both interior (rotary knob) and exterior (keyed) locks exceeding FMVSS standards. The keys will be Model 751. The locks will be capable of activating when the doors are open or closed. The doors will remain locked if locks are activated when the doors are opened, then closed. A full length, heavy duty, stainless steel, piano-type hinge with a 0.38" pin and 11 gauge leaf will be provided on all cab doors. There will be double automotive-type rubber seals around the perimeter of the door framing and door edges to ensure a weather-tight fit. A chrome grab handle will be provided on the inside of each cab door for ease of entry. A red webbed grab handle will be installed on the crew cab door stop strap. The grab handles will be securely mounted. The bottom cab step at each cab door location will be located below the cab doors and will be exposed to the exterior of the cab.
0655543	Door Panel, Brushed Stainless Steel, Saber/Enforcer 4-Door Cab	**Door Panels** The inner cab door panels will be constructed out of brushed stainless steel.

0630636	Controls, Electric Roll-Up Windows, 4dr, 4 Driver Controls, Saber FR/Enforcer	**ELECTRIC OPERATED CAB DOOR WINDOWS** All four (4) cab doors will be equipped with electric operated windows with one (1) flush mounted automotive style switch on each door. The driver's door will have four (4) switches, one (1) to control each door window. Each switch will allow intermittent or auto down operation for ease of use. Auto down operation will be actuated by holding the window down switch for approximately 1 second.
0638310	Steps, 4-Door Cab, Saber FR/Enforcer	**CAB STEPS** The forward cab and crew cab access steps will be a full size two (2) step design to provide largest possible stepping surfaces for safe ingress and egress. The bottom steps will be designed with a grip pattern punched into bright aluminum treadplate material to provide support, slip resistance, and drainage. The bottom steps will be a bolt-in design to minimize repair costs should they need to be replaced. The forward cab steps will be a minimum 25.00" wide, and the crew cab steps will be 21.65" wide with a 10.00" minimum depth. The inside cab steps will not exceed 16.50" in height. The vertical surfaces of the step well will be aluminum treadplate.
0770194	Handrail, Exterior, Knurled, Alum, 4-Door Cab	**CAB EXTERIOR HANDRAILS** A 1.25" diameter slip-resistant, knurled aluminum handrail will be provided adjacent to each cab and crew cab door opening to assist during cab ingress and egress.
0892638	Lights, Cab & Crw Cab Acs Stps, P25, LED w/Bezel, 6lts	**STEP LIGHTS** There will be six (6) white LED step lights with chrome housing installed for cab and crew cab access steps. One (1) light for the left access steps. Two (2) lights for the left side crew cab access steps. Two (2) lights for the right side crew cab access steps. One (1) light for the right side access step. In order to ensure exceptional illumination, each light will provide a minimum of 25 foot-candles (fc) covering an entire 15" x 15" square placed ten (10) inches below the light and a minimum of 1.5 fc covering an entire 30" x 30" square at the same ten (10) inch distance below the light. The lights will be activated when the battery switch is on and the adjacent door is opened.
0583698	Fenders, S/S on cab, Extra Wide, Saber/Enf	**FENDER CROWNS** Stainless steel fender crowns will be installed at the cab wheel openings.
0557023	Handrail, 10", Below Cab Windshield, Pair	**HANDRAILS BELOW CAB WINDSHIELD** A 10.00" long x 1.25" diameter handrail will be mounted below the front cab windshield, one (1) on each side. The handrails will be extruded aluminum with a ribbed design to provide a positive gripping surface.
0042105	No Windows, Side of Crew Cab	
0012090	Not Required, Windows, Front/Side of raised roof	
0779036	Windows, Rear CC, (2) 14.75" x 7.25", Saber FR/Enforcer	**REAR WALL WINDOWS** There will be two (2) windows, located one (1) each side, on the rear wall of the crew cab. The windows will measure 14.75" wide x 7.25" high.
0722796	Dash, Poly, Saber FR/Enforcer	**CAB DASH** The driver side dash, switch panel located to the right of the driver, and center console will be an easily removable high impact resistant polymer cover. The instrument gauge cluster will be surrounded with a high impact ABS plastic contoured to the same shape of the instrument gauge cluster. The officer side dash will be a flat top design with an upper beveled edge to provide easy maintenance and will be constructed out of aluminum and painted to match the cab interior.
0634206	Mounting Provisions, 1/4" Alum, Full Engine Tunnel, Saber FR/Enforcer	**MOUNTING PLATE ON ENGINE TUNNEL** Equipment installation provisions will be installed on the engine tunnel. A .25" smooth aluminum plate will be bolted to the top surface of the engine tunnel. The plate will follow the contour of the engine tunnel and will run the entire length of the engine tunnel. The plate will be spaced off the engine tunnel 1.00" to allow for wire routing below the plate. The mounting surface will be painted to match the cab interior.

0606278	Tray, Equipment Mounting, Aluminum, Lip, Size	**EQUIPMENT MOUNTING TRAY(S)** There will be one (1) tray(s) for mounting of equipment located CENTER ENGINE TUNNEL, EXACT LOCATION AT PRECON Each tray will have a 1.00" lip on four (4) sides. The size of the tray(s) will be 30"Lx24"Wx1"H. Each tray will be fabricated from aluminum and will be painted to match the cab interior. Tray not intended for storage of loose equipment. Items stored on tray will be permanently attached to meet NFPA requirements.
0750824	Cab Interior, Vinyl Headliner, Saber FR/Enforcer, CARE	**CAB INTERIOR** The cab interior will be constructed of primarily metal (painted aluminum) to withstand the severe duty cycles of the fire service. The engine tunnel will be padded and covered, on the top and sides, with dark silver gray 36 ounce leather grain vinyl resistant to oil, grease, and mildew. For durability and ease of maintenance, the cab interior side walls will be painted aluminum. The rear wall will be painted aluminum. The headliner will be installed in both forward and rear cab sections. Headliner material will be vinyl. A sound barrier will be part of its composition. Material will be installed on an aluminum sheet and securely fastened to interior cab ceiling. The forward portion of the cab headliner will permit easy access for service of electrical wiring or other maintenance needs. All wiring will be placed in metal raceways. **CAB INTERIOR UPHOLSTERY** The cab interior upholstery will be 36 oz dark silver gray vinyl.
0753903	Cab Interior, Paint Color, Saber FR/Enforcer	**CAB INTERIOR PAINT** The cab interior metal surfaces, excluding the rear heater panels, will be painted fire smoke gray, vinyl texture paint. The rear heater panels will be painted black, vinyl textured paint.
0052100	Floor, Rubber Padded, Cab & Crew Cab, Saber/Enforcer	**CAB FLOOR** The cab and crew cab floor areas will be covered with Polydamp™ acoustical floor mat consisting of a black pyramid rubber facing and closed cell foam decoupler. The top surface of the material has a series of raised pyramid shapes evenly spaced, which offer a superior grip surface. Additionally, the material has a 0.25" thick closed cell foam (no water absorption) which offers a sound dampening material for reducing sound levels.

0722696	HVAC, Enforcer, CARE	**DEFROST/AIR CONDITIONING SYSTEM** A ceiling mounted combination heater, defroster and air conditioning system will be installed in the cab above the engine tunnel area. **Cab Defroster** A 54,000 BTU heater-defroster unit with 690 SCFM of air flow will be provided inside the cab. The heater-defroster will be installed in the forward portion of the cab ceiling. Air outlets will be strategically located in the cab header extrusion per the following: One (1) adjustable will be directed towards the left side cab window One (1) adjustable will be directed towards the right side cab window Six (6) fixed outlets will be directed at the windshield The defroster will be capable of clearing 98 percent of the windshield and side glass when tested under conditions where the cab has been cold soaked at 0 degrees Fahrenheit for 10 hours, and a 2 ounce per square inch layer of frost/ice has been able to build up on the exterior windshield. The defroster system will meet or exceed SAE J382 requirements. **Cab/Crew Auxiliary Heater** There will be one (1) 31,000 BTU auxiliary heater with 560 SCFM of air flow provided in the left side rear facing seat riser with a dual scroll blower. An aluminum plenum incorporated into the cab structure used to transfer heat to the forward left side position. **Air Conditioning** A condenser will be a 59,644 BTU output that meets and exceeds the performance specification will be mounted on the radiator. The air conditioning system will be capable of cooling the average cab temperature from 100 degrees Fahrenheit to 75 degrees Fahrenheit at 50 percent relative humidity within 30 minutes. The cooling performance test will be run only after the cab has been heat soaked at 100 degrees Fahrenheit for a minimum of 4 hours. The evaporator unit will be installed in the rear portion of the cab ceiling over the engine tunnel. The evaporator will include one (1) high performance heating core, one (1) high performance cooling core with (1) plenum directed to the front and one (1) plenum directed to the rear of the cab. The rear plenum will be covered with a formed plastic cover. The evaporator unit will have a 52,000 BTU at 690 SCFM rating that meets and exceeds the performance specifications. Adjustable air outlets will be strategically located on the forward plenum cover per the following: Four (4) will be directed towards the seating position on the left side of the cab Four (4) will be directed towards the seating position on the right side of the cab Adjustable air outlets will be strategically located on the rear plenum cover per the following: Minimum of five (5) will be directed towards crew cab area A high efficiency particulate air (HEPA) filter will be included for the system. Access to the filter cover will be secured with four (4) screws. The air conditioner refrigerant will be R-134A and will be installed by a certified technician. **Climate Control** An automotive style controller will be provided to control the heat and air conditioning system within the cab. The controller will have three (3) functional knobs for fan speed, temperature, and air flow distribution (front to rear) control. The system will control the temperature of the cab and crew cab automatically by pushing the center of the fan speed control knob. Rotate the center temperature control knob to set the cab and crew cab temperature. The AC system will be manually activated by pushing the center of the temperature control knob. Pushing the center of the air flow distribution knob will engage the AC for max defrost, setting the fan speeds to 100 percent and directing all air flow to the overhead forward position. The system controller will be located within panel position #12. **Gravity Drain Tubes** Two (2) condensate drain tubes will be provided for the air conditioning evaporator. The drip pan will have two (2) drain tubes plumbed separately to allow for the condensate to exit the drip pan. No pumps will be provided.
0624005	Sun Visor, Vinyl/Fabric, AXT, Dash CF, Qtm, Saber FR/Enforcer	**SUN VISORS** There will be two (2) vinyl covered sun visors provided. The sun visors will be located above the windshield with one (1) mounted on each side of the cab. There will be a black plastic thumb latch provided to help secure each sun visor in the stowed position.
0634328	Grab Handles, Driver and Officer Door Posts, Saber FR/Enforcer	**GRAB HANDLES** A black rubber covered grab handle will be mounted on the door post of the driver and officer's side cab door to assist in entering the cab. The grab handles will be securely mounted to the post area between the door and windshield.
0583938	Lights, Engine Compt, Custom, Auto Sw, Wln 3SC0CDCR, 3" LED, Trim	**ENGINE COMPARTMENT LIGHTS** There will be one (1) Whelen, Model 3SC0CDCR, 12 volt DC, 3.00" white LED light(s) with Whelen, Model 3FLANGEC, chrome flange kit(s) installed under the cab to be used as engine compartment illumination. These light(s) will be activated automatically when the cab is raised.

0602841	Fluid Check Access, Not Required, Non-NFPA 2016 Compliant	**ACCESS TO ENGINE DIPSTICKS** The cab will be tilted for access to the engine oil and transmission fluid dipsticks. NFPA 1901, 2016 edition, section 4.16.1 requires the fire apparatus to be designed so all manufacturer's recommended routine maintenance checks of lubricant and fluid levels can be performed by the operator without lifting the cab of a tilt-cab apparatus or without the need for hand tools. The fire apparatus purchaser will realize that by requesting an exception to this aspect of NFPA 1901, this fire apparatus will not contribute to the national standardization initiative. Per the purchaser's specification, this apparatus will not be compliant to NFPA 1901 standards in this regard.
0583042	Side Roll and Frontal Impact Protection	**CAB SAFETY SYSTEM** The cab will be provided with a safety system designed to protect occupants in the event of a side roll or frontal impact, and will include the following: A supplemental restraint system (SRS) sensor will be installed on a structural cab member behind the instrument panel. The SRS sensor will perform real time diagnostics of all critical subsystems and will record sensory inputs immediately before and during a side roll or frontal impact event. A slave SRS sensor will be installed in the cab to provide capacity for eight (8) crew cab seating positions. A fault-indicating light will be provided on the vehicle's instrument panel allowing the driver to monitor the operational status of the SRS system. A driver side front air bag will be mounted in the steering wheel and will be designed to protect the head and upper torso of the occupant, when used in combination with the 3-point seat belt. A passenger side knee bolster air bag will be mounted in the modesty panel below the dash panel and will be designed to protect the legs of the occupant, when used in combination with the 3-point seat belt. Air curtains will be provided in the outboard bolster of outboard seat backs to provide a cushion between occupant and the cab wall. Suspension seats will be provided with devices to retract them to the lowest travel position during a side roll or frontal impact event. Seat belts will be provided with pre-tensioners to remove slack from the seat belt during a side roll or frontal impact event. **Frontal Impact Protection** The SRS system will provide protection during a frontal or oblique impact event. The system will activate when the vehicle decelerates at a predetermined G force known to cause injury to the occupants. The cab and chassis will have been subjected, via third party test facility, to a crash impact during frontal and oblique impact testing. Testing included all major chassis and cab components such as mounting straps for fuel and air tanks, suspension mounts, front suspension components, rear suspensions components, frame rail cross members, engine and transmission and their mounts, pump house and mounts, frame extensions and body mounts. The testing provided configuration specific information used to optimize the timing for firing the safety restraint system. The sensor will activate the pyrotechnic devices when the correct crash algorithm, wave form, is detected. The SRS system will deploy the following components in the event of a frontal or oblique impact event: Driver side front air bag Passenger side knee bolster air bag Air curtains mounted in the outboard bolster of outboard seat backs Suspension seats will be retracted to the lowest travel position Seat belts will be pre-tensioned to firmly hold the occupant in place **Side Roll Protection** The SRS system will provide protection during a fast or slow 90 degree roll to the side, in which the vehicle comes to rest on its side. The system will analyze the vehicle's angle and rate of roll to determine the optimal activation of the advanced occupant restraints. The SRS system will deploy the following components in the event of a side roll: Air curtains mounted in the outboard bolster of outboard seat backs Suspension seats will be retracted to the lowest travel position Seat belts will be pre-tensioned to firmly hold the occupant in place
0622617	Seating Capacity, 6 Seats	**SEATING CAPACITY** The seating capacity in the cab will be six (6).
0766159	Seat, Driver, USSC, Valor, P1A, Air Ride, I-Back, Safety, Saber FR/Enforcer	**DRIVER SEAT** A USSC Valor air suspension I-back seat will be provided in the cab for the driver. For increased convenience, the seat will include a manual control to adjust the horizontal position (6.00" travel). To provide flexibility for multiple driver configurations, the seat will have a reclining back, adjustable from 15 degrees back to 15 degrees forward. The seat will include the following features incorporated into the side roll protection system: Side air curtain will be mounted integral to the outboard bolster of the seat back. The air curtain will be covered by a decorative panel when in the stowed position. A suspension seat safety system will be included. When activated in the event of a side roll, this system will pretension the seat belt and retract the seat to its lowest travel position. Shipped loose with the seat will be one (1) additional removable waterproof vinyl contaminant mitigation cover form fit for the seat cushion and back with velcro fasteners. The seat will be furnished with a 3-point, shoulder type seat belt.

0766079		Seat, Officer, USSC, Valor, P1A, Air Ride, I-Back, Safety, Saber FR/Enforcer	**OFFICER SEAT** A USSC, P1A, air suspension seat will be provided in the cab for the officer. For optimal comfort, the seat will be provided with 17.00" deep cushion. For increased convenience, the seat will include a manual control to adjust the height (3.00" travel) and horizontal position (4.25" travel). The seat back will be an I-Back style with an adjustable recline. The seat will include the following features incorporated into the side roll protection system: Side air curtain will be mounted integral to the outboard bolster of the seat back. The air curtain will be covered by a decorative panel when in the stowed position. A suspension seat safety system will be included. When activated in the event of a side roll, this system will pretension the seat belt, then retract the seat to its lowest travel position. Shipped loose with the seat will be one (1) additional removable waterproof vinyl contaminant mitigation cover form fit for the seat cushion and back with velcro fasteners. The seat will be furnished with a 3-point, shoulder type seat belt.
0002517		Not Required, Radio Compartment	
0890022	SP	Cabinet, Rear Facing, LS, 22.75 W x 25 H x 26 D, Ext Acc Only, Sp Mtg, SFR/Enf	**REAR FACING LEFT SIDE CABINET** A rear facing cabinet will be provided in the crew cab at the left side outboard position. The cabinet will be mounted off the edge of the seat riser so that it is even with the crew cab door frame. The cabinet will be 22.75" wide x 25.00" high x 26.00" deep. The cabinet will include no adjustable shelves or traysin the cabinet interior. The cabinet will include no louvers. The cabinet will provide access only from outside the cab with one (1) reverse hinged double pan door painted to match the cab exterior with a locking D-ring latch with #751 key. The door will be located on the side of the cab over the wheelwell. A pneumatic stay arm will be provided as a door stop. The clear door opening will be 17.00" wide x 23.50" high. The exterior access will be provided with a brushed stainless steel scuffplate on the lower door frame. The cabinet will be constructed of smooth aluminum and painted to match the cab interior. **Cabinet Light** There will be one (1) white LED strip light installed on the right side of the exterior cabinet door opening. The lighting will be controlled by an automatic door switch.
0102783		Not Required, Seat, Rr Facing C/C, Center	
0890021	SP	Cabinet, Rear Facing, RS, 22.75 W x 25 H x 24 D, Ext Acc Only, Sp Mtg, SFR/Enf	**REAR FACING RIGHT SIDE CABINET** A rear facing cabinet will be provided in the crew cab at the right side outboard position. The cabinet will be mounted off the edge of the seat riser so that it is even with the crew cab door frame. The cabinet will be 22.75" wide x 25.00" high x 24.00" deep. The cabinet will include no adjustable shelves or traysin the cabinet interior. The cabinet will include no louvers. The cabinet will provide access from outside the cab with one (1) reverse hinged double pan door painted to match the cab exterior with a locking D-ring latch with #751 key. A pneumatic stay arm will be provided as a door stop. The exterior clear door opening will be 17.00" wide x 23.50" high. The exterior access will be provided with a brushed stainless steel scuffplate on the lower door frame. The cabinet will be constructed of smooth aluminum, and painted to match the cab interior. **Cabinet Light** There will be one (1) white LED strip light installed on the left side of the exterior cabinet door opening. The lights will be controlled by an automatic door switch.
0757156		Seat, Forward Facing C/C, DS Outboard, USSC, Valor, I-Back,Foldup,Safety,SFR/Enf	**FORWARD FACING LEFT SIDE OUTBOARD SEAT** There will be one (1) forward facing, USSC Valor foldup seat provided at the driver side outboard position in the crew cab. For optimal comfort, and to maximize accessibility to the crew cab, the seat will be provided with 17.00" deep cushion. The seat back will be an I-back style with an adjustable recline angle. To ensure safe operation, the seat will be equipped with a sensor in the seat cushion and belt receptacle that will activate an alarm indicating the seat is occupied but not buckled. The seat will include the following features incorporated into the side roll protection system: Side air curtain will be mounted integral to the outboard bolster of the seat back. The air curtain will be covered by a decorative panel when in the stowed position A seat safety system will be included. When activated, this system will pretension the seat belt. The seat will be furnished with a 3-point, shoulder type seat belt. Shipped loose with the seat will be one (1) additional removable waterproof vinyl contaminant mitigation cover form fit for the seat cushion and back with velcro fasteners.

0795034	Seat, Forward Facing C/C, Center, (2) USSC, Valor, SCBA, Safety, Saber FR/Enf	**FORWARD FACING CENTER SEATS** There will be two (2) forward facing, USSC Valor seats provided at the center position in the crew cab. For optimal comfort, the seats will be provided with a 15.00" deep foam cushion. The seat backs will be an SCBA style with 90 degree back. The SCBA cavity will be adjustable from front to rear in 0.75" increments to accommodate different sized SCBA cylinders. Moving the SCBA cavity will be accomplished by unbolting, relocating, and re-bolting it in the desired location. The seat will include the following features incorporated into the side roll protection system: A seat safety system will be included. When activated, this system will pretension the seat belt. The seats will be furnished with a 3-point, shoulder type seat belt. Shipped loose with the seats will be two (2) additional removable waterproof vinyl contaminant mitigation cover form fit for the seat cushion and back with velcro fasteners, one (1) for each seat.
0757157	Seat, Forward Facing C/C, PS Outboard, USSC, Valor, I-Back,Foldup,Safety,SFR/Enf	**FORWARD FACING PASSENGER SIDE OUTBOARD SEAT** There will be one (1) forward facing, USSC Valor foldup seat provided at the passenger side outboard position in the crew cab. For optimal comfort, the seat will be provided with a 17.00" deep cushion. The seat back will be an I-back style with an adjustable recline angle. The seat will include the following features incorporated into the side roll protection system: Side air curtain will be mounted integral to the outboard bolster of the seat back. The air curtain will be covered by a decorative panel when in the stowed position. A seat safety system will be included. When activated, this system will pretension the seat belt around the occupant to firmly hold them in place in the event of a side roll. Shipped loose with the seat will be two (2) additional removable waterproof vinyl contaminant mitigation covers form fit for the seat cushion and back with velcro fasteners. The seat will be furnished with a 3-point, shoulder type seat belt.
0752005	Lip, Top of Interior Cabinet, All Sides	**LIP ON CABINET** There will be a 2.00" lip provided around the top perimeter of the cabinet. There will NOT be anything stored on the top portion without restraints There will be two (2) cabinets(s) provided with the lip each rear facing EMS compartment.
0782746	Upholstery, Seats In Cab, All Vinyl, USSC, CARE	**SEAT UPHOLSTERY** All seat upholstery will be leather grain gray vinyl resistant to oil, grease and mildew. The cab will have six (6) seating positions.
0543991	Bracket, Air Bottle, Hands-Free II, Cab Seats	**AIR BOTTLE HOLDERS** All SCBA type seats in the cab will have a "Hands-Free" auto clamp style bracket in its backrest. For efficiency and convenience, the bracket will include an automatic spring clamp that allows the occupant to store the SCBA bottle by simply pushing it into the seat back. For protection of all occupants in the cab, in the event of an accident, the inertial components within the clamp will constrain the SCBA bottle in the seat and will exceed the NFPA standard of 9G. There will be a quantity of two (2) SCBA brackets.
0735335	Door, Access, Front, (1) Rear Facing Seat Risers, No Heater	**ACCESS DOOR** An access door will be provided in the front edge of the right side rear facing seat riser with a drop down door. The drop down door will be provided with a flush, locking lift and turn latch and painted to match the cab interior. There will be no louvers.
0603866	Seat Belt, Dual Retractor, ReadyReach, Saber FR/Enforcer	**SEAT BELTS** All cab and tiller cab (if applicable) seating positions will have red seat belts. To provide quick, easy use for occupants wearing bunker gear, the female buckle and seat belt webbing length will meet or exceed the current edition of NFPA 1901 and CAN/ULC - S515 standards. The 3-point shoulder type seat belts will include height adjustment. This adjustment will optimize the belts effectiveness and comfort for the seated firefighter. The 3-point shoulder type seat belts will be furnished with dual automatic retractors that will provide ease of operation in the normal seating position. The 3-point shoulder type belts will also include the ReadyReach D-loop assembly to the shoulder belt system. The ReadyReach feature adds an extender arm to the D-loop location placing the D-loop in a closer, easier to reach location. Any flip up seats will include a 3-point shoulder type belts only. To ensure safe operation, the seats will be equipped with seat belt sensors in the seat cushion and belt receptacle that will activate an alarm indicating a seat is occupied but not buckled.
0602464	Helmet Storage, Provided by Fire Department, NFPA 2016	**HELMET STORAGE PROVIDED BY FIRE DEPARTMENT** NFPA 1901, 2016 edition, section 14.1.7.4.1 requires a location for helmet storage be provided. There is no helmet storage on the apparatus as manufactured. The fire department will provide a location for storage of helmets.

0647647	Lights, Dome, FRP Dual LED 4 Lts	**CAB DOME LIGHTS** There will be four (4) dual LED dome lights with grey bezels provided. Two (2) lights will be mounted above the inside shoulder of the driver and officer and two (2) lights will be installed and located, one (1) on each side of the crew cab. The color of the LED's will be red and white. The white LED's will be controlled by the door switches and the lens switch. The color LED's will be controlled by the lens switch. In order to ensure exceptional illumination, each white LED dome light will provide a minimum of 10.1 foot-candles (fc) covering an entire 20.00" x 20.00" square seating position when mounted 40.00" above the seat.
0896451	Enhanced Software for Cab and Crew Cab Dome Lts	**ENHANCED SOFTWARE FOR CAB AND CREW CAB DOME LIGHTS** The cab and crew cab dome lights will remain on for 10 seconds for improved visibility after the doors are closed. The dome lights will dim after 10 seconds or immediately if the vehicle's transmission is put into gear.
0602637	Portable Hand Light, Provided by Fire Dept, Pumper NFPA 2016 Classification	**PORTABLE HAND LIGHTS, PROVIDED BY FIRE DEPARTMENT** NFPA 1901, 2016 edition, section 5.9.4 requires two portable hand lights mounted in brackets fastened to the apparatus. The hand lights are not on the apparatus as manufactured. The fire department will provide and mount these hand lights.
0603606	Cab Instruments, Ivory Gauges, Chrome Bezels, Enf MUX	**CAB INSTRUMENTATION** The cab instrument panel will include gauges, an LCD display, telltale indicator lamps, control switches, alarms, and a diagnostic panel. The function of the instrument panel controls and switches will be identified by a label adjacent to each item. Actuation of the headlight switch will illuminate the labels in low light conditions. Telltale indicator lamps will not be illuminated unless necessary. The cab instruments and controls will be conveniently located within the forward cab section, forward of the driver. The gauge assembly and switch panels are designed to be removable for ease of service and low cost of ownership. **Gauges** The gauge panel will include the following ten (10) ivory faced gauges with chrome bezels to monitor vehicle performance: Voltmeter gauge (volts): Low volts (11.8 VDC) Amber caution indicator on the information center with intermittent alarm Amber caution light on gauge assembly High volts (15.5 VDC) Amber caution indicator on the information center with intermittent alarm Amber caution light on gauge assembly Very low volts (11.3 VDC) Red warning indicator on the information center with a steady alarm Amber caution light on gauge assembly Very high volts (16.0 VDC) Red warning indicator on the information center with a steady alarm Amber caution light on gauge assembly Engine Tachometer (RPM) Speedometer MPH (Major Scale), KM/H (Minor Scale) Fuel level gauge (Empty - Full in fractions): Low fuel (1/8 full) Amber caution indicator on the information center with intermittent alarm Amber caution light on gauge assembly Very low fuel (1/32 full) Red caution indicator on the information center with steady alarm Amber caution light on gauge assembly Engine Oil pressure Gauge (PSI): Low oil pressure to activate engine warning lights and alarms Red caution indicator on the information center with steady alarm Amber caution light on gauge assembly Front Air Pressure Gauges (PSI): Low air pressure to activate warning lights and alarm Red warning indicator on the information center with a steady alarm Amber caution light on gauge assembly Rear Air Pressure Gauges (PSI): Low air pressure to activate warning lights and alarm Red warning indicator on the information center with a steady alarm Amber caution light on gauge assembly Transmission Oil Temperature Gauge (Fahrenheit): High transmission oil temperature activates warning lights and alarm Amber caution indicator on the information center with intermittent alarm Amber caution light on gauge assembly Engine Coolant Temperature Gauge (Fahrenheit): High engine temperature activates an engine warning light and alarms Amber caution indicator on the information center with intermittent alarm Amber caution light on gauge assembly Diesel Exhaust Fluid Level Gauge (Empty - Full in fractions): Low fluid (1/8 full) Amber indicator light in gauge dial All gauges will perform prove out at initial power-up to ensure proper performance. **Indicator Lamps** To promote safety, the following telltale indicator lamps will be located on the instrument panel in clear view of the driver. The indicator lamps will be "dead-front" design that is only visible when

active. The colored indicator lights will have descriptive text or symbols.
The following amber telltale lamps will be present:
Low coolant
Trac cntl (traction control) (where applicable
Check engine
Check trans (check transmission
Aux brake overheat (Auxiliary brake overheat
Air rest (air restriction)
Caution (triangle symbol)
Water in fuel
DPF (engine diesel particulate filter regeneration)
Trailer ABS (where applicable)
Wait to start (where applicable)
HET (engine high exhaust temperature) (where applicable)
ABS (antilock brake system)
MIL (engine emissions system malfunction indicator lamp) (where applicable)
Side roll fault (where applicable)
Front air bag fault (where applicable)
The following red telltale lamps will be present:
Warning (stop sign symbol)
Seat belt
Parking brake
Stop engine
Rack down
The following green telltale lamps will be provided:
Left turn
Right turn
Battery on
The following blue telltale lamp will be provided:
High beam

Alarms

Audible steady tone warning alarm: A steady audible tone alarm will be provided whenever a warning message is present.
Audible pulsing tone caution alarm: A pulsing audible tone alarm (chime/chirp) will be provided whenever a caution message is present without a warning message being present.
Alarm silence: Any active audible alarm will be able to be silenced by holding the ignition switch at the top position for three (3) to five (5) seconds. For improved safety, silenced audible alarms will intermittently chirp every 30 seconds until the alarm condition no longer exists. The intermittent chirp will act as a reminder to the operator that a caution or warning condition still exists. Any new warning or caution condition will enable the steady or pulsing tones respectively.

Indicator Lamp and Alarm Prove-Out

A system will be provided which automatically tests telltale indicator lights and alarms located on the cab instrument panel. Telltale indicators and alarms will perform prove-out at initial power-up to ensure proper performance.

Control Switches

For ease of use, the following controls will be provided immediately adjacent to the cab instrument panel within easy reach of the driver. All switches will have backlit labels for low light applications.
Headlight/Parking light switch: A three (3)-position maintained rocker switch will be provided. The first switch position will deactivate all parking and headlights. The second switch position will activate the parking lights. The third switch will activate the headlights.
Panel back lighting intensity control switch: A three (3)-position momentary rocker switch will be provided. Pressing the top half of the switch, "Panel Up" increases the panel back lighting intensity and pressing the bottom half of the switch, "Panel Down" decreases the panel back lighting intensity. Pressing the half or bottom half of the switch several times will allow back lighting intensity to be gradually varied from minimum to maximum intensity level for ease of use.
Ignition switch: A three (3)-position maintained/momentary rocker switch will be provided. The first switch position will turn off and deactivate vehicle ignition. The second switch position will activate vehicle ignition and will perform prove-out on the telltale indicators and alarms for 3 to 5 seconds after the switch is turned on. A green indicator lamp is activated with vehicle ignition. The third momentary position will temporarily silence all active cab alarms. An alarm "chirp" may continue as long as alarm condition exists. Switching ignition to off position will terminate the alarm silence feature and reset function of cab alarm system.
Engine start switch: A two (2)-position momentary rocker switch will be provided. The first switch position is the default switch position. The second switch position will activate the vehicle's engine. The switch actuator is designed to prevent accidental activation.
Hazard switch will be provided on the instrument panel or on the steering column.
Heater, defroster, and air conditioning control panel.
Windshield wiper control will include low, high and intermittent modes.
Turn signal arm: A self-canceling turn signal with high beam headlight will be provided.
Parking brake control: An air actuated push/pull park brake control valve will be provided.
Chassis horn control: Activation of the chassis horn control will be provided through the center of the steering wheel.
High idle engagement switch: A momentary rocker switch with integral indicator lamp will be provided. The switch will activate and deactivate the high idle function. The "OK To Engage High Idle" indicator lamp must be active for the high idle function to engage. A green indicator lamp integral to the high idle engagement switch will indicate when the high idle function is engaged.
"OK To Engage High Idle" indicator lamp: A green indicator light will be provided next to the high idle activation switch to indicate that the interlocks have been met to allow high idle engagement.
Emergency switching will be controlled by multiple individual warning light switches for various groups or areas of emergency warning lights. An Emergency Master switch provided on the instrument panel that enables or disables all individual warning light switches is included.

		An additional "Emergency Master" button will be provided on the lower left hand corner of the gauge panel to allow convenient control of the "Emergency Master" system from inside the driver's door when standing on the ground. **Custom Switch Panels** **The design of cab instrumentation will allow for emergency lighting and other switches to be placed within easy reach of the operator thus improving safety. There will be positions for up to four (4) switch panels in the lower instrument console and up to six (6) switch panels in the overhead visor console. All switches have backlit labels for low light conditions.** **Diagnostic Panel** **A diagnostic panel will be accessible while standing on the ground and located inside the driver's side door left of the steering column. The diagnostic panel will allow diagnostic tools such as computers to connect to various vehicle systems for improved troubleshooting providing a lower cost of ownership. Diagnostic switches will allow ABS systems to provide blink codes should a problem exist.** **The diagnostic panel will include the following:** **Engine diagnostic port** **Transmission diagnostic port** **ABS diagnostic port** **Roll sensor diagnostic port** **Command Zone USB diagnostic port** **ABS diagnostic switch (blink codes flashed on ABS telltale indicator)** **Diesel particulate filter regeneration switch (where applicable)** **Diesel particulate filter regeneration inhibit switch (where applicable)** **Cab LCD Display** **A digital four (4)-row by 20-character dot matrix display will be integral to the gauge panel. The display will be capable of showing simple graphical images as well as text. The display will be split into three (3) sections. Each section will have a dedicated function. The upper left section will display the outside ambient temperature.** **The upper right section will display the following, along with other configuration specific information:** **Odometer** **Trip mileage** **PTO hours** **Fuel consumption** **Engine hours** **The bottom section will display INFO, CAUTION, and WARNING messages. Text messages will automatically activate to describe the cause of an audible caution or warning alarm. The LCD will be capable of displaying multiple text messages should more than one caution or warning condition exist.**
0509511	Air Restriction Indicator, Imp/Vel, AXT, Dash CF, Enf MUX	**AIR RESTRICTION INDICATOR** A high air restriction warning indicator light LCD message with amber warning indicator and audible alarm will be provided.
0002638	Gauge, Air Pressure, Brake Application	- Air pressure gauge will be provided on the cab instrument panel. The gauge will indicate pressure from the brake pedal primary circuit.
0543751	Light, Do Not Move Apparatus	**"DO NOT MOVE APPARATUS" INDICATOR** A flashing red indicator light, located in the driving compartment, will be illuminated automatically per the current NFPA requirements. The light will be labeled "Do Not Move Apparatus If Light Is On." The same circuit that activates the Do Not Move Apparatus indicator will activate a steady tone alarm when the parking brake is released.

0509042	Messages, Open Dr/DNMT, Color Dsply,	**DO NOT MOVE TRUCK MESSAGES** Messages will be displayed on the Command Zone™, color display located within sight of the driver whenever the Do Not Move Truck light is active. The messages will designate the item or items not in the stowed for vehicle travel position (parking brake disengaged). The following messages will be displayed (where applicable): Do Not Move Truck DS Cab Door Open (Driver Side Cab Door Open) PS Cab Door Open (Passenger's Side Cab Door Open) DS Crew Cab Door Open (Driver Side Crew Cab Door Open) PS Crew Cab Door Open (Passenger's Side Crew Cab Door Open) DS Body Door Open (Driver Side Body Door Open) PS Body Door Open (Passenger's Side Body Door Open) Rear Body Door Open DS Ladder Rack Down (Driver Side Ladder Rack Down) PS Ladder Rack Down (Passenger Side Ladder Rack Down) Deck Gun Not Stowed Lt Tower Not Stowed (Light Tower Not Stowed) Fold Tank Not Stowed (Fold-A-Tank Not Stowed) Aerial Not Stowed (Aerial Device Not Stowed) Stabilizer Not Stowed Steps Not Stowed Handrail Not Stowed Any other device that is opened, extended, or deployed that creates a hazard or is likely to cause major damage to the apparatus if the apparatus is moved will be displayed as a caution message after the parking brake is disengaged.
0611683	Switching, Cab Instrument Lower Console & Overhead, Membrane, Enforcer WiFi MUX	**SWITCH PANELS** The emergency light switch panel will have a master switch for ease of use plus individual switches for selective control. Each switch panel will contain eight (8) membrane-type switches each rated for one million (1,000,000) cycles. Panels containing less than eight (8) switch assignments will include non-functioning black appliqués. The built-in switch panels will be located in the lower console or overhead console of the cab. Additional switch panel(s) will be located in the overhead position(s) above the windshield or in designated locations on the lower instrument panel layout. The switches will be membrane-type and also act as an integral indicator light. For quick, visual indication the entire surface of the switch will be illuminated white whenever back lighting is activated and illuminated green whenever the switch is active. An active illuminated switch will flash when interlock requirements are not met or device is actively being load managed. For ease of use, a two (2)-ply, scratch resistant laser engraved Gravoply label indicating the use of each switch will be placed in the center of the switch. The label will allow light to pass through the letters for ease of use in low light conditions.
0802940	Wiper Control, 2-Speed with Intermittent, Saber FR/Enforcer	**WIPER CONTROL** Wiper control will consist of a two (2)-speed windshield wiper control with intermittent feature and windshield washer controls. The control will be located on the left side of the center instrument panel.
0585914	Wiring, Spare, 20 A 12V DC, 6 Circuit Fuse Block, Blue Sea 5025 1st	**SPARE CIRCUIT** There will be seven (7) pair of wires, including a positive and a negative, installed on the apparatus. The above wires will have the following features: The positive wire will be connected directly to the battery power. The negative wire will be connected to ground. Wires will be protected to 20 amps at 12 volts DC. Power and ground will terminate forward upper area of each body compartment, leave loose with a 6' coil. Termination will be to a Blue Sea System, Model 5025, 6 circuit with negative bus bar. The terminal block will include a cover with circuit labels. Wires will be sized to 125% of the protection. This circuit(s) may be load managed when the parking brake is set.
0548004	Wiring, Spare, 15 A 12V DC 1st	**SPARE CIRCUIT** There will be two (2) pair of wires, including a positive and a negative, installed on the apparatus. The above wires will have the following features: The positive wire will be connected directly to the battery power The negative wire will be connected to ground Wires will be protected to 15 amps at 12 volts DC Power and ground will terminate officer side dash area Termination will be with heat shrinkable butt splicing Wires will be sized to 125 percent of the protection The circuit(s) may be load managed when the parking brake is set.

0548006		Wiring, Spare, 15 A 12V DC 2nd	**SPARE CIRCUIT** There will be four (4) pair of wires, including a positive and a negative, installed on the apparatus. The above wires will have the following features: The positive wire will be connected directly to the battery power. The negative wire will be connected to ground. Wires will be protected to 15 amps at 12 volts DC. Power and ground will terminate driver side dash, officer side dash, one each between the center forward facing seats in a painted box attached to the rear wall. Termination will be with 15 amp, power point plug with rubber cover. Wires will be sized to 125 percent of the protection. This circuit(s) may be load managed when the parking brake is set.
0548007		Wiring, Spare, 15 A 12V DC 3rd	**SPARE CIRCUIT** There will be four (4) pair of wires, including a positive and a negative, installed on the apparatus. The above wires will have the following features: The positive wire will be connected directly to the battery power. The negative wire will be connected to ground. Wires will be protected to 15 amps at 12 volts DC. Power and ground will terminate each seating position, leave loose with a 6' coil. Termination will be with heat shrinkable butt splicing. Wires will be sized to 125 percent of the protection. This circuit(s) may be load managed when the parking brake is set.
0891871	SP	Wireless Router, Cradlepoint IBR900, Netcloud, Panorama, Sub1	**WIRELESS ROUTER** There will be one (1) IBR900 router with WiFi (600Mbps modem), no AC power supply TBD. The router will include a Cradlepoint NetCloud Essentials for Mobile Routers (Prime) - subscription l, one (1) year subscription license. The router will be connected to directly to the battery power. There will be a low profile multimode 5 in 1 antenna provided on the roof for cellular / WiFi (802.11 a/b/g/n/ac) connected to the router. The color of the antenna will be black Features of the router will include: Two (2) Configurable LAN/WAN Ports VPN Support Active GPS support The following components will be included: One (1) Cradlepoint MA1-0900600M-NNA, IBR900 router One (1) Antenna, Panorama, 5 in 1, LG-IN2457, Low Profile Dome Antenna. 5G All necessary antenna and power cables
0803875		Radio, AM/FM/WB, Jensen, Frt,Rear Aux In/Frt,Rear USB/Bluetooth	**STEREO RADIO** A Jensen, heavy duty AM/FM / Bluetooth / Weatherband stereo radio, with front and rear auxiliary input will be installed per instrument panel layout. There will be 5.25" speakers installed one (1) pair of 5.25" speakers in the cab and one (1) pair of 5.25" speakers in the crew cab. The antenna will be a roof-mounted rubber antenna located in an open space, on the cab roof. The following features will be included: - 180 watts max power output (45W x 4) - Bluetooth® streaming audio and controls (A2DP/AVRCP) with hands-free calling (HFP) - Electronic AM/FM tuner (US/Euro) - iPod®/iPhone® ready via USB - SiriusXM-Ready® - Seven-channel NOAA weatherband with S.A.M.E. technology - USB 2.0 for playback of MP3 & WMA audio files - RBDS with PTY search - Front and rear USB input - Front and rear AUX input
0615386		Vehicle Information Center, 7" Color Display, Touchscreen, MUX	**INFORMATION CENTER** An information center employing a 7.00" diagonal touch screen color LCD display will be encased in an ABS plastic housing. The information center will have the following specifications: Operate in temperatures from -40 to 185 degrees Fahrenheit An Optical Gel will be placed between the LCD and protective lens Five weather resistant user interface switches Grey with black accents Sunlight Readable Linux operating system Minimum of 1000nits rated display Display can be changed to an available foreign language A LCD display integral to the cab gauge panel will be included as outlined in the cab instrumentation area. Programmed to read US Customary **General Screen Design** Where possible, background colors will be used to provide "At a Glance" vehicle information. If information provided on a screen is within acceptable limits, a green background will be used. If a caution or warning situation arises the following will occur: An amber background/text color will indicate a caution condition A red background/text color will indicate a warning condition The information center will utilize an "Alert Center" to display text messages for audible alarm tones. The text messages will be written to identify the item(s) causing the audible alarm to

sound. If more than one (1) text message occurs, the messages will cycle every second until the problem(s) have been resolved. The background color for the "Alert Center" will change to indicate the severity of the "warning" message. If a warning and a caution condition occur simultaneously, the red background color will be shown for all alert center messages.
A label for each button will exist. The label will indicate the function for each active button for each screen. Buttons that are not utilized on specific screens will have a button label with no text or symbol.

Home/Transit Screen

This screen will display the following:
Vehicle Mitigation (if equipped)
Water Level (if the water level system includes compatible communications to the information center)
Foam Level (if the foam level system includes compatible communications to the information center)
Seat Belt Monitoring Screen Seat Belt Monitoring Screen
Tire Pressure Monitoring (if equipped)
Digital Speedometer
Active Alarms

On Scene Screen

This screen will display the following and will be auto activated with pump engaged (if equipped):
Battery Voltage
Fuel
Oil Pressure
Coolant Temperature
RPM
Water Level (if equipped)
Foam Level (if equipped)
Foam Concentration (if equipped)
Water Flow Rate (if equipped)
Water Used (if equipped)
Active Alarms

Virtual Buttons

There will be four (4) virtual switch panel screens that match the overhead and lower lighting and HVAC switch panels.

Page Screen

The page screen will display the following and allow the user to progress into other screens for further functionality:
Diagnostics
Faults
Listed by order of occurrence
Allows to sort by system
Interlock
Throttle Interlocks
Pump Interlocks (if equipped)
Aerial Interlocks (if equipped)
PTO Interlocks (if equipped)
Load Manager
A list of items to be load managed will be provided. The list will provide a description of the load. The lower the priority numbers the earlier the device will be shed should a low voltage condition occur.
The screen will indicate if a load has been shed (disabled) or not shed.
"At a glance" color features are utilized on this screen.
Systems
Command Zone
Module type and ID number
Module Version
Input or output number
Circuit number connected to that input or output
Status of the input or output
Power and Constant Current module diagnostic information
Foam (if equipped)
Pressure Controller (if equipped)
Generator Frequency (if equipped)
Live Data
General Truck Data
Maintenance
Engine oil and filter
Transmission oil and filter
Pump oil (if equipped)
Foam (if equipped)
Aerial (if equipped)
Setup
Clock Setup
Date & Time
12 or 24 hour format
Set time and date
Backlight
Daytime
Night time
Sensitivity
Unit Selection
Home Screen
Virtual Button Setup
On Scene Screen Setup
Configure Video Mode
Set Video Contrast
Set Video Color
Set Video Tint

Do Not Move
The screen will indicate the approximate location and type of item that is open or is not stowed for travel. The actual status of the following devices will be indicated
Driver Side Cab Door
Passenger's Side Cab Door
Driver Side Crew Cab Door
Passenger's Side Crew Cab Door
Driver Side Body Doors
Passenger's Side Body Doors
Rear Body Door(s)
Ladder Rack (if applicable)
Deck Gun (if applicable)
Light Tower (if applicable)
Hatch Door (if applicable)
Stabilizers (if applicable)
Steps (if applicable)
Notifications
View Active Alarms
Shows a list of all active alarms including date and time of the occurrence is shown with each alarm
Silence Alarms - All alarms are silenced
Timer Screen
HVAC (if equipped)
Tire Information (if equipped)
Ascendant Set Up Confirmation (if equipped)
Button functions and button labels may change with each screen.

0734854 Collision Mitigation, Not Requested

0606247 Vehicle Data Recorder w/CZ Display Seat Belt Monitor

VEHICLE DATA RECORDER
There will be a vehicle data recorder (VDR) capable of reading and storing vehicle information provided.
The information stored on the VDR can be downloaded through a USB port mounted in a convenient location determined by cab model. A USB cable can be used to connect the VDR to a laptop to retrieve required information. The program to download the information from the VDR will be available to download on-line.
The vehicle data recorder will be capable of recording the following data via hardwired and/or CAN inputs:
Vehicle Speed - MPH
Acceleration - MPH/sec
Deceleration - MPH/sec
Engine Speed - RPM
Engine Throttle Position - % of Full Throttle
ABS Event - On/Off
Seat Occupied Status - Yes/No by Position
Seat Belt Buckled Status - Yes/No by Position
Master Optical Warning Device Switch - On/Off
Time - 24 Hour Time
Date - Year/Month/Day
Seat Belt Monitoring System
A seat belt monitoring system (SBMS) will be provided on the Command Zone™ color display.
The SBMS will be capable of monitoring up to 10 seating positions indicating the status of each seat position per the following:
Seat Occupied & Buckled = Green LED indicator illuminated
Seat Occupied & Unbuckled = Red LED indicator with audible alarm
No Occupant & Buckled = Red LED indicator with audible alarm
No Occupant & Unbuckled = No indicator and no alarm
The seat belt monitoring screen will become active on the Command Zone color display when:
The home screen is active:
and there is any occupant seated but not buckled or any belt buckled with an occupant.
and there are no other Do Not Move Apparatus conditions present. As soon as all Do Not Move Apparatus conditions are cleared, the SBMS will be activated.
The SBMS will include an audible alarm that will warn that an unbuckled occupant condition exists and the parking brake is released, or the transmission is not in park.

0677696 Intercom, Sigtronics US-45S, 4-Pos, 2-Radio, D,O,2C

INTERCOM SYSTEM
A four (4) position Sigtronics, Model US-45S, intercom system with single radio interface at the driver and officer positions will be provided. Two (2) crew located, at both forward facing seats , will have radio listen / intercom only.
The following components will be included:
One (1) US-45S Intercom master station
Four (4) Headset jacks in blue boxes (Driver, Officer, 2 Crew)
Two (2) Push-to-transmit buttons in blue boxes (Driver, Officer)
All necessary cabling

0006288 Cable, Radio to Intercom Interface, Sigtronics, 1 Radio

RADIO / INTERCOM INTERFACE CABLE
The apparatus manufacturer will supply and install one (1) radio interface cable before delivery of the vehicle.
The radio equipment to be used by the customer will be:
Motorola High Power , Model number MOTOROLA .

0568105	Headset, Sigtronics, SE-8 Under Helmet, Flex Mic, Standard	**HEADSET, UNDER HELMET** There will be four (4) Sigtronics, Model SE-8, under helmet, standard headset(s) provided as required. . Each headset will feature: Coiled cord with single nickel coated plug Noise cancelling electret microphone with wind muff Flexible microphone boom rotates 180 degrees for left or right dress Gel filled earseals Volume control 24 dB noise reduction
0681408	Hangers For Headsets, NFPA, Each	**HEADSET HANGERS** There will be four (4) headset hanger(s) installed driver's seat, officer's seat, driver's side outboard forward facing seat and passenger's side outboard forward facing seat. The hanger(s) will meet NFPA 1901, Section 14.1.11, requirement for equipment mounting.
0648437	Antenna Mount, Custom Chassis, Cable Routed to Behind Driver Seat	**RADIO ANTENNA MOUNT** There will be two (2) standard 1.125", 18 thread antenna-mounting base(s) installed best location on the cab roof with high efficiency, low loss, coaxial cable(s) routed to behind the driver seat. A weatherproof cap will be installed on the mount.
0653526	Camera, Pierce, Driver Mux, Rear Camera Only	**VEHICLE CAMERA SYSTEM** There will be a color vehicle camera system provided with the following: One (1) camera located at the rear of the apparatus, pointing rearward, displayed automatically with the vehicle in reverse The camera images will be displayed on the driver's vehicle information center display. Audio from the microphone on the active camera will be emitted by an amplified speaker with volume control located behind the driver seat. The following components will be included: One (1) SV-CW134639CAI, camera One (1) amplified speaker (if applicable) All necessary cables
0890416	Pierce Command Zone, Advanced Electronics & Control System, Enforcer, WiFi CZT	**ELECTRICAL POWER CONTROL SYSTEM** The primary power distribution will be located forward of the officer's seating position and be easily accessible while standing on the ground for simplified maintenance and troubleshooting. Additional electrical distribution centers will be provided throughout the vehicle to house the vehicle's electrical power, circuit protection, and control components. The electrical distribution centers will be located strategically throughout the vehicle to minimize wire length. For ease of maintenance, all electrical distribution centers will be easily accessible. All distribution centers containing fuses, circuit breakers and/or relays will be easily accessible. Distribution centers located throughout the vehicle will contain battery powered studs for supplying customer installed equipment thus providing a lower cost of ownership. Circuit protection devices, which conform to SAE standards, will be utilized to protect electrical circuits. All circuit protection devices will be rated per NFPA requirements to prevent wire and component damage when subjected to extreme current overload. General protection circuit breakers will be Type-I automatic reset (continuously resetting). When required, automotive type fuses will be utilized to protect electronic equipment. Control relays and solenoid will have a direct current rating of 125 percent of the maximum current for which the circuit is protected per NFPA. **Solid-State Control System** A solid-state electronics based control system will be utilized to achieve advanced operation and control of the vehicle components. A fully computerized vehicle network will consist of electronic modules, electronic control modules to include black housings, a power indicator and status indicator located near their point of use to reduce harness lengths and improve reliability. The control system will comply with SAE J1939-11 recommended practices. The control system will operate as a master-slave system whereas the main control module instructs all other system components. The system will contain patented Mission Critical software that maintains critical vehicle operations in the unlikely event of a main controller error. The system will utilize a Real Time Operating System (RTOS) fully compliant with OSEK/VDX™ specifications providing a lower cost of ownership. For increased reliability and simplified use the control system modules will include the following attributes: Green LED indicator light for module power Red LED indicator light for network communication stability status Control system self test at activation and continually throughout vehicle operation No moving parts due to transistor logic Software logic control for NFPA mandated safety interlocks and indicators Integrated electrical system load management without additional components Integrated electrical load sequencing system without additional components Customized control software to the vehicle's configuration Factory and field programmable to accommodate changes to the vehicle's operating parameters To assure long life and operation in a broad range of environmental conditions, the solid-state control system modules will meet the following specifications: Module circuit board will meet SAE J771 specifications Operating temperature from -40C to +70C Storage temperature from -40C to +70C Vibration to 50g IP67 rated enclosure (Totally protected against dust and also protected against the effect of temporary immersion between 15 centimeters and one (1) meter) Operating voltage from eight (8) volts to 32 volts DC The main controller will activate status indicators and audible alarms designed to provide warning

of problems before they become critical.

Circuit Protection and Control Diagram

Copies of all job-specific, computer network input and output (I/O) connections will be provided with each chassis. The sheets will indicate the function of each module connection point, circuit protection information (where applicable), wire numbers, wire colors and load management information.

On-Board Electrical System Diagnostics

The on-board information center will include the following diagnostic information:
Text description of active warning or caution alarms
Simplified warning indicators
Amber caution indication with intermittent alarm
Red warning indication with steady tone alarm
Advanced diagnostic feature will be provided in this control system. From the Command Zone display or connected wireless device, these features allow the user to monitor the real-time status of every input or output on the vehicle. It also allows users logged in as an administrator to force on inputs or outputs to assist the troubleshooting process.

TCU Module with WiFi

An in cab module will provide WiFi wireless interface and data logging capability. The WiFi interface will comply with IEEE 802.11 b/g/n capabilities while communicating at 2.4 Gigahertz. The module will communicate through a black WiFi antenna allowing a line of site communication range of up to 300 feet with a roof mounted antenna.
The module will transmit a password protected web page to a WiFi enabled device (i.e. most smart phones, tablets or laptops) allowing two levels of user interaction. The firefighter level will allow vehicle monitoring of the vehicle and firefighting systems on the apparatus. The technician level will allow diagnostic access to inputs and outputs installed on the Command Zone™, control and information system.
The TCU capability will record faults from the engine, transmission, ABS and Command Zone™, control and information systems as they occur. No other data will be recorded at the time the fault occurs. The data TCU will provide up to 2 Gigabytes of data storage.
The TCU will provide a means to download the TCU information and update software in the device.

Indicator Light and Alarm Prove-Out System

A system will be provided which automatically tests basic indicator lights and alarms located on the cab instrument panel.

Voltage Monitor System

A voltage monitoring system will be provided to indicate the status of the battery system connected to the vehicle's electrical load. The system will provide visual and audible warning when the system voltage is below or above optimum levels.
The alarm will activate if the system falls below 11.8 volts DC for more than two (2) minutes.

Dedicated Radio Equipment Connection Points

There will be three (3) studs provided in the primary power distribution center located in front of the officer for two-way radio equipment. The studs will consist of the following:
12-volt 40-amp battery switched power
12-volt 60-amp ignition switched power
12-volt 60-amp direct battery power
There will also be a 12-volt 100-amp ground stud located in or adjacent to the power distribution center.

EMI/RFI Protection

To prevent erroneous signals from crosstalk contamination and interference, the electrical system will meet, at a minimum, SAE J551/2, thus reducing undesired electromagnetic and radio frequency emissions. An advanced electrical system will be used to ensure radiated and conducted electromagnetic interference (EMI) or radio frequency interference (RFI) emissions are suppressed at their source.
The apparatus will have the ability to operate in the electromagnetic environment typically found in fire ground operations to ensure clean operations. The electrical system will meet, without exceptions, electromagnetic susceptibility conforming to SAE J1113/25 Region 1, Class C EMR for 10KHz-1GHz to 100 Volts/Meter. The vehicle OEM, upon request, will provide EMC testing reports from testing conducted on an entire apparatus and will certify that the vehicle meets SAE J551/2 and SAE J1113/25 Region 1, Class C EMR for 10KHz-1GHz to 100 Volts/Meter requirements. Component and partial (incomplete) vehicle testing is not adequate as overall vehicle design can impact test results and thus is not acceptable by itself.
EMI/RFI susceptibility will be controlled by applying appropriate circuit designs and shielding. The electrical system will be designed for full compatibility with low-level control signals and high-powered two-way radio communication systems. Harness and cable routing will be given careful attention to minimize the potential for conducting and radiated EMI/RFI susceptibility.

0896456 Prognostics, Electrical System

ELECTRICAL SYSTEM PROGNOSTICS

There will be a software based vehicle tool provided to predict remaining life of the vehicles critical fluid and events.
The system will send automatic indications to the Command Zone™ information center and/or wireless enabled devices to proactively alert of upcoming service intervals.
Prognostics will include the following:
Engine oil and filter
Transmission oil and filter

0892649	CZ Connect Telematics	**TELEMATICS SYSTEM** There will be a cellular based vehicle telematics system consisting of a Telematic Control Unit (TCU) with external cellular WiFi and GPS antenna, and access to a web-based user interface portal provided. The TCU will be fully integrated into the Command Zone™ electrical system. It will monitor the vehicle through the CAN data bus and transmit data through a secure 4G LTE cellular connection, and be provided with a 3 year subscription.. After accepting the end user license agreement, the vehicle administrator will have access to vehicle location information and vehicle data via a secure CZ Connect web-based interface portal. The CZ Connect web-based interface will allow users to access vehicle data and configure monitoring tools, providing a global view of the location of each connected asset and a summary of fleet data, which include: User defined interval notifications User defined fault alerts Remote access to Command Zone diagnostics Vehicle analytics and activity monitoring Vehicle system status
0624253	Electrical System, Enforcer MUX	**ELECTRICAL** All 12-volt electrical equipment installed by the apparatus manufacturer will conform to modern automotive practices. All wiring will be high temperature crosslink type. Wiring will be run, in loom or conduit, where exposed and have grommets where wire passes through sheet metal. Automatic reset circuit breakers will be provided which conform to SAE Standards. Wiring will be color, function and number coded. Function and number codes will be continuously imprinted on all wiring harness conductors at 2.00" intervals. Exterior exposed wire connectors will be positive locking, and environmentally sealed to withstand elements such as temperature extremes, moisture and automotive fluids. Electrical wiring and equipment will be installed utilizing the following guidelines: All holes made in the roof will be caulked with silicon. Large fender washers, liberally caulked, will be used when fastening equipment to the underside of the cab roof. Any electrical component that is installed in an exposed area will be mounted in a manner that will not allow moisture to accumulate in it. Exposed area will be defined as any location outside of the cab or body. Electrical components designed to be removed for maintenance will not be fastened with nuts and bolts. Metal screws will be used in mounting these devices. Also a coil of wire will be provided behind the appliance to allow them to be pulled away from mounting area for inspection and service work. Corrosion preventative compound will be applied to all terminal plugs located outside of the cab or body. All non-waterproof connections will require this compound in the plug to prevent corrosion and for easy separation (of the plug). All lights that have their sockets in a weather exposed area will have corrosion preventative compound added to the socket terminal area. All electrical terminals in exposed areas will have silicon applied completely over the metal portion of the terminal. All lights and reflectors, required to comply with Federal Motor Vehicle Safety Standard #108, will be furnished. Rear identification lights will be recessed mounted for protection. Lights and wiring mounted in the rear bulkheads will be protected from damage by installing a false bulkhead inside the rear compartments. An operational test will be conducted to ensure that any equipment that is permanently attached to the electrical system is properly connected and in working order. The results of the tests will be recorded and provided to the purchaser at time of delivery.
0098841	Batteries, (6) Deka Grp 31, 1000 CCA each, Threaded Stud	**BATTERY SYSTEM** Six (6) 12 volt, Deka, Model 1231MF, maintenance free group 31 batteries that include the following features, each, will be provided: 1000 CCA (cold cranking amps) 185 reserve capacity High cycle Ref. CA of 1190 at 0 degrees Fahrenheit 185 reserve capacity Threaded studs
0008621	Battery System, Single Start, All Custom Chassis	**BATTERY SYSTEM** There will be a single starting system with an ignition switch and starter button provided and located on the cab instrument panel. **MASTER BATTERY SWITCH** There will be a master battery switch provided within the cab within easy reach of the driver to activate the battery system. An indicator light will be provided on the instrument panel to notify the driver of the status of the battery system.

0002698	Battery Compartment, Saber/Enforcer	**BATTERY COMPARTMENTS** Batteries will be placed on non-corrosive mats and stored in well ventilated compartments located under the cab. Heavy-duty, 2/0 gauge, color coded battery cables will be provided. Battery terminal connections will be coated with anti-corrosion compound. Battery solenoid terminal connections will be encapsulated with semi-permanent rubberized compound. **JUMPER STUDS** One (1) set of battery jumper studs with plastic color-coded covers will be included on the battery compartments.
0637577	Charger, Sngl Sys, Kussmaul, Pump Plus 1200, 091-9-12V-1200-194-WT-**	**BATTERY CHARGER/ AIR COMPRESSOR** There will be a Kussmaul Pump Plus 1200, Model 091-9-12V-1200194-WT-XX, 40 amp single output battery charger/air compressor with Model 091-194-IND-WT-XX watertight digital display provided. The color of the charge indicator will be red. The 12-volt air compressor will be installed to maintain the air system pressure when the vehicle is not in use. There will be an auto pump timer installed between the pressure switch and the pump that will allow the pump to run for one hour than shut down for one hour. The battery charger will be wired to the AC shoreline inlet.
0678372	Location, Charger/Compr, Behind Driver Seat, Saber FR/Enforcer	Battery charger/compressor will be located in the cab behind the driver's seat.
0530949	Location, Bat Chrg Ind, Driver's Seat Riser	The battery charger indicator will be located on the driver's seat riser.
0016857	Shoreline, 20A 120V, Kussmaul Auto Eject, 091-55-20-120, Super	**AUTO EJECT FOR SHORELINE** There will be one (1) Kussmaul™, Model 091-55-20-120, 20 amp 120 volt AC shoreline inlet(s) provided to operate the dedicated 120 volt AC circuits on the apparatus. The shoreline inlet(s) will include red weatherproof flip up cover(s). There will be a release solenoid wired to the vehicle's starter to eject the AC connector when the engine is starting. The shoreline(s) will be connected to the battery charger. There will be a mating connector body supplied with the loose equipment. There will be a label installed near the inlet(s) that state the following: Line Voltage Current Ratting (amps) Phase Frequency
0026800	Shoreline Location	The shoreline receptacle will be located on the driver side of cab, to the front of cab door.
0008740	Cover, Protection over Battery Charger	**BATTERY CHARGER COVER** A cover will be fabricated and installed over the battery charger for protection. behind DS seat.
0121711	Alternator, 320 amp, Leece-Neville 4962PA, Sgl Sys	**ALTERNATOR** A Leece-Neville, Model 4962PA, alternator will be provided. It will have a rated output current of 320 amps, as measured by SAE method J56. The alternator will feature an integral, self diagnostic regulator and rectifier. The alternator will be connected to the power and ground distribution system with heavy-duty cables sized to carry the full rated alternator output.

0092582	Load Manager/Sequencer, MUX	**ELECTRONIC LOAD MANAGER** An electronic load management (ELM) system will be provided that monitors the vehicles 12-volt electrical system, automatically reducing the electrical load in the event of a low voltage condition, and automatically restoring the shed electrical loads when a low voltage condition expires. This ensures the integrity of the electrical system. For improved reliability and ease of use, the load manager system will be an integral part of the vehicle's solid state control system requiring no additional components to perform load management tasks. Load management systems which require additional components will not be allowed. The system will include the following features: System voltage monitoring. A shed load will remain inactive for a minimum of five minutes to prevent the load from cycling on and off. Sixteen available electronic load shedding levels. Priority levels can be set for individual outputs. High Idle to activate before any electric loads are shed and deactivate with the service brake. If enabled: "Load Man Hi-Idle On" will display on the information center. Hi-Idle will not activate until 30 seconds after engine start up. Individual switch "on" indicator to flash when the particular load has been shed. The information center indicates system voltage. The information center, where applicable, includes a "Load Manager" screen indicating the following: Load managed items list, with priority levels and item condition. Individual load managed item condition: ON = not shed SHED = shed **SEQUENCER** A sequencer will be provided that automatically activates and deactivates vehicle loads in a preset sequence thereby protecting the alternator from power surges. This sequencer operation will allow a gradual increase or decrease in alternator output, rather than loading or dumping the entire 12 volt load to prolong the life of the alternator. For improved reliability and ease of use, the load sequencing system will be an integral part of the vehicle's solid state control system requiring no additional components to perform load sequencing tasks. Load sequencing systems which require additional components will not be allowed. Emergency light sequencing will operate in conjunction with the emergency master light switch. When the emergency master switch is activated, the emergency lights will be activated one by one at half-second intervals. Sequenced emergency light switch indicators will flash while waiting for activation. When the emergency master switch is deactivated, the sequencer will deactivate the warning light loads in the reverse order. Sequencing of the following items will also occur, in conjunction with the ignition switch, at half-second intervals: Cab Heater and Air Conditioning Crew Cab Heater (if applicable) Crew Cab Air Conditioning (if applicable) Exhaust Fans (if applicable) Third Evaporator (if applicable)
0783153	Headlights, Rect LED, JW Spkr Evo 2, AXT/DCF/Enf/Imp/Sab/Vel	**HEADLIGHTS** There will be four (4) JW Speaker®, Model 8800, 4" x 6" rectangular LED lights mounted in the front quad style, chrome housing on each side of the cab grille: the outside light on each side will contain a part number 055***1 low beam module the inside light on each side will contain a part number 055***1 high beam module the headlights to include chrome bezels The low beam lights will be activated when the headlight switch is on. The high beam and low beam lights will be activated when the headlight switch and the high beam switch is activated.
0625953	Light, Directional, Wln 600 Cmb, Cab Crn, Wrp Bzl Out HD Lts, Enf, Sab FR	**DIRECTIONAL LIGHTS** There will be two (2) Whelen 600 series, LED combination directional/marker lights provided. The lights will be located on the outside cab corners, next to the headlights. The color of the lenses will be the same color as the LED's.
0620054	Light, Directional/Marker, Intermediate, Weldon 9186-8580-29 LED 2lts	**INTERMEDIATE LIGHT** There will be two (2) Weldon, Model 9186-8580-29, amber LED turn signal marker lights furnished, one (1) each side, in the rear fender panel. The light will double as a turn signal and marker light.
0647802	Lights, Clearance/Marker/ID, Front, P25 LED 5 Lts, Saber FR/Enforcer	**CAB CLEARANCE/MARKER/ID LIGHTS** There will be five (5) amber LED lights provided to indicate the presence and overall width of the vehicle in the following locations: Three (3) amber LED identification lights will be installed in the center of the cab above the windshield. Two (2) amber LED clearance lights will be installed, one (1) on each outboard side of the cab above the windshield.

0625210	Lights, Directional, Cab Front Side, Truck-Lite 19036Y LED, AXT/Enf	**FRONT CAB SIDE CLEARANCE/MARKER LIGHTS** There will be two (2) Truck-Lite®, Model 19036Y, amber LED lights installed to the outside of the chrome wrap around bezel, one (1) on each side of the cab. The lights will activate as additional directional lights with the corresponding directional circuit.
0563675	Lights, Clearance/Marker/ID, Rear, Truck-Lite 33050R LED 7Lts	**REAR CLEARANCE/MARKER/ID LIGHTING** There will be three (3) Truck-Lite®, Model 33050R, LED lights used as identification lights recessed and located at the rear of the apparatus per the following: As close as practical to the vertical centerline Centers spaced not less than 6.00" or more than 12.00" apart Red in color All at the same height There will be two (2) Truck-Lite, Model 33050R, LED lights recessed at the rear of the apparatus used as clearance lights located at the rear of the apparatus per the following: To indicate the overall width of the vehicle One (1) each side of the vertical centerline As near the top as practical Red in color To be visible from the rear All at the same height There will be two (2) Truck-Lite, Model 33050R, LED lights recessed on the side of the apparatus as marker lights as close to the rear as practical per the following: To indicate the overall length of the vehicle One (1) each side of the vertical centerline As near the top as practical Red in color To be visible from the side All at the same height There will be two (2) red reflectors located on the rear of the truck facing to the rear. One (1) each side, as far to the outside as practical, at a minimum of 15.00", but no more than 60.00", above the ground. There will be two (2) red reflectors located on the side of the truck facing to the side. One (1) each side, as far to the rear as practical, at a minimum of 15.00", but no more than 60.00", above the ground. Per FMVSS 108 and CMVSS 108 requirements.
0804514	Lights, Tail, Wln M62BTT* Red Stop/Tail & M62T* Amber Dir Arw For Hsg	**REAR FMVSS LIGHTING** The rear stop/tail and directional lighting included in the rear tail light housing will include the following: Two (2) Whelen®, Model M62BTT, 4.30" high x 6.70" wide x 1.40" deep brake/tail lights with red LEDs Two (2) Whelen, Model M62T, 4.30" high x 6.70" wide x 1.40" deep directional lights with amber LEDs. The directional lights will be set to Steady On (Arrow) flash pattern. The lens color(s) to be clear.
0561471	Lights, Backup, Wln M6BUW, LED, For Tail Lt Housing	There will be two (2) Whelen Model M6BUW, LED backup lights provided in the tail light housing.
0889577	Bracket, License Plate & Light, P25 LED, Stainless Brkt	**LICENSE PLATE BRACKET** One (1) license plate bracket constructed of stainless steel will be provided at the rear of the apparatus. One (1) white LED light with chrome housing will be provided to illuminate the license plate. A stainless steel light shield will be provided over the light that will direct illumination downward, preventing white light to the rear.
0556842	Bezels, Wln, (2) M6 Chrome Pierce, For mtg (4) Wln M6 lights	**LIGHTING BEZEL** There will be two (2) Whelen, Model M6FCV4P, four (4) place chromed ABS housings with Pierce logos provided for the rear M6 series stop/tail, directional, back up, scene lights or warning lights.
0589905	Alarm, Back-up Warning, PRECO 1040	**BACK-UP ALARM** A PRECO, Model 1040, solid-state electronic audible back-up alarm that actuates when the truck is shifted into reverse will be provided. The device will sound at 60 pulses per minute and automatically adjust its volume to maintain a minimum ten (10) dBA above surrounding environmental noise levels.
0626588	Lights, Perimeter Cab, TecNiq T10-LC00-1 15" LED 4Dr	**CAB PERIMETER SCENE LIGHTS** There will be four (4) TecNiq, Model T10-LC00-1, 15.00" lights with white LEDs and 45 degree stainless steel brackets provided per the following: one (1) under the driver's side cab access step one (1) under the passenger's side cab access step one (1) under the passenger's side crew cab access step one (1) under the driver's side crew cab access step The lights will be activated when the battery switch is on, when the respective door is open and by the same control selected for the body perimeter lights.

0617901	Lights, Perimeter Pump House, TecNiq T10-LC00-1 15" LED 2lts	**PUMP HOUSE PERIMETER LIGHTS** There will be two (2) TecNiq, Model T10-LC00-1, 15.00" white 12 volt DC LED weatherproof strip lights provided under the pump panel running boards, one (1) each side. The lights will be controlled by the same means as the body perimeter lights.
0626579	Lights, Perimeter Body, TecNiq T10-LC00-1 15" LED 2lts, Rear Step	**BODY PERIMETER SCENE LIGHTS** There will be two (2) TecNiq, Model T10-LC00-1, 15.00" 12 volt DC LED strip lights provided at the rear step area of the body, one (1) each side shining to the rear. The perimeter scene lights will be activated when a switch within reach of the driver is activated and the parking brake is applied.
0617802	Lights, Perimeter, TecNiq T10-LC00-1 15" LED	**ADDITIONAL PERIMETER LIGHTS** There will be two (2) TecNiq, Model T10-LC00-1, 1.25" high x 15.00" long white LED light(s) provided under under LS1 and RS1. These additional lights will be controlled with the other body perimeter lights.
0896454	Enhanced Software for Perimeter Lts	**ENHANCED SOFTWARE FOR PERIMETER LIGHTS** All perimeter lights and scene lights will be deactivated when the parking brake is released. The cab and crew cab perimeter lights will dim after 10 seconds or immediately if the vehicle's transmission is put into gear.
0661576	Lights, Step, P25 LED 4lts, Perimeter Scene Lt Sw	**STEP LIGHTS** There will be four (4) white LED, step lights provided. One (1) step light will be provided on each side, on the front compartment face and two (2) step lights at the rear to illuminate the tailboard. In order to ensure exceptional illumination, each light will provide a minimum of 25 foot-candles (fc) covering an entire 15" x 15" square placed ten (10) inches below the light and a minimum of 1.5 fc covering an entire 30" x 30" square at the same ten (10) inch distance below the light. These step lights will be activated by the perimeter scene lights switch in the cab. All other steps on the apparatus will be illuminated per the current edition of NFPA 1901.
0679615	Bracket, Alum. Trdplate, 12V Surface Mounted Flood Lights, Compt Top, Each	**12 VOLT LIGHT BRACKET** There will be two (2) aluminum treadplate bracket(s) installed each catwalk, centered over the rear wheels for the surface mounted flood light(s). The bracket(s) will have all wiring totally enclosed.
0776357	Light, Visor, Wln, 12V P*H2* Pioneer, Cnt Feature, 1st	**12 VOLT LIGHTING** There will be one (1) Whelen® Model P*H2*, 17,750 lumens 12 volt DC light(s) with a combination of flood and spot optics provided on the front visor, centered. The housing(s) painted parts of this light assembly to be black. The light(s) will be controlled by a switch at the driver's side switch panel, by a switch at the left side pump panel and by a switch at the passenger's side switch panel. These light(s) may be load managed when the parking brake is applied.
0768059	Lights, Wln, PCPSM2* Pioneer, 12 VDC, 2nd	**12 VOLT DC SCENE LIGHTS** There will be two (2) Whelen® Model PCPSM2*, 16,000 lumens 12 volt DC powered light(s) with white LEDs installed on the cab located, Above LS2, center over the rear wheel, mount in the 4 way box outboard, and above the EMS compartment on the RS of the cab.. The surface mount housing(s) will be provided with a black cover. The light(s) will be activated by a switch at the driver's side switch panel, by a switch at the left side pump panel and by a switch at the passenger's side switch panel. The light(s) may be load managed when the parking brake is applied.
0768061	Lights, Wln, PCPSM2* Pioneer, 12 VDC, 1st	**12 VOLT DC SCENE LIGHTS** There will be two (2) Whelen® Model PCPSM2*, 16,000 lumens 12 volt DC powered light(s) with white LEDs installed on the cab located, Above RS2, center over the rear wheel, mount in the 4 way box outboard, and above the EMS compartment on the RS of the cab.. The surface mount housing(s) will be provided with a black cover. The light(s) will be activated by a switch at the driver's side switch panel, by a switch at the left side pump panel and by a switch at the passenger's side switch panel. The light(s) may be load managed when the parking brake is applied.
0766906	Lights, Wln, PCPSM1*, Pioneer, 12 VDC, 1st	**12 VOLT LIGHTING** There will be two (2) Whelen® Model PCPSM1*, 10,444 lumens 12 volt DC surface mount light(s) installed on the body of the apparatus located, REAR BULKHEAD EACH SIDE, MATCH 35147. The light(s) will include black housing(s) with a chrome cover. The light(s) will be controlled by a switch at the driver's side switch panel, by a switch at the left side pump panel, by a switch at the passenger's side switch panel and by a switch in a stainless steel cup located on the driver's side at the rear of the apparatus no more than 72.00" from the ground. The light(s) may be load managed when the parking brake is applied.

0532358		Not Required, Deck Lights, Other Hose Bed & Rear Lighting	
0768474		Lights, Hose Bed, Below Alum Cvr, Amdor AY-LB-12HW040, 40" LED 4lts	**LIGHTS BELOW HOSE BED COVER** There will be four (4) Amdor Model AY-LB12HW040, 700 lumens, 40.00" white LED lights provided to illuminate the hose bed area. Two (2) LED light strips will be installed on the driver's side hose bed cover 30.00" from the front and rear of the hose bed, as close to the hinge as practical. Two (2) LED light strips will be installed on the passenger's side hose bed cover 30.00" from the front and rear of the hose bed, as close to the hinge as practical. The lights will be activated when the battery switch is on, and when the hosebed cover is raised.
0645677		Lights, Not Required, Rear Work, Alt. 12 Volt Lights At Rear Body	
0805690	SP	Lights, Walk Surf, 4-P25 LED, Hose Bed Walkway Area, Mounted on Side Sht	**WALKING SURFACE LIGHT** There will be four (4) 12 volt DC, P25 LED lights provided on the side of the hose bed walkway area to illuminate the surface of the walkway area. These lights shall be located on the side sheet, evenly spaced along the catwalk walkway area. These lights will be activated by the same control that has been selected for the hose bed illumination.
0060115		Pumper, Medium, Aluminum, 2nd Gen	
0554271		Body Skirt Height, 20"	
0028244		Tank, Water, 500 Gallon, Poly, Med	**WATER TANK** Booster tank will have a capacity of 500 gallons and be constructed of polypropylene plastic by United Plastic Fabricating, Incorporated. Tank joints and seams will be nitrogen welded inside and out. Tank will be baffled in accordance with NFPA Bulletin1901 requirements. Baffles will have vent openings at both the top and bottom to permit movement of air and water between compartments. Longitudinal partitions will be constructed of .38" polypropylene plastic and will extend from the bottom of the tank through the top cover to allow for positive welding. Transverse partitions will extend from 4.00" off the bottom of the tank to the underside of the top cover. All partitions will interlock and will be welded to the tank bottom and sides. Tank top will be constructed of .50" polypropylene. It will be recessed .38" and will be welded to the tank sides and the longitudinal partitions. Tank top will be sufficiently supported to keep it rigid during fast filling conditions. Construction will include 2.00" polypropylene dowels spaced no more than 30.00" apart and welded to the transverse partitions. Two (2) of the dowels will be drilled and tapped (.50" diameter, 13.00" deep) to accommodate lifting eyes. A sump that will be sized dependent on the tank to pump plumbing will be provided at the bottom of the water tank. Sump will include a drain plug and the tank outlet. Tank will be installed in a fabricated cradle assembly constructed of structural steel. Sufficient crossmembers will be provided to properly support bottom of tank. Crossmembers will be constructed of steel bar channel or rectangular tubing. Tank will "float" in cradle to avoid torsional stress caused by chassis frame flexing. Rubber cushions, .50" thick x 3.00" wide, will be placed on all horizontal surfaces that the tank rests on. Stops or other provision will be provided to prevent an empty tank from bouncing excessively while moving vehicle. Mounting system will be approved by the tank manufacturer.
0003405		Overflow, 4.00" Water Tank, Poly	Fill tower will be constructed of .50" polypropylene and will be a minimum of 8.00" wide x 14.00" long. Fill tower will be furnished with a .25" thick polypropylene screen and a hinged cover. An overflow pipe, constructed of 4.00" schedule 40 polypropylene, will be installed approximately halfway down the fill tower and extend through the water tank and exit to the rear of the rear axle.
0028104		Foam Cell Required	
0633066		Sleeve, Through Tank	**SLEEVE, PLUMBING, THROUGH TANK** One (1) sleeve will be provided in the water tank for a 3.00" pipe to the rear.
0553729		Not Required, Restraint, Water Tank, Heavy Duty	
0003429		Not Required, Direct Tank Fill	

0003424	Not Required, Dump Valve	
0048710	Not Required, Jet Assist	
0030007	Not Required, Dump Valve Chute	
0514778	Not Required, Switch, Tank Dump Master	
0126633	Hose Bed, Aluminum, Pumper	**HOSE BED** The hose bed will be fabricated of .125"-5052 aluminum with a nominal 38,000 psi tensile strength. Upper and rear edges of side panels will have a double break for rigidity. The upper inside area of the beavertails will be covered with brushed stainless steel to prevent damage to painted surface when hose is removed. Flooring of the hose bed will be removable aluminum grating with the top surface corrugated to aid in hose aeration. The grating slats will be a minimum of 0.50" x 4.50" with spacing between slats for hose ventilation.
0723549	Painted Hose Bed	The hose bed interior walls will be painted to match the lower body color.
0003481	Hose Bed Capacity, Special	Hose bed will accommodate DS to PS: 300' x 1.75" DJH / 300' x 2.50" DJH / 300' x 2.00" DJH / 800' x 5.00" LDH / 400' 1.50" SJ Forestry Hose split by the hose bed divider.
0652742	Divider, Hose Bed, .25" Unpainted, Special Height	**HOSE BED DIVIDER** Four (4) hosebed dividers will be furnished for separating hose. Each divider will be constructed of a .25" brushed aluminum sheet. Flat surfaces will be sanded for uniform appearance, or constructed of brushed aluminum. The height of the hose bed divider(s) will be The three dividers for beds 1, 2, and 3 to be max 18.00" high, the divider that for the middle of bed 5 to be full height to the bottom of the hose bed cover. Divider will be fully adjustable by sliding in tracks, located at the front and rear of the hose bed. Divider will be held in place by tightening bolts, at each end. Acorn nuts will be installed on all bolts in the hose bed which have exposed threads.
0010133	Cross-Divider, Hose Bed	A cross-divider will be provided just behind the fill tower. The divider will be bolted to the side sheet.
0581892	Divider, Hose Bed, .25" Sheet, Unpainted, Permanent	There will be one (1) additional hose bed dividers furnished. Each divider will be constructed of a .25" brushed aluminum sheet. Partition will be permanently installed and located on top of the left side of the ladder compartment, height to the bottom of the hose bed cover. Acorn nuts will be installed on all bolts in the hose bed which have exposed threads. Flat surfaces will be sanded for uniform appearance or constructed of brushed aluminum.
0530804	Cover, Hose Bed, Alum Treadplate	**HOSE BED COVER** A two (2) section hose bed cover, constructed of .125" bright aluminum treadplate will be furnished. The cover will be hinged with full length stainless steel piano hinge. The sides will be slanted down. A stationary bridgework support assembly will be provided at the rear to support the cover. The cover will be reinforced so that it can support the weight of a man walking on the cover. The cover is designed with the left cover opening first. If access to the water tank fill tower is blocked by the hose bed cover, then a hinged door will be provided in it so that the tank may be filled without raising cover doors. Chrome grab handles and four (4) gas filled cylinders will be provided to assist in opening and closing the cover. A handrail is to be provided at the rear, in the center of the support, to assist in opening the cover. The hose bed cover will be connected to the Do Not Move Truck indicator. The light will be activated if the cover is not in the stowed position and the parking brake is released.
0697328	Flap, Rear of Alum Hose Bed Cover, Two Piece, Vinyl, w/Seat Belt Buckles	**HOSEBED END FLAP** A pair of black vinyl flaps will be installed on the rear, one for each of the aluminum treadplate hose bed covers. The vinyl flap will be secured to the hose bed cover with quarter turn fasteners. Each vinyl flap will have (2) nylon tie down straps with seat belt buckles to secure the flaps at their base.

0013512	Running Boards, 12.75" Deep	**RUNNING BOARDS** Running boards will be fabricated of .125" bright aluminum treadplate. Each running board will be supported by a welded 2.00" square tubing and channel assembly, which will be bolted to the pump compartment substructure. Running boards will be 12.75" deep and spaced .50" away from the pump panel. A splash guard will be provided above the running board treadplate.
0689424	Tailboard, T-Shaped, 18" & 8" Deep	**TAILBOARD** The tailboard will also be constructed of .125" bright aluminum treadplate and spaced .50" from the body, as well as supported by a structural steel assembly. The tailboard area will be 18.00" deep in the center area and 8.00" deep to the rear of the side compartments. The tailboard will be T-shaped. The exterior side will be flanged down and in for increased rigidity of tailboard structure.
0690037	Wall, Rear, Smooth Aluminum/Body Material	**REAR WALL, SMOOTH ALUMINUM/BODY MATERIAL** The rear facing surfaces of the center rear wall will be smooth aluminum. The bulkheads, the surface to the rear of the side body compartments, will be smooth and the same material as the body. Any inboard facing surfaces below the height of the hosebed will be aluminum diamondplate.
0889214	Tow Eyes, w/Tow Bar, 2G Pumper	**REAR TOW EYES** Two (2) tow eyes, which are an integral part of the body mounting substructure, will be installed below the rear of the truck. The tow eyes will be of adequate strength to allow the truck to be pulled from the eyes. **REAR TOW BAR** One (1) tow bar will be installed under the tailboard, 3.00" forward from the rear of the tailboard. With air ride suspension and a 65 gallon fuel tank, the tow bar will be located .50" further rearward than normal when there is this combination of options. The tow bar assembly will be designed and positioned to allow up to a 30-degree upward angled pull of 17,000 lb, or a 20,000 lb straight horizontal pull in line with the centerline of the vehicle. The tow bar design will have been tested and evaluated using finite element analysis techniques.
0590934	Hose Restraint, Running Board, Straps, FV Fastener	**RUNNING BOARD HOSE RESTRAINT** A pair of 2.00" wide black nylon straps with seat belt buckle fasteners will be provided for each hose tray to secure the hose during travel. There will be One (1) hose tray located in the left side running board.
0003634	Tray, Hose, Running Board, Soft Suction Hose, 25' of 5.00"	**HOSE TRAY** One (1) hose tray will be recessed in the left hand side running board. Capacity of the tray will be 25.00' of 5.00" soft suction hose. Rubber matting will be installed on the floor of the tray to provide proper ventilation. Drain holes will be provided.

0895820	Construction, Compt, Alum, 2G Pumper	**COMPARTMENTATION** Body and compartments will be fabricated of 0.125", 5052-H32 aluminum. Side compartments will be an integral assembly with the rear fenders. Circular fender liners will be provided for prevention of rust pockets and ease of maintenance. Side compartment flooring will be of the sweep out design with the floor higher than the compartment door lip. The side compartment door opening will be framed by flanging the edges in 1.75" and bending out again 0.75" to form an angle. Drip protection will be provided above the doors by means of bright aluminum extrusion, formed bright aluminum treadplate or polished stainless steel. The top of the compartment will be covered with bright aluminum treadplate rolled over the edges on the front, rear and outward side. These covers will have the corners welded. Side compartment covers will be separate from the compartment tops. Front facing compartment walls will be covered with bright aluminum treadplate. All screws and bolts which protrude into a compartment will have acorn nuts on the ends to prevent injury. **UNDERBODY SUPPORT SYSTEM** Due to the severe loading requirements of this pumper a method of body and compartment support suitable for the intended load will be provided. The backbone of the support system will be the chassis frame rails which is the strongest component of the chassis and is designed for sustaining maximum loads. Forward to the rear axle, the support system will include "L"-shaped support members bolted to the chassis frame rails. These welded support members will include vertical formed channels, horizontal structural channels, and support gussets. These parts extend from the chassis frame outward underneath the body. Rearward to the rear axle, the body support system will include two rearward facing "L"-shaped support members bolted to the chassis frame rails. These support members will be connected to the two body supporting crossmembers forming a boxed foundation for the rear body support system. Steel upper platform decks will be mounted on the top of these support members to create a floating substructure which will result in a 500 lb equipment support rating per lower compartment. All structural components of this system will be made from high strength 50K steel plate material or structural steel componentry. The steel frames as well as the steel vertical angles will be treated with an epoxy E-coat to provide resistance to corrosion and chemicals as standard. The floating substructure will be separated from the horizontal members with neoprene elastomer isolators. These isolators will reduce the natural flex stress of the chassis from being transmitted to the body. Isolators will have a broad load range, proven viability in vehicular applications, be of a fail-safe design and allow for all necessary movement in three (3) transitional and rotational modes. The neoprene isolators will be installed in a pattern which assimilates a three (3)-point mounting pattern to reduce the natural flex of the chassis being transmitted to the body. A design with body compartments hanging on the chassis in an unsupported fashion will not be acceptable. **AGGRESSIVE WALKING SURFACE** All exterior surfaces designated as stepping, standing, and walking areas will comply with the required average slip resistance of the current NFPA standards. **LOUVERS** Louvers will be stamped into compartment walls to provide the proper airflow inside the body compartments and to prevent water from dripping into the compartment. Where these louvers are provided, they will be formed into the metal and not added to the compartment as a separate plate. **TESTING OF BODY DESIGN** Body structural analysis will be fully tested. Proven engineering and test techniques such as finite element analysis, strain gauging, and model analysis will be performed with special attention given to fatigue, life and structural integrity of the body and substructure. Body will be tested while loaded to its greatest in-service weight. The criteria used during the testing procedure will include: Raising opposite corners of the vehicle tires 9.00" to simulate the twisting a truck may experience when driving over a curb. Making a 90 degree turn, while driving at 20 mph to simulate aggressive driving conditions. Driving the vehicle at 35 mph on a washboard road. Driving the vehicle at 55 mph on a smooth road. Accelerating the vehicle fully, until reaching the approximate speed of 45 mph on rough pavement. Evidence of actual testing techniques will be made available upon request.

0023650	LS 152" Rollup, Full Height Front & Rear, FDLER	**LEFT SIDE COMPARTMENTATION** The left side compartmentation will consist of three rollup door compartments. A full height, rollup door compartment ahead of the rear wheels will be provided. The interior dimensions of this compartment will be 34.50" wide x 66.63" high x 25.88" deep in the lower 25.00" of the compartment and 12.00" deep in the remaining upper portion. The clear door opening will be a minimum of 28.75" wide x 56.88" high. A rollup door compartment over the rear wheels will be provided. The interior dimensions of this compartment will be 66.50" wide x 32.88" high x 12.00" deep. The clear door opening will be a minimum of 58.25" wide x 23.13" high. A full height, rollup door compartment behind the rear wheels will be provided.**The interior dimensions of this compartment will be 47.75" wide x 67.63" high x 25.88" deep in the lower 26.00" of height and 12.00" deep in the remaining upper section of the compartment. The clear door opening will be a minimum of 44.75" wide x 57.88" high.** **The interior height of the compartments will be measured from the compartment floor to the ceiling. The spool of the rollup door at the top of the compartment takes up some usable space. The depth of the compartments will be measured from the back wall to the inside of the door frame.** **Closing of the door will not require releasing, unlocking, or unlatching any mechanism and will easily be accomplished with one hand.**
0063658	RS 152" Rollup, Full Height Front & Rear, FDLER	**RIGHT SIDE COMPARTMENTATION** The right side compartmentation will consist of three rollup door compartments. A full height, rollup door compartment ahead of the rear wheels will be provided. The interior dimensions of this compartment will be 34.50" wide x 66.63" high x 25.88" deep in the lower 25.00" of the compartment and 12.00" deep in the remaining upper portion. The clear door opening will be a minimum of 28.75" wide x 56.88" high. A rollup door compartment over the rear wheels will be provided. The interior dimensions of this compartment will be 66.50" wide x 32.88" high x 12.00" deep. The clear door opening will be a minimum of 58.25" wide x 23.13" high. A full height, rollup door compartment behind the rear wheels will be provided.**The interior dimensions of this compartment will be 47.75" wide x 67.63" high x 25.88" deep in the lower 26.00" of height and 12.00" deep in the remaining upper section of the compartment. The clear door opening will be a minimum of 44.75" wide x 57.88" high.** **The interior height of the compartments will be measured from the compartment floor to the ceiling. The spool of the rollup door at the top of the compartment takes up some usable space. The depth of the compartments will be measured from the back wall to the inside of the door frame.** **Closing of the door will not require releasing, unlocking, or unlatching any mechanism and will easily be accomplished with one hand.**
0594005	Doors, Rollup, Amdor, Side Compartments	**SIDE COMPARTMENT ROLLUP DOOR(S)** There will be six (6) compartment doors installed on the side compartments, double faced, aluminum construction, painted one (1) color to match the lower portion of the body and manufactured by AMDOR™ brand rollup doors. Door(s) will be constructed using 1.00" extruded double wall aluminum slats which will feature a flat smooth interior surface to provide maximum protection against equipment hang-up. The slats will be connected with a structural driven ball and socket hinge designed to provide maximum curtain diaphragm strength. Mounting and adjusting the curtain will be done with a clip system that connects the curtain to the balancer drum allowing for easy tension adjustment without tools. The slats will be mounted in reusable slat shoes with positive snap-lock securement. Each slat will incorporate weather tight recessed dual durometer seals. One (1) fin will be designed to locate the seal within the extrusion. The second will serve as a wiping seal which will also allow for compression to prevent water ingression. The doors will be mounted in a one (1)-piece aluminum side frame with recessed side seals to minimize seal damage during equipment deployment. All seals including side frames, top gutters and bottom panel are to be manufactured utilizing non-marring materials. Bottom panel flange of rollup door will be equipped with two (2) cut-outs to allow for easier access with gloved hands. A polished stainless steel lift bar with locking key latches to be provided for each roll-up door. The keys to be Model 751 to match all compartment and cab doors. The lift bar will be located at the bottom of door with striker latches installed at the base of the side frames. Side frame mounted door strikers will include support beneath the stainless steel lift bar to prevent door curtain bounce, improve bottom seal life expectancy and to avoid false door ajar signals. All injection molded rollup door wear components will be constructed of Type 6 nylon. Each rollup door will have a 3.00 inch diameter balancer/tensioner drum to assist in lifting the door. The header for the rollup door assembly will not exceed 4.00". A heavy-duty magnetic switch will be used for control of open compartment door warning lights.
0073701	Compt, Rear, Rollup, 44.50", 31.88" D	**REAR COMPARTMENTATION** A roll-up door compartment above the rear tailboard will be provided**.** The interior dimensions of this compartment will be 40.00" wide x 47.38" high x 31.88" deep. The spool of the rollup door at the top of the compartment takes up some usable space. The depth of the compartment will be calculated with the compartment door closed. A louvered, removable access panel will be furnished on the back wall of the compartment. The rear compartment will be open into the rear side compartments. The clear door opening of this compartment will be a minimum of 33.25" wide x 37.63" high. Closing of the door will not require releasing, unlocking, or unlatching any mechanism and will easily be accomplished with one hand.

0594003	Door, Amdor, Rollup, Rear Compartment	**ROLLUP REAR COMPARTMENT DOOR** The rear compartment will have a rollup door. The door will be double faced, aluminum construction, satin aluminum and manufactured by AMDOR™ brand rollup doors. The door will be constructed using 1.00" extruded double wall aluminum slats which will feature a flat smooth interior surface to provide maximum protection against equipment hang-up. The slats will be connected with a structural driven ball and socket hinge designed to provide maximum curtain diaphragm strength. Mounting and adjusting the curtain will be done with a clip system that connects the curtain to the balancer drum allowing for easy tension adjustment without tools. The slats will be mounted in reusable slat shoes with positive snap-lock securement. Each slat will incorporate weather tight recessed dual durometer seals. One (1) fin will be designed to locate the seal within the extrusion. The second will serve as a wiping seal which will also allow for compression to prevent water ingression. The door will be mounted in a one (1)-piece aluminum side frame with recessed side seals to minimize seal damage during equipment deployment. All seals including side frames, top gutters and bottom panel are to be manufactured utilizing non-marring materials. Bottom panel flange of rollup door will be equipped with two (2) cut-outs to allow for easier access with gloved hands. A polished stainless steel lift bar with locking key latches to be provided for each roll-up door. The keys to be Model 751 to match all compartment and cab doors. The lift bar will be located at the bottom of door with striker latches installed at the base of the side frames. Side frame mounted door strikers will include support beneath the stainless steel lift bar to prevent door curtain bounce, improve bottom seal life expectancy and to avoid false door ajar signals. All injection molded rollup door wear components will be constructed of Type 6 Nylon. The door will have a 3.00 inch diameter balancer/tensioner drum to assist in lifting the door. The header for the rollup door assembly will not exceed 4.00". A heavy-duty magnetic switch will be used for control of open compartment door warning lights.
0554992	Body Modification, 5" Reduced Depth Rear Compt	**BODY MODIFICATION FROM STANDARD** The following body modifications will be required for the installation of a single axle air ride suspension: - Rear compartment will be 5.00" shorter in depth. - Special water tank mounting required if applicable.
0019845	Guard, Drip Pan, S/S, Rollup Door	**DOOR GUARD** There will be seven (7) compartment doors that will include a guard/drip pan designed to protect the roll-up door from damage when in the retracted position and contain any water spray. The guard will be fabricated from stainless steel and installed all compartments.
0641826	Electric Door Locks, Body Doors, Amdor	**ELECTRIC DOOR LOCKS** There will be one (1) door(s) located RS1 door equipped with electric locks. The locks will be wired battery direct. The switch for control will be located RS rear facing seat riser between the riser and the door. In the event of loss of power, a manual override is available.
0616670	Lights, Compt, Pierce LED, Dual Light Strips, Each Side of Door, Pumper/Tanker	**COMPARTMENT LIGHTING** There will be seven (7) compartment(s) with two (2) white 12 volt DC LED compartment light strips. The dual light strips will be centered vertically along each side of the door framing. There will be two (2) light strips per compartment. The dual light strips will be in all body compartment (s). Any remaining compartments without light strips will have a 6.00" diameter Truck-Lite, Model: 79384 light. Each light will have a number 1076 one filament, two wire bulb. Opening the compartment door will automatically turn the compartment lighting on.
0687146	Shelf Tracks, Painted	**MOUNTING TRACKS** There will be seven (7) sets of tracks for mounting shelf(s) in LS1, LS2, LS3, RS1, RS2, RS3 and B1. These tracks will be installed vertically to support the adjustable shelf(s). The tracks will be painted to match the compartment interior.
0600350	Shelves, Adj, 500 lb Capacity, Full Width/Depth, Predefined Locations	**ADJUSTABLE SHELVES** There will be six (6) shelves with a capacity of 500 lb provided. The shelf construction will consist of .188" aluminum painted spatter gray with 2.00" sides. Each shelf will be infinitely adjustable by means of a threaded fastener, which slides in a track. The shelves will be held in place by .12" thick stamped plated brackets and bolts. The location(s) will be in RS3 in the upper third, in RS1 in the upper third, in LS3 in the upper third, in LS1 in the upper third, in LS1 in the upper third and in B1 in the upper third.

0647091	Tray, Floor Mounted, Slide-Out, 500lb, 2.00" Sides	**SLIDE-OUT FLOOR MOUNTED TRAY** There will be one (1) floor mounted slide-out tray(s) provided. Each tray will have 2.00" high sides and a minimum capacity rating of 500 lb in the extended position. Each tray will be constructed of aluminum painted spatter gray There will be two undermount-roller bearing type slides rated at 250lb each provided. The pair of slides will have a safety factor rating of 2. To ensure years of dependable service, the slides will be coated with a finish that is tested to withstand a minimum of 1,000 hours of salt spray per ASTM B117. To ensure years of easy operation, the slides will require no more than a 50lb force for push-in or pull-out movement when fully loaded after having been subjected to a 40 hour vibration (shaker) test under full load. The vibration drive file will have been generated from accelerometer data collected from a heavy truck chassis driven over rough gravel roads in an unloaded condition. Proof of compliance will be provided upon request. Automatic locks will be provided for both the "in" and "out" positions. The trip mechanism for the locks will be located at the front of the tray for ease of use with a gloved hand. The location(s) will be B1.
0725644	Cabinet, Drawer Assembly, CTECH, Three Drawers, Up To 24" Wide	**DRAWER ASSEMBLY** A slide-out drawer assembly will be installed LS3. The clear dimensions of the first drawer starting at the top will be 4.00" with a face plate that is 5.00" high x 21.00" deep. The clear dimensions of the second drawer will be 7.75" with a face plate that is 8.00" high x 21.00" deep. The clear dimensions of the third drawer will be 7.75" with a face plate that is 8.00" high x 21.00" deep. Each drawer will be the same width and not exceed 24.00". The drawers will have a capacity of 250 pounds. The drawers will be mounted in a cabinet housing constructed of light gray powder coated aluminum with anodized aluminum frames. The housing will be 24.00" deep, and completely enclose the drawer. A full-length aluminum extruded rail will be provided at the top edge of each drawer. This rail will act as the latching mechanism as well as the handle for each drawer. There will be a total of one (1) provided.
0726441	Partition, Trans Rear Compt	**PARTITION, TRANSVERSE REAR COMPARTMENT** Two (2) partitions will be bolted in place to separate the left and right side rear compartments from the rear tailboard compartment. The partition will be body material painted spatter gray.
0602555	No Louvers, Delete Standard Compt Louvers, Per Compt, Non-NFPA 2016	**DELETE STANDARD LOUVERS PER COMPARTMENT** A total of seven (7) compartment louver(s) in compartment(s) each compartment will be deleted. NFPA 1901, 2016 edition, section 15.1.1 requires any enclosed external compartment will be weather resistant and ventilated and have provisions for drainage of moisture. Per fire department specification and request to have one (1) or more compartments provided without louvers, the apparatus will be non-compliant to NFPA 1901 standards at time of contract execution.
0028026	Matting, Turtle Tile, Compt Shelving only	**MATTING, COMPARTMENT SHELVING** Turtle Tile compartment matting will be provided in eight (8) shelves. The locations are, all shelves and trays. The color of the Turtle Tile will be black.
0659383	Matting, Turtle Tile w/Ramp, Compt Floors	**MATTING, COMPARTMENT FLOOR** Turtle Tile compartment matting will be provided in four (4) compartments on the compartment floor. The locations are, LS2, RS2, RS3, RS1. The Turtle Tile will be black and the leading edge of the matting will include the beveled edge. The beveled edge will be black .
0797957	Pac Trac, Installed on Compt Wall, Back Wall Only	**EQUIPMENT MOUNTING SYSTEM** Pac Trac equipment mounting system will be installed on the back wall of two (2) compartment(s), LS2 and RS2.
0013202	Strap, Nylon w/Velcro	**STRAP** There will be one (1) black 2.00" wide nylon strap(s) provided horizontal across the D handle troughs in the ladder compartment. The strap(s) will be fastened with Velcro in the center.
0004016	Rub Rail, Aluminum Extruded, Side of Body	**RUB RAIL** Bottom edge of the side compartments will be trimmed with a bright aluminum extruded rub rail. Trim will be 2.12" high with 1.38" flanges turned outward for rigidity. The rub rails will not be an integral part of the body construction, which allows replacement in the event of damage.

0784811		Fender Crowns, Rear, Stainless, w/Removable Liner	**BODY FENDER CROWNS** Polished stainless steel fender crowns will be provided around the rear wheel openings with a dielectric barrier will be provided between the fender crown and the fender sheet metal to prevent corrosion. The fender crowns will be held in place with stainless steel screws that thread directly into a composite nut and not directly into the parent body sheet metal to eliminate dissimilar metals contact and greatly reduce the chance for corrosion. Rubber welting will be provided between the body and crown. **BODY FENDER LINER** A painted to match the lower body color fender liner will be provided. The liners will be removable to aid in the maintenance of rear suspension components.
0519849		Not Required, Hose, Hard Suction	**HARD SUCTION HOSE** Hard suction hose will not be required.
0626229		Handrails, Side Pump Panels, Per Print	**HANDRAILS** The handrails will be 1.25" diameter knurled aluminum to provide a positive gripping surface. Chrome plated end stanchions will support the handrail. Plastic gaskets will be used between end stanchions and any painted surfaces. Drain holes will be provided in the bottom of all vertically mounted handrails. Handrails will be provided to meet NFPA 1901 section 15.8 requirements. The handrails will be installed as noted on the sales drawing.
0729463	SP	Handrails, Beavertail, LS , RS Split	One (1) vertical handrail will be mounted on the left side rear beavertail. Two (2) vertical handrails, will be located on the right side rear beavertail above and below the I Zone bracket.
0011212		Handrail, Not Required, Rear Hose Bed, Pumper	
0004154		Handrail, Extra - 10" Long	**ADDITIONAL HANDRAIL** Two (2) handrails, 10.00" long, will be mounted one each side of the camera at the rear on the underside of the step .
0636301		Compt, Extinguisher (2) Fender Panel, Triangular Door	**EXTINGUISHER/AIR BOTTLE/ STORAGE (Triangular)** A total of one (1) extinguisher/air bottle/storage compartments will be provided RS forward of rear axle. The triangular shaped compartment will be sized to fit a 8.00" diameter extinguisher in the lower area and a 8.00" diameter extinguisher in the upper area. The compartment will be approximately 25.50" deep. A partition will be provided to separate the compartment. Also inside the compartment, black Dura-Surf friction reducing material will be provided. The compartment will be furnished with a drain hole. A painted stainless steel, triangular shaped door with a chrome plated flush lift & turn latch will be provided to contain the air bottles. A dielectric barrier will be provided between the door hinge, hinge fasteners and the body sheet metal. **AIR BOTTLE COMPARTMENT STRAP** A strap will be provided in the air bottle compartment(s) to help contain the bottles when the vehicle is parked on an incline. The strap will wrap around the neck and attach to the wall of the compartment.
0654143		Compt, Air Bottle, Single,Tri Door (DEF/Fuel), Fender Panel	**AIR BOTTLE STORAGE (Single)** A quantity of one air bottle compartment, approximately 7.50" wide x 7.50" tall x 26.00" deep, will be provided on the driver side rearward of the rear wheels. The triangular door will cover the air bottle opening, the DEF tank access, and fuel fill. The compartment will be square with angled corners. A painted stainless steel door with a chrome plated flush lift & turn latch will be provided to contain the air bottle. A dielectric barrier will be provided between the door hinge, hinge fasteners and the body sheet metal. Inside the compartment, black Dura-Surf friction reducing material will be provided. **AIR BOTTLE COMPARTMENT STRAP** A strap will be provided in the air bottle compartment to help contain the air bottle when the vehicle is parked on an incline. The strap will wrap around the neck and attach to the wall of the compartment.
0657522		Compt, Air Bottle, Triple, Fender Panel	**AIR BOTTLE STORAGE (Triple)** A quantity of one (1) air bottle compartment designed to hold (3) air bottles up to 7.25" in diameter x 26.00" deep will be provided on the left side forward of the rear wheels. A painted stainless steel door with a chrome plated flush lift & turn latch will be provided to contain the air bottle. A dielectric barrier will be provided between the door hinge, hinge fasteners and the body sheet metal. Inside the compartment, black Dura-Surf friction reducing material will be provided. **AIR BOTTLE COMPARTMENT STRAP** A strap will be provided in the air bottle compartment(s) to help contain the air bottles when the vehicle is parked on an incline. The strap will wrap around the neck and attach to the wall of the compartment.

0637785		Compt, Extinguisher Fender Panel, 9.00" Square	**EXTINGUISHER STORAGE** A quantity of one (1) extinguisher compartments will be provided on the right side rearward of the rear wheels. The extinguisher compartment will be in the form of a 9.00" square tube and of adequate depth to accommodate different size extinguishers. A painted stainless steel door with a chrome plated flush lift & turn latch will be provided to contain the extinguisher. A dielectric barrier will be provided between the door hinge, hinge fasteners, and the body sheet metal. Inside the compartment, black Dura-Surf friction reducing material will be provided. There will also be a drain hole for each compartment.
0024205		Holder, Air Bottle w/CRS Strap, Body Compt Mt w/Tracks	**AIR BOTTLE HOLDERS** Two (2) brackets will be provided for mounting air bottles. Each bracket will be a Ziamatic, model UN-6-30-3-SF, and contain a collision restraint strap. It will be mounted on tracks and used for adjusting the location of the bracket within the compartment. The brackets will be installed in compartment LS3, RS3 UPPER REAR WALL CENTER.
0004225		Ladder, 24' Duo-Safety 900A 2-Section	**EXTENSION LADDER** There will be a 24' two-section aluminum Duo-Safety Series 900-A extension ladder provided.
0004230		Ladder, 14' Duo-Safety 775A Roof	**ROOF LADDER** There will be a 14' aluminum Duo-Safety Series 775-A roof ladder provided.
0730782	SP	Ladders/Backboard Btwn Tank & S.Sht, RS, Ext'd Rr, Encl'd Comp,RPH,Vinyl,Spcl Mt	**LADDER STORAGE** The ladders and a single backboard will be stored between the water tank and the right side compartments. The ladders will extend into the pump compartment just to the rear of the water pump discharges. Backboard dimensions will be 74" X 2.50 X 18". The ladder storage area will be enclosed as practical by means of sheet metal to protect the ladders from road dirt. A black rubber boot will be provided to enclosed the ladders in the gap between the pump house and the body. The ladders that extend into the pump house will also be enclosed. The pump house portion of the enclosure will be made of red vinyl. The vinyl portion will be fastened to the pumphouse structure with side release buckles. The vinyl portion will allow the user to move the enclosure aside to access the pump area. Each ladder will be stored vertically in a separate stainless steel storage trough. Each stainless steel trough will be lined with Dura-Surf nylon slides. A bright aluminum treadplate enclosure will be provided at the rear of the body to properly contain the ladders This enclosure will extend to the rear of the side body compartments. The ladders will be mounted FLY INBOARD. The enclosure will also include a vertically hinged aluminum treadplate door with a D-handle latch to access the ladders. The door will be hinged along the outboard edge.
0733387		Ladder, 10' Duo-Safety Folding 585A	**FOLDING LADDER** One (1) 10.00' aluminum, Series 585-A, Duo-Safety folding ladder will be installed.
0547754		Not Required, Pike, Pole, 8'	
0549137		Not Required, Pike Pole, 6'	
0087631		Trough for D-Handled Pike Pole	**PIKE POLE STORAGE** Stainless steel U-shaped trough be used for the storage of two (2) pike poles, with D-handle style grip, will be provided and installed top portion of the ladder compartment, match 27714, for 6' and 10' poles.
0004379		Bell, 12" Chrome w/Eagle, Mounted on Cab Corner	**BELL** A chrome plated, 12.00" bronze cast bell, complete with an eagle, will be mounted on the passenger side radiused corner of cab face. The cab will be properly reinforced to support the weight of the bell. A rope pull, for the bell, will be installed inside the cab.
0755552	SP	Label, Indicator Lamp Symbols, Cab Door Panel	**INDICATOR LAMP LABEL** There will be a label provided on the cab door panel, Driver's door. The label will provide brief descriptive text for each indicator lamp that may become visible in the driver side gauge cluster. The symbols on the label will match the symbols on the gauge cluster.

0785102	Steps, Folding, Front of Body, Cargo Bed Access, w/LED, Trident	**FOLDING STEPS FRONT OF BODY** Folding steps will be provided full height on the left side and right side body compartments to provide access to the cargo bed. Steps will be spaced evenly on the sales drawing. Actual quantity may vary due to pump panel interferences but will meet the NFPA required maximum stepping height. The Trident steps will be bright finished, non-skid with a black tread coating on the stepping surface. The step will incorporate an LED light to illuminate the stepping surface. The steps can be used as a hand hold with two openings wide enough for a gloved hand.
0592994	Steps, Folding, Rear of Body, w/LED, Trident	**REAR FOLDING STEPS** Bright finished, non-skid folding steps with a black tread coating on the stepping surface will be provided at the rear. Each step will incorporate an LED light to illuminate the stepping surface. The steps can be used as a hand hold with two openings wide enough for a gloved hand.
0650261	I Zone Bracket, Pair, Folding Style	**I-ZONE BRACKETS** Two (2) flip-out I-Zone brackets will be provided and mounted at the rear of the apparatus, rear bulkhead each side, just under the rear facing scene lights, HINGE OUTBOARD, MATCH 35147 AND PICS TO BE PROVIDED. The brackets will be designed with adequate reinforcement to eliminate flexing of the body (oil canning).
0007590	Pump House, Side Control, 52", Control Zone	**PUMP COMPARTMENT** The pump compartment will be separate from the hose body and compartments so that each may flex independently of the other. It will be a fabricated assembly made of the same material as the rear body using tubing, angles and channels which supports both the fire pump and the side running boards. The pump compartment will be mounted on the chassis frame rails with rubber biscuits in a four point pattern to allow for chassis frame twist. Pump compartment, pump, plumbing and gauge panels will be removable from the chassis in a single assembly. **PUMP MOUNTING** Pump will be mounted to a substructure which will be mounted to the chassis frame rail using rubber isolators. The mounting will allow chassis frame rails to flex independently without damage to the fire pump. **LEFT SIDE PUMP CONTROL PANELS** All pump controls and gauges will be located at the left side of the apparatus and properly identified. Layout of the pump control panel will be ergonomically efficient and systematically organized. The pump operator's control panel will be removable in two (2) main sections for ease of maintenance: The upper section will contain sub panels for the mounting of the pump pressure control device, engine monitoring gauges, electrical switches, and foam controls (if applicable). Sub panels will be removable from the face of the pump panel for ease of maintenance. Below the sub panels will be located all valve controls and line pressure gauges. The lower section of the panel will contain all inlets, outlets, and drains. All push/pull valve controls will have 1/4 turn locking control rods with polished chrome plated zinc tee handles. Guides for the push/pull control rods will be chrome plated zinc castings securely mounted to the pump panel. Push/pull valve controls will be capable of locking in any position. The control rods will pull straight out of the panel and will be equipped with universal joints to eliminate binding. **IDENTIFICATION TAGS** The identification tag for each valve control will be recessed in the face of the tee handle. All discharge outlets will have color coded identification tags, with each discharge having its own unique color. Color coding will include the labeling of the outlet and the drain for each corresponding discharge. All line pressure gauges will be mounted directly above the corresponding discharge control tee handles and recessed within the same chrome plated casting as the rod guide for quick identification. The gauge and rod guide casting will be removable from the face of the pump panel for ease of maintenance. The casting will be color coded to correspond with the discharge identification tag. All remaining identification tags will be mounted on the pump panel in chrome plated bezels. The pump panel on the right side will be removable with lift and turn type fasteners. Trim rings will be installed around all inlets and outlets.
0053227	Raised Pump House Structure, Side Control Vert Up-Right Moved Inboard For Ladder	**PUMPHOUSE STRUCTURE** A special pumphouse structure is required to accommodate the ladders stored between the tank and the sidesheet. The vertical upright support will need to be moved inboard.

0014441	Pump, Hale, QMAX-150, 1500 GPM, Single Stage	**MIDSHIP FIRE PUMP** Midship fire pump will be a Hale QMAX-150, 1500 gpm single (1) stage midship mounted centrifugal type. Pump will be the class "A" type. Pump will deliver the percentage of rated discharges at the pressures indicated below: - 100% of rated capacity at 150 psi net pump pressure. - 100% of rated capacity at 165 psi net pump pressure. - 70% of rated capacity at 200 psi net pump pressure. - 50% of rated capacity at 250 psi net pump pressure. Entire pump and both suction and discharge passages will be hydrostatically tested to a pressure of 500 psi. Pump will be fully tested at the pump manufacturer's factory to the performance requirements as outlined by the current NFPA 1901 standards and will be free from objectionable pulsation and vibration. Pump body and related parts will be of fine grain, alloy cast iron with a minimum tensile strength of 30,000 psi (2041.2 bar). All moving parts in contact with water will be of high quality bronze or stainless steel. Pump body will be horizontally split, on a single plane in two (2) sections, for easy removal of entire impeller assembly, including wear rings and bearings from beneath the pump, without disturbing pump piping or the mounting of the pump in the chassis. Pump will have one (1) double suction impeller. The pump body will have two (2) opposed discharge volute cutwaters to eliminate radial unbalance. Pump impeller will be hard, fine grain bronze of the mixed flow design, accurately machined, hand-ground, and individually balanced. The vanes of the impeller intake eyes will be hand-ground and polished to a sharp edge. They will be of sufficient size and design to provide ample reserve capacity utilizing minimum horsepower. Impeller clearance rings will be bronze and easily renewable without replacing impeller or pump volute body. They will be of the wrap-around double labyrinth design for maximum efficiency. Pump shaft will be electric furnace heat-treated, corrosion resistant stainless steel. It will be super-finished under packing with galvanic corrosion (zinc separators in packing) protection for longer shaft life. Pump shaft will be sealed with double oil seal to keep road dirt and water out of drive unit. Pump shaft will be rigidly supported by three (3) bearings for minimum deflection. A high lead bronze sleeve bearing will be located immediately adjacent to the impeller (on the side opposite of the drive unit). The sleeve bearing will be automatically oil lubricated and pressure balanced to exclude foreign material. The remaining bearings will be heavy-duty, deep groove ball bearings in the gearbox and will be splash lubricated.
0014482	Seal, Mechanical, Hale	**MECHANICAL SEAL ON PUMP** Only one (1) mechanical seal will be used on the suction (inboard) side of the pump. The mechanical seal will be 2.00" in diameter and will be spring loaded, maintenance-free, and self-adjusting. The mechanical seal construction will be a carbon sealing ring, stainless steel coil spring, Viton® rubber boot, and a tungsten carbide seat with a Teflon backup seal.
0014477	Trans, Pump, Hale, Gear	**PUMP TRANSMISSION** The drive unit will be cast and completely manufactured and tested at the Hale Products, Inc. factory. The pump drive unit will be of sufficient size to withstand up to 16,000 foot/ pounds of torque from the engine in both the road and pump operating conditions. The drive unit is will be designed with ample lubrication reserve to maintain the proper operating temperature. The gearbox drive shafts will be of heat treated chrome nickel steel and 2.75" in diameter on both the input and output drive shafts. They will be designed to withstand the full torque of the engine in both road and pump operating conditions. All gears, both drive and pump, will be of the highest quality, electric furnace, chrome nickel steel. Bores will be ground to size and teeth integrated, crown-shaved and hardened, to give an extremely accurate gear for long life, smooth, quiet running and higher load carrying capability. An accurately cut spur design will be provided to eliminate all possible end thrust. Pierce Manufacturing will select the pump ratio to provide the maximum performance with the engine and transmission selected. Three (3) green warning lights will be provided to indicate to the operator(s) when the pump has completed the shift from Road to Pump position. Two (2) lights will be located in the truck driving compartment and one (1) light on pump operator's panel adjacent to the throttle control.
0635600	Pumping Mode, Stationary Only	**PUMPING MODE** An interlock system will be provided to ensure that the pump drive system components are properly engaged so that the apparatus can be safely operated. The interlock system will be designed to allow stationary pumping only.
0604324	Pump Shift, Air Mnl Override, Split Shaft, Interlocked, Hale	**AIR PUMP SHIFT** Pump shift engagement will be made by a two (2) position sliding collar, actuated pneumatically (by air pressure), with a three (3) position air control switch located in the cab. A manual back-up shift control will also be located on the left side pump panel. Two (2) indicator lights will be provided adjacent to the pump shift inside the cab. One (1) green light will indicate the pump shift has been completed and be labeled "pump engaged". The second green light will indicate when the pump has been engaged and the chassis transmission is in pump gear. This indicator light will be labeled "OK to pump". The pump shift will be interlocked to prevent the pump from being shifted out of gear when the chassis transmission is in gear to meet NFPA requirements. The pump shift control in the cab will be illuminated to meet NFPA requirements.

0003148	Transmission Lock-up, EVS	**TRANSMISSION LOCK-UP** The direct gear transmission lock-up for the fire pump operation will engage automatically when the pump shift control in the cab is activated.
0004547	Auxiliary Cooling System	**AUXILIARY COOLING SYSTEM** A supplementary heat exchange cooling system will be provided to allow the use of water from the discharge side of the pump for cooling the engine water. The heat exchanger will be a separate unit. It will be installed in the pump or engine compartment with the control located on the pump operator's control panel. The exchanger will be plumbed to the master drain valve.
0014486	Not Required, Transfer Valve, Single Stage Pump	
0777650	Valve, Relief Intake, Akron	**INTAKE RELIEF VALVE - PUMP** An Akron Style 53 relief valve will be installed on the suction side of the pump preset at 125 psig. The relief valve will have a working range of 50 psi to 250 psi. The outlet will terminate below the frame rails with a 2.50" National Standard hose thread adapter and will have a "do not cap" warning tag. The relief valve pressure control will be located behind the right side pump panel with a stainless steel access door .
0721609	Controller, Pressure, Pierce LCD, Custom Chassis	**PIERCE PRESSURE CONTROLLER** A Pierce electronic pressure controller will be provided. A pressure transducer will be installed in the discharge side of the water pump. The transducer continuously monitors pump pressure sending a signal to the electronic pressure controller. The pressure controller can be used in two (2) modes of operation, RPM mode and pressure modes. The controller will be programmed to turn on/default to No Mode/Default Press Setting mode. In the RPM mode, the controller can be activated after vehicle parking brake has been set. When in this mode, the controller will maintain the set engine speed, regardless of engine load (within engine operation capabilities). In the pressure mode, the controller can be activated after vehicle parking brake has been set. When in this mode, the controller will automatically maintain the discharge pressure set by the operator (within the discharge capabilities of the pump and water supply) regardless of flow. A 2.00" diameter throttle control knob with no mechanical stops, a serrated grip, and a red idle push button in the center will be a integrated/part of the pressure controller. The throttle control knob will be programmed for Clockwise rotation to increase engine speed. Individual LED indicators for ok to pump, throttle ready, pressure mode and rpm mode will be located on the pressure controller for easy viewing. A pump cavitation protection feature will also provided which will return the engine to idle should the pump cavitate. Cavitation is sensed by the combination of pump pressure below 30 psi and engine speed above 2000 rpm for more than five (5) seconds. Other safety features include recognition of low water and no water conditions with an automatic programmed response and a push button to return the engine to idle. The pressure controller LCD screen will be 4.20" in size with a minimum brightness of 750 nits. The LCD screen and LED intensity will be automatically adjust for day and nighttime operation. The LCD screen intensity can also be manually adjusted if needed. The following information will be provided/displayed on the LCD screen - Engine RPM Check engine and stop engine warning indicators Engine oil pressure Engine coolant temperature Water pump temperature Fuel Level Water tank level Battery voltage Operating mode (RPM or pressure) Pressure or RPM setting On screen messaging show diagnostic and warning messages as they occur. It will show apparatus information, stored data, and program options when selected by the operator. It will monitor inputs outputs and support audible and visual warning alarms for the following conditions - High battery voltage Low battery voltage/engine off Low battery voltage/engine running High water pump temperature Low fuel Low engine oil pressure High engine coolant temperature Water tank out of water (visual alarm only) No engine response (visual alarm only) The pressure controller will store the accumulated operating hours for the pump and engine. These items are to be displayed within the pressure controller menu. The pressure controller will include a USB port on the back of the controller for easy software upgrades if needed.

0072153	Primer, Trident, Air Prime, Air Operated	**PRIMING PUMP** The priming pump will be a Trident Emergency Products compressed air powered, high efficiency, multistage venturi based AirPrime System, conforming to standards outlined in the current edition of NFPA 1901. All wetted metallic parts of the priming system are to be of brass and stainless steel construction. One (1) priming control will open the priming valve and start the pump primer.
0044552	Line, 0.50" Recirculating w/Check Valve	**RECIRCULATING LINE WITH CHECK VALVE** A 0.50" diameter recirculating line, from the pump to the water tank, will be furnished with a control installed at the pump operator's control panel. A check valve will be provided in this line to prevent the back flow of water from the tank to the pump if the valve is left in the open position.
0658552	Thermal Relief Valve, TRV120-L w/Red Warning Light, Hale Pump	**THERMAL RELIEF VALVE** A Hale TRV120-L thermal protection device will be included on the pump that monitors pump water temperature and opens to relieve water to cool the pump when the temperature of the pump water exceeds 120 Degrees F (49 C). The thermal protection device will include a red warning light. The warning light with a test switch will be mounted on the pump operator panel. The discharge line will be 3/8 inch diameter tubing plumbed to ground.
0780364	Manuals, Pump, (2) Total, Electronic Copies	**PUMP MANUALS** There will be a total of two (2) pump manuals provided by the pump manufacturer and furnished with the apparatus. The manuals will be provided by the pump manufacturer in the form of two (2) electronic copies. Each manual will cover pump operation, maintenance, and parts.
0602512	Plumbing, Stainless Steel and Hose, Single Stage Pump, Control Zone	**PLUMBING, STAINLESS STEEL AND HOSE** All inlet and outlet lines will be plumbed with either stainless steel pipe, flexible polypropylene tubing or synthetic rubber hose reinforced with hi-tensile polyester braid. All hose's will be equipped with brass or stainless steel couplings. All stainless steel hard plumbing will be a minimum of a schedule 10 wall thickness. Where vibration or chassis flexing may damage or loosen piping or where a coupling is required for servicing, the piping will be equipped with victaulic or rubber couplings. Plumbing manifold bodies will be ductile cast iron or stainless steel. All piping lines are to be drained through a master drain valve or will be equipped with individual drain valves. All drain lines will be extended with a hose to drain below the chassis frame. All water carrying gauge lines will be of flexible polypropylene tubing. All piping, hose and fittings will have a minimum of a 500 PSI hydrodynamic pressure rating.
0795135	Plumbing, Stainless Steel, w/Foam System	**FOAM SYSTEM PLUMBING** All piping that is in contact with the foam concentrate or foam/water solution will be stainless steel. The fittings will be stainless steel or brass. Cast iron pump manifolds will be allowed.
0004645	Inlets, 6.00" - 1250 GPM or Larger Pump	**MAIN PUMP INLETS** A 6.00" pump manifold inlet will be provided on each side of the vehicle. The suction inlets will include removable die cast zinc screens that are designed to provide cathodic protection for the pump, thus reducing corrosion in the pump.
0034651	Pump Suction Tube(s), Short, Right Side	**RIGHT SIDE SHORT SUCTION TUBE(S)** The suction tube(s) on the right side of the water pump will have short suction tube(s) installed to allow for installation of adapters, elbows or intake valves without excessive overhang.
0895474	Valve, w/Relief, LS Side Pump Inlet, Hale MIV 2.0, Handwheel Cntrl	**INLET VALVE/DUMP** One (1) butterfly valve type Hale MIV 2.0 will be provided on the left side main pump inlet. The inlet valve will be a combination butterfly valve and pressure relief valve with a Hale bleeder valve. The pressure relief valve will have a range of 75 to 250 PSI and will be factory set to 125 PSIG. The valve, less relief valve, will be rated for 600 PSI hydrostatic pressure and 26 inHg of vacuum. The valve will cycle from full open to full closed in approximately ten (10) to twelve (12) turns of the handwheel. An indicator light will be provided to show when the valve is in the closed position. The valve will be fully recessed behind the pump panel. A chrome plated handwheel will be provided next to the inlet valve.
0004646	Cap, Main Pump Inlet, Long Handle, NST, VLH	**MAIN PUMP INLET CAP** The main pump inlets will have National Standard Threads with a long handle chrome cap. The cap will be the Pierce VLH, which incorporates an exclusive thread design to automatically relieve stored pressure in the line when disconnected.

0084610	Valves, Akron 8000 series- All	**VALVES** All ball valves will be Akron® Brass. The Akron valves will be the 8000 series heavy-duty style with a stainless steel ball and a simple two-seat design. No lubrication or regular maintenance is required on the valve. Valves will have a **ten (10) year** warranty.
0016158	Valve, Inlet(s) Recessed, Side Cntrl, "Control Zone"	The location of the valve for the two (2) inlets will be recessed behind the pump panel.
0004700	Control, Inlet, at Valve	**INLET CONTROL** The side auxiliary inlet(s) will incorporate a quarter-turn ball valve with the control located at the inlet valve. The valve operating mechanism will indicate the position of the valve.
0004660	Inlet (1), Left Side, 2.50"	**LEFT SIDE INLET** There will be one (1) auxiliary inlet with a 2.50" valve at the left side pump panel, terminating with a 2.50" (F) National Standard hose thread adapter. The auxiliary inlet will be provided with a strainer, chrome swivel and plug.
0004680	Inlet, Right Side, 2.50"	**RIGHT SIDE INLET** There will be one (1) auxiliary inlet with a 2.50" valve at the right side pump panel, terminating with a 2.50" (F) National Standard hose thread adapter. The auxiliary inlet will be provided with a strainer, chrome swivel and plug.
0034720	Anode, Zinc, Pair, Pump Inlets	**ANODE, INLET** A pair of sacrificial zinc anodes will be provided in the water pump inlets to protect the pump from corrosion.
0012635	Elbow, 30 Degree Side Inlet, 6" FNST Swivel x 5" Storz w/Cap	**ADAPTER, INLET** One (1) adapter for the inlet will be provided. The elbow adapter will be furnished for the left side main pump inlet/s. The elbow/s will be 6.00"" female NST swivel to 5.00" Storz. A 5.00" Storz cap will be provided with the elbow.
0092569	No Rear Inlet (Large Dia) Requested	
0064116	No Rear Inlet Actuation Required	
0092696	Not Required, Cap, Rear Inlet	
0009648	No Rear Intake Relief Valve Required on Rear Inlet	
0092568	No Rear Auxiliary Inlet Requested	
0004699	Valve, .75 Bleeder,Aux. Side Inlet	**INLET BLEEDER VALVE** A 0.75" ball type bleeder valve will be provided for each side gated inlet. The valves will be located behind the panel with a handwheel type knob for the control extended to the outside of the panel. The water, that is discharged by the valve, will be routed below the chassis frame rails.
0014751	Tank to Pump, (1) 3.00" Valve, 3.00" Plumbing, Reverse Linkage	**TANK TO PUMP** The booster tank will be connected to the intake side of the pump with heavy duty piping and a quarter turn 3.00" full flow line valve with the control remotely located at the operator's panel. The tank to pump line will run straight (no elbows) from the pump into the front face of the water tank and down into the tank sump. A rubber coupling will be included in this line to prevent damage from vibration or chassis flexing. The control on the pump panel will be "in" when the valve is open and "out" when the valve is closed. A check valve will be provided in the tank to pump supply line to prevent the possibility of "back filling" the water tank.
0004905	Outlet, Tank Fill, 1.50"	**TANK REFILL** A 1.50" combination tank refill and pump re-circulation line will be provided, using a quarter-turn full flow ball valve controlled from the pump operator's panel.

0062133	Control, Outlets, Manual, Pierce HW if applicable	**DISCHARGE OUTLET CONTROLS** The discharge outlets will incorporate a quarter-turn ball valve with the control located at the pump operator's panel. The valve operating mechanism will indicate the position of the valve. If a handwheel control valve is used, the control will be a minimum of a 3.9" diameter stainless steel handwheel with a dial position indicator built in to the center of the handwheel. Any 3.00 inch or larger discharge valve will be a slow-operating valve in accordance with NFPA 16.7.5.3.
0004940	Outlet, Left Side, 2.50"	**LEFT SIDE DISCHARGE OUTLETS** There will be Two (2) discharge outlets with a 2.50" valve on the left side of the apparatus, terminating with a 2.50" (M) National Standard hose thread adapter.
0065091	Elbow, Left Side Outlets, 30 Degree, 2.50" FNST x 2.50" MNST, VLH	**LEFT SIDE OUTLET ELBOWS** The 2.50" discharge outlets, located on the left side pump panel, will be furnished with a 2.50" (F) National Standard hose thread x 2.50" (M) National Standard hose thread, chrome plated, 30 degree elbow. The elbow will be Pierce VLH, which incorporates an exclusive thread design to automatically relieve stored pressure in the line when disconnected.
0092570	Not Required, Outlets, Left Side Additional	
0035094	Not Required, Elbow, Left Side Outlets, Additional	
0004945	Outlet, Right Side, 2.50"	**RIGHT SIDE DISCHARGE OUTLETS** There will be One (1) discharge outlet with a 2.50" valve on the right side of the apparatus, terminating with a 2.50" (M) National Standard hose thread adapter.
0085096	Elbow, Right Side Outlets, 30 Degree, 2.5" FNST x 2.5" MNST, VLH	**RIGHT SIDE OUTLET ELBOWS** The 2.50" discharge outlets, located on the right side pump panel, will be furnished with a 2.50" (F) National Standard hose thread x 2.50" (M) National Standard hose thread, chrome plated, 30 degree elbow. The elbow will be Pierce VLH, which incorporates an exclusive thread design to automatically relieve stored pressure in the line when disconnected.
0011668	Outlet, Right Side, 3" w/3" Plumbing, Handwheel Control, (added)	There will be One (1) discharge outlet with a 3.00" valve on the right side of the apparatus, terminating with a 3.00" (M) National Standard hose thread adapter. The outlet will be controlled by a handwheel control located at the pump operator's panel. An indicator will be provided to show the position of the valve.
0045097	Elbow, Right Side Outlets, 30 Degree, 3.00" FNST x 5.00" Storz w/Cap, Additional	**ADDITIONAL RIGHT SIDE OUTLET ELBOWS** The 3.00" outlet will be furnished with a 30 degree, 3.00" (F) National Standard hose thread x 5.00" Storz elbow adapter with Storz cap.
0029137	Not Required, Outlet, Large Diameter	
0007308	Not Required, Elbow, Large Diameter Outlet	
0649939	Outlet, Front, 1.50" w/2" Plumbing	**FRONT DISCHARGE OUTLET** There will be one (1) 1.50" discharge outlet piped to the front of the apparatus and located on the top of the right side of the front bumper. Plumbing will consist of 2.00" piping and flexible hose with a 2.00" ball valve with control at the pump operator's panel. A fabricated weldment made of stainless steel pipe will be used in the plumbing where appropriate. The piping will terminate with a 1.50" NST with 90 degree stainless steel swivel. There will be automatic drains provided at all low points of the piping.
0004995	Outlet, Rear, 2.50"	**REAR DISCHARGE OUTLET** There will be One (1) discharge outlet piped to the rear of the hose bed, left side, installed so proper clearance is provided for spanner wrenches or adapters. Plumbing will consist of 2.50" piping along with a 2.50" full flow ball valve with the control from the pump operator's panel.

0040286	Elbow, Rear Outlets, 30 Degree, 2.50" FNST x 2.50" MNST, VLH	**REAR OUTLET ELBOWS** The 2.50" discharge outlets, located at the rear of the apparatus, will be furnished with a 2.50" (F) National Standard hose thread x 2.50" (M) National Standard hose thread, chrome plated, 30 degree elbow. The elbow will be Pierce VLH, which incorporates an exclusive thread design to automatically relieve stored pressure in the line when disconnected.
0092574	Not Required, Outlet, Rear, Additional	
0085695	Not Required, Elbow, Rear Outlets, Large, Additional	
0092573	Not Required, Outlet, Hose Bed/Running Board Tray	
0752097	Caps/Plugs for 1.00" to 3.00" Discharges/Inlets, Chain	**DISCHARGE CAPS/ INLET PLUGS** Chrome plated, rocker lug, caps with chain will be furnished for all discharge outlets 1.00" thru 3.00" in size, besides the pre-connected hose outlets. Chrome plated, rocker lug, plugs with chain will be furnished for all auxiliary inlets 1.00" thru 3.00" in size. The caps and plugs will incorporate a thread design to automatically relieve stored pressure in the line when disconnected.
0723042	Valve, 0.75" Bleeder, Discharges, "T" Swing Handle	**OUTLET BLEEDER VALVE** A 0.75" bleeder valve will be provided for each outlet 1.50" or larger. Automatic drain valves are acceptable with some outlets if deemed appropriate with the application. The valves will be located behind the panel with a T swing style handle control extended to the outside of the side pump panel. The handles will be chrome plated and provide a visual indication of valve position. The T swing handle will provide an ergonomic position for operating the valve without twisting the wrist and provides excellent leverage. Bleeders will be located at the bottom of the pump panel. They will be properly labeled identifying the discharge they are plumbed in to. The water discharged by the bleeders will be routed below the chassis frame rails.
0091260	Outlet, 3.00" Deluge w/TFT Extend-a-Gun XG12 Riser, Akron Valve, Handwheel	**DELUGE RISER** A 3.00" deluge riser will be installed above the pump in such a manner that a monitor can be mounted and used effectively. Piping will be rigidly braced and installed securely so no movement develops when the line is charged. The riser will be gated and controlled at the pump operator's panel. The outlet will include an Akron valve with a handwheel control. **TELESCOPIC PIPING** The deluge riser piping will include a 12.00" Task Force Model XG12 Extend-A-Gun extension. This extension will be telescopic to allow the deluge gun to be raised 12.00" increasing the range of operation. A position sensor will be provided on the telescopic piping that will activate the "do not move vehicle" light inside the cab when the monitor is in the raised position.
0095958	Deluge Outlet, Special Height/Location	**DELUGE OUTLET SPECIAL INSTRUCTIONS** The deluge gun outlet will be located same height as the top of the hose reel.
0543550	Monitor, TFT Crossfire XFC-42, (2) 2.5" Portable Base, Shaper, Quad Stack Tips	**MONITOR** A Task Force Crossfire Series XFC-42 monitor package will be properly installed on the deluge riser. The monitor package will include a Crossfire monitor with a 10.00" stream shaper and quad stack tips. A Safe-Tak portable base unit with two (2) 2.50" inlets will be provided. The monitor will be painted to match the body.
0047175	No Additional Nozzle Req'd	
0046857	Deluge Mount, For TFT Crossfire Monitor, TFT Manual Extend-A-Gun Only	The deluge riser Extend-a-Gun will have provisions for direct mounting a Task Force Tips CrossFire monitor.
0723726	Speedlay Module Not Required	
0722432	Hose Restraint Not Required, No Speedlay Module	

0723395		Speedlays, Not Required	
0723394		Speedlays, Not Required	
0029210		Crosslays Sngl Sheet, (2+) 1.50", Spl. Cap/Arrangement	**CROSSLAY HOSE BEDS, 1.50"** Two (2) crosslays with 1.50" outlets will be provided. Each bed to be capable of carrying full height to match the deadlay, both crosslays no wider than 7.50" clear and will be plumbed with 2.00" i.d. pipe and gated with a 2.00" quarter turn ball valve. Outlets to be equipped with a 1.50" National Standard hose thread 90 degree swivel located in the hose bed so that hose may be removed from either side of apparatus. The crosslay controls will be at the pump operator's panel. The center crosslay dividers will be fabricated of .25" aluminum and will provide adjustment from side to side. The divider will be unpainted with a brushed finish. Vertical scuffplates, constructed of stainless steel, will be provided at the front and rear ends of the bed on each side of vehicle. Crosslay bed flooring will consist of removable perforated brushed aluminum.
0092183		Deadlay(s) No Plumbing, Spl Capacity,	**DEADLAY HOSE BEDS** One (1) deadlay bed, without plumbing, will be provided above the pump compartment capable of carrying the clear width set at 9.00", match the height of the front crosslay bed, and make the deadlay the forward bed in front of the crosslays.. The center crosslay dividers will be fabricated of .25" aluminum and will provide adjustment from side to side. The divider will be unpainted with a DA finish. The remainder of the crosslay bed will be painted job color. Stainless steel vertical scuffplates will be provided at hose bed ends (each side of vehicle). Bottom of hose bed ends (each side) will also be equipped with a stainless steel scuffplate. Deadlay bed flooring will consist of removable perforated brushed aluminum.
0549499	SP	Hose Restraint, X-lay/Speedlay/Deadlay, Vinyl, Seat Belt Buckle	**HOSE RESTRAINT SIDES** three (3) vinyl cover will be provided on each end of crosslay/speedlay/deadlay beds to secure the hose during travel. There will be one cover provided across each end to cover the entire end regardless of the number of beds covered. Color shall be black To secure hose during travel, vinyl end skirts with seat belt buckle style latches will be provided.
0029260		Not Required, Speedlays	
0750536		Hose Restr, Spdly, Not Required, No Spdly	
0075206		Cover, Crosslay, Bi-fold 3\16" Alum Treadplate	**CROSSLAY COVER** A bi-fold .19" aluminum treadplate cover will be installed over the crosslay hose beds. It will include a latch at each end of the cover to hold it securely in place, a chrome grab handle at each end for opening and closing the cover and a foam rubber gasket where the cover comes into contact to a painted surface.
0019853		Crosslays, 8.00" Lower Than Standard - Control Zone w/9.00" Raised PH	**CROSSLAY 8.00" LOWER THAN STANDARD** The crosslays will be lowered 8.00" from standard.
0005216		Reel, Booster, Aluminum - Over Pump, Left Side	**BOOSTER HOSE REEL** A Hannay electric rewind booster hose reel will be installed over the pump in a recessed open compartment on the left side of the apparatus. Reel will be fabricated of aluminum and have highly polished end discs. A polished stainless steel roller and guide assembly will be mounted on the reel side of the apparatus. Discharge control will be provided at the pump operator's panel. Plumbing to the reel will consist of 1.50" Aeroquip hose and a 1.50" valve.
0005280		Switches, Reel Rewind - (1) Each Pump Panel	Reel motor will be protected from overload with a circuit breaker rated to match the motor. Two (2) electric rewind control switches will be provided, one (1) installed on each pump panel.
0075300		Hose, Booster - 100' of 1.00"/800 PSI	Booster hose, 1.00" diameter and 100 feet, with chrome plated Barway, or equal couplings will be provided. Working pressure of the booster hose will be a minimum of 800 psi.
0025244		Capacity, Hose Reel 100' of 1"	Capacity of the hose reel will be 100 feet of 1.00" booster hose.

0007428	Nozzle for Booster Reel Not Req'd	
0515688	Gauge, Hose Reel, (Match Panel Gauges)	**PRESSURE GAUGE** There will be a pressure gauge provided for one (1) hose reel(s). The gauge will be located left side pump panel, see pump panel drawing. The gauge will match the discharge outlet gauges.
0021954	Cutout for Reel Access, One, w/ S/S Trim	**HOSEREEL ACCESS** A cutout will be provided in the side sheet next to the booster hose reel. This cutout will allow access to the hose and provide a window to view the reel. Stainless steel trim will be mounted horizontally and vertically around the cutout.
0622237	Roller Assembly, Additional	There will be one (1) additional polished stainless steel roller and guide assembly mounted RS.

0592633	Foam Sys, Husky 3, Single Agent	**HUSKY 3 FOAM PROPORTIONER** A Pierce Husky® 3 foam proportioning system will be provided. The Husky 3 is an on demand, automatic proportioning, single point, direct injection system suitable for all types of Class A and B foam concentrates, including the high viscosity (6000 cps), alcohol resistant Class B foams. Operation will be based on direct measurement of water flow, and remain consistent within the specified flows and pressures. The system will automatically proportion foam solution at rates from 0.1 percent to 3 percent regardless of variations in water pressure and flow, up to the maximum rated capacity of the foam concentrate pump. The design of the system will allow operation from draft, hydrant, or relay operation. **System Capacity** The system will have the ability to deliver the following minimum foam solution flow rates at accuracies that meet or exceed NFPA requirements at a pump rating of 150 psi. 100 gpm @ 3 percent 300 gpm @ 1 percent 600 gpm @ 0.5 percent Class A foam setting in 0.1 percent increments from 0.1 percent to 1 percent. Typical settings of 1 percent, 0.5 percent and 0.3 percent (maximum capacity will be limited to the plumbing and water pump capacity). **Control System** The system will be equipped with a digital electronic control display located on the pump operators panel. Push button controls will be integrated into the panel to turn the system on/off, control the foam percentage, and to set the operation modes. The percent of injection will have a preset. This preset can be changed at the fire department as desired. The percent of injection will be able to be easily changed at the scene to adjust to changing demands. Three (3) 0.50" tall LEDs will display the foam percentage in numeric characters. Three (3) indicator LEDs will also be included, one (1) green, one (1) red, and one (1) yellow. The LEDs will indicate various system operation or error states. The indications will be: Solid Green - System On Solid Red - Valve Position Error Solid Yellow - Priming System Flashing Green - Injecting Foam Flashing Red - Low Tank Level Flashing Yellow - Refilling Tank The control display will house a microprocessor, which receives input from the systems water flow meter while also monitoring the position of the foam concentrate pump. The microprocessor will compare the values of the water flow versus the position/rate of the foam pump, to ensure the proportion rate is accurate. One (1) check valve will be installed in the plumbing to prevent foam from contaminating the water pump. **Hydraulic Drive System** The foam concentrate pump will be powered by an electric over hydraulic drive system. The hydraulic system and motor will be integrated into one (1) unit. **Foam Concentrate Pump** The foam concentrate pump will be of positive displacement, self-priming; linear actuated design, driven by the hydraulic system. The pump will be constructed of brass body; chrome plated stainless steel shaft, with a stainless steel piston. In order to increase longevity of the pump, no aluminum will be present in its construction. A relief system will be provided which is designed to protect the drive system components and prevent over pressuring the foam concentrate pump The foam concentrate pump will have minimum capacity for 3 gpm with all types of foam concentrates with a viscosity at or below 6000 cps including protein, fluoroprotein, AFFF, FFFP, or AR-AFFF. The system will deliver only the amount of foam concentrate flow required, without recirculating foam back to the storage tank. Recirculating foam concentrate back to the storage tank can cause agitation and premature foaming of the concentrate, which can result in system failure. The foam concentrate pump will be self-priming and have the ability to draw foam concentrate from external supplies such as drums or pails. **External Foam Concentrate Connection** An external foam pick-up will be provided to enable use of a foam agent that is not stored on the vehicle. The external foam pick-up will be designed to allow continued operation after the on-board foam tank is empty, or the use of foam different than the foam in the foam tank. **Panel Mounted External Pick-Up Connection / Valve** A bronze three (3)-way valve will be provided. The unit will be mounted to the pump panel. The valve unit will function as the foam system tank to pump valve and external suction valve. The external foam pick-up will be one (1) 0.75" male connection GHT (garden hose thread) with a cap. **Pick-Up Hose** A 0.75" flexible hose with an end for insertion into foam containers will be provided. The hose will be supplied with a 0.75" female swivel GHT (garden hose thread) swivel connector. The hose will be shipped loose. **Discharges** The foam system will be plumbed to five (5) discharges. The discharges capable of dispensing foam will be front bumper, both x-lays, hose reel, rear body 2.50" discharge. **System Electrical Load** The maximum current draw of the electric motor and system will be no more than 55 amperes at 12 VDC.
0012126	Not Required, CAF Compressor	

0592527	Refill, Foam Tank, Integral, Husky 3	**SINGLE FOAM TANK REFILL** The foam system's proportioning pump will be used to fill the foam tank. This will allow use of the auxiliary foam pick-up to pump the foam from pails or a drum on the ground into the foam tank. A foam shut-off switch will be installed in the fill dome of the tank to shut the system down when the tank is full. The fill operation will be controlled by a mode in the foam system controller. While the proportioner pump is filling the tank, the controller will display a flashing yellow LED to indicate that the tank is filling. When the tank is full, as determined by the float switch in the tank dome, the pump will stop and the controller will shut the yellow LED off. If it attempted to use tank fill and the refill valve and suction valve are in the wrong position(s), then a red LED will illuminate to indicate the improper valve position(s). When the valves are positioned properly, then filling will commence.
0031896	Demonstration, Foam System, Dealer Provided	
0005446	Foam Cell, 20 Gallon, Not Reduce Water	**FOAM TANK** The foam tank will be an integral portion of the polypropylene water tank. The cell will have a capacity of 20 gallons of foam with the intended use of Class B foam. The foam cell will not reduce the capacity of the water tank. The foam cell will have a screen in the fill dome and a breather in the lid.
0894580	Drain, 1.00", Foam Tank #1, Husky 3 Foam System, "T" Swing Handle	**FOAM TANK DRAIN** The foam tank drain will be a 0.75" drain valve with a "T" swing handle. The drain will have 1.00" fittings located inside the pump/plumbing compartment.
0091079	Not Required, Foam Tank #2	
0091112	Not Required, Foam Tank #2 Drain	
0746447	Approval Dwg, All Pump Panel(s), Includes Color And Label Tags	The following drawing(s) will be provided for approval by the customer. The drawing(s) will be made for up Two (02) Truck apparatus and/or similar Pierce job number. **PUMP OPERATOR'S PANEL DRAWING** A detailed drawing to scale of the pump operator's panel will be provided for the customer to review. The drawing will include all of the gauges, controls, switching, etc.., located on the pump operator's panel. The customer will be allowed to make changes and/or mark-ups to this approval drawing. The fire apparatus manufacturer will make revisions (If needed) to the drawing per the customer changes and/or mark-ups as long as the changes are physically possible within a specific product line. The finalized and signed customer approved pump operator's panel drawing will become part of the contract documents. Due to the way drain(s), bleeder(s), operational/maintenance tag(s) and NFPA required warning tag(s) are placed on pump panel(s), these items will NOT be shown on any pump panel approval drawing(s). These item(s) will be placed on pump panel(s) at the fire apparatus manufacturer discretion. **REMAINING PUMP PANEL(S)** Detailed drawing(s) to scale of the remaining pump panel(s) will be provided for the customer to review. The drawing(s) will include all of the gauges, controls, switching, etc.., located on the pump panel(s). The customer will be allowed to make changes and/or mark-ups to these approval drawing(s). The fire apparatus manufacturer will make revisions (If needed) to the drawing(s) per the customer changes and/or mark-ups as long as the changes are physically possible within a specific product line. The finalized and signed customer approved pump panel drawing(s) will become part of the contract documents. Due to the way drain(s), bleeder(s), operational/maintenance tag(s) and NFPA required warning tag(s) are placed on pump panel(s), these items will NOT be shown on any pump panel approval drawing(s). These item(s) will be placed on pump panel(s) at the fire apparatus manufacturer discretion. **COLOR CODED TAGS** A detailed drawing/chart of the colors used on all of the inlet(s) and outlet(s) will be provided for the customer to review. The customer will be allowed to make changes and/or mark-ups to this approval drawing/chart. The fire apparatus manufacturer will make revisions (If needed) to the drawing per the customer changes and/or mark-ups as long as the changes are physically possible within a specific product line. The finalized and signed customer approved drawing/chart of the colors will become part of the contract documents. **SPECIAL TEXT/VERBIAGE TAGS** A detailed drawing/chart of the text/verbiage used on all of the inlet(s) and outlet(s) will be provided for the customer to review. The customer will be allowed to make changes and/or mark-ups to this approval drawing/chart. The fire apparatus manufacturer will make revisions (If needed) to the drawing per the customer changes and/or mark-ups as long as the changes are physically possible within a specific product line. The finalized and signed customer approved drawing/chart of the text/verbiage will become part of the contract documents.

0032479	Pump Panel Configuration, Control Zone	**PUMP PANEL CONFIGURATION** The pump panel configuration will be arranged and installed in an organized manner that will provide user-friendly operation.
0629252	Material, Pump Panels, Side Control Black Vinyl	**PUMP AND GAUGE PANEL** The pump and gauge panels will be constructed of aluminum with a black vinyl finish. A polished aluminum trim molding will be provided around each panel.
0721772	Panel, Pump Access - Right Side, Front, Side Control	**PUMP ACCESS** **Right Side Panel** The right side pump panel will be removable. **Panel Fastener** The right side removable panel will be secured using a black swell latch . The left side pump panels will be attached with screws. The right side lower panel (drain bank) will be secured using screws. **Front Pump House Access** The front of the pump house structure will have provisions for access to the pump.
0583824	Light, Pump Compt, Wln 3SC0CDCR LED White	**PUMP COMPARTMENT LIGHT** There will be one (1) Whelen®, Model 3SC0CDCR, 3.00" white 12 volt DC LED light(s) with Whelen, Model 3FLANGEC, flange(s) installed in the pump compartment. There will be a switch accessible through a door on the pump panel included with this installation.
0536401	Gauges, Engine, Included With Pierce Pressure Controller	Engine monitoring graduated LED indicators will be incorporated with the pressure controller.
0005601	Throttle, Engine, Incl'd w/Press Controller	
0739224	Indicator Light @ Pump Panel, Throttle Ready, Incl w/Pressure Gov/Throttle,Green	**THROTTLE READY GREEN INDICATOR LIGHT** There will be a green indicator light integrated with the pressure governor and/or engine throttle installed on the pump operators panel that is activated when the pump is in throttle ready mode.
0549333	Indicators, Engine, Included with Pressure Controller	
0745568	Indicator Light, Pump Panel, Ok To Pump, Green	**OK TO PUMP INDICATOR LIGHT** There will be a green indicator light installed on the pump operators panel that is activated when the pump is in Ok To Pump mode.
0553643	Control, Air Horn at Pmp Pnl, Red Switch	**AIR HORN SWITCH** An air horn control switch will be provided at the pump operator's control panel. This switch will be red and properly labeled. The switch will be located within easy reach of the operator in the electrical switch panel.
0005690	Gauges, 6.00" Master, Class 1, 30"-0 -600psi	**VACUUM AND PRESSURE GAUGES** The pump vacuum and pressure gauges will be liquid filled and manufactured by Class 1 Incorporated ©. The gauges will be a minimum of 6.00" in diameter and will have white faces with black lettering, with a pressure range of 30.00"-0-600#. The pump pressure and vacuum gauges will be installed adjacent to each other at the pump operator's control panel. Test port connections will be provided at the pump operator's panel. One will be connected to the intake side of the pump, and the other to the discharge manifold of the pump. They will have 0.25 in. standard pipe thread connections and polished stainless steel plugs. They will be marked with a label.
0008637	Gauge, 2.50" Pressure, Class 1, Special	**PRESSURE GAUGES** The individual "line" pressure gauges for the discharges will be interlube filled and manufactured by Class 1©. They will be a minimum of 2.50" in diameter and the dial will have white faces with black markings. Gauges will have a pressure rating of 30.00" 0-600 psi. The individual pressure gauge will be installed as close to the outlet control as practical.

0536428	Gauge, Water Level, Pierce, In pressure Controller	**WATER LEVEL GAUGE** An electric water level gauge will be incorporated in the pressure controller that registers water level by means of 9 LEDs. They will be at 1/8 level increments with a tank empty LED. The LEDs will be a bright type that is readable in sunlight, and have a full 180-degree of clear viewing. To further alert the pump operator, the gauge will have a warning flash when the tank volume is less than 25%, and will have "Down Chasing LEDs when the tank is almost empty. The level measurement will be ascertained by sensing the head pressure of the fluid in the tank or cell.
0604028	Water Level Gauge, FRC, MaxVision WLA280-A00 Programmable Remote Display	**ADDITIONAL WATER LEVEL GAUGE** There will be two (2) additional Fire Research MaxVision model WLA280-A00 water tank remote indicators provided and installed each side of the upper crew cab, as per the AD. The indicators will show the volume of water in the tank on Ninety six (96) easy to see super bright Tri-color LEDs. The indicator case will be waterproof, manufactured of Polycarbonate material with an integrated lens. The remote indicator will indicate the level as a single color in Red for 25% or less, Amber color for up to 50% volume, Blue color for up to 75% volume and Green color for up to 100% volume. When the level reaches 25%, the red LEDs will begin flashing. When the level is empty, the red LEDs will scroll in a down-chasing motion and then flash three times. The flash rate will be determined by the main water tank sensor. It will have the program capability to adjust the brightness level for day time and night time viewing. The LEDs can also be programmed for different colors. This module will be activated when the pump is in gear.
0604354	Gauge, Foam Level, FRC, Tank Vision Pro, WLA 360-A00, Class "A"	**CLASS "A" FOAM LEVEL GAUGE** A Fire Research TankVision Pro model WLA360-A00 cell/tank level indicator kit will be installed on the pump operators panel. The kit will include an electronic indicator module, a pressure sensor, a 10' sensor cable and a tank vent. The indicator will show the volume of Class "A" foam concentrate in the cell/tank on nine (9) easy to see super bright RGB LEDs. A wide view lens over the LEDs will provide for a viewing angle of 180 degrees. The indicator case will be waterproof, manufactured of Polycarbonate/Nylon material and have a distinctive green label. The program features will be accessed from the front of the indicator module. The program will support self-diagnostics capabilities, self-calibration, six (6) programmable colored light patterns to display cell/tank volume, adjustable brightness control levels and a data link to connect remote indicators. Low foam level warnings will include flashing LEDs at 1/4 cell/tank and down chasing LEDs when the cell/tank is almost empty. The indicator will receive an input signal from an electronic pressure sensor. The sensor will be mounted from the outside of the foam cell/tank near the bottom. No probe will be placed on the interior of the cell/tank. Wiring will be weather resistant and have automotive type plug-in connectors.
0682503	Light Shield/Step 8", LED, P25 LED Stp Lt	**STEP/LIGHT SHIELD** There will be an aluminum treadplate stepping surface no less than 8.00" deep and properly reinforced to support a man's weight, installed over the pump operators panel. There will be 12 volt DC white LED lights installed under the step to illuminate the controls, switches, essential instructions, gauges, and instruments necessary for the operation of the apparatus. These lights will be activated by the pump panel light switch. Additional lights will be included every 18.00" depending on the size of the pump house. One (1) pump panel light will come on when the pump is in ok to pump mode. There will be a light activated above the pump panel light switch when the parking brake is applied. This is to afford the operator some illumination when first approaching the control panel. There will be one (1) white LED, step light provided above this step. In order to ensure exceptional illumination, each step light will provide a minimum of 25 foot-candles (fc) covering an entire 15.00" x 15.00" square placed 10.00" below the light and a minimum of 1.5 fc covering an entire 30.00" x 30.00" square at the same 10.00" distance below the light. The step light will be activated by the pump panel light switch.
0606694	Air Horns, (2) Hadley, 6" Round, eTone, In Bumper	**AIR HORN SYSTEM** Two (2) Hadley®, eTone, chrome air horns will be recessed in the front bumper. The air horn system will be piped to the air brake system wet tank utilizing 0.38" tubing. A pressure protection valve will be installed to prevent the loss of air in the brake system.
0606834	Location, Air Horns, Bumper, Each Side, Outside Frame, Inboard (Pos #2 & #6)	**Air Horn Location** The air horns will be located on each side of the bumper, just outside of the frame rails.
0016065	Control, Air Horn, Horn Ring, PS Chrome Push Button	**Air Horn Control** The air horns will be actuated by a chrome push button located on the officer's side of the engine tunnel and by the horn button in the steering wheel. The driver will have the option to control the air horns or the chassis horns from the horn button by means of a selector switch located on the instrument panel.

0602752	Siren, Wln 295HFS2 Remote, Single Amp, Other Speaker, Non-NFPA 2016	**ELECTRONIC SIREN** A Whelen 295HFS2, electronic remote siren with noise canceling microphone will be provided. This siren to be active when the battery switch is on and that emergency master switch is on. NFPA 1901, 2016 edition, Section 13.9.1.1 requires the siren manufacturer to certify the siren as meeting the requirements of SAE J1849, *Emergency Vehicle Sirens.* Per the fire department specification, the siren and siren speaker come from separate manufacturers and a certification is therefore not valid. The apparatus will be non compliant to NFPA 1901 standards at time of contract execution.
0510206	Location, Elect Siren, Recessed Overhead In Console	Electronic siren head will be recessed in the overhead console above the engine tunnel in the center.
0076156	Control, Elec Siren, Head Only	The electronic siren will be controlled on the siren head only. No horn button or foot switches will be provided.
0601330	Speaker, (1) Federal, ES100C w/ESFMT-EF Recess Mnt & S/S Grille	**SPEAKER** There will be one (1) Federal Signal DynaMax®, Model ES100, 100 watt speaker provided. The speaker will use a Federal Signal, Model ESFMT-EF, recess mount with stainless steel grille. The speaker will be connected to the siren amplifier.
0601555	Location, Speaker, Frt Bumper, Recessed, Left Side, Outside Frame,Outbrd (Pos 7)	The speaker will be recessed in the left side of the front bumper, towards the outside.
0895310	Siren, Federal Q2B	**AUXILIARY MECHANICAL SIREN** There will be a Federal Signal Model Q2B mechanical siren furnished and installed in the front of the apparatus. The Q2B will be chrome finish. The siren will have a 2-gauge cable connected to a power solenoid that is connected by a 2-gauge cable ran battery direct to the primary chassis batteries and will be labeled Q2B+ at the battery. The power solenoid will only be enabled when the emergency master switch is on. The siren will have a 2-gauge ground wire connected to the chassis battery stud. The cable will be labeled Q2B- at the battery. When the chassis battery switch is on, and the emergency master switch is on, the Q2B siren will be activated by the following:
0006097	Location of Siren, Recessed in Bumper	The mechanical siren will be recessed in the front bumper on the right side. The siren will be properly supported using the bumper framework.
0748305	Control, Mech Siren, Multi Select	**MECHANICAL SIREN CONTROL** The mechanical siren will be activated by the following:
0748282	Control Mech Siren, Ft Sw LS	Left side foot switch.
0731979	Control Mech Siren, Push Button Sw, Chrome, RS	Right side chrome push button switch.
0734674	Sw, Siren Brake, Mom Rocker, Red Outline, RS Overhead Sw Pnl, Mux	A momentary rocker switch will be included in the right side overhead switch panel to activate the siren brake. There will be a red outline decal around the black rocker switch.
0897455	Sw, Siren Brake, Mom Rocker/Membrane, Red Outline, Lower Sw Pnl, Mux	A momentary switch with red outline around the black switch will be included in the lower switch panel to activate the siren brake.
0021826	Bracket, Wedge Style for Foot Switch, Each	**WEDGE STYLE FOOT SWITCH BRACKET** There will be one (1) wedge style bracket provided at the driver side for the air horn switch, place outboard side on cab the floor. The bracket will be large enough to hold one (1) foot switch. The bracket will be angled approximately 30 degrees.
0746353	Not Required, Warning Lights Intensity	

0607496	Lightbar, Wln, Freedom IV-Q, 81", RRRRRRRWRRWRRRRRRR	**FRONT ZONE UPPER WARNING LIGHTS** There will be one (1) 81.00" Whelen Freedom IV LED lightbar mounted on the cab roof. The lightbar will include the following: One (1) red flashing LED module in the driver's side end position. One (1) red flashing LED module in the driver's side front corner position. One (1) red flashing LED module in the driver's side first front position. One (1) red flashing LED module in the driver's side second front position. One (1) red flashing LED module in the driver's side third front position. One (1) red flashing LED module in the driver's side fourth front position. One (1) red flashing LED module in the driver's side fifth front position. One (1) white flashing LED module in the driver's side sixth front position. One (1) red flashing LED module in the driver's side seventh front position. One (1) red flashing LED module in the passenger's side seventh front position. One (1) white flashing LED module in the passenger's side sixth front position. One (1) red flashing LED module in the passenger's side fifth front position. One (1) red flashing LED module in the passenger's side fourth front position. One (1) red flashing LED module in the passenger's side third front position. One (1) red flashing LED module in the passenger's side second front position. One (1) red flashing LED module in the passenger's side first front position. One (1) red flashing LED module in the passenger's side front corner position. One (1) red flashing LED module in the passenger's side end position. There will be clear lenses included on the lightbar. There will be a switch installed in the cab on the switch panel to control this lightbar. The two (2) white flashing LED modules will be disabled when the parking brake is applied. The 12 red flashing LED modules in the front positions may be load managed when the parking brake is applied.
0619608	Light, GTT, 794*M LED Multimode Opticom Emitter on Cab Roof, 2100 Controller	**TRAFFIC LIGHT CONTROLLER** There will be a GTT, Model 794*M Multimode LED Opticom™ traffic light infrared emitter / GPS antenna with national standard high priority remote mounted on the front edge of the cab just to the left side of the visor light. A Model 2100 control unit, measuring 7.25"L x 5.44"W x 1.63"H will be provided in the cab. The Opticom™ traffic light controller will be activated with the emergency master switch only. The Opticom™ traffic light controller will have no momentary activation switch. The Opticom™ traffic light controller will be disabled when the parking brake is applied.
0016380	No Additional Lights Req'd, Side Zone Upper	
0899300	Lights, Front Zone, Wln M6** M6RS M6RS M6**, Inside Steady Burn, 4lts Q Bez	**FRONT ZONE LOWER LIGHTS** There will be four (4) Whelen®, 4.31" high x 6.75" wide x 1.37" deep lights installed on the cab face above the headlights, in a common bezel matching the one for the headlamps per the following. One (1) Model M6** flashing light installed in the left side outside position. The left side outside warning light to include red LEDs. One (1) Model M6RS steady burning light installed in the left side inside position. The light will include red LEDs. One (1) Model M6RS steady burning light installed in the right side inside position. The light will include red LEDs. One (1) Model M6** flashing light installed in the right side outside position. The right side outside warning light to include red LEDs. The lens color(s) to be clear. The housing to be polished and the trim shall be chrome. There will be a switch in the cab on the switch panel to control the lights.
0653937	Flasher, Headlight Alternating	**HEADLIGHT FLASHER** The high beam headlights will flash alternately between the left and right side. There will be a switch installed in the cab on the switch panel to control the high beam flash. This switch will be live when the battery switch and the emergency master switches are on. The flashing will automatically cancel when the headlight (high or low beam) switch is activated or when the parking brake is set.
0747228	Lights, Side Zone Lower, Wln M6**, M6**, M6**, 6Lts	**SIDE ZONE LOWER LIGHTING** There will be six (6) Whelen®, Model M6**, 4.31" high x 6.75" long x 1.37" deep flashing LED warning lights with chrome trim installed per the following: Two (2) lights located, one (1) each side on the bumper extension. The driver's side, side front light to include red warning LEDs and the passenger's side, side front light to include red warning LEDs. Two (2) lights located, one (1) each side of cab rearward of crew cab doors. The driver's side, side middle light to include red warning LEDs and the passenger's side, side middle light to include red warning LEDs. Two (2) lights located, one (1) each side above rear wheels. The driver's side, side rear light to include red warning LEDs and the passenger's side, side rear light to include red warning LEDs. The warning light lens colors to be the same as the LEDs. There will be a switch in the cab on the switch panel to control the lights.

0750408	Lights, Side, Wln PS*01FCR LED 1st	**SIDE WARNING LIGHTS** There will be two (2) Whelen® Model PS*01FCR, 1.68" high x 11.11" wide x 0.52" deep flashing LED warning light(s) with chrome trim and clear lenses provided on the side of the apparatus, centered above the side scene lights above the EMS compartments, split the distance between the top of the lights and the drip rail. The light(s) to include red flashing LEDs. These lights will be controlled by the side zone lower switch in the cab. White LEDs will be deactivated when the parking brake is applied. Amber, blue, green and red LEDs may be load manages when the parking brake is applied.
0564654	Lights, Rear Zn Lwr, Wln M6*, Colored Lens, For Tail Light Housing	**REAR ZONE LOWER LIGHTING** There will be two (2) Whelen®, Model M6*, LED flashing warning lights will be located at the rear of the apparatus. The driver's side rear light to be red The passenger's side rear light to be red Both lights will include a lens that is the same color as the LED's. There will be a switch located in the cab on the switch panel to control the lights.
0686562	Light, Rear Zone Up, Wln MCFLED2* LED	**REAR UPPER ZONE WARNING LIGHTS** There will be two (2) Whelen, Model MCFLED2* LED warning beacons provided at the rear of the truck, one (1) each side. The color of the lights will be: The rear upper light(s) on the driver's side to be red. The rear upper light(s) on the passenger's side to be red. All lenses will be clear. There will be a switch located in the cab on the switch panel to control the beacons.
0006551	Not Required, Lights, Rear Upper Zone Blocking	
0006615	Mtg, Rear Warn Lts, On Top of Compt	The rear warning lights will be mounted on top of the compartmentation with all wiring totally enclosed. The rear deck lights will be mounted on the beavertails as high as possible.
0762435	Light, Traffic Directing, Wln TAL85, 46.87" Long LED, Lens Feature	**TRAFFIC DIRECTING LIGHT** There will be one (1) Whelen® Model TAL85 46.87" long x 2.87" high x 2.25" deep, amber LED traffic directing light installed at the rear of the apparatus. The lens color will be the same color as the LED's. The control head will be included with this installation. The control head will be energized when the battery switch is on. The auxiliary flash not activated.
0529680	Location, Traf Dir Lt, Surface Mounted with Treadplate Box	This traffic directing light will be surface mounted with a treadplate box at the rear of the apparatus.
0530282	Location, Traf Dir Lt Controller, Overhead Switch Panel DS Right End	The traffic directing light control head will be located in the driver side overhead switch panel in the right panel position.
0519934	Not Required, Brand, Hydraulic Tool System	
0649753	Not Required, PTO Driven Hydraulic Tool System	
0007150	Bag of Nuts and Bolts	**LOOSE EQUIPMENT** The following equipment will be furnished with the completed unit: One (1) bag of chrome, stainless steel, or cadmium plated screws, nuts, bolts and washers, as used in the construction of the unit.

0602516	NFPA Required Loose Equipment, Pumper, NFPA 2016, Provided by Fire Department	**NFPA REQUIRED LOOSE EQUIPMENT PROVIDED BY FIRE DEPARTMENT** The following loose equipment as outlined in NFPA 1901, 2016 edition, section 5.9.3 and 5.9.4 will be provided by the fire department. 800 ft (60 m) of 2.50" (65 mm) or larger fire hose. 400 ft (120 m) of 1.50" (38 mm), 1.75" (45 mm), or 2.00" (52 mm) fire hose. One (1) handline nozzle, 200 gpm (750 L/min) minimum. Two (2) handline nozzles, 95 gpm (360 L/min) minimum. One (1) smoothbore of combination nozzle with 2.50" shutoff that flows a minimum of 250 gpm. One (1) SCBA complying with NFPA 1981 for each assigned seating position, but not fewer than four (4), mounted in brackets fastened to the apparatus or stored in containers supplied by the SCBA manufacturer. One (1) spare SCBA cylinder for each SCBA carried, each mounted in a bracket fastened to the apparatus or stored in a specially designed storage space(s). One (1) first aid kit. Four (4) combination spanner wrenches. Two (2) hydrant wrenches. One (1) double female 2.50" (65 mm) adapter with National Hose threads. One (1) double male 2.50" (65 mm) adapter with National Hose threads. One (1) rubber mallet, for use on suction hose connections. Two (2) salvage covers each a minimum size of 12 ft x 14 ft (3.7 m x 4.3 m). One (1) traffic vest for each seating position, each vest to comply with ANSI/ISEA 207, *Standard for High Visibility Public Safety Vests*, and have a five-point breakaway feature that includes two (2) at the shoulders, two (2) at the sides, and one (1) at the front. Five (5) fluorescent orange traffic cones not less than 28.00" (711 mm) in height, each equipped with a 6.00" (152 mm) retro-reflective white band no more than 4.00" (152 mm) from the top of the cone, and an additional 4.00" (102 mm) retro-reflective white band 2.00" (51 mm) below the 6.00" (152 mm) band. Five (5) illuminated warning devices such as highway flares, unless the five (5) fluorescent orange traffic cones have illuminating capabilities. One (1) automatic external defibrillator (AED). Four (4) ladder belts meeting the requirements of NFPA 1983, *Standard on Fire Service Life Safety Rope and System Components* (if equipped with an aerial device). If the supply hose carried does not use sexless couplings, an additional double female adapter and double male adapter, sized to fit the supply hose carried, will be carried mounted in brackets fastened to the apparatus. If none of the pump intakes are valved, a hose appliance that is equipped with one or more gated intakes with female swivel connection(s) compatible with the supply hose used on one side and a swivel connection with pump intake threads on the other side will be carried. Any intake connection larger than 3.00" (75 mm) will include a pressure relief device that meets the requirements of 16.6.6. If the apparatus does not have a 2.50" National Hose (NH) intake, an adapter from 2.50" NH female to a pump intake will be carried, mounted in a bracket fastened to the apparatus if not already mounted directly to the intake. If the supply hose carried has other than 2.50" National Hose (NH) threads, adapters will be carried to allow feeding the supply hose from a 2.50" NH thread male discharge and to allow the hose to connect to a 2.50" NH female intake, mounted in brackets fastened to the apparatus if not already mounted directly to the discharge or intake.
0602407	Soft Suction Hose, Provided by Fire Department, Pumper NFPA 2016 Classification	**SOFT SUCTION HOSE PROVIDED BY FIRE DEPARTMENT** NFPA 1901, 2016 edition, section 5.8.2.1 requires a minimum of 20' of suction hose or 15' of supply hose will be carried. Hose is not on the apparatus as manufactured. The fire department will provide suction or supply hose.
0027023	No Strainer Required	
0602538	Extinguisher, Dry Chemical, Pumper NFPA 2016 Class, Provided by Fire Department	**DRY CHEMICAL EXTINGUISHER PROVIDED BY FIRE DEPARTMENT** NFPA 1901, 2016 edition, section 5.9.4 requires one (1) approved dry chemical portable fire extinguisher with a minimum 80-B:C rating mounted in a bracket fastened to the apparatus. The extinguisher is not on the apparatus as manufactured. The fire department will provide and mount the extinguisher.
0602360	Extinguisher, 2.5 Gal. Pressurized Water, Pumper NFPA 2016,Provided by Fire Dept	**WATER EXTINGUISHER PROVIDED BY FIRE DEPARTMENT** NFPA 1901, 2016 edition, section 5.9.4 requires one (1) 2.5 gallon or larger water extinguisher mounted in a bracket fastened to the apparatus. The extinguisher is not on the apparatus as manufactured. The fire department will provide and mount the extinguisher.
0602679	Axe, Flathead, Pumper NFPA 2016 Classification, Provided by Fire Department	**FLATHEAD AXE PROVIDED BY FIRE DEPARTMENT** NFPA 1901, 2016 edition, Section 5.9.4 requires one (1) flathead axe mounted in a bracket fastened to the apparatus. The axe is not on the apparatus as manufactured. The fire department will provide and mount the axe.

0602667	Axe, Pickhead, Pumper NFPA 2016 Classification, Provided by Fire Department	**PICKHEAD AXE PROVIDED BY FIRE DEPARTMENT** NFPA 1901, 2016 edition, Section 5.9.4 requires one (1) pickhead axe mounted in a bracket fastened to the apparatus. The axe is not on the apparatus as manufactured. The fire department will provide and mount the axe.
0741569	Paint Process / Environmental Requirements, Appleton	**PAINT PROCESS** The exterior custom cab and body painting procedure will consist of a seven (7) step finishing process as follows: Manual Surface Preparation - All exposed metal surfaces on the custom cab and body will be thoroughly cleaned and prepared for painting. Imperfections on the exterior surfaces will be removed and sanded to a smooth finish. Exterior seams will be sealed before painting. Exterior surfaces that will not be painted include; chrome plating, polished stainless steel, anodized aluminum and bright aluminum treadplate. Chemical Cleaning and Pretreatment - All surfaces will be chemically cleaned to remove dirt, oil, grease, and metal oxides to ensure the subsequent coatings bond well. The aluminum surfaces will be properly cleaned and treated using a high pressure, high temperature 4 step Acid Etch process. The steel and stainless surfaces will be properly cleaned and treated using a high temperature 3 step process specifically designed for steel or stainless. The chemical treatment converts the metal surface to a passive condition to help prevent corrosion. Surfacer Primer - The Surfacer Primer will be applied to a chemically treated metal surface to provide a strong corrosion protective basecoat. A minimum thickness of 2 mils of Surfacer Primer is applied to surfaces that require a Critical aesthetic finish. The Surfacer Primer is a two-component high solids urethane that has excellent sanding properties and an extra smooth finish when sanded. Finish Sanding - The Surfacer Primer will be sanded with a fine grit abrasive to achieve an ultra-smooth finish. This sanding process is critical to produce the smooth mirror like finish in the topcoat. Sealer Primer - The Sealer Primer is applied prior to the Basecoat in all areas that have not been previously primed with the Surfacer Primer. The Sealer Primer is a two-component high solids urethane that goes on smooth and provides excellent gloss hold out when topcoated. Basecoat Paint - Two coats of a high performance, two component high solids polyurethane basecoat will be applied. The Basecoat will be applied to a thickness that will achieve the proper color match. The Basecoat will be used in conjunction with a urethane clear coat to provide protection from the environment. Clear Coat - Two (2) coats of Clear Coat will be applied over the Basecoat color. The Clear Coat is a two-component high solids urethane that provides superior gloss and durability to the exterior surfaces. Lap style and roll-up doors will be Clear Coated to match the body. Paint warranty for the roll-up doors will be provided by the roll-up door manufacturer. After the cab and body are painted, the color will be verified to make sure that it matches the color standard. Electronic color measuring equipment will be used to compare the color sample to the color standard entered into the computer. Color specifications will be used to determine the color match. A Delta E reading will be used to determine a good color match within each family color. All removable items such as brackets, compartment doors, door hinges, and trim will be removed and painted separately if required, to ensure paint behind all mounted items. Body assemblies that cannot be finish painted after assembly will be finish painted before assembly. The paint finish quality levels for critical areas of the apparatus (cab front and sides, body sides and doors, and boom lettering panels) are to meet or exceed Cadillac/General Motors GMW15777 global paint requirements. Orange peel levels are to meet or exceed the #6 A.C.T.standard in critical areas. The manufacture's written paint standards will be available upon request. **Environmental Impact** Contractor will meet or exceed all current state regulations concerning paint operations. Pollution control will include measures to protect the atmosphere, water and soil. Controls will include the following conditions: Topcoats and primers will be chrome and lead free. Metal treatment chemicals will be chrome free. The wastewater generated in the metal treatment process will be treated on-site to remove any other heavy metals. Particulate emission collection from sanding operations will have a 99.99 percent efficiency factor. Particulate emissions from painting operations will be collected by a dry filter or water wash process. If the dry filter is used, it will have an efficiency rating of 98 percent. Water wash systems will be 99.97 percent efficient Water from water wash booths will be reused. Solids will be removed on a continual basis to keep the water clean. Paint wastes are disposed of in an environmentally safe manner. Empty metal paint containers will be recycled to recover the metal. Solvents used in clean-up operations will be recycled on-site or sent off-site for distillation and returned for reuse. Additionally, the finished apparatus will not be manufactured with or contain products that have ozone depleting substances. Contractor will, upon demand, present evidence that the manufacturing facility meets the above conditions and that it is in compliance with his state EPA rules and regulations.
0709567	Paint, Single Color, Enforcer	**CAB PAINT** The cab will be painted #90 red.
0709845	Paint, Single Color, Body	**BODY PAINT** The body will be painted to match the lower section of the cab.

0646901	Paint Chassis Frame Assy, With Liner, E-Coat, Standard	**PAINT CHASSIS FRAME ASSEMBLY** The chassis frame assembly will be finished with primer and gloss paint to match the lower job color before the installation of the cab and body, and before installation of the engine and transmission assembly, air brake lines, electrical wire harnesses, etc. Components that are included with the chassis frame assembly that will be painted are: Frame rails Frame liners Cross members Axles Suspensions Steering gear Battery boxes Bumper extension weldment Frame extensions Body mounting angles Rear Body support substructure (front and rear) Pump house substructure Air tanks Steel fuel tank Castings Individual piece parts used in chassis and body assembly Components treated with epoxy E-coat protection prior to paint: Two (2) C-channel frame rails Two (2) frame liners The E-coat process will meet the technical properties shown.
0693797	No Paint Required, Aluminum Front Wheels	
0693792	No Paint Required, Aluminum Rear Wheels	
0733739	Paint, Axle Hubs	**AXLE HUB PAINT** All axle hubs will be painted black #101.
0007230	Compartment, Painted, Spatter Gray	**COMPARTMENT INTERIOR PAINT** The interior of all compartments will be painted with a gray spatter finish for ease of cleaning and to make it easier to touch up scratches and nicks.
0544129	Reflective Band, 1"-6"-1"	**REFLECTIVE STRIPES** Three (3) reflective stripes will be provided across the front of the vehicle and along the sides of the body. The reflective band will consist of a 1.00" white stripe at the top with a 1.00" gap then a 6.00" white stripe with a 1.00" gap and a 1.00" white stripe on the bottom.
0007356	Reflective across Cab Face	The reflective band provided on the cab face will be at the headlight level.
0536954	Stripe, Chevron, Rear, Diamond Grade, Pumper	**REAR CHEVRON STRIPING** There will be alternating chevron striping located on the rear-facing vertical surface of the apparatus. The rear surface, excluding the rear compartment door, will be covered. The colors will be red and fluorescent yellow green diamond grade. Each stripe will be 6.00" in width. This will meet the requirements of the current edition of NFPA 1901, which states that 50% of the rear surface will be covered with chevron striping.
0567374	Stripe, Black Outline each Chevron Stripe @ Rear (Not Warranted)	**REFLECTIVE STRIPE OUTLINE** A black vinyl outline will be provided for each chevron stripe at the rear of the truck.
0017359	Stripe, Black Outline, Vinyl on Reflective Band	**REFLECTIVE STRIPE OUTLINE** A black outline will be applied on the top and the bottom of the reflective band. There will be three (3) set of outline stripes required.
0022087	"Z" Ribbon, w/Shade in Reflective Stripe, Pair	**"Z" RIBBON IN REFLECTIVE STRIPE** "Z" type ribbon(s) will be added to the reflective stripe. Areas adjacent to the "Z" portion of the stripe will be shaded and highlighted with an air brush to give it a ribbon affect. There will be one (1) pair on the vehicle.
0065687	Stripe, Reflective, Cab Doors Interior	**CAB DOOR REFLECTIVE STRIPE** A 6.00" x 16.00" black reflective stripe will be provided across the interior of each cab door. The stripe will be located approximately 1.00" up from the bottom, on the door panel. This stripe will meet the NFPA 1901 requirement.

0679831	Stripe, Sign Gold, Cab Sides, IPO Chrome Molding	**CAB STRIPE** There will be a Sign Gold stripe provided on both sides of the cab in place of the chrome molding.
0594559	Lettering Specifications, (Sign Gold Process)	**LETTERING** The lettering will be 22 karat gold vinyl.
0685936	Lettering, Sign Gold, 3.00", Each	**LETTERING** There will be sign gold lettering, 3.00" high, with outline and shade provided. There will be 24 letters provided.
0683995	Lettering, Vinyl, 24.00", Each	**LETTERING** There will be non-reflective vinyl lettering, 24.00" high, with no outline or shade provided. There will be three (3) letters provided.
0686002	Lettering, Reflective, 8.00", Each	**LETTERING** There will be reflective lettering, 8.00" high, with outline and shade provided. There will be nine (9) letters provided.
0686013	Lettering, Reflective, 6.00", Each	**LETTERING** There will be reflective lettering, 6.00" high, with outline and shade provided. There will be 11 letters provided.
0686018	Lettering, Reflective, 5.00", Each	**LETTERING** There will be reflective lettering, 5.00" high, with outline and shade provided. There will be four (4) letters provided.
0672805	Emblem, Maltese Cross, Reflective, 15"-17", Each	**MALTESE CROSS INSTALLATION** There will be two (2) maltese cross, comprised of reflective material, provided and installed front cab doors, each side per the LSP.
0755303	Artwork File, Provided on Custom USB Drive	**ARTWORK ON CUSTOM USB DRIVE** There will be a custom USB drive with department specific artwork files provided to the Fire Department. Stock artwork, or artwork developed exclusively by Pierce Manufacturing, and proprietary fonts will not be included on the USB drive.
0666414	Emblem, Freedom Flag, Each	**EMBLEM** There will be two (2) emblem(s), approximately 15.00" - 17.00" wide in size, installed per LSP. The emblem will feature a "Flying American Flag" and an "Eagle Head".
0772003	Manual, Fire Apparatus Parts, USB Flash Drive, Custom	**FIRE APPARATUS PARTS MANUAL** There will be one (1) custom parts manual(s) in USB flash drive format for the complete fire apparatus provided. The manual(s) will contain the following: Job number Part numbers with full descriptions Table of contents Parts section sorted in functional groups reflecting a major system, component, or assembly Parts section sorted in alphabetical order Instructions on how to locate parts Each manual will be specifically written for the chassis and body model being purchased. It will not be a generic manual for a multitude of different chassis and bodies. **Service Parts Internet Site** The service parts information included in these manuals are also available on the Pierce website. The website offers additional functions and features not contained in this manual, such as digital photographs and line drawings of select items. The website also features electronic search tools to assist in locating parts quickly.

0772037	Manual, Chassis Service, USB Flash Drive, Custom	**CHASSIS SERVICE MANUALS** There will be one (1) chassis service manuals on USB flash drives containing parts and service information on major components provided with the completed unit. The manual will contain the following sections: Job number Table of contents Troubleshooting Front Axle/Suspension Brakes Engine Tires Wheels Cab Electrical, DC Air Systems Plumbing Appendix The manual will be specifically written for the chassis model being purchased. It will not be a generic manual for a multitude of different chassis and bodies.
0773381	Manual, Chassis Operation, (1) USB Flash Drive, Custom	**CHASSIS OPERATION MANUAL** The chassis operation manual will be provided on one (1) USB flash drive.
0030008	Warranty, Basic, 1 Year, Apparatus, WA0008	**ONE (1) YEAR MATERIAL AND WORKMANSHIP** A Pierce basic apparatus limited warranty certificate, WA0008, is included with this proposal.
0696698	Warranty, Engine, Cummins, 5 Year, WA0181	**ENGINE WARRANTY** A Cummins **five (5) year** limited engine warranty will be provided. A limited warranty certificate, WA0181, is included with this proposal.
0684953	Warranty, Steering Gear, Sheppard M110, 3 Year WA0201	**STEERING GEAR WARRANTY** A Sheppard **three (3) year** limited steering gear warranty will be provided. A copy of the warranty certificate will be submitted with the bid package.
0596017	Warranty, Frame, 50 Year, Custom Chassis, WA0013	**FIFTY (50) YEAR STRUCTURAL INTEGRITY** The Pierce custom chassis frame limited warranty certificate, WA0013, is included with this proposal.
0595698	Warranty, Axle, 3 Year, TAK-4, WA0050	**FRONT AXLE THREE (3) YEAR MATERIAL AND WORKMANSHIP WARRANTY** The Pierce TAK-4 suspension limited warranty certificate, WA0050, is included with this proposal.
0733306	Warranty, Single Axle, 5 Year, Meritor General Service, WA0384	**SINGLE REAR AXLE FIVE (5) YEAR MATERIAL AND WORKMANSHIP WARRANTY** A Meritor™ Axle 5 year limited warranty will be provided.
0652758	Warranty, ABS Brake System, 3 Year, Meritor Wabco, WA0232	**ABS BRAKE SYSTEM THREE (3) YEAR MATERIAL AND WORKMANSHIP WARRANTY** A Meritor Wabco™ ABS brake system limited warranty certificate, WA0232, is included with this proposal.
0019914	Warranty, Structure, 10 Year, Custom Cab, WA0012	**TEN (10) YEAR STRUCTURAL INTEGRITY** The Pierce custom cab limited warranty certificate, WA0012, is included with this proposal.
0744240	Warranty, Paint, 10 Year, Cab, Pro-Rate, WA0055	**TEN (10) YEAR PRO-RATED PAINT AND CORROSION** A Pierce cab limited pro-rated paint warranty certificate, WA0055, is included with this proposal.
0524627	Warranty, Electronics, 5 Year, MUX, WA0014	**FIVE (5) YEAR MATERIAL AND WORKMANSHIP** The Pierce Command Zone electronics limited warranty certificate, WA0014, is included with this proposal.
0695416	Warranty, Pierce Camera System, WA0188	**CAMERA SYSTEM WARRANTY** A Pierce fifty four (54) month**warranty will be provided for the camera system.**
0647720	Warranty, Pierce LED Strip Lights, WA0203	**COMPARTMENT LIGHT WARRANTY** The Pierce 12 volt DC LED strip lights limited warranty certificate, WA0203, is included with this proposal.

0046369	Warranty, 5-year EVS Transmission, Standard Custom, WA0187	**TRANSMISSION WARRANTY** The transmission will have a **five (5) year/unlimited mileage** warranty covering 100 percent parts and labor. The warranty will be provided by Allison Transmission. Note: The transmission cooler is not covered under any extended warranty you may be getting on your Allison Transmission. Please review your Allison Transmission warranty for coverage limitations.
0685945	Warranty, Transmission Cooler, WA0216	**TRANSMISSION COOLER WARRANTY** The transmission cooler will carry a five (5) year parts and labor warranty (exclusive to the transmission cooler). In addition, a collateral damage warranty will also be in effect for the first three (3) years of the warranty coverage and will not exceed $10,000 per occurrence. A copy of the warranty certificate will be submitted with the bid package.
0688798	Warranty, Water Tank, Lifetime, UPF, Poly Tank, WA0195	**WATER TANK WARRANTY** A UPF poly water tank limited warranty certificate, WA0195, is included with this proposal.
0596025	Warranty, Structure, 10 Year, Body, WA0009	**TEN (10) YEAR STRUCTURAL INTEGRITY** The Pierce apparatus body limited warranty certificate, WA0009, is included with this proposal.
0693126	Warranty, AMDOR, Roll-up Door, 10 Year/5 Year Painted, WA0185	**ROLL UP DOOR MATERIAL AND WORKMANSHIP WARRANTY** An AMDOR roll-up door limited warranty will be provided. The roll-up door will be warranted against manufacturing defects for a period of **ten (10) years**. A **five (5) year** limited warranty will be provided on painted roll up doors. The limited warranty certificate, WA0185, is included with this proposal.
0892410	Warranty, Pump, Hale, 5 Year Parts, 2 Year Labor, WA0388	**PUMP WARRANTY** A Hale pump limited warranty certificate, WA0388, is included with this proposal.
0648675	Warranty, 10 Year S/S Pumbing, WA0035	**TEN (10) YEAR PUMP PLUMBING WARRANTY** The Pierce apparatus plumbing limited warranty certificate, WA0035, is included with this proposal.
0657990	Warranty, Foam System, Husky 3, WA0231	**FOAM SYSTEM WARRANTY** The Husky 3 foam system limited warranty certificate, WA0231, is included with this proposal.
0595820	Warranty, Paint, 10 Year, Body, Pro-Rate, WA0057	**TEN (10) YEAR PRO-RATED PAINT AND CORROSION** A Pierce body limited pro-rated paint warranty certificate, WA0057, is included with this proposal.
0595412	Warranty, Graphics Lamination, 1 Year, Apparatus, WA0168	**ONE (1) YEAR MATERIAL AND WORKMANSHIP** The Pierce graphics fading and deterioration limited warranty limited warranty certificate, WA0168, is included with this proposal.
0683627	Certification, Vehicle Stability, CD0156	**VEHICLE STABILITY CERTIFICATION** The fire apparatus manufacturer will provide a certification stating the apparatus complies with NFPA 1901, current edition, section 4.13, Vehicle Stability. The certification will be provided at the time of bid.
0736243	Certification, Engine Installation, Enforcer, Cummins X12, 2021, CD0170	**ENGINE INSTALLATION CERTIFICATION** The fire apparatus manufacturer will provide a certification, along with a letter from the engine manufacturer stating they approve of the engine installation in the bidder's chassis. The certification will be provided at the time of delivery.
0686786	Certification, Power Steering, CD0098	**POWER STEERING CERTIFICATION** The fire apparatus manufacturer will provide a certification stating the power steering system as installed meets the requirements of the component supplier. The certification will be provided at the time of bid.

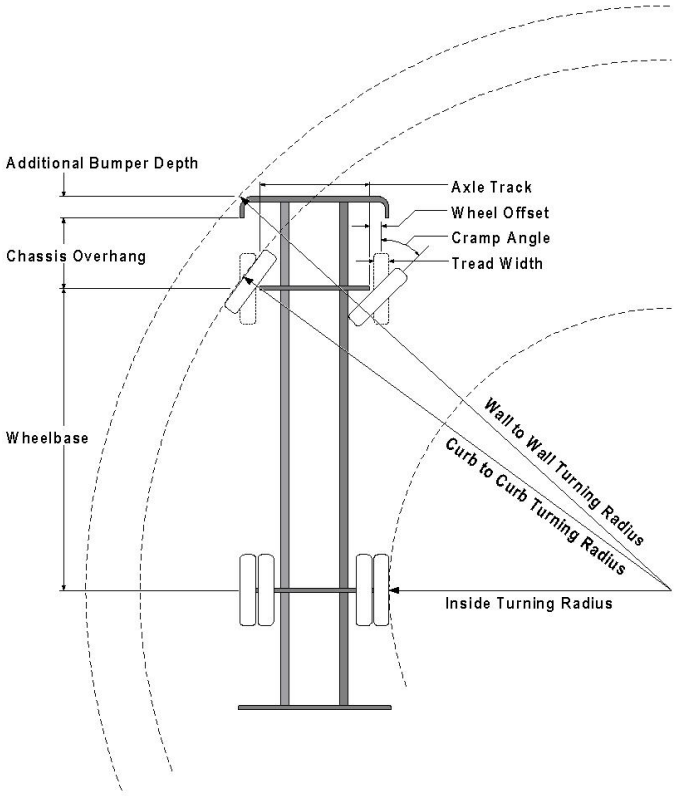
0631980	Certification, Cab Integrity, Saber FR/Enforcer, CD0130	**CAB INTEGRITY CERTIFICATION** The fire apparatus manufacturer will provide a cab crash test certification with this proposal. The certification will state that a specimen representing the substantial structural configuration of the cab has been tested and certified by an independent third party test facility. Testing events will be documented with photographs, real-time and high-speed video, vehicle accelerometers, cart accelerometers, and a laser speed trap. The fire apparatus manufacturer will provide a state licensed professional engineer to witness and certify all testing events. Testing will meet or exceed the requirements below: European Occupant Protection Standard ECE Regulation No.29. SAE J2422 Cab Roof Strength Evaluation - Quasi-Static Loading Heavy Trucks. SAE J2420 COE Frontal Strength Evaluation - Dynamic Loading Heavy Trucks. **Roof Crush** The cab will be subjected to a roof crush force of 22,500 lb. This value meets the ECE 29 criteria, and is equivalent to the front axle rating up to a maximum of ten (10) metric tons. **Side Impact** The same cab will be subjected to dynamic preload where a 13,275-lb moving barrier is slammed into the side of the cab at 5.50 mph, striking with an impact of 13,000 ft-lb of force. This test is part of the SAE J2422 test procedure and more closely represents the forces a cab will see in a rollover incident. **Frontal Impact** The same cab will withstand a frontal impact of 32,600 ft-lb of force using a moving barrier in accordance with SAE J2420. **Additional Frontal Impact** The same cab will withstand a frontal impact of 65,200 ft-lb of force using a moving barrier. (Twice the force required by SAE J2420) The same cab will withstand all tests without any measurable intrusion into the survival space of the occupant area.
0631973	Certification, Cab Door Durability, Saber FR/Enforcer, CD0137	**CAB DOOR DURABILITY CERTIFICATION** Robust cab doors help protect occupants. Cab doors will survive a 200,000 cycle door slam test where the slamming force exceeds 20 G's of deceleration. The bidder will certify that the sample doors similar to those provided on the apparatus have been tested and have met these criteria without structural damage, latch malfunction, or significant component wear.
0631978	Certification, Windshield Wiper Durability, Saber FR/Enforcer, CD0132	**WINDSHIELD WIPER DURABILITY CERTIFICATION** Visibility during inclement weather is essential to safe apparatus performance. Windshield wipers will survive a 3 million cycle durability test in accordance with section 6.2 of SAE J198 *Windshield Wiper Systems - Trucks, Buses and Multipurpose Vehicles.* The bidder will certify that the wiper system design has been tested and that the wiper system has met these criteria.
0631974	Certification, Electric Window Durability, Saber FR/Enforcer, CD0133	**ELECTRIC WINDOW DURABILITY CERTIFICATION** Cab window roll-up systems can cause maintenance problems if not designed for long service life. The window regulator design will complete 30,000 complete up-down cycles and still function normally when finished. The bidder will certify that sample doors and windows similar to those provided on the apparatus have been tested and have met these criteria without malfunction or significant component wear.
0631977	Certification, Seat Belt Anchors and Mounting, Saber FR/Enforcer, CD0134	**SEAT BELT ANCHOR STRENGTH** Seat belt attachment strength is regulated by Federal Motor Vehicle Safety Standards and should be validated through testing. Each seat belt anchor design will withstand 3000 lb of pull on both the lap and shoulder belt in accordance with FMVSS 571.210 Seat Belt Assembly Anchorages. The bidder will certify that each anchor design was pull tested to the required force and met the appropriate criteria. **SEAT MOUNTING STRENGTH** Seat attachment strength is regulated by Federal Motor Vehicle Safety Standards and should be validated through testing. Each seat mounting design will be tested to withstand 20 G's of force in accordance with FMVSS 571.207 Seating Systems. The bidder will certify, at time of delivery, that each seat mount and cab structure design was pull tested to the required force and met the appropriate criteria.

0735949	Certification, Cab HVAC System Performance, SFR/Enf, CD0165/CD0167/CD0174/CD0175	**PERFORMANCE CERTIFICATIONS** **Cab Air Conditioning** Good cab air conditioning temperature and air flow performance keeps occupants comfortable, reduces humidity, and provides a climate for recuperation while at the scene. The cab air conditioning system will cool the cab from a heat-soaked condition at 100 degrees Fahrenheit to an average of 78 degrees Fahrenheit in 30 minutes. The bidder will certify that a substantially similar cab has been tested and has met these criteria. **Cab Defroster** Visibility during inclement weather is essential to safe apparatus performance. The defroster system will clear the required windshield zones in accordance with SAE J381 Windshield Defrosting Systems Test Procedure And Performance Requirements - Trucks, Buses, And Multipurpose Vehicles.*The bidder will certify that the defrost system design has been tested in a cold chamber and passes the SAE J381 criteria.* ***Cab Auxiliary Heater*** *Good cab heat performance and regulation provides a more effective working environment for personnel, whether in-transit, or at a scene. An auxiliary cab heater will warm the cab 77 degrees Fahrenheit from a cold-soak, within 30 minutes when tested using the coolant supply methods found in SAE J381. The bidder will certify, at time of delivery, that a substantially similar cab has been tested and has met these criteria.*
0545073	Amp Draw Report, NFPA Current Edition	**AMP DRAW REPORT** The bidder will provide, at the time of bid and delivery, an itemized print out of the expected amp draw of the entire vehicle's electrical system. The manufacturer of the apparatus will provide the following: Documentation of the electrical system performance tests. A written load analysis, which will include the following: The nameplate rating of the alternator. The alternator rating under the conditions specified per: Applicable NFPA 1901 or 1906 (Current Edition). The minimum continuous load of each component that is specified per: Applicable NFPA 1901 or 1906 (Current Edition). Additional loads that, when added to the minimum continuous load, determine the total connected load. Each individual intermittent load. All of the above listed items will be provided by the bidder per the applicable NFPA 1901 or 1906 (Current Edition).
0002758	Amp Draw, NFPA/ULC Radio Allowance	
0799248	Appleton/Florida BTO	
0000018	PUMPER, 2ND GEN	
0000012	PIERCE CHASSIS	
0004713	ENGINE, OTHER	
0046396	EVS 4000 Series TRANSMISSION	
0020012	HALE PUMP	
0020009	POLY TANK	
0028048	FOAM SYSTEM	
0020006	SIDE CONTROL	
0020007	AKRON VALVES	
0020015	ABS SYSTEM	
0658751	PUMPER BASE	

Turning Performance Analysis

09/15/2022

Bid Number: 905
Department: Pacific Grove Fire Department
Chassis: Enforcer Chassis
Body: Pumper, Medium, Aluminum, 2nd Gen



Parameters:

*Inside Cramp Angle:	45°
Axle Track:	82.92 in.
Wheel Offset:	4.68 in.
Tread Width:	15.9 in.
Chassis Overhang:	65.95 in.
Additional Bumper Depth:	13 in.
Front Overhang:	78.95 in.
Wheelbase:	191.5 in.

Calculated Turning Radii:

Inside Turn:	14 ft. 11 in.
Curb to curb:	28 ft. 11 in.
Wall to wall:	32 ft. 10 in.

Category	Option	Description
Tires, Front	0802633	Tires, Front, Goodyear, Armor Max MSA, 385/65R22.50, 18 ply, Fire Ser. Load Rtg
Axle, Front, Custom	0630705	Axle, Front, Oshkosh TAK-4, Non Drive, 19,500 lb, Enforcer
Bumpers	0606557	Bumper, 13" Extended, Saber FR/Enforcer
Wheels, Front	0019611	Wheels, Front, Alcoa, 22.50" x 12.25", Aluminum, Hub Pilot

Notes:

*Actual Inside cramp angle may be less than shown.

Curb to Curb turning radius calculated for 9.00 inch curb.

Definitions:	
Inside CrampAngle	Maximum turning angle of the front inside fire.
Axle Track	King-pin to King-pin distance of front axle.
Wheel Offset	Offset from the center line of the wheel to the King-pin.
Tread Width	Width of the tire tread.
Chassis Overhang	Distance of the center line of the front axle to the front edge of the cab. This does not include the bumper depth.
Additional Bumper Wheel	Depth that the bumper assembly adds to the front overhang.
Wheelbase	Distance between the center lines of the vehicles front and rear axles.
Inside Turning Radius	Radius of the smallest circle around which the vehicle can turn.
Curb to Curb Turning Radius	Radius of the smallest circle around which the vehicle's tires can turn. This measures assumes a curb height of 9 inches.
Wall to Wall Turning Radius	Radius of the smallest circle around which the vehicle's tires can turn. This measures takes into account any front overhang due to chassis , bumper extensions and or aerial devices.

Electrical Analysis

9/15/2022

Bid #: 905

Desc: One (1) 1500 Enforcer Pumper (duplicate to 35147)

Customer: Pacific Grove Fire Department

Option: Pierce Command Zone, Advanced Electronics & Control System, Enforcer, WiFi CZT

Job #:

Sales Rep: Myers, Rich

Organization: Golden State Fire Apparatus, Inc

Type: Multiplexed

Option	Description	Type*	Minimum Load	Intermittent Load	Total Connected
0001244	High Idle w/Electronic Engine, Custom		0.00	1.20	0.00
0002638	Gauge, Air Pressure, Brake Application		0.00	0.00	0.08
0005216	Reel, Booster, Aluminum - Over Pump, Left Side		0.00	36.00	0.00
0010670	ABS Wabco Brake System, Single rear axle		0.00	6.00	0.00
0016065	Control, Air Horn, Horn Ring, PS Chrome Push Button		0.00	0.83	0.00
0072153	Primer, Trident, Air Prime, Air Operated		0.00	0.01	0.00
0098841	Batteries, (6) Deka Grp 31, 1000 CCA each, Threaded Stud		0.00	3.00	0.00
0543751	Light, Do Not Move Apparatus		0.00	0.80	0.00
0549333	Indicators, Engine, Included with Pressure Controller		0.00	0.35	0.00
0553643	Control, Air Horn at Pmp Pnl, Red Switch		0.00	0.16	0.00
0561471	Lights, Backup, Wln M6BUW, LED, For Tail Lt Housing		0.00	3.20	0.00
0583824	Light, Pump Compt, Wln 3SC0CDCR LED White		0.00	0.36	0.00
0583938	Lights, Engine Compt, Custom, Auto Sw, Wln 3SC0CDCR, 3"		0.00	0.30	0.00
0589905	Alarm, Back-up Warning, PRECO 1040		0.00	0.50	0.00
0592633	Foam Sys, Husky 3, Single Agent		0.00	55.00	0.00
0602637	Portable Hand Light, Provided by Fire Dept, Pumper NFPA 2016		0.00	0.50	0.00
0604028	Water Level Gauge, FRC, MaxVision WLA280-A00 Programmable		0.00	0.00	0.00
0604354	Gauge, Foam Level, FRC, Tank Vision Pro, WLA 360-A00, Class		0.00	0.00	1.23
0619608	Light, GTT, 794*M LED Multimode Opticom Emitter on Cab Roof,		0.00	0.03	0.00
0630636	Controls, Electric Roll-Up Windows, 4dr, 4 Driver Controls, Saber		0.00	26.00	0.00
0639727	Cab Lift, Elec/Hyd, Manual Override, Saber FR/Enforcer		0.00	180.00	0.00
0653526	Camera, Pierce, Driver Mux, Rear Camera Only		0.00	1.20	0.00
0653937	Flasher, Headlight Alternating		0.00	0.00	0.08
0677696	Intercom, Sigtronics US-45S, 4-Pos, 2-Radio, D,O,2C		0.00	0.00	0.08
0687994	Engine Brake, Jacobs Compression Brake, Cummins Engine		0.00	0.42	0.00
0750408	Lights, Side, Wln PS*01FCR LED 1st		0.00	0.96	0.64
0766906	Lights, Wln, PCPSM1*, Pioneer, 12 VDC, 1st		0.00	0.00	12.00
0768059	Lights, Wln, PCPSM2* Pioneer, 12 VDC, 2nd		0.00	0.00	24.00
0768061	Lights, Wln, PCPSM2* Pioneer, 12 VDC, 1st		0.00	0.00	24.00
0776357	Light, Visor, Wln, 12V P*H2* Pioneer, Cnt Feature, 1st		0.00	0.00	13.00
0803875	Radio, AM/FM/WB, Jensen, Frt,Rear Aux In/Frt,Rear		0.00	0.00	2.00
0891871	Wireless Router, Cradlepoint IBR900, Netcloud, Panorama, Sub1		0.00	0.00	0.00
0895310	Siren, Federal Q2B		0.00	100.00	0.00
0548004	Wiring, Spare, 15 A 12V DC 1st	Load Managed	0.00	0.00	30.00
0548006	Wiring, Spare, 15 A 12V DC 2nd	Load Managed	0.00	0.00	60.00
0548007	Wiring, Spare, 15 A 12V DC 3rd	Load Managed	0.00	0.00	60.00
0585914	Wiring, Spare, 20 A 12V DC, 6 Circuit Fuse Block, Blue Sea 5025	Load Managed	0.00	0.00	140.00
0722696	HVAC, Enforcer, CARE	Load Managed	0.00	0.00	100.00
0002758	Amp Draw, NFPA/ULC Radio Allowance	NFPA	5.00	0.00	0.00
0023650	LS 152" Rollup, Full Height Front & Rear, FDLER	NFPA	4.50	0.00	4.50
0063658	RS 152" Rollup, Full Height Front & Rear, FDLER	NFPA	4.50	0.00	4.50
0073701	Compt, Rear, Rollup, 44.50", 31.88" D	NFPA	0.90	0.00	0.90
0092582	Load Manager/Sequencer, MUX	NFPA	0.56	0.56	0.00
0536401	Gauges, Engine, Included With Pierce Pressure Controller	NFPA	0.30	0.00	0.00
0536428	Gauge, Water Level, Pierce, In pressure Controller	NFPA	1.23	0.00	0.00
0563675	Lights, Clearance/Marker/ID, Rear, Truck-Lite 33050R LED 7Lts	NFPA	0.35	0.00	0.00
0564654	Lights, Rear Zn Lwr, Wln M6*, Colored Lens, For Tail Light	NFPA	1.80	2.70	0.00

* UDMC = User Defined Mission Critical, LM = User Defined Load Managed, S = Electrical Amperage Supply

Electrical Analysis

9/15/2022

Bid #: 905

Desc: One (1) 1500 Enforcer Pumper (duplicate to 35147)

Customer: Pacific Grove Fire Department

Option: Pierce Command Zone, Advanced Electronics & Control System, Enforcer, WiFi CZT

Job #:

Sales Rep: Myers, Rich

Organization: Golden State Fire Apparatus, Inc

Type: Multiplexed

Option	Description	Type*	Minimum Load	Intermittent Load	Total Connected
0568012	Air Dryer, Wabco System Saver 1200, Heater, 2010	NFPA	7.81	0.00	0.00
0602752	Siren, Wln 295HFS2 Remote, Single Amp, Other Speaker, Non-	NFPA	1.40	12.60	0.00
0603606	Cab Instruments, Ivory Gauges, Chrome Bezels, Enf MUX	NFPA	1.26	0.00	0.00
0604324	Pump Shift, Air Mnl Override, Split Shaft, Interlocked, Hale	NFPA	1.00	0.00	0.00
0607496	Lightbar, Wln, Freedom IV-Q, 81", RRRRRRRWRRWRRRRRRR	NFPA	6.48	2.48	14.88
0615386	Vehicle Information Center, 7" Color Display, Touchscreen, MUX	NFPA	1.20	0.00	0.00
0617802	Lights, Perimeter, TecNiq T10-LC00-1 15" LED	NFPA	1.56	0.00	0.00
0617901	Lights, Perimeter Pump House, TecNiq T10-LC00-1 15" LED 2lts	NFPA	0.80	0.00	0.00
0620054	Light, Directional/Marker, Intermediate, Weldon 9186-8580-29	NFPA	0.10	0.90	0.00
0625210	Lights, Directional, Cab Front Side, Truck-Lite 19036Y LED,	NFPA	0.12	0.00	0.00
0625953	Light, Directional, Wln 600 Cmb, Cab Crn, Wrp Bzl Out HD Lts,	NFPA	0.70	0.70	0.00
0626579	Lights, Perimeter Body, TecNiq T10-LC00-1 15" LED 2lts, Rear	NFPA	0.80	0.00	0.00
0626588	Lights, Perimeter Cab, TecNiq T10-LC00-1 15" LED 4Dr	NFPA	1.60	0.00	0.00
0647647	Lights, Dome, FRP Dual LED 4 Lts	NFPA	0.80	0.80	0.00
0647802	Lights, Clearance/Marker/ID, Front, P25 LED 5 Lts, Saber	NFPA	0.35	0.00	0.00
0648332	Cab, Enforcer, 7010	NFPA	6.80	10.20	0.00
0661576	Lights, Step, P25 LED 4lts, Perimeter Scene Lt Sw	NFPA	1.00	0.00	0.00
0682503	Light Shield/Step 8", LED, P25 LED Stp Lt	NFPA	4.00	0.00	0.00
0686562	Light, Rear Zone Up, Wln MCFLED2* LED	NFPA	3.00	0.00	0.00
0721609	Controller, Pressure, Pierce LCD, Custom Chassis	NFPA	1.70	0.00	0.00
0739224	Indicator Light @ Pump Panel, Throttle Ready, Incl w/Pressure	NFPA	0.10	0.00	0.00
0745568	Indicator Light, Pump Panel, Ok To Pump, Green	NFPA	0.10	0.00	0.00
0747228	Lights, Side Zone Lower, Wln M6**, M6**, M6**, 6Lts	NFPA	5.40	8.10	0.00
0758340	DEF Tank, 4.5 Gallon, DS Fill, Rearward of Rr Axle, Common	NFPA	0.60	11.40	0.00
0762435	Light, Traffic Directing, Wln TAL85, 46.87" Long LED, Lens	NFPA	2.52	2.52	0.00
0768474	Lights, Hose Bed, Below Alum Cvr, Amdor AY-LB-12HW040, 40"	NFPA	2.40	0.00	0.00
0783153	Headlights, Rect LED, JW Spkr Evo 2, AXT/DCF/Enf/Imp/Sab/Vel	NFPA	4.20	4.20	0.00
0801886	Trans, Allison 6th Gen, 4500 EVS P, Imp/Vel/Enf	NFPA	2.00	2.00	0.00
0804514	Lights, Tail, Wln M62BTT* Red Stop/Tail & M62T* Amber Dir Arw	NFPA	0.83	2.49	0.00
0805690	Lights, Walk Surf, 4-P25 LED, Hose Bed Walkway Area, Mounted	NFPA	0.56	0.00	0.00
0889577	Bracket, License Plate & Light, P25 LED, Stainless Brkt	NFPA	0.07	0.00	0.00
0890021	Cabinet, Rear Facing, RS, 22.75 W x 25 H x 24 D, Ext Acc Only,	NFPA	0.28	0.28	0.00
0890022	Cabinet, Rear Facing, LS, 22.75 W x 25 H x 26 D, Ext Acc Only,	NFPA	0.28	0.28	0.00
0892638	Lights, Cab & Crw Cab Acs Stps, P25, LED w/Bezel, 6lts	NFPA	1.00	0.00	0.00
0892649	CZ Connect Telematics	NFPA	1.61	0.00	0.00
0893805	Engine, Cummins X12, 525 hp, 1695 lb-ft, W/OBD, EPA 2021,	NFPA	10.00	0.00	0.00
0899300	Lights, Front Zone, Wln M6** M6RS M6RS M6**, Inside Steady	NFPA	3.60	5.40	0.00
0121711	Alternator, 320 amp, Leece-Neville 4962PA, Sgl Sys	S	0.00	0.00	0.00
		Load Totals:	**97.17**	**484.43**	**491.89**

Note: Minimum Continous Load is in "Blocking Right of Way" mode.(Reference current edition of NFPA 1901)
Note: Intermittent Load items are not factored in on any alternator load comparisons. These items are included on the report for reference only and should be looked at as amp draw exclusion items. (Reference current edition of NFPA 1901)
Note: Total Connected Load "Demand" represents Total Connected Load minus any Load Managed items

Alternator Output at Idle: 182.00

Alternator Output at Governed Speed: 277.00

* UDMC = User Defined Mission Critical, LM = User Defined Load Managed, S = Electrical Amperage Supply

Electrical Analysis

9/15/2022

Bid #: 905

Desc: One (1) 1500 Enforcer Pumper (duplicate to 35147)

Customer: Pacific Grove Fire Department

Option: Pierce Command Zone, Advanced Electronics & Control System, Enforcer, WiFi CZT

Job #:

Sales Rep: Myers, Rich

Organization: Golden State Fire Apparatus, Inc

Type: Multiplexed

Minimum Continuous Load	
Supply:	182.00
Demand:	97.17
Variance:	84.83

Total Connected Load	
Supply:	277.00
Demand:	199.06
Variance:	77.94

* UDMC = User Defined Mission Critical, LM = User Defined Load Managed, S = Electrical Amperage Supply

GOLDEN STATE
FIRE APPARATUS

DEALER SUPPLIED EQUIPMENT AND/OR SERVICES

Bid #905

DEALER SUPPLIED EQUIPMENT and/or SERVICES

The following items and/or services will be provided by Golden State Fire Apparatus Inc. (GSFA) prior to final delivery:

LICENSED MANUFACTURER

The State of California Vehicle Code, section 11701 requires "every manufacturer of a vehicle subject to registration shall make application to the Department of Motor Vehicles (DMV) for a license containing a general distinguishing number". The manufacturer has a current license at time of proposal and shall provide a copy upon request. Temporary licenses are not acceptable.

LICENSED DEALERSHIP

The State of California Vehicle Code, section 11701 requires a "dealer in vehicles of a type subject to registration, shall make application to the Department of Motor Vehicles (DMV) for a license containing a general distinguishing number". Golden State Fire Apparatus, Inc. has a current license at time of bid as outlined above and is available upon request. Temporary licenses are not acceptable.

LICENSED SALES REPRESENTATIVE

The State of California Vehicle Code, section 11800 requires that it shall be "unlawful for any person to function as a vehicle salesperson without having first procured a license issued by the Department of Motor Vehicles (DMV)". The representative has a current vehicle salespersons license at time of proposal and shall provide a copy upon request. Temporary licenses are not acceptable.

VEHICLE REGISTRATION

The State of California Vehicle Code section 11739 requires that the "dealer of a new motor vehicle sale is responsible for applying for the title, securing vehicle registration, and obtaining license plates for the Customer" through the Department of Motor Vehicles (DMV). Golden State Fire Apparatus, Inc. is a factory-authorized dealer of the vehicle being sold and is authorized to register with the State of California as a new vehicle manufacturer.

Once the contract has been paid in full, including any change orders, GSFA will make all necessary applications and complete all transfer papers, including applying for California Exempt "E" license plates.

WEEKLY PROGRESS PHOTOGRAPHS

GSFA will provide weekly photographs of the apparatus or the major components as they are being constructed. The photographs will commence at the start of the manufacturing process and will continue through production by the manufacturer. The reports will show the progress of the apparatus through the course of each week. Special attention will be given to show the unique features and aspects of the apparatus as construction progresses.

PRE-CONSTRUCTION, FACTORY TRIP

A pre-construction trip to the manufacturing facility will be provided for four (4) Customer representative(s). The intent of this trip is to review and finalize, in detail, the specifications prior to the start of production. The pre-construction trip will have a duration of three (3) days and two (2) nights and be scheduled at times mutually agreed upon between GSFA and the Customer. Costs for airfare, lodging, meals, and ground transportation while at the manufacturer's location will be the responsibility of GSFA. Air travel will be from one of the following airports: Sacramento, San Francisco, or San Jose.

Costs such as Customer ground transportation in California, Customer airport parking, Customer luggage fees and Customer incidentals while traveling to the factory will be the responsibility of the Customer. Flight reservations are non-refundable and in the event of a cancellation after booking, the Customer will

be responsible for all costs associated with this cancellation, which may include not only the original ticket cost but also any change or cancellation fees imposed by the airline and/ or travel agency. Flight reservations are also non-transferable.

Please note that one (1) factory pre-construction trip has been priced for the two (2) units being proposed between Pacific Grove and Carmel-By-The-Sea (meaning that the cost for this inspection trip, has been spread evenly over two (2) units).

FINAL INSPECTION, FACTORY TRIP

A final inspection trip to the manufacturing facility will be provided for four (4) Customer representative(s). The intent of this trip is to ensure that the apparatus is built to specification and to detect any deficiencies that require correction. The final inspection trip will have a duration of four (4) days and three (3) nights and be scheduled at times mutually agreed upon between GSFA and the Customer. Costs for airfare, lodging, meals, and ground transportation while at the manufacturer's location will be the responsibility of GSFA. Air travel will be from one of the following airports: Sacramento, San Francisco, or San Jose.

Costs such as Customer ground transportation in California, Customer airport parking, Customer luggage fees and Customer incidentals while traveling to the factory will be the responsibility of the Customer. Flight reservations are non-refundable and in the event of a cancellation after booking, the Customer will be responsible for all costs associated with this cancellation, which may include not only the original ticket cost but also any change or cancellation fees imposed by the airline and/ or travel agency. Flight reservations are also non-transferable.

Please note that one (1) factory final inspection trip has been priced for the two (2) units being proposed between Pacific Grove and Carmel-By-The-Sea (meaning that the cost for this inspection trip, has been spread evenly over two (2) units).

ELECTRONIC MOUNTING ALLOWANCE

An electronic (two-way radio, etc.) mounting allowance of $2,500.00 is included in the bid price to cover the cost of mounting the applicable equipment per the direction of the City of Pacific Grove. If the mounting allowance is exceeded, additional work can be performed at the current published shop rate. Any unused portion of this allowance will be credited back on the final invoice or reimbursed in the form of a check to the City of Pacific Grove.

LOOSE EQUIPMENT MOUNTING ALLOWANCE

A loose equipment mounting allowance of $10,000.00 is included in the bid price to cover the cost of mounting the applicable equipment per the direction of the City of Pacific Grove. If the mounting allowance is exceeded, additional work can be performed at the current published shop rate. Any unused portion of this allowance will be credited back on the final invoice or reimbursed in the form of a check to the City of Pacific Grove.

CHANGE ORDER / CONTINGENCY FUND

A change order / contingency fund in the sum of $10,000 is included in the bid price to cover the cost of change orders, unforeseen items or required work that may come up during construction. Any unused portion of this fund will be credited back on the final invoice or reimbursed in the form of a check to the City of Pacific Grove.

DELIVERY TO AUTHORIZED SERVICE FACILITY

GSFA will, at their expense, deliver the apparatus (including any applicable equipment, spare parts, and supplies) to their Northern California facility in Sacramento for a dealer preparation inspection.

To ensure proper break in of all components while still under warranty, the apparatus shall be delivered under its own power - rail or truck freight shall not be acceptable.

PRE-DELIVERY SERVICE

After transportation from the factory and prior to delivery, the apparatus will receive a pre-delivery service to confirm proper operation and correction of any issues found as a result of said inspection. The Golden State Fire Apparatus, Inc. pre-delivery service consists of the following:

- Engine Compartment and Undercarriage – Check for any broken mounting brackets and inspect for correct capacities of the following (if applicable): engine oil, coolant, power steering fluid, washer reservoir fluid, transmission fluid, rear end fluid, pump transmission oil, and primer oil.

- Interior – Operate all doors, windows, and locks for proper adjustment. Check upholstery.

- Exterior – Repair reasonable paint scratches or chips. Tighten any loose hardware and inspect tires and wheels for proper pressure and lug torquing.

- Road Test – With the water tank (if applicable) full, the apparatus will be driven approximately twenty miles which allows the drive train components to get up to operating temperature. Road test will be on both city and highway roads. A DOT compliant brake test will be conducted to ensure the system is holding air. The brake condition and wheel seals will also be inspected.

- Electrical - Operate all lights, sirens, and other electrical accessories to verify operation.

- Pump - If applicable, vacuum test the pump to hold for 15 minutes. After vacuum test, operate the relief valve, transfer valve and check pump shift. Check water tank for leaks and inspect water level gauge for calibration. With discharge caps loose, rapid test all individual gauges and main gauges for calibration. Lubricate valve rods.

- Foam System – If applicable, tighten caps and connect foam lines. Test selector, valves, metering valve and operation of foam system (including flush).

- Fuel Tank - Fuel tank will be filled at the dealership location prior to final delivery.

- DEF Tank - DEF tank will be filled at the dealership location prior to final delivery.

- Wash - The apparatus will be thoroughly washed at the dealership location prior to final delivery.

FINAL DELIVERY (CUSTOMER LOCATION)

GSFA will, at their expense, deliver the Product (including any applicable equipment, spare parts, and supplies) to the Customer specified address once completed. Prior to delivery of the Product, Customer agrees to provide proof of liability and physical damage insurance to GSFA. GSFA will not release the Product to the Customer until such proof of insurance is provided.

It is the responsibility of the Customer to have any outstanding balance due, paid in full to GSFA, prior to or at the time that the Product is complete and ready to deliver. If payment is late or delivery is delayed pending payment, a daily finance charge of $150.00 and a daily storage fee of $50.00 may apply until such payment is received.

Due to insurance liability, the Product will not be delivered without full acceptance and full payment (or prior written agreement between the Customer and GSFA).

END OF DEALER SUPPLIED EQUIPMENT and/or SERVICES

PRODUCT WARRANTIES

Exhibit “C”

Bid #905



Fire and Rescue Apparatus

One (1) Year Material and Workmanship
Basic Apparatus
Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	**Portions of the apparatus manufactured by Pierce shall be free from defects in material and workmanship**
Warranty Begins:	**The date the apparatus is placed in service, or 60 days from the original buyer invoice date, whichever comes first.**
Warranty Period Ends After:	**Twelve (12) months.**
Conditions and Exclusions: **See Also Paragraphs 2 thru 4**	**No specific exclusions apply**

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY.

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES.

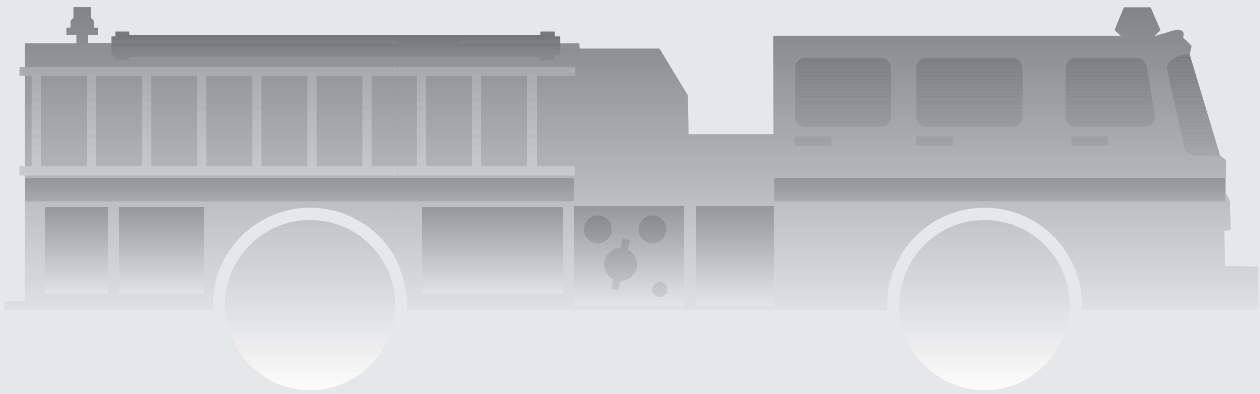
Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.

2/8/2010 WA0008

Cummins Warranty

Worldwide
Fire Apparatus/Crash Trucks



Coverage

Products Warranted

This Warranty applies to new diesel Engines sold by Cummins and delivered to the first user on or after April 1, 2007, that are used in fire apparatus truck and crash truck* applications Worldwide.

Base Engine Warranty

The Base Engine Warranty covers any failures of the Engine which result, under normal use and service, from a defect in material or factory workmanship (Warrantable Failure). This Coverage begins with the sale of the Engine by Cummins and ends five years or 100,000 miles (160,935 kilometers), whichever occurs first, after the date of delivery of the Engine to the first user.

Engine aftertreatment components included in the Cummins Critical Parts List (CPL) and marked with a Cummins part number are covered under Base Engine Warranty.

Additional Coverage is outlined in the Emission Warranty section.

These Warranties are made to all Owners in the chain of distribution and Coverage continues to all subsequent Owners until the end of the periods of Coverage.

Cummins Responsibilities

Cummins will pay for all parts and labor needed to repair the damage to the Engine resulting from a Warrantable Failure.

Cummins will pay for the lubricating oil, antifreeze, filter elements, belts, hoses and other maintenance items that are not reusable due to the Warrantable Failure.

Cummins will pay for reasonable labor costs for Engine removal and reinstallation when necessary to repair a Warrantable Failure.

Cummins will pay reasonable costs for towing a vehicle disabled by a Warrantable Failure to the nearest authorized repair location. In lieu of the towing expense, Cummins will pay reasonable costs for mechanics to travel to and from the location of the vehicle, including meals, mileage and lodging when the repair is performed at the site of the failure.

Owner Responsibilities

Owner is responsible for the operation and maintenance of the Engine as specified in Cummins Operation and Maintenance Manuals. Owner is also responsible for providing proof that all recommended maintenance has been performed.

Before the expiration of the applicable Warranty, Owner must notify a Cummins distributor, authorized dealer or other repair location approved by Cummins of any Warrantable Failure and make the Engine available for repair by such facility. Except for Engines disabled by a Warrantable Failure, Owner must also deliver the Engine to the repair facility.

Service locations are listed on the Cummins Worldwide Service Locator at cummins.com.

Owner is responsible for the cost of lubricating oil, antifreeze, filter elements and other maintenance items provided during Warranty repairs unless such items are not reusable due to the Warrantable Failure.

Owner is responsible for communication expenses, meals, lodging and similar costs incurred as a result of a Warrantable Failure.

Owner is responsible for non-Engine repairs and for ‘‘downtime’’ expenses, cargo damage, fines, all applicable taxes, all business costs and other losses resulting from a Warrantable Failure.

Owner is responsible for a $100 (U.S. Dollars) deductible per each service visit under this plan in the 3rd, 4th and 5th years of Base Engine Warranty. The deductible will not be charged during the first 2 years of the Base Engine Warranty.

Limitations

Cummins is not responsible for failures or damage resulting from what Cummins determines to be abuse or neglect, including, but not limited to: operation without adequate coolants or lubricants; overfueling; overspeeding; lack of maintenance of lubricating, cooling or intake systems; improper storage, starting, warm-up, run-in or shutdown practices; unauthorized modifications of the Engine.

Any unauthorized modifications to the aftertreatment could negatively effect emissions certification and void Warranty.

Cummins is also not responsible for failures caused by incorrect oil, fuel or diesel exhaust fluid or by water, dirt or other contaminants in the fuel, oil or diesel

exhaust fluid.

This Warranty does not apply to accessories supplied by Cummins which bear the name of another company. Such non-warranted accessories include, but are not limited to: alternators, starters, fans, air conditioning compressors, clutches, filters, transmissions, torque converters, vacuum pumps, power steering pumps, fan drives and air compressors. Cummins branded alternators and starters are covered for the first two years from the date of delivery of the Engine to the first user, or the expiration of the Base Engine Warranty, whichever occurs first.

Failures resulting in excessive oil consumption are not covered beyond the duration of the Coverage or 100,000 miles (160,935 kilometers) or 7,000 hours from the date of delivery of the Engine to the first user, whichever of the three occurs first. Before a claim for excessive oil consumption will be considered, Owner must submit adequate documentation to show that consumption exceeds Cummins published standards.

Failures of belts and hoses supplied by Cummins are not covered beyond the first year from the date of delivery of the Engine to the first user or the duration of the Warranty, whichever occurs first.

Parts used to repair a Warrantable Failure may be new Cummins parts, Cummins approved rebuilt parts or repaired parts. Cummins is not responsible for failures resulting from the use of parts not approved by Cummins.

A new Cummins or Cummins approved rebuilt part used to repair a Warrantable Failure assumes the identity of the part it replaced and is entitled to the remaining Coverage hereunder.

Cummins Inc. reserves the right to interrogate Electronic Control Module (ECM) data for purposes of failure analysis.

CUMMINS DOES NOT COVER WEAR OR WEAROUT OF COVERED PARTS.

CUMMINS IS NOT RESPONSIBLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.

THIS WARRANTY AND THE EMISSION WARRANTY SET FORTH HEREINAFTER ARE THE SOLE WARRANTIES MADE BY CUMMINS IN REGARD TO THESE ENGINES. CUMMINS MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, OR OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Emission Warranty

Products Warranted

This Emission Warranty applies to new Engines marketed by Cummins that are used in the United States** in vehicles designed for transporting persons or property on a street or highway. This Warranty applies to Engines delivered to the first user on or after September 1, 1992.

Coverage

Cummins warrants to the first user and each subsequent purchaser that the Engine is designed, built and equipped so as to conform at the time of sale by Cummins with all U.S. federal emission regulations applicable at the time of manufacture and that it is free from defects in material or factory workmanship which would cause it not to meet these regulations within the longer of the following periods: (A) Five years or 100,000 miles (160,935 kilometers) of operation, whichever occurs first, as measured from the date of delivery of the Engine to the first user or (B) The Base Engine Warranty.

If the vehicle in which the Engine is installed is registered in the state of California, a separate California Emission Warranty also applies.

Limitations

Failures, other than those resulting from defects in material or factory workmanship, are not covered by this Warranty.

Cummins is not responsible for failures or damage resulting from what Cummins determines to be abuse or neglect, including, but not limited to: operation without adequate coolants or lubricants; overfueling; overspeeding; lack of maintenance of lubricating, cooling or intake systems; improper storage, starting, warm-up, run-in or shutdown practices; unauthorized modifications of the Engine.

Any unauthorized modifications to the aftertreatment could negatively effect emissions certification and void Warranty.

Cummins is also not responsible for failures caused by incorrect oil, fuel or diesel exhaust fluid or by water, dirt or other contaminants in the fuel, oil or diesel exhaust fluid.

Cummins is not responsible for non-Engine repairs, ‘‘downtime’’ expenses, cargo damage, fines, all applicable taxes, all business costs or other losses resulting from a Warrantable Failure.

CUMMINS IS NOT RESPONSIBLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.

* Airport operated crash trucks and fire department operated trucks employed to respond to fires, hazardous material releases, rescue and other emergency-type situations.

** United States includes American Samoa, the Commonwealth of Northern Mariana Islands, Guam, Puerto Rico and the U.S. Virgin Islands.

Cummins Inc.
Box 3005
Columbus, IN 47202-3005
U.S.A.

Bulletin 3381161
Printed in U.S.A. Rev. 08/09
©2001 Cummins Inc.

R. H. SHEPPARD CO., INC.
101 Philadelphia St.
Hanover, PA 17331
Pierce Manufacturing Inc.
2600 American Drive
Appleton, WI 54912

LIMITED WARRANTY: The R. H. Sheppard Co. Inc., ("Sheppard") warrants all M110PKG1 and M110SAU1 steering gears manufactured and sold to Pierce Manufacturing Inc. ("Pierce") for application on Pierce TAK-4 equipped vehicles to be free from defects of workmanship and material under normal use and service for a period of thirty six months from the in service date of the vehicle to its original owner.

Vehicle applications where Sheppard product is used require an application approval before production build. If Pierce uses Sheppard product for any purpose or application which has not been approved by Sheppard in advance, including aftermarket devices (defined as a device added to the steering system directly or indirectly affecting the performance or operation of the Sheppard product in its approved application) not tested and approved by Sheppard this limited warranty SHALL NOT APPLY AND SHALL BE VOID. SHEPPARD MAKES NO OTHER WARRANTY, EITHER EXPRESS OR IMPLIED. SHEPPARD EXPRESSLY DISCLAIMS ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR USE OR PURPOSE WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF.
SHEPPARD SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES OR FOR LOSS OR DAMAGE DIRECTLY OR INDIRECTLY ARISING FROM THE USE OF A PRODUCT. Pierce expressly acknowledges its obligation to inform all users (customers) of the above disclaimer.

CONDITIONS: Claims under this Limited Warranty may only be made by Pierce. In no event shall Sheppard be held liable for warranty charges by unauthorized persons. No allowance will be made for repairs or alterations, unless made with the written consent of Sheppard. Authorized Pierce dealers shall be the only authorized repair facility for Sheppard products applied to Pierce vehicles. Any warrantable repair made under this Limited Warranty must be made on or before 36 months of the in-service date for the Product to which the claim relates. Sheppard shall not be liable for claims made after such date. Sheppard product fitted to Pierce vehicles that are repaired at a repair facility other than an authorized Pierce dealer within the warranty period will be considered for payment under the guidelines of this agreement only by joint written consideration of Sheppard and Pierce warranty departments. It shall be the responsibility of the Pierce warranty department to notify Sheppard if and when this situation occurs. Sheppard will not be held responsible for damage to other steering components such as but not limited to pumps and reservoirs due to improper adjustment of steering gear relief plungers. Vehicle downtime and towing will not be considered under warranty.

REMEDIES: The sole and exclusive remedy of Pierce for Sheppard's breach of the foregoing warranty is limited to the return and repair or reimbursement as follows:

Warranty Support: In support of the Pierce dealer network, Sheppard will provide a toll-free "Hotline" service to assist in the diagnosis and troubleshooting of steering problems. The R. H. Sheppard Co., Inc. Field Service Department can be reached at 1-800-274-7437 for assistance. Sheppard will require that Pierce dealers contact this toll-free "Hotline" for approval before product is removed from a vehicle in a warranty situation. When contacted regarding a warranty situation, the Sheppard representative will provide an authorization number for removal of the product. This Returned Goods Authorization (RGA) number must be included in all warranty correspondence and attached to all returned goods.

Procedure: In the event of a warranty situation, the servicing dealer shall contact the Sheppard Hotline and receive an RGA number before replacing any steering gear. For M110PKG1 and M110SAU1 steering gear models, the dealer will first obtain an RGA number from Sheppard, and then order the replacement gear from Pierce. Replacement M110PKG1 and M110SAU1 steering gears shall be shipped from Pierce once those models are in full production. A warranty claim for both parts and labor will then be generated by the dealer and sent to Pierce. After reviewing the claim, Pierce will submit it to Sheppard for reimbursement.

Parts Reimbursement: Sheppard agrees to reimburse Pierce at Pierce's purchase price plus 30% mark-up for parts found to be defective within the warranty period. Parts being returned for warranty consideration shall be sent to the R. H. Sheppard Company, 447 E. Middle St., Hanover, PA 17331 ATTN: Warranty Dept. Sheppard's determination as to whether the part is covered by the foregoing warranty is final and conclusive. Sheppard requires the return of complete steering gears only. Individual seals replaced under warranty **should not** be returned unless specifically requested by Sheppard. All parts being returned for warranty consideration must be clearly tagged with all pertinent warranty information including, but not limited to (1) Returned Goods Authorization number (RGA); (2) claim number; (3) date in service; (4) date of failure; (5) mileage; (6) part number; (7) labor hours; (8) dealer labor rate and; (9) dollar amount claimed. Claims submitted without prior authorization are subject to rejection under this agreement.

Labor: Labor to repair Sheppard product found to be defective within the warranty period will be reimbursed at not more than 10 hours per vehicle. Labor shall be reimbursed at the rate of $85.00 USD per hour for M110PGK1 and M110SAU1 steering gears.

Freight: Pierce will collect M110PGK1 and M110SAU1 warranty material at a designated collection point. Inbound freight to the Pierce collection point will be the responsibility of Pierce. All warranty material should be returned from the Pierce collection point to R. H. Sheppard Co. Freight Collect by a Sheppard-specified common carrier based on location of the Pierce collection point. Sheppard does not require the return of failed seals. Any freight charges incurred for the return of seals will be the responsibility of Pierce. Parts returned for warranty consideration without prior authorization are subject to rejection under this agreement and may be subject to a charge back of inbound freight charges. Parts rejected under this warranty will be returned to Pierce Freight Collect or scrapped by Sheppard at Pierce's discretion.

Outside Purchases: Pierce authorized dealers shall be the only outlet for repair, warranty service and parts for Sheppard products applied to Pierce vehicles. Sheppard will not be responsible for consumables such as hoses, belts, fluids, fittings or miscellaneous shop material that may be required for the repair of the product.

Warranty Documentation: Warranty credit memos will be issued monthly to the Pierce Warranty Department. Monthly credit memos will include (1) claim number; (2) part number; (3) parts reimbursement; (4) labor reimbursement; (5) any applicable Pierce reference number and; (6) reason for rejection or acceptance of the claim. Credit memos will be issued in U.S. funds. Debits for warranty claims will not be accepted under this agreement. Claim disposition will constitute the final and conclusive resolution of warranty claims.

Parts Retention: Sheppard will retain parts submitted for warranty consideration for a period of sixty (60) days for any material found to be rejected for warranty. Sheppard will notify Pierce within sixty (60) days of receipt of Sheppard's determination as to whether any such part is covered by this warranty. Warranty reimbursement will be issued within thirty days of receipt of material at Sheppard.

Good-Will Requests: Good-Will requests will be considered jointly between Sheppard and Pierce for equitable compensation.

RECALLS: Sheppard retains the right to review information regarding federal motor vehicle recall and /or product repair programs if Sheppard products fitted to Pierce vehicles are alleged to be non-compliant with federal motor vehicle safety standards. Sheppard retains the right to review any claims of product defect or non-compliance before participating in reimbursement of expenses incurred as a result of alleged non-compliance or defect of its products. Sheppard agrees to negotiate in good faith for the reimbursement of expenses incurred by Pierce for all administrative, material and labor cost and expense associated with any recall where Sheppard product is found to be defective or non-compliant with federal motor vehicle standards.

MISCELLANEOUS: This writing constitutes the full complete and final statement of Sheppard's limited warranty for M110PKG1 and M110SAU1 products sold to Pierce. All prior oral or written correspondence, test data, negotiations, representations, understandings and the like regarding products are merged in this writing and extinguished by it. This limited warranty may not be altered, amended extended or modified except by a writing signed by the President or Vice President of Sheppard. No employee, vendor, dealer, distributor or other representative of Sheppard has authority to make statements to extend, expand, alter or amend the terms of this Limited Warranty. Sheppard expressly disclaims any statements contrary to the Limited Warranty. Sheppard's failure at any time to enforce any of the terms and conditions stated herein shall not constitute a waiver of any provisions herein. This Limited Warranty shall be governed by and construed in accordance with the laws of the Commonwealth of Pennsylvania.

Any legal actions which may arise as a result of disputes, controversies or claims arising out of or related to this limited warranty shall be in such forum as Sheppard and Pierce shall agree, or, in the absence of agreement, in a court of appropriate jurisdiction other than in the county in which either party is located. This Limited Warranty shall not be assigned by Pierce.

COOPERATIVE EFFORT: Sheppard and Pierce agree to work cooperatively toward expanding this warranty coverage to a period of sixty months from the in service date. These cooperative efforts shall focus on examining the effects of increased heat generated by 2007 model engines and its impact on the entire power steering system.

AGREEMENT: This agreement is effective April 3, 2006 and may be modified by mutual agreement between Sheppard and Pierce of a signed amendment to be attached to the original Limited Warranty. There are no third party beneficiaries to this Limited Warranty. This warranty agreement applies to Pierce authorized dealers only. It does not encompass any special arrangements that Pierce may now have or that Pierce may enter into, with any other segments of the trucking industry. This warranty agreement does not apply to non-conforming product removed at Pierce assembly plants.

This Limited Warranty agreement between the R. H. Sheppard Co., Inc and Pierce Manufacturing Inc. may be terminated by either party with thirty days written notice prior to termination.

Signed at Pierce Manufacturing Inc., Appleton, WI this _____ day of _____, 2006.

R. H. SHEPPARD CO., INC.

_____
Authorized Signature

_____
Title

PIERCE MANUFACTURING INC.

_____
Authorized Signature

_____
Title

Fire and Rescue Apparatus

Lifetime Fifty (50) Year Structural Integrity Custom Chassis Frame

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	**Custom chassis frame rail manufactured by Pierce shall be free from defects in material and workmanship**
Warranty Begins:	**The date of the original purchase invoice (issued when the product ships from the factory).**
Warranty Period Ends After:	**Fifty (50) Years (Expected Life of Apparatus)**
Conditions and Exclusions: **See Also Paragraphs 2 thru 4**	**This warranty does not apply to damage caused by corrosion.**

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY.

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES.

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.

2/8/2010 WA0013

Three (3) Year Material and Workmanship
TAK-4 Independent Front Suspension

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	**The TAK-4 Front Independent Suspension and Steering Gears shall be free from defects in material and workmanship.**
Warranty Begins:	**The date of the original purchase invoice (issued when the product ships from the factory).**
Warranty Period Ends After:	**Three (3) Years -or- 30,000 Miles**
Conditions and Exclusions: **See Also Paragraphs 2 thru 4**	**This limited warranty excludes brake pads, brake rotors, seal boots and shock absorbers.**

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY.

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES.

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.

12/16/2013 WA0050

SUPPLIER

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the purchaser who first puts the product in service ("Buyer"):

Coverage:	**The Meritor axle shall be covered by Meritor as indicated in the attached Meritor warranty coverage description**
Warranty Begins:	**The date of the original purchase invoice (issued when the product ships from the factory).**
Warranty Period Ends After:	**Five (5) Years**
Conditions and Exclusions: **See Also Paragraphs 2 thru 4**	**The exclusions listed in the attached Meritor warranty description shall apply.**

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY.

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES.

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.

6/29/2020 WA0384

MERITOR® COMMERCIAL VEHICLE SYSTEMS

WARRANTY/MODEL YEAR 2020 VEHICLES

MERITOR®



WARRANTY INFORMATION CONTENTS

Effective Model Year 2020 Vehicles

Linehaul 3-4
General Service 5-6
Heavy Service/Specialty Vehicle 7-8
Fire and Emergency 9
Transit Bus 10
Off-Highway Service 11
Terms and Conditions 12

How to Read Warranty Coverage

Number of Years	Mileage (in thousands) Unl=Unlimited	P=Parts Only P&L=Parts & Labor

Notice:

Models or components that are approved for use by Meritor's vocational guidelines contained in Meritor Publication TP-9441 for axles, SP-8320 for trailer axles, TP-12126 for drivelines, which are not specifically listed, are warranted for one year, unlimited miles, parts only (1/Unl/P).

Products purchased on an incomplete vehicle (glider) are limited to one year, unlimited miles parts only (1/Unl/P).

Advantage Program

Purchasing additional coverage on select components will continue to safeguard your investment against major repair costs after the initial base coverage expires. You can find out more about the Advantage Program by visiting www.meritor.com or by contacting Meritor at 866-OnTrac1 (866-668-7221).

LINEHAUL WARRANTY INFORMATION

Linehaul Vehicles

- Bulk Hauler
- Chip Hauler (Truck)*
- Doubles
- Flatbed
- General Freight
- Grain Hauler
- Livestock Hauler
- Moving Van
- Pipe Hauler
- Refrigerated Freight
- Tanker
- Triples

* Chip Hauler vehicles require specific axle models listed below and Linehaul condition to be eligible for Linehaul warranty consideration.

Linehaul Typically Is

- High mileage operation (over 60,000 miles/year)
- Well maintained major highways of concrete or asphalt construction
- Greater than 30 miles between starting and stopping

Coverage under Meritor's warranty require that the application of products be properly approved pursuant to OEM and Meritor approvals. Refer to TP-9441 for axles, SP-8320 for trailer axles, TP-12126 for drivelines, and/or contact Meritor regarding specific application approval questions on any product line.

Front Non-Drive Steer Axles – 5/750/P&L

FD-965	FF-967	MFS-12-122B-N	MFS-12-132C-N	MFS-13-122B-N	MFS-13B-122C-N
FF-941	FG-941	MFS-12-122C-N	MFS-12E-132B-N	MFS-13-122C-N	MFS-13B-132B-N
FF-942	FG-943	MFS-12E-122A-N	MFS-12E-132C-N	MFS-13-132B-N	MFS-13B-132C-N
FF-943	MFS-10-122A	MFS-12E-122B-N	MFS-12-143A-N	MFS-13-132C-N	MFS-14-122A-N
FF-944	MFS-10-143A-N	MFS-12E-122C-N	MFS-12E-143A-N	MFS-13-143A-N	MFS-14-124A-N
FF-961	MFS-10-144A-N	MFS-12-124A-N	MFS-12-144A-N	MFS-13-144A-N	MFS-14-143A-N
FF-966	MFS-12-122A-N	MFS-12-132B-N	MFS-13-122A-N	MFS-13B-122B-N	MFS-14-144A-N

Rear Drive Single Axles – 5/750/P&L

RS-19-144/145/A	RS-21-145	RS-23-160
MS-19-14X	RS-21-160	RS-23-161
MS-21-144	MS-23-17X	RS-23-186

Drivelines

RPL	5/500/P, 1/Unl/P&L
MXL	3/350/P, 1/Unl/P&L
155N	1/Unl/P
92N	1/Unl/P

Rear Drive Tandem/Tridem Axles – 5/750/P&L

RT-34-144/P/A	MA-40-165	MT-40-14XHE
RT-40-145/A	MA-40-175	MT-40-144/P
RT-40-160/P[1,2]	MT-34-14X/P	MT-40-943
RT-46-160/P[1,2]	MT-40-14T/P	MT-40-943-SP
RT-46-164EH/P[1,2]	MT-40-14X/P	RZ-166[2]
RT-50-160/P[1,2]	MT-40-14X/P	RZ-188

[1] These models required for Chip Hauler and Linehaul warranty consideration.
[2] Each vehicle must have a Request for Application Recommendation (RAR) approved by Meritor prior to vehicle build. All RARs must identify the chassis number or VIN. Refer to Product Information Letter #303 and #396 for further details.

LINEHAUL WARRANTY INFORMATION

Brake Components

Cam Q Series Trailer Brakes	5/500/P, 1/100/L
Q+ Drum Brake™	5/500/P, 1/Unl/P&L
ASA	5/500/P, 1/Unl/P&L
Hubs/Cast Drums and Other Wheel-end Components	1/Unl/P
Hydraulic Disc Brakes	1/Unl/P
All Other Brakes	1/Unl/P
STEELite X30 Drum Brake™[2]	12-Years or Wearable Life/P
EX+ Air Disc Brake™	5/500/P, 1/Unl/L
EX+ Air Disc Brake Extended Standard Warranty[3]	5/500/P&L

[1] Includes: bushing, seal, cam, ASA lubrication and wear coverage of 3/500/P&L.

[2] Based on stamped wear diameter max.

[3] Applies only to MA761 friction material code CD brake assembly i.e. EX225LXXXCDXXX

Trailer Axles

Beam and Brackets	5/500/P, 1/100/L
Wheel End Systems[1]	
Standard System[2]	1/100/P&L
PreSet by Meritor[3]	5/500/P&L
AxlePak5[4]	5P/L
AxlePak7[5]	7P/L

[1] Includes hub, wheel seals and wheel bearings—all systems require annual inspections and proper documentation to ensure full coverage.

[2] When installed by Meritor.

[3] Requires approved hubcap stating PreSet by Meritor on hubcap face.

[4] When specified with AxlePak5 wheel end system, coverage on MTIS thru-tee and stator is 5/Unl/P, 1/Unl/L.

[5] When specified with AxlePak7 wheel end system, coverage on MTIS thru-tee and stator is 7/Unl/P, 1/Unl/L.

(For brake components and ABS coverage, refer to appropriate product warranties.)

TAG/Pusher Axles[1]

TQ, TQD, TR, TRD Beam and Brackets	5/750/P&L

[1] For brake components and ABS Coverage, refer to appropriate product warranties.

Meritor Tire Inflation System

MTIS Components	5/Unl/P, 1/Unl/L

Trailer Air Suspension Systems

MPA38/40 (Tandem Axle Parallelogram)[1]	
Major Structural Components	5/500/P, 1/100/L
Curbing Damage Warranty[2]	5/500/P, 1/100/L
Height Control Valve	1/100/P&L
Shock Absorbers	2/200/P&L
Air Springs	2/200/P, 1/100/L
Bushings	5/P, 3/L
PinLoc Air Controls	1/100/P&L
PinLoc Actuator	3/300/P&L
MPA20 (Single Axle Parallelogram)	
Major Structural Components	5/500/P, 1/100/L
Height Control Valve	1/100/P&L
Shock Absorbers	2/200/P&L
Air Springs	2/200/P, 1/100/L
Bushings	5/P, 3/L
MTA (Trailing Arm)	
Major Structural Components	5/500/P, 1/100/L
Height Control Valve	1/100/P&L
Shock Absorbers	2/200/P&L
Air Springs & Rebound Straps	2/200/P, 1/100/L
Bushings	5/500/P, 3/300/L

[1] Fastener torque coverage is limited to 2/Unl/P&L when torqued by Meritor

(For axle and ABS coverage, refer to appropriate product warranties.)

[2] "Curbing damage" is defined as deformation (bending, buckling, or breakage), caused by sudden impact with a curb or similar fixed object. Damage to the RideSentry slider box (the suspension sliding subframe, consisting of the frame rails, crossmembers, and central A-frame assembly), caused by accidental trailer impact with a curb or similar fixed object, is eligible for warranty coverage. Damage to other components or damage resulting from collision with another vehicle, rollover or fire is not covered under this provision. Warranty is not transferrable to another trailer VIN, and coverage does not apply if the trailer is deemed to be a total loss, scrapped, or otherwise not salvageable.

GENERAL SERVICE WARRANTY INFORMATION

General Service Vehicles

- Auto Hauler
- Beverage Truck
- Chip Hauler
- Cross Country Coach
- Flatbed
- Front Engine Commercial Chassis
- Front Engine Integral Coach
- General Freight
- Intercity Coach
- Intermodal Chassis
- Livestock Hauler
- Meat Packer
- Moving Van
- Municipal Truck
- Newspaper Delivery
- Pick-Up and Delivery
- Pipe Hauler
- Platform Auto Hauler
- Rear Engine Integral Coach
- Recreational Vehicles
- Refrigerated Freight
- School Bus
- Stake Truck
- Tanker
- Tanker Trailer
- Tour Bus
- Wrecker

General Service Typically Is

- Lower mileage operations (less than 60,000 miles/year)
- Generally, on-road service (less than 10% off-road)
- An average of three (3) miles between starting and stopping

Coverage under Meritor's warranty require that the application of products be properly approved pursuant to OEM and Meritor approvals. Refer to TP-9441 for axles, SP-8320 for trailer axles, TP-12126 for drivelines, and/or contact Meritor regarding specific application approval questions on any product line.

Front Non-Drive Steer Axles – 2/Unl/P&L

FD-965	FL-943	MFS-8-163B-N	MFS-12E-132B-N	MFS-13-132C-N	MFS-16-143A-N
FF-941	MFS-6-151A-N	MFS-10-122A	MFS-12-132C-N	MFS-13B-132B-N	MFS-18-133A-N
FF-942	MFS-6-153B-N	MFS-10-143A-N	MFS-12E-132C-N	MFS-13B-132C-N	MFS-18-135A-N
FF-943	MFS-6-162B-N	MFS-10-144A-N	MFS-12-143A-N	MFS-13-143A-N	MFS-18-193A-N
FF-944	MFS-6-153C-N	MFS-12-122A-N	MFS-12-144A-N	MFS-13-144A-N	MFS-20-133A-N
FF-946	MFS-6-162C-N	MFS-12E-122A-N	MFS-12E-143A-N	MFS-14-122A-N	MFS-20-135A-N
FF-961	MFS-7-113C-N	MFS-12-122B-N	MFS-13-122A-N	MFS-14-124A-N	MFS-20-192A-N
FF-966	MFS-7-153C-N	MFS-12E-122B-N	MFS-13-122B-N	MFS-14-143A-N	MFS-20-193A-N
FF-967	MFS-7-163C-N	MFS-12-122C-N	MFS-13B-122B-N	MFS-14-144A-N	MFS-22-135A-N
FG-941	MFS-8-113B-N	MFS-12E-122C-N	MFS-13-122C-N	MFS-16-122A-N	MFS-22H-135A-N
FH-941	MFS-8-143A-N	MFS-12-124A-N	MFS-13B-122C-N	MFS-16-133A-N	MFS-22-193A-N
FH-946[1]	MFS-8-153B-N	MFS-12-132B-N	MFS-13-132B-N	MFS-16-135A-N	MFS-22H-193A-N
FL-941					

[1] Can also be used with reduced steer angles in tag position in Coach Applications.

Front Drive/Non-Drive Steer Axles – 1/Unl/P&L

MX-08-130-FV (FSD-08A)	MX-16-130-FV (FSD-16A)	MX-21-130-SD (SDA-2100)
MX-10-130-FV (FSD-10A)	MX-18-130-FV (FSD-18A)	MX-23-130-FV (FSD-23A)
MX-12-130-FV (FSD-12A)	MX-18-130-SD (SDA-1800)	MX-23-130-SD (SDA-2300)
MX-13-130-FV (FSD-13A)	MX-20-130-FV (FSD-20A)	MX-29-130-FV (FSD-29A)
MX-14-130-FV (FSD-14A)	MX-21-130-FV (FSD-21A)	

Rear Drive Single Axles – 2/Unl/P&L

MS-17-13X	MS-21-14X	RC-23-160	RS-24-160	MS-30-616-SP
MS-17-14X	MS-21-144	RC-23-161	RC-25-160	RS-35-380
MS-19-13X	MS-23-17X	RC-23-162[1]	RS-26-185	71162
MS-19-14X	RS-21-145/A	RC-23-165[1]	MS-26-616	71163
RS-17-144/145/A	RS-21-160	RS-23-160	MS-26-616-SP	79163
RS-19-144/145/A	RC-22-145	RS-23-161	RS-30-185	
MS-21-13X	RC-22-145/A	RS-23-186	MS-30-616	

[1] 3/Unl/P&L if PreSet by Meritor.

Rear Drive Tandem/Tridem Axles – 2/Unl/P&L

MT-34-14X/P	MT-40-14XHE	RT-44-145/P	MT-58-616
RT-34-144/P/A	MT-40-144/P	RT-46-169	RT-58-185[1]
MT-40-14T/P	RT-40-145/A	MT-52-616	MT-70-380
MT-40-14X/P	MT-44-14X/P	RT-52-185[1]	RZ-188

[1] Each vehicle must have a Request for Application Recommendation (RAR) approved by Meritor prior to vehicle build. All RARs must identify the chassis number or VIN. Refer to Product Information Letter #303 and #396 for further details.

Rear Drive Tandem/Tridem - 3/Unl/P&L

RT-40-160/P	RT-50-160/P
RT-46-160/P	RZ-166
RT-46-164EH/P	

Rear Drive Axles – 1/Unl/P&L

11170	RND-14H
523	RND-16A

Drivelines

RPL	4/400/P, 1/Unl/P&L
MXL	3/350/P, 1/Unl/P&L
155N	1/Unl/P
92N	1/Unl/P

Transmission – 1/Unl/P&L

516	FAT 30

PTO – 1/Unl/P&L

MPT-318	MPT-526	MPT-1702
MPT-500	MPT-531	MPT-175
MPT-510	MPT-543	MPT-185
MPT-518	MPT-170	MPT-190

GENERAL SERVICE WARRANTY INFORMATION

Brake Components

Cam Q Series Trailer Brakes	3/Unl/P, 1/Unl/L
Cam P[3]	2/200/P
Cam	3/Unl/P
Q+ Drum Brake™	3/Unl/P&L
Q+ Drum Brake ™[3]	2/200/P&L
ASA	3/Unl/P
ASA[3]	2/200/P
Hubs/Cast Drums and Other Wheel-end Components	1/Unl/P
Hydraulic Disc Brakes	1/Unl/P
All Other Brakes	1/Unl/P
STEELite X30 Drum Brake™[2]	12-Years or Wearable Life/P
EX+ Air Disc Brake™	2/Unl/P&L

[1] Includes: bushing, seal, cam, ASA lubrication and wear coverage of 1/Unl/P.
[2] Based on stamped wear diameter max.
[3] Applies to Tour Bus and Cross Country Coach only.

Trailer Axles

Beam and Brackets[1]	5/Unl/P, 1/Unl/L
Wheel End Systems[2]	
Standard System[3]	1/Unl/P&L
AxlePak5[4]	5/P&L
AxlePak7[5]	7/P&L

[1] 9000 Series is 3/Unl/P, 1/Unl/L
[2] Includes hub, wheel seals and wheel bearings—all systems require annual inspections and proper documentation to ensure full coverage.
[3] When installed by Meritor.
[4] When specified with AxlePak5 wheel end system, coverage on MTIS thru-tee and stator is 5/Unl/P, 1/Unl/L.
[5] When specified with AxlePak7 wheel end system, coverage on MTIS thru-tee and stator is 7/Unl/P, 1/Unl/L.

(For brake components and ABS coverage, refer to appropriate product warranties.)

Chassis Axles (2000 Series/ChassiPak)

Beam & Brackets	6/Unl/P, 1/Unl/L
Wheel End Systems[1]	
Standard System	1/Unl/P&L
AxlePak7	7/P&L
Beam and Brackets	7/P, 1/L

[1] Includes hub, wheel seals and wheel bearings—all systems require annual inspections and proper documentation to ensure full coverage.

Trailer Air Suspension Systems

MPA38/40 (Tandem Axle Parallelogram)[1]	
Major Structural Components	5/Unl/P, 1/Unl/L
Curbing Damage Warranty[2]	5/500/P, 1/100/L
Height Control Valve	1/Unl/P&L
Shock Absorbers	2/Unl/P&L
Air Springs	2/Unl/P, 1/Unl/L
Bushings	5/P, 3/L
PinLoc Air Controls	1/Unl/P&L
PinLoc Air Actuator	3/Unl/P&L
MPA20 (Single Axle Parallelogram)	
Major Structural Components	5/Unl/P, 1/Unl/L
Height Control Valve	1/Unl/P&L
Shock Absorbers	2/Unl/P&L
Air Springs	2/Unl/P, 1/Unl/L
Bushings	5/P, 3/L
MTA (Trailing Arm)	
Major Structural Components	5/Unl/P, 1/Unl/L
Height Control Valve	1/Unl/P&L
Shock Absorbers	2/Unl/P&L
Air Springs and Rebound Straps	2/Unl/P, 1/Unl/L
Bushings[3]	5/Unl/P, 3/Unl/L

(For axle and ABS coverage, refer to appropriate product warranties.)
[1] Fastener torque coverage is limited to 2/Unl/P&L when torqued by Meritor
[2] "Curbing damage" is defined as deformation (bending, buckling, or breakage), caused by sudden impact with a curb or similar fixed object. Damage to the RideSentry slider box (the suspension sliding subframe, consisting of the frame rails, crossmembers, and central A-frame assembly), caused by accidental trailer impact with a curb or similar fixed object, is eligible for warranty coverage. Damage to other components or damage resulting from collision with another vehicle, rollover or fire is not covered under this provision. Warranty is not transferrable to another trailer VIN, and coverage does not apply if the trailer is deemed to be a total loss, scrapped, or otherwise not salvageable.
[3] Raw wood applications 3/Unl/P, 1/Unl/L

TAG/Pusher Axles

TQ, TQD, TR, TRD Beam and Brackets[1]	3/Unl/P, 1/Unl/L
MC14002, MC16003, FH946	2/Unl/P&L

(For brake components and ABS coverage, refer to appropriate product warranties.)
[1] 3/Unl/P&L if sold with PreSet by Meritor.

Meritor® Tire Inflation System

MTIS Components	5/Unl/P, 1/Unl/L

HEAVY SERVICE/SPECIALTY VEHICLE WARRANTY INFORMATION

Heavy Service/Specialty Vehicle

- Airport Rescue Fire Fighting (ARFF)
- Airport Shuttle*
- Asphalt Truck
- Block Truck
- Bottom Dump Trailer Combination
- Cementing Vehicle
- Commercial Pick-Up
- Concrete Pumper
- Construction Material Hauler
- Mixer
- Demolition
- Drill Rig
- Dump
- Equipment Hauling
- Flatbed Trailer Hauler
- Flatbed Truck
- Fracturing Truck
- Front Loader
- Geophysical Exploration
- Hopper Trailer Combinations
- Landscaping Truck
- Liquid Waste Hauler
- Log Hauling
- Lowboy
- Michigan Special Gravel Trains
- Michigan Special Log Hauler
- Michigan Special Steel Hauler
- Michigan Special Waste Vehicle
- Municipal Dump
- Rear Loader (Refuse)
- Recycling Truck
- Residential Pick-Up (Refuse)
- Rigging Truck
- Roll-Off
- Scrap Truck
- Semi-End Dump
- Sewer/Septic Vacuum
- Shuttle Bus*
- Side Loader
- Snowplow/Snowblower
- Steel Hauling
- Tanker
- Tank Truck
- Tractors with Pole Trailers
- Tractor/Trailer with Jeeps
- Transfer Dump
- Transfer Vehicle
- Utility Truck
- Winch Truck

*Commercial chassis only

Heavy Service/Specialty Vehicle Typically Is

- Moderate mileage operation (less than 60,000 miles per year)
- On/Off road vocations (10% or more off-road)
- Moderate to frequent stops/starts (up to 10 stops per mile)

Coverage under Meritor's warranty require that the application of products be properly approved pursuant to OEM and Meritor approvals. Refer to TP-9441 for axles, SP-8320 for trailer axles, TP-12126 for drivelines, and/or contact Meritor regarding specific application approval questions on any product line.

Front Drive/Non-Drive Steer Axles – 2/Unl/P&L

FD-965	FL-941	MFS-10-143A-N	MFS-12-143A-N	MFS-13-144A-N	MFS-18-193A-N	MX-12-120
FF-941	FL-943	MFS-10-144A-N	MFS-12-144A-N	MFS-13-155	MFS-20-133A-N	MX-12-120 EVO
FF-942	MFS-6-151A-N	MFS-12-122	MFS-12-155	MFS-14-122	MFS-20-135A-N	MX-14-120
FF-943	MFS-6-153B	MFS-12E-122	MFS-13-122	MFS-14-124A-N	MFS-20-192A-N	MX-16-120
FF-944	MFS-6-162B	MFS-12-122B-N	MFS-13-122B-N	MFS-14-143A-N	MFS-20-193A-N	MX-18-120
FF-946	MFS-6-162C	MFS-12E-122B-N	MFS-13B-122B-N	MFS-14-144A-N	MFS-22-135A-N	MX-17-140
FF-961	MFS-7-113C-N	MFS-12-122C-N	MFS-13-122C-N	MFS-16-122A-N	MFS-22H-135A-N	MX-19-140
FF-966	MFS-7-153C-N	MFS-12E-122C-N	MFS-13B-122C-N	MFS-16-133A-N	MFS-22-193A-N	MX-21-140
FF-967	MFS-7-163C-N	MFS-12-124A-N	MFS-13-132B-N	MFS-16-135A-N	MFS-22H-193A-N	MX-21-160
FG-941	MFS-8-113B-N	MFS-12-132B-N	MFS-13B-132B-N	MFS-16-143A-N	RF-16-145	MX-23-160
FG-943	MFS-8-153B-N	MFS-12E-132B-N	MFS-13-132C-N	MFS-18-133A-N	RF-21-160	MX-810
FH-941	MFS-8-163B-N	MFS-12-132C-N	MFS-13B-132C-N	MFS-18-135A-N	MX-10-120	
FH-946	MFS-10-122A	MFS-12E-132C-N	MFS-13-143A-N	MFS-18-192A-N	MX-10-120 EVO	

Front Drive/Non-Drive Steer Axles – 1/Unl/P&L

MX-08-130-FV (FSD-08A)	MX-16-130-FV (FSD-16A)	MX-21-130-SD (SDA-2100)
MX-10-130-FV (FSD-10A)	MX-18-130-FV (FSD-18A)	MX-23-130-FV (FSD-23A)
MX-12-130-FV (FSD-12A)	MX-18-130-SD (SDA-1800)	MX-23-130-SD (SDA-2300)
MX-13-130-FV (FSD-13A)	MX-20-130-FV (FSD-20A)	MX-29-130-FV (FSD-29A)
MX-14-130-FV (FSD-14A)	MX-21-130-FV (FSD-21A)	

Rear Drive Single Axles – 2/Unl/P&L

MS-17-14X	RS-21-160	RS-24-160	MS-35-380
RS-17-144/145/A	RC-22-145	RS-25-160	RS-38-380
MS-19-14X	RC-23-160	MS-26-616	RC-25-160
RS-19-144	RH-23-160	MS-26-616-SP	RC-26-633
MS-21-114	RS-23-160	RS-26-185/380	MT-58-616
MS-21-14X	RC-23-161	MS-30-616	MT-58-616-SP
RS-21-145	RS-23-161	MS-30-616-SP	
RS-21-145/A	RS-23-186/380	RS-30-185/380	

Rear Drive Axles – 1/Unl/P&L

11170	RND-14H
523	RND-16A

Drivelines

RPL	3/Unl/P, 1/Unl/P&L
92N	1/Unl/P&L
MXL	1/Unl/P&L

Transmission – 1/Unl/P&L

516
FAT 30

PTO – 1/Unl/P&L

MPT-318	MPT-526	MPT-1702
MPT-500	MPT-531	MPT-175
MPT-510	MPT-543	MPT-185
MPT-518	MPT-170	MPT-190

HEAVY SERVICE/SPECIALTY VEHICLE WARRANTY INFORMATION

Rear Drive Tandem/Tridem Axles – 2/Unl/P&L

MT-34-14X/P
RT-34-144/P/A
MT-40-14X/P
RT-40-145/A
MT-44-14X/P
RT-44-145/P
RT-46-169
RT-58-160
MT-52-616
MT-52-616-SP
RT-52-185/380[1,2]
MT-58-616
MT-58-616-SP
RT-58-185/380[1,2]
RT-70-380
MT-70-380
RZ-188

[1] Axle model designated will vary according to options and variations specified on these axles. Contact Meritor Axle Applications Engineering for details.
[2] Each vehicle must have a Request for Application Recommendation (RAR) approved by Meritor prior to vehicle build. All RARs must identify the chassis number or VIN. Refer to Product Information Letter #303 and #396 for further details.

Brake Components

Cam P	3/Unl/P
Cam P[3]	2/100/P
Cam Cast Plus™	2/100/P&L
Q+ Drum Brake™	3/Unl/P&L
Q+ Drum Brake™[2]	2/100/P&L
ASA	3/Unl/P
ASA[2]	2/100/P
Hubs/Cast Drums and Other Wheel-end Components	1/Unl/P
Hydraulic Disc Brakes	1/Unl/P
All Other Brakes	1/Unl/P
EX+ Air Disc Brake	2/100/P&L

[1] Based on stamped wear diameter max.
[2] Applies to City Bus, Trolley, Shuttle Bus and Airport Shuttle only.
[3] Warranty for all non-Meritor ASAs supplied by Meritor for all Heavy Service vocations is 1/100/P.

Rear Drive Tandem/Tridem - 3/Unl/P&L

RT-40-160/P/A[3]
RT-46-160/P/A[1,3]
RT-46-164EH/P/A[2,3]
RT-50-160/P/A[3]
RZ-166

[1] U.S. only. Canadian warranty = 1/Unl/P for combination vehicles only.
[2] Axle model designated will vary according to options and variations specified on these axles. Contact Meritor Axle Applications Engineering for details.
[3] Each vehicle must have a Request for Application Recommendation (RAR) approved by Meritor prior to vehicle build. All RARs must identify the chassis number or VIN. Refer to Product Information Letter #303 and #396 for further details.

Meritor Tire Inflation System

MTIS Components	5/Unl/P, 1/Unl/L

Trailer Air Suspension Systems

MTA (Trailing Arm)	
Major Structural Components[1]	5/Unl/P, 1/Unl/L
Height Control Valve	1/Unl/P&L
Shock Absorbers	2/Unl/P&L
Air Springs	2/Unl/P, 1/Unl/L
Bushings[1]	5/Unl/P, 3/Unl/L

[1] Raw wood applications 3/Unl/P, 1/Unl/L

(For axle and ABS coverage, refer to appropriate product warranties.)

Trailer Axles

Beam and Brackets[1]	5/Unl/P, 1/Unl/L
Wheel End Systems[2]	
Standard System[3]	1/Unl/P&L

[1] 9000 Series is 3/Unl/P, 1/Unl/L.
[2] Includes hub, wheel seals and wheel bearings—all systems require annual inspections and proper documentation to ensure full coverage.
[3] When installed by Meritor.

(For brake components and ABS coverage, refer to appropriate product warranties.)

Gearboxes – 1/Unl/P&L

MGX-240
MGX-279
MGX-279D
MGX-280
MGX-285
MGX-292
MGX-314
MGX-376
MGX-377
MGX-378
MGX-380
MGX-384
MGX-402
MGX-413
MGX-448
MGX-456
MGX-478
MGX-480
MGX-487
MGX-488
MGX-505
MGX-506
MGX-514
MGX-519
MGX-520
MGX-522
MGX-524
MGX-527
MGX-528
MGX-533
MGX-534
MGX-536
MGX-537
MGX-541
MGX-545
MGX-546
MGX-550

Transfer Cases – 1/Unl/P

MTC-4213
MTC-4210
MTC-4208
MTC-4206-FV (TC-38)
MTC-3106-FV (TC-137)
MTC-3111 (T-2111)
MTC-3112-CV (529 & 548C)
MTC-3116 (T-2111)
MTC-3118-FV (TC-180 & TC-180-23)
MTC-3118-CV (358)
MTC-3120-FV (TC-143)
MTC-3124 (T-2119)
MTC-3205-GV (MTC-25/247)
MTC-3205-GV (MTC-25/350)
MTC-3205-GV (RTC-25/350)
MTC-3206-FV (TC-237)
MTC-3206-CS (544)
MTC-3208-GV (RTC-50)
MTC-3209-GV (RTC-60/420)
MTC-3209-GV (RTC-60/380)
MTC-3209-GV (MTC-60/420)
MTC-3209-GV (MTC-60/380)
MTC-3212-CV (315 & 548B)
MTC-3312-FV (TC-270)
MTC-3220-FC (TC-142)
MTC-2212-CV (306)

FIRE AND EMERGENCY WARRANTY INFORMATION

Fire and Emergency Vehicles

- Aerial Ladder Truck
- Aerial Platform
- Ambulance
- Command Vehicle
- Crash Fire Rescue (CFR)
- Pumper
- Rapid Intervention Vehicle (RIV)
- Tanker

Fire and Emergency Typically Is

- Lower mileage operations (less than 20,000 miles/year)
- Generally, on-road service (less than 10% off-road)
- An average of three (3) miles between starting and stopping

Coverage under Meritor's warranty require that the application of products be properly approved pursuant to OEM and Meritor approvals. Refer to TP-9441 for axles, TP-12126 for drivelines, and/or contact Meritor regarding specific application approval questions on any product line.

Front Non-Drive Steer Axles – 5/Unl/P&L

FL-941	MFS-18-193A-N	MFS-22-135A-N
FL-943	MFS-20-133A-N	MFS-22H-135A-N
MFS-18-133A-N	MFS-20-135A-N	MFS-22-193A-N
MFS-18-135A-N	MFS-20-193A-N	MFS-22H-193A-N

Front Drive Steer Axles – 2/Unl/P&L

MX-19140	MX-21160	MX-23810
MX-21140	MX-23160	

Rear Drive Single Axles – 5/Unl/P&L

RC-23-160	RS-23-186	RS-26-185	RS-25-160
RS-23-160	RS-24-160	RS-30-185	
RS-23-161	RC-25-160	RS-35-380	

[1] 3/Unl/P&L if PreSet by Meritor.

Rear Drive Tandem/Tridem Axles – 5/Unl/P&L

MT-40-14X/P	RT-44-145/P	MT-52-616
MT-40-144/P	RT-46-160/P	RT-52-185[1]
RT-40-145/A	RT-46-164EH/P	MT-58-616
RT-40-160/P	RT-46-169	RT-58-185[1]
MT-44-14X/P	RT-50-160/P	MT-70-380

[1] Each vehicle must have a Request for Application Recommendation (RAR) approved by Meritor prior to vehicle build. All RARs must identify the chassis number or VIN. Refer to Product Information Letter #303 and #396 for further details.

Brake Components

Cam	3/Unl/P
Q+ Drum Brake™	3/Unl/P&L
ASA	3/Unl/P
Hubs/Cast Drums and Other Wheel-end Components	1/Unl/P
Hydraulic Disc Brakes	1/Unl/P
All Other Brakes	1/Unl/P
EX+ Air Disc Brake™	2/Unl/P&L

[1] Includes: bushing, seal, cam, ASA lubrication and wear coverage of 1/Unl/P.

Drivelines

RPL	4/400/P, 1/Unl/L
MXL	3/350/P, 1/Unl/L
155N	1/Unl/P
92N	1/Unl/P

Transfer Cases – 1/Unl/P

MTC-4208	MTC-3111 (T-2111)
MTC-4210	MTC-3116 (T-2111)
MTC-4213	MTC-3124 (T-2119)

TRANSIT BUS WARRANTY INFORMATION

Transit Bus Vehicles

- Airport Shuttle
- City Bus
- Commuter Coach
- Shuttle Bus
- Transit Bus
- Trolley

Transit Bus Typically Is

- Moderate mileage operation (less than 50,000 miles per year)
- Moderate to frequent stops/starts (up to 10 stops per mile)

Coverage under Meritor's warranty require that the application of products be properly approved pursuant to OEM and Meritor approvals. Refer to TP-9441 for axles, TP-12126 for drivelines, and/or contact Meritor regarding specific application approval questions on any product line.

Front Drive/Non-Drive Steer Axles – 5/300/P&L

FH-946	MFS-12-155
FH-941[1]	MFS-13-155

[1] Commuter coach only – 2/Unl/P&L

Rear Drive Single Axles – 5/300/P&L

RS-23-160	79163	RS-21-160
RC-23-161	RC-23-162[1]	
71163	RC-23-165[1]	

[1] Commuter coach only – 2/Unl/P&L

Brake Components

Cam Cast Plus™	2/100/P&L
Q+ Drum Brake™[1]	2/100/P&L
ASA[1]	2/100/P
Hubs/Cast Drums and Other Wheel-end Components	1/Unl/P
All Other Brakes	1/Unl/P
EX+ Air Disc Brake	2/100/P&L

[1] Applies to City Bus, Trolley, Shuttle Bus and Airport Shuttle only.

Drivelines

RPL	3/Unl/P, 1/Unl/L
92N	1/Unl/P&L
MXL	1/Unl/P&L

Tag Axles – 2/Unl/P&L

MC-14002
MC-16003
FH-946

Center Non-drive Axles – 5/300/P&L

MC-26000
71063
79063

OFF-HIGHWAY SERVICE WARRANTY INFORMATION

Industrial And Off-Highway Service Vehicles

- Load-On/Load-Off
- Port Tractor
- Rail Yard Spotter
- Roll-On/Roll-Off
- Stevedoring Tractor
- Trailer Spotter
- Yard Jockey
- All-Terrain Crane
- Rough Terrain Crane
- Forestry
- Material Handling
- Specialized Heavy Haul
- Specialized Mining
- Excavator
- Compactor
- Fertilizer Spreader
- Snow Blower
- Mining
- Rail Car Mover
- Loader
- Tow Tractor
- Pushback Tractor

Industrial And Off-Highway Service Typically Is

- Low mileage operation
- Low speed vehicle speed restriction
- Vehicles are **not** typically licensed for highway use
- Six (6) starts/stops per mile (typical)

Coverage under Meritor's warranty require that the application of products be properly approved pursuant to OEM and Meritor approvals. Contact Meritor regarding specific application approval questions on any product line.

Drivelines – 1/Unl/P

RPL	MXL

Front Non-Drive Steer Axles – 1/Unl/P

FF - 941	MFS-12-144A-N	MFS-18-193A-N
FF - 943	MFS-13-143A-N	MFS-20-133A-N
FF - 961	MFS-13-144A-N	MFS-20-135A-N
FF - 966	MFS-14-143A-N	MFS-20-192A-N
FG - 941	MFS-16-122A-N	MFS-20-193A-N
FG - 943	MFS-16-133A-N	MFS-22-135A-N
FL - 941	MFS-16-135A-N	MFS-22H-135A-N
FL - 943	MFS-16-143A-N	MFS-22-193A-N
FN - 951	MFS-18-133A-N	MFS-22H-193A-N
MFS-12-143A-N	MFS-18-135A-N	MON-Z0 FAMILY

Brake Components

Cam P	3/Unl/P
Q+ Drum Brake™	3/Unl/P&L
ASA	3/Unl/P
Hubs/Cast Drums and Other Wheel-end Components	1/Unl/P
Hydraulic Disc Brakes	1/Unl/P
All Other Brakes	1/Unl/P

Planetary Axles – 1/Unl/P

MOB	MOF	MOS	MOZ
MOC	MOG	MOT	
MOD	MOH	MOX	
MOE	MOR	MOY	

Gearboxes – 1/Unl/P&L

MGX-240	MGX-376	MGX-448	MGX-506	MGX-528	MGX-546
MGX-279	MGX-377	MGX-456	MGX-514	MGX-533	MGX-550
MGX-279D	MGX-378	MGX-478	MGX-519	MGX-534	
MGX-280	MGX-380	MGX-480	MGX-520	MGX-536	
MGX-285	MGX-384	MGX-487	MGX-522	MGX-537	
MGX-292	MGX-402	MGX-488	MGX-524	MGX-541	
MGX-314	MGX-413	MGX-505	MGX-527	MGX-545	

Transfer Cases – 1/Unl/P

MTC-4213	MTC-3116 (T-2111)	MTC-3205-GV (RTC-25/350)	MTC-3209-GV (MTC-60/380)
MTC-4210	MTC-3118-FV (TC-180 & TC-180-23)	MTC-3206-FV (TC-237)	MTC-3212-CV (315 & 548B)
MTC-4208	MTC-3118-CV (358)	MTC-3206-CS (544)	MTC-3312-FV (TC-270)
MTC-4206-FV (TC-38)	MTC-3120-FV (TC-143)	MTC-3208-GV (RTC-50)	MTC-3220-FC (TC-142)
MTC-3106-FV (TC-137)	MTC-3124 (T-2119)	MTC-3209-GV (RTC-60/420)	MTC-2212-CV (306)
MTC-3111 (T-2111)	MTC-3205-GV (MTC-25/247)	MTC-3209-GV (RTC-60/380)	
MTC-3112-CV (529 & 548C)	MTC-3205-GV (MTC-25/350)	MTC-3209-GV (MTC-60/420)	

TERMS AND CONDITIONS

Coverage Exclusions

Product Description

All
The cost of any repairs, replacements or adjustments to a covered component (1) associated with noise; (2) resulting from the use or installation of non-genuine Meritor components or materials; (3) due to vibration associated with improper operation or misapplication of drivetrain components; and (4) damage resulting from corrosion.

For axle assemblies supplied by Meritor with suspension and interface brackets designed and/or attached by non-Meritor parties, Meritor warranty coverage does not apply to the brackets, bracket attachment methods, and field issues caused by brackets or bracket attachments to any covered component unless specified in a separate OEM agreement.

Front Axles
King Pin Bushings.

Rear Axles
Self-contained traction equalizers and oil filters. The use of NoSPIN differentials will result in the exclusion of axle shafts from warranty considerations. NoSPIN is a product of Eaton.

ASA
Boot and bushing. Bent, broken, over-torqued, missing or otherwise damaged pawl assemblies.

Cam Brake
Brake lining wear and brake shoe “rust-jacking.”

Disc Brake
Pad wear, rotor wear.

Coverage Limitations

Product Description

All
Any claim beyond 60 days from date of repair will not be accepted or honored under this warranty program. Products purchased on an incomplete vehicle (glider) are limited to one year, unlimited miles parts only (1/Unl/P).

Front Axles
Tie rod and tie rod ends limited to 3-year/300,000-mile or published vocational coverage, whichever is less. Wheel seals, gaskets and wheel bearings are covered for 1 year/unlimited miles if the wheel end equipment is supplied and assembled by Meritor.

Rear Axles
Pinion and through shaft seals limited to 3-year/300,000-mile or published vocational coverage, whichever is less, if yoke is installed by Meritor. If yoke is not installed by Meritor, then Meritor does not warrant pinion seals. Wheel seals, gaskets and wheel bearings are covered for 1 year/unlimited miles if the wheel end equipment is supplied and assembled by Meritor.

Rear Axles
The Meritor® breather part number A-2297-C-8765 with A-3196-J-1336 hose must be used for eligibility of any potential warranty consideration relating to contamination and/or loss of lube in axles.

Cam Brake
Limited to bracket, brake spider and camshaft structural integrity.

STEELite X30
Wearable life is up to the discard diameter of the drum.

Disc Brake
Warranty coverage for boots, seals, bushings and pins is 2/200/P. Warranty coverage for pads is 1/100/P.

Warranty coverage on vehicles with 1,850 lb-ft engine torque and over may be reduced on individual drivetrain components. Contact your Meritor representative for specific details.

TERMS AND CONDITIONS

(1) What is Covered by this Commercial Warranty?
Meritor Heavy Vehicle Systems, LLC warrants to the owner ("Owner") that the components listed in this publication, which have been installed by an Original Equipment Manufacturer ("OEM") as original equipment in vehicles licensed for on-highway use, will be free from defects in material and workmanship. This warranty coverage begins only after the expiration of the OEM's vehicle warranty for the applicable covered components. Warranty coverage ends at the expiration of the applicable time period from the date of vehicle purchase by the first Owner, or, the applicable mileage limitation, whichever occurs first. Duration of coverage varies by component and vocation as detailed elsewhere in this warranty statement.

Some components are warranted for parts only and the Owner must pay any labor costs associated with the repair or replacement of the component. Other components are warranted for both parts and reasonable labor to repair or replace the subject component. Components (whether new, used or remanufactured) installed as replacements under this warranty are warranted only for the remainder of the original period of time or mileage under the original warranty.

For certain components, coverage requires the use of specific extended drain interval or synthetic lubricants. For further information about lubrication and maintenance, see Meritor publication Maintenance Manual Number I and the applicable Meritor maintenance manual for the product in question. Other conditions and limitations applicable to this warranty are detailed below.

(2) Designation of Vocational Use Required.
To obtain warranty coverage, each Owner must notify Meritor through the OEM new truck and/or trailer dealer of the intended vocational use of the vehicle into which the Meritor components have been incorporated prior to the vehicle in-service date. This notification may be accomplished by registering the vehicle through your OEM new truck and/or trailer dealer or with Meritor directly. Failure to notify Meritor of (I) the intended vocational use of the vehicle or (II) a change in vocational use from that which was originally designated, will result in the application of a one year, unlimited mileage, parts only warranty (1/Unl/P) from the initial in-service date.

A second Owner and each subsequent Owner must also notify Meritor as to the intended vocational use of the vehicle. This notification can be sent directly to Meritor or through the OEM new truck and/or trailer dealer. The duration and mileage coverage of this warranty cannot exceed the coverage extended to the first Owner after his or her initial designation of vocational use.

Coverage under Meritor's warranty requires that the application of products be properly approved pursuant to OEM and Meritor approvals. Refer to TP-9441 for axles, SP-8320 for trailer axles, TP-12126 for drivelines, and/or contact Meritor regarding specific application approval questions on any product line.

(3) What is the Cost of this Warranty?
There is no charge to the Owner for this warranty.

(4) What is not Covered by this Warranty?
This warranty does not cover normal wear and tear; nor does it cover a component that fails, malfunctions or is damaged as a result of (I) improper installation, adjustment, repair or modification (including the use of unauthorized attachments or changes or modification in the vehicle's configuration, usage, or vocation from that which was originally approved by Meritor), (II) accident, natural disaster, abuse, or improper use (including loading beyond the specified maximum vehicle weight or altering engine power settings to exceed the axle and/or driveline capacity), or (III) improper or insufficient maintenance (including deviation from approved lubricants, change intervals, or lube levels). This warranty does not cover any component or part that is not branded by Meritor. For vehicles that operate full or part time outside of the United States and Canada, a one year, unlimited mileage, parts only warranty (1/Unl/P) will apply.

(5) Remedy.
The exclusive remedy under this warranty shall be the repair or replacement of the defective component at Meritor's option. Meritor reserves the right to require that all applicable failed materials are available and/or returned to Meritor for review and evaluation.

(6) Disclaimer of Warranty.
THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES OR CONDITIONS, EXPRESSED, IMPLIED OR STATUTORY INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE.

(7) Limitation of Remedies.
In no event shall Meritor be liable for special, incidental, indirect, or consequential damages of any kind or under any legal theory, including, but not limited to, towing, downtime, lost productivity, cargo damage, taxes, or any other losses or costs resulting from a defective covered component.

(8) To Obtain Service.
If the Owner discovers within the applicable coverage period a defect in material or workmanship, the Owner must promptly give notice to either Meritor or the dealer from which the vehicle was purchased. To obtain service, the vehicle must be taken to any participating OEM new truck and/or trailer dealer or authorized Meritor service location. The dealer will inspect the vehicle and contact Meritor for an evaluation of the claim. When authorized by Meritor, the dealer will repair or replace during the term of this warranty any defective Meritor component covered by this warranty.

(9) Entire Agreement.
This is the entire agreement between Meritor and the Owner about warranty and no Meritor employee or dealer is authorized to make any additional warranty on behalf of Meritor. This agreement allocates the responsibilities for component failure between Meritor and the Owner.

Product models, brands, names and trademarks depicted herein are the property of their respective owners and, except where otherwise indicated, are not in any way associated with Meritor Heavy Vehicle Systems, LLC, or any parent or affiliate, thereof.

MERITOR

Meritor Heavy Vehicle Systems, LLC
2135 West Maple Road
Troy, Michigan 48084 USA

For more information:
call Ontrac at 866-668-7221
or visit meritor.com

©2018 Meritor, Inc.
Litho in USA, SP-95155
Revised 1-19 (47865/11900)

Three (3) Year Material and Workmanship
Meritor Wabco ABS Brake System
Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	**The Meritor Wabco ABS brake system shall be covered by Meritor Wabco as indicated in the attached Meritor Wabco warranty coverage description**
Warranty Begins:	**The date of the original purchase invoice (issued when the product ships from the factory).**
Warranty Period Ends After:	**Three (3) Year**
Conditions and Exclusions: **See Also Paragraphs 2 thru 4**	**The exclusions listed in the attached Meritor Wabco warranty description shall apply.**

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY.

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES.

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.

2/25/2013 WA0232

WARRANTY

MODEL YEAR 2021 VEHICLES



Warranty coverage is essential to protecting your investment. But understanding the full details of your coverage can be challenging. This straightforward approach allows you, our valued customer, to better understand how your specific vehicle applications will be covered in your region. Our component warranty coverage is provided according to vocation/usage categories listed below.

- Linehaul covers high mileage operation (over 60,000 miles/year) on well-maintained major highways of concrete or asphalt construction.
- General Service covers moderate mileage operations (less than 60,000 miles/year) on well-maintained public roads (less than 10 percent off-road) typically with less than three (3) stops per mile.
- Heavy Service (Vocational) covers vehicles with more than 10 percent off-road OR moderate to frequent starts/stops typically with more than three (3) stops per mile.
- Off-Highway Service covers lower mileage operations. Vehicles are not typically licensed for highway use.

How to Read Warranty Coverage (Example)		
Number of Years	**Mileage (in thousands) Unl=Unlimited**	**P=Parts Only P&L=Parts & Labor**
3	300	P

- The standard aftermarket warranty for WABCO products - including WABCO Original parts, WABCO Reman Solutions, ProVia quality aftermarket parts and WABCO retrofit solutions - is one year, parts only from in-service date when purchased from ZF distributor networks or its affiliates and/or subsidiaries.

LINEHAUL/GENERAL SERVICE WARRANTY INFORMATION

LINEHAUL/GENERAL SERVICE VEHICLES

- Aerial Ladder Truck
- Aerial Platform
- Ambulance
- Auto Hauler
- Beverage Truck
- Bulk Hauler
- Chip Hauler (Truck)
- Cross Country Coach
- Doubles
- Flatbed
- Front Engine Commercial Chassis
- Front Engine Integral Coach
- General Freight
- Grain Hauler
- Intercity Coach
- Intermodal Chassis
- Livestock Hauler
- Meat Packer
- Moving Van
- Municipal Truck
- Pipe Hauler
- Platform Auto Hauler
- Pumper
- Rear Engine Integral Coach
- Recreational Vehicles
- Refrigerated Freight
- School Bus
- Stake Truck
- Tanker
- Tanker Truck
- Triples
- Tour Bus
- Wrecker

LINEHAUL TYPICALLY IS

- High mileage operation (over 60,000 miles/year)
- Well maintained major highways of concrete or asphalt construction

GENERAL SERVICE TYPICALLY IS

- Moderate mileage operations (less than 60,000 miles/year)
- Well maintained public roads (less than 10% off-road)
- Less than three (3) stops per mile

WABCO Components[1]	
Air Management	
Air Brake Valves	1/100/P&L
Trailer Lift Axle Control Valve	
Trailer Control Line Filter[3]	
Air Compressors (ALL)[2]	2/200/P&L
Air Dryers (ALL)	3/300/P&L
Aerodynamics	
OptiFlow® TrailerSkirt	2/UnU/P
OptiFlow® Trailer Tail and AutoTail	2/Unl/P
Braking Systems	
ABS (Anti-Lock Braking System) Air	3/300/P&L
ABS (Anti-Lock Braking System) Hydraulic	
Electronic Braking System (EBS)	
Electronic Stability Control (ESC)	
Roll Stability Control (RSS)	
Trailer Roll Stability Support (RSS)	
Trailer ABS (Anti-Lock Braking System)[3]	
Driveline Suspension Control	
Clutch Controls	2/200/P&L
Leveling Valves	1/100/P&L
OptiRide® Automated Manual Transmission (AMT)	
OptiRide® Electronically Controlled Air Suspension (ECAS)	3/300/P&L

WABCO Components[1] (cont.)	
Safety	
OnGuardACTIVE®	3/300/P&L
OnLane®	
OnLaneALERT®	
OnSide®	
Trailer SafeStart™	
Trailer TailGUARD™	
Telematics	
TrailerCAST™ Telematics Device	3/300/P&L
Wheel End Solutions	
EasyFit™ Slack Adjuster	6/600/P
MAXXUS™ Truck Air Disc Brake	5/500/P&L
IVTM - Wheel Module	6/P
IVTM - All Other Products	2/P
Pan 17 and 19 Air Disc Brake	2/Unl/P and 1/Unl/L
Pan 22 Air Disc Brake	5/500/P and 1/L
TRISTOP™ D Actuator w/ IBV or IRB	6/600/P
TRISTOP™ D Actuator	3/300/P
UNISTOP™ Actuator	2/200/P
Trailer MAXX22T™ Air Disc Brake	5/500/P and 1/L

[1] ZF and WABCO branded components. [2] WABCO compressors installed on Cummins, Mercedes, and DDC engines are not warranted or serviced by ZF. Please contact your respective dealer/distributor of those engines for warranty and servicing. [3] An extended warranty of 4/400/P will apply when a WABCO Trailer Control Line Filter is used in combination with a WABCO Trailer ABS valve.

HEAVY SERVICE (VOCATIONAL) WARRANTY INFORMATION

HEAVY SERVICE VEHICLES

- Airport Rescue Fire (ARF)
- Airport Shuttle
- Asphalt Truck
- Block Truck
- Bottom Dump Trailer Combination
- Cementing Vehicle
- City Bus
- Commercial Pick-Up
- Concrete Pumper
- Construction Material Hauler
- Crash Fire Rescue (CFR)
- Mixer
- Demolition
- Drill Rig
- Dump
- Emergency Service
- Equipment Hauling
- Flatbed Trailer Hauler
- Flatbed Truck
- Fracturing Truck
- Front Loader
- Geophysical Exploration
- Hopper Trailer Combinations
- Landscaping Truck
- Liquid Waste Hauler
- Log Hauling
- Lowboy
- Michigan Special Gravel Trains
- Michigan Special Log Hauler
- Michigan Special Steel Hauler
- Michigan Special Waste Vehicle
- Municipal Dump
- Newspaper Delivery
- Package Delivery
- Pick-up and Delivery
- Rapid Intervention Vehicle (RIV)
- Rear Loader
- Recycling Truck
- Residential Pick-Up/Waste
- Rigging Truck
- Roll-Off
- Scrap Truck
- Semi-End Dump
- Sewer/Septic Vacuum
- Shuttle Bus
- Side Loader
- Snowplow/Snowblower
- Steel Hauling
- Tanker
- Tank Truck
- Tractors with Pole Trailers
- Tractor/Trailer with Jeeps
- Transfer Dump
- Transfer Vehicle
- Transit Bus
- Trolley
- Utility Truck
- Winch Truck

HEAVY SERVICE TYPICALLY IS

- On/Off road vocations (10% or more off-road) OR
- Moderate to frequent starts/stops typically more than three (3) stops per mile



WABCO Components[1]	
Air Management	
Air Brake Valves	1/100/P&L
Air Compressors (ALL)2	
Air Dryers (ALL)	
Trailer Control Line Filter[3]	
Braking Systems	
ABS (Anti-Lock Braking System) Air	3/300/P&L
ABS (Anti-Lock Braking System) Hydraulic	2/200/P&L
Electronic Braking System (EBS)	3/300/P&L
Electronic Stability Control (ESC)	
Trailer ABS Valve[3]	
Roll Stability Control (RSS)	
Trailer Roll Stability Support (RSS)	
Driveline Suspension Control	
OptiRide® Electronically Controlled Air Suspension (ECAS)	2/200/P&L
Leveling Valves	1/100/P&L
Clutch Controls	2/200/P&L
Safety	
OnGuardACTIVE®	3/300/P&L
OnLane®	
OnLaneALERT®	
OnSide®	
Trailer SafeStart™	
Trailer TailGUARD™	
Telematics	
TrailerCAST™ Telematics Device	3/300/P&L
Wheel End Solutions	
EasyFit™ Slack Adjuster	2/200/P
MAXXUS™ Air Disc Brake	1/Unl/P&L
IVTM - Wheel Module	6/P
IVTM - All Other Products	2/P
Pan 22, 19 and 17 Air Disc Brake	1/Unl/P&L
Trailer MAXX22T™	1/Unl/P&L
TRISTOP™ D Actuator w/ IBV	3/Unl/P
TRISTOP™ D Actuator	2/200/P
UNISTOP™ Actuator	1/100/P

1 ZF and WABCO branded components. 2 WABCO compressors installed on Cummins, Mercedes, and DDC engines are not warranted or serviced by ZF. Please contact your respective dealer/distributor of those engines for warranty and servicing. 3 An extended warranty of 4/400/P will apply when a WABCO Trailer Control Line Filter is used in combination with a WABCO Trailer ABS valve.

INDUSTRIAL/OFF-HIGHWAY SERVICE WARRANTY INFORMATION

INDUSTRIAL AND OFF-HIGHWAY SERVICE TYPICALLY IS

- Low mileage operation[3]
- Vehicles are not typically licensed for highway use

Market	Common Application Types
Agriculture	Fertilizer Spreader, Tractor, Heavy Duty Ag Trailers, Harvester, Sprayer, Skid Loader, Silage Bagger, Slurry Wagons, Grain Cart
Airport Support	Pushback Tractor, Towing Tugs, Aircraft Tow Tractor, Refueling Trucks, Food Service Trucks, Baggage Tractors, De-Icing Equipment, Runway Clearing Equipment
Construction	All-Terrain Crane, Rough Terrain Crane, Excavator, Compactor, Wheel Loader, Road Roller, Motor Grader, Articulated Dump Truck, Rubber Tire Road Roller, Backhoe Loaders, Haul Trucks, Scraper Rough Terrain Forklifts, Trenchers, Drills
Forestry	Logging Forwarder, Kidder, Loaders, Yard Forklifts, Harvesters Fellers
Material Handling	Port Tractor, Rail Yard Spotter, Stevedoring Tractor, Trailer Spotter, Yard Jockey, Scissor Lift, Straddle Carrier, Manlift, Forklift, Boom Lift Telebandlers, Aerial Work Platforms
Mining	Specialized Mining, Excavator, Haul Truck, Underground Loader, Service Trucks, Wheel Loaders, Scrapers, Load Haul Dumps, Personnel Transports, Bolters, Scalers
Municipal	Street Sweeper, Utility Tractor, Utility Trucks, Tree Trimmers, Dump Trucks, Tow Trucks, Flat Bed Trucks, Winch Applications
Oil & Gas	Fracturing Trailer, Injecter Heads, Top Drives, Jack/Lift Boats, Wireline Trucks, Load-On / Load-Off
Rail	Railcar Mover, Track Layers, Grinders, Platform Crane, Locomotive Railcars, Ballast Equipment, Winch Applications



WABCO Components[1]	
Air Management	
Air Brake Valves	2/Unl/P
Air Compressors (ALL)2	
Air Dryers (ALL)	
Brake Actuation	
Air/Hydraulic Actuators	2/Unl/P
Master Cylinders	
Remote Actuators	
Slave and Wheel Cylinders	
Two Fluid Actuators	
Brake Locks	
Brake Locks (ALL)	2/Unl/P
Electric Brake Locks	
Lever Locks	
Braking Systems	
ABS (Anti-Lock Braking System) Air	1/100/P&L
ABS (Anti-Lock Braking System) Hydraulic	
Driveline Suspension Control	
Clutch Controls	1/100/P&L
Leveling Valves	
Electrohydraulics & Controls	
Electronic Pedals	2/Unl/P
Electrohydraulic Brake Valves (EBV)	
Pressure Switches	
Hydraulic Braking Solutions	
Accumulator Charging Valves	2/Unl/P
Hydraulic Throttle Controls and Switches	
Modulating Brake Valves	
Wheel End Solutions	
EasyFit™ Slack Adjuster	2/200/P
Caliper Disc Brakes	2/Unl/P
MAXXUS™ Air Disc Brake	1/Unl/P&L
Multiple Disc Brakes	2/Unl/P
IVTM - Wheel Module	6/P
IVTM - All Other Products	2/P
Pan 22, 19 and 17 Air Disc Brake	1/Unl/P&L
TRISTOP™ D Actuator w/ IBV	3/Unl/P
TRISTOP™ D Actuator	2/200/P
UNISTOP™ Actuator	1/100/P

[1] ZF and WABCO branded components. 2 WABCO compressors installed on Cummins, Mercedes, and DDC engines are not warranted or serviced by ZF. Please contact your respective dealer/distributor of those engines for warranty and servicing. 3 Equivalent hours of service limit: 2,000 hours for all components.

TERMS AND CONDITIONS

COVERAGE EXCLUSIONS

PRODUCT DESCRIPTION

ALL PRODUCTS

This Warranty shall not apply to the following, but not limited to: (1) damage to the product or its component parts caused by incorrect use, installation, maintenance or repair, including without limitation (a) improper fit of mating components or brackets, damaged threads, cut, broken, chafed, pinched or otherwise damaged wiring (sensors, harnesses and connectors), (b) sensors damaged during removal when seized in block, or associated with sensor adjustments/ alignments, and (c) damage resulting from the use or installation of non-genuine WABCO components or materials; (2) damage to the product, its component parts, or diminished product or component part performance due to incorrect operation, deviation from approved conditions or misapplication; (3) any unauthorized disassembly of the product or its component parts including without limitation (a) obliterated, defaced or missing WABCO or WABCO name plate, serial numbers or label identifying the device as a ZF product or WABCO component, (b) changes to sealed adjusting screws, and (c) opening or attempted repair of non-serviceable components; (4) malfunction of the component due to internal contamination of the vehicle system including without limitation (a) water and other contamination damage that is due to the use of a non-genuine air dryer cartridge or (b) valve failures due to contamination in air system, (5) complaints associated with noise, (6) damage resulting from corrosion (including oxidation of electrical devices and connections).

AIR DRYERS

Mounting brackets (see vehicle OEM). Desiccant cartridge housing only.

AIR SYSTEM COMPONENTS

Normal wear items; Gladhand seals, dash valve knobs, valve actuation handles, treadles, pedals.

ABS, ELECTRONIC STABILITY CONTROL (ESC), ROLL STABILITY CONTROL (RSC), OPTIRIDE®, ONGUARD® AND ONLANE®, COLLECTIVELY “ELECTRONICS”

Failure of electronic components due to overvoltage condition, improper grounding, electrostatic discharge (ESD), improper shielding, electromagnetic interference (EMI), or other wiring or installation issues. Malfunctions and failure codes caused by other electronic subsystem failures (data bus, engine, transmission, dashboard, etc.)

HYDRAULIC COMPONENTS

For certain components, brake fluid DOT3 or DOT4 is used as the operating medium. Use of any other fluid will void all warranties associated with that component. For hydraulic braking applications the brake fluid is considered a maintenance item. Maintenance intervals are listed in TB-1367.

COVERAGE LIMITATIONS

PRODUCT DESCRIPTION

ALL PRODUCTS

Any claim beyond 60 days from date of repair will not be accepted or honored under this warranty program.

Products purchased on an incomplete vehicle (glider) are limited to one year, 1/Unl/P.

For vehicles that operate full- or part-time outside of the United States and Canada, a 1-Year/Unlimited Miles parts only (1/Unl/P) will apply.

TOOLBOX PLUS™ DIAGNOSTIC SOFTWARE

Proper diagnostics of WABCO Electronics may require the latest version of TOOLBOX PLUS™. Additional labor due to use of an outdated version of TOOLBOX™ software and/or the time to purchase or install the latest version of TOOLBOX PLUS™ are not covered under product warranty.

TERMS AND CONDITIONS

(1) What is Covered by this Commercial Warranty?
ZF CV Systems North America LLC and its North American subsidiaries and affiliates (ZF) warrant to the owner ("Owner") that the components listed in this publication, which have been installed by an Original Equipment Manufacturer ("OEM") as original equipment will be free from defects in material and workmanship. This warranty coverage begins from the original in-service date to the limits provided and runs concurrently with any warranties provided by OEMs and/or any distribution agreements and/or any service contracts that cover the components listed in this publication, if any. If the components listed in this publication are covered by an OEM warranty and/or service contract, then the OEM's warranty and/ or service contract shall supersede ZF's warranty and Owner shall comply with all OEM's warranty and/or service contract requirements for claims under such OEM's warranty and/or service contract until those agreements expire. Once those agreements expire and provided the ZF warranty has not expired under the terms stated above, the ZF warranty will be in effect until its expiration date.

Warranty coverage ends at the expiration of the applicable time period from the date of vehicle purchase by the first Owner, or, the applicable mileage limitation, whichever occurs first. Duration of coverage varies by component and vocation as detailed previously in this publication. Some components are warranted for parts only and the Owner must pay any labor costs associated with the repair or replacement of the component. Other components are warranted for both parts and reasonable labor to repair or replace the subject component. Additional diagnostic time due to use of an outdated version of TOOLBOX™, time to purchase or install latest version of TOOLBOX™ are the responsibility of the authorized ZF distributor networks and are not covered under product warranty. Components installed as replacements under this warranty are warranted only for the remainder of the original period of time or mileage under the original warranty.

(2) Designation of Vocational Use Required. To obtain warranty coverage, each Owner must notify ZF through the OEM new truck and/or trailer dealer of the intended vocational use of the vehicle into which the WABCO components have been incorporated prior to the vehicle in-service date. This notification may be accomplished by registering the vehicle through your OEM new truck and/or trailer dealer or with ZF directly. Failure to notify ZF of (I) the intended vocational use of the vehicle or (II) a change in vocational use from that which was originally designated, will result in the application of a one year, unlimited mileage, parts only warranty (1/Unl/P) from the initial in-service date. A second Owner and each subsequent Owner must also notify ZF as to the intended vocational use of the vehicle. This notification can be sent directly to ZF or through the OEM new truck and/or trailer dealer. The duration and mileage coverage of this warranty cannot exceed the coverage extended to the first Owner after his or her initial designation of vocational use. Coverage under ZF's warranty requires that the application of products be properly approved pursuant to OEM and ZF, approvals.

(3) What is the Cost of this Warranty? There is no charge to the Owner for this warranty.

(4) What is not Covered by this Warranty? In addition to the items listed on "Coverage Exclusions," this warranty does not cover normal wear and tear, or service items; nor does it cover a component that fails, malfunctions or is damaged as a result of (a) improper handling, storage, installation, adjustment, repair or modification including the use of unauthorized attachments or changes or modification in the vehicle's configuration, usage, or vocation from that which was originally approved by ZF, (b) accident, fire or other casualty, natural disaster, road debris, negligence, misuse, abuse, or improper use (including loading beyond the specified maximum vehicle weight or altering engine power settings to exceed the brake system capacity), or (c) improper or insufficient maintenance (including deviation from maintenance intervals, approved lubricants, or lube levels). This warranty does not cover any component or part that is not sold by ZF.

(5) To obtain service. If the owner discovers within the applicable coverage period a defect in material or workmanship, the Owner must promptly give notice to either ZF or the dealer from which the vehicle was purchased. To obtain service, the vehicle must be taken to any participating OEM dealer or ZF distributor networks' servicer. The dealer or ZF authorized servicer will inspect the vehicle and contact ZF for an evaluation of the claim. When authorized by ZF, the dealer or ZF authorized servicer will repair or replace during the term of this warranty any defective WABCO component covered by this warranty.

(6) Disclaimer of Warranty and Limitation of remedies. TO THE MAXIMUM EXTENT PERMITTED BY LAW, THE LIMITED WARRANTY SET FORTH HEREIN IS EXCLUSIVE AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, ARISING BY OPERATION OF LAW OR OTHERWISE, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND/OR WARRANTY FOR HIDDEN OR LATENT DEFECTS, AND IN NO EVENT WILL ZF OR ANY OF ITS AFFILIATES BE LIABLE FOR DIRECT, INDIRECT, INCIDENTAL, PROGRESSIVE, SPECIAL, OR CONSEQUENTIAL DAMAGES OF ANY KIND.

(7) Legal action. Any legal action or claim arising from or related to this Warranty, in contract or otherwise, must be commenced within one year from the accrual of that cause of action, or be barred forever. Any dispute arising in connection with this agreement shall be governed by and construed according to the laws of the State of Michigan and be brought, heard and determined exclusively in either the Circuit Court for the County of Oakland, State of Michigan or the United States District Court for the Eastern District of Michigan. The parties stipulate that the referenced venues are convenient.

(8) Remedy. The exclusive remedy under this warranty shall be the repair or replacement of the defective component at ZF's option. ZF reserves the right to require that all applicable covered components are available and/or returned to ZF for review and evaluation. THE MAXIMUM LIABILITY, IF ANY, OF ZF FOR ALL DAMAGES, INCLUDING WITHOUT LIMITATION CONTRACT DAMAGES, BREACH OF WARRANTY, NEGLIGENCE, STRICT LIABILITY, OR OTHER TORT, IS LIMITED TO AN AMOUNT NOT TO EXCEED THE PURCHASE PRICE OF THE PRODUCT and where indicated in the product and application warranty information above, the inclusion of labor is limited to the standard repair time. THE PARTIES ACKNOWLEDGE AND AGREE THAT THE LIMITATION OF DAMAGES PROVISION SET FORTH IN THIS PARAGRAPH SURVIVES BETWEEN THE ORIGINAL END USER AND ZF EVEN IF THE EXCLUSIVE REMEDY SET FORTH ABOVE IS DEEMED TO FAIL OF ITS ESSENTIAL PURPOSE. ZF may change the design or make improvements to its Products without incurring any warranty obligation for previously manufactured Product .

(9) Entire Agreement. This is the entire agreement between ZF and the Owner about warranty and no, ZF employee, or dealer is authorized to make any additional warranty on behalf of ZF unless in writing and signed by an authorized representative of ZF.





For further product details contact your distributor or the WABCO Customer Care Center at 855-228-3203.

About ZF Friedrichshafen AG

ZF is a global technology company and supplies systems for passenger cars, commercial vehicles and industrial technology, enabling the next generation of mobility. ZF allows vehicles to see, think and act. In the four technology domains Vehicle Motion Control, Integrated Safety, Automated Driving, and Electric Mobility, ZF offers comprehensive solutions for established vehicle manufacturers and newly emerging transport and mobility service providers. ZF electrifies different kinds of vehicles. With its products, the company contributes to reducing emissions and protecting the climate.

ZF, which acquired WABCO Holdings Inc. on May 29, 2020, now has 160,000 employees worldwide with approximately 260 locations in 41 countries. In 2019, the two then-independent companies achieved sales of €36.5 billion (ZF) and $3.4 billion (WABCO). For more information, visit: **www.wabco-na.com**

© 2021 ZF CV Systems North America LLC - All rights reserved - SP1375 / 2.2021

WABCO

Fire and Rescue Apparatus

Ten (10) Year Structural Integrity
Custom Cab
Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	**The Pierce Custom Cab shall be free from structural failures caused by defects in material and workmanship**
Warranty Begins:	**The date of the original purchase invoice (issued when the product ships from the factory).**
Warranty Period Ends After:	**Ten (10) Years - or - 100,000 Miles**
Conditions and Exclusions: **See Also Paragraphs 2 thru 4**	**This warranty applies only to the cab tubular support and mounting structures and other structural components of the cab of the vehicle model, as identified in the Pierce specifications for the Fire and Rescue Apparatus.** **This warranty does not apply to damage caused by corrosion.**

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY.

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES.

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.

2/8/2010 WA0012

Fire and Rescue Apparatus

Ten (10) Year Pro-Rated Paint and Corrosion Cab

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	**Exterior surfaces of the cab painted by Pierce shall be free from blistering, peeling, corrosion or any other adhesion defect caused by defective manufacturing methods or paint material selection.**
Warranty Begins:	**The date of the original purchase invoice (issued when the product ships from the factory).**
Warranty Period Ends After:	**Ten (10) Years**
Conditions and Exclusions: **See Also Paragraphs 2 thru 4**	**This limited warranty is applicable to the vehicle in the following percentage costs of warranty repair, if any:** **Topcoat Durability & Appearance: Gloss, Color Retention & Cracking** **0-72 months 100%** **73-96 months 50%** **97-120 months 25%** **Integrity of Coating System: Adhesion, Blistering/Bubbling** **0-36 months 100%** **37-84 months 50%** **85-120 months 25%** **Corrosion: Dissimilar Metal and Crevice** **0-36 months 100%** **37-48 months 50%** **49-72 months 25%** **73-120 months 10%** **Corrosion Perforation** **0-120 months 100%** **This limited warranty applies only to exterior paint. Paint on the vehicle's interior is warranted only under the Pierce Basic One Year Limited Warranty.** **Items not covered by this warranty include:** **(a) Damage from lack of maintenance and cleaning (proper cleaning and maintenance procedures are detailed in the Pierce operation and maintenance manual).** **(b) UV paint fade.** **(c) Any cab not manufactured by Pierce.**

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY.

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES.

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.

2/8/2010 WA0055

Fire and Rescue Apparatus

Five (5) Year Material and Workmanship
Command Zone Electronics
Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	**Command Zone control modules shall be free from failures caused by defects in material and workmanship**
Warranty Begins:	**The date of the original purchase invoice (issued when the product ships from the factory).**
Warranty Period Ends After:	**Five (5) Years**
Conditions and Exclusions: **See Also Paragraphs 2 thru 4**	**This limited warranty applies to all of the control modules for the Command Zone system, including the full color graphic displays. Related wire harnesses, cables and connectors are not covered under this limited warranty and are instead covered under the Pierce One Year Basic Apparatus Limited Warranty.**

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY.

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES.

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.

2/8/2010 WA0014

Fire and Rescue Apparatus

54 Months Material and Workmanship

Camera System

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	**This limited warranty covers repairs to correct any defect related to materials or workmanship of the Sharpvision camera system installed on the apparatus occuring during the warranty period.**
Warranty Begins:	**The date of delivery.**
Warranty Period Ends After:	**Fifty - Four (54) months**
Conditions and Exclusions: **See Also Paragraphs 2 thru 4**	**This limited warranty does not apply to related wire harnesses, cables, and connectors, which are covered by the Pierce one (1) year basic apparatus limited warranty.**

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY.

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES.

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.

1/11/2011 WA0188

Ten (10) Year Material and Workmanship
Pierce 12V LED Strip Light
Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	**This limited warranty covers repairs to correct any defect related to materials or workmanship of the Pierce 12V LED strip lights installed on the apparatus occuring during the warranty period.**
Warranty Begins:	**The date of the original purchase invoice (issued when the product ships from the factory).**
Warranty Period Ends After:	**Ten (10) Year**
Conditions and Exclusions: **See Also Paragraphs 2 thru 4**	**This limited warranty does not apply to related wire harnesses, cables, and connectors, which are covered by the Pierce one (1) year basic apparatus limited warranty.**

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY.

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES.

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.

7/5/2011 WA0203

NEW PRODUCT WARRANTY

PARTICIPATING OEM SALES
DISTRIBUTOR SALES

LIMITED WARRANTY ON NEW ALLISON AUTOMATIC TRANSMISSIONS USED IN EMERGENCY VEHICLE APPLICATIONS

Allison Transmission will provide for repairs or replacement, at its option, during the warranty period of each new Allison transmission listed below that is installed in an Emergency Vehicle in accordance with the following terms, conditions, and limitations.

WHAT IS COVERED

- **WARRANTY APPLIES —** This warranty is for new Allison transmission models listed below installed in an Emergency Vehicle and is provided to the original and any subsequent owner(s) of the vehicle during the warranty period.
- **REPAIRS COVERED —** The warranty covers repairs or replacement, at Allison Transmission's option, to correct any transmission malfunction resulting from defects in material or workmanship occurring during the warranty period. Needed repairs or replacements will be performed using the method Allison Transmission determines most appropriate under the circumstances.
- **TOWING —** Towing is covered to the nearest Allison Transmission Distributor or authorized Dealer only when necessary to prevent further damage to your transmission.
- **PAYMENT TERMS —** Warranty repairs, including parts and labor, will be covered per the schedule shown in the chart contained in section "APPLICABLE MODELS, WARRANTY LIMITATIONS, AND ADJUSTMENT SCHEDULE."
- **OBTAINING REPAIRS —** To obtain warranty repairs, take the vehicle to any Allison Transmission Distributor or authorized Dealer within a reasonable amount of time and request the needed repairs. A reasonable amount of time must be allowed for the Distributor or Dealer to perform necessary repairs.
- **TRANSMISSION REMOVAL AND REINSTALLATION —** Labor costs for the removal and re-installation of the transmission, when necessary to make a warranty repair, are covered by this warranty.
- **WARRANTY PERIOD —** The warranty period for all coverages shall begin on the date the transmission is delivered to the first retail purchaser, with the following exception:

  Demonstration Service - A transmission in a new truck or bus may be demonstrated to a total of 5000 miles (8000 kilometers). If the vehicle is within this limit when sold to a retail purchaser, the warranty start date is the date of purchase. Normal warranty services are applicable to the demonstrating Dealer. Should the truck or bus be sold to a retail purchaser after these limits are reached, the warranty period will begin on the date the vehicle was first placed in demonstration service and the purchaser will be entitled to the remaining warranty.

APPLICABLE MODELS, WARRANTY LIMITATIONS, AND ADJUSTMENT SCHEDULE

APPLICABLE MODELS	WARRANTY LIMITATIONS (Whichever occurs first)		ADJUSTMENT CHARGE TO BE PAID BY THE CUSTOMER	
	Months	Transmission Miles Or Kilometers	Parts	Labor
MT, MD 3000, 3200, 3500, 3700	0–24	No Limit	No Charge	No Charge
HT with Hydraulic Controls	0–24	No Limit	No Charge	No Charge
AT, 1000 Series™, 2000 Series™, 2400 Series™	0–36	No Limit	No Charge	No Charge
HT with Electronic Controls	0–60	No Limit	No Charge	No Charge
HD 1000 EVS, 2100 EVS, 2200 EVS 2350 EVS, 2500 EVS, 2550 EVS, 3000 EVS, 3500 EVS, 4000, 4000 EVS, 4500, 4500 EVS, 4700, 4700 EVS, 4800, 4800 EVS	0–60	No Limit	No Charge	No Charge

WHAT IS NOT COVERED

- **DAMAGE DUE TO ACCIDENT, MISUSE, or ALTERATION —** Defects and damage caused as the result of any of the following are not covered:
  - — Flood, collision, fire, theft, freezing, vandalism, riot, explosion, or objects striking the vehicle;
  - — Misuse of the vehicle;
  - — Installation into unapproved applications and installations;
  - — Alterations or modification of the transmission or the vehicle, and
  - — Damage resulting from improper storage (refer to long-term storage procedure outlined in the applicable Allison Service Manual)
  - — Anything other than defects in Allison Transmission material or workmanship

  NOTE: This warranty is void on transmissions used in vehicles currently or previously titled as salvaged, scrapped, junked, or totaled.
- **CHASSIS, BODY, and COMPONENTS —** The chassis and body company (assemblers) and other component and equipment manufacturers are solely responsible for warranties on the chassis, body, component(s), and equipment they provide. Any transmission repair caused by an alteration(s) made to the Allison transmission or the vehicle which allows the transmission to be installed or operated outside of the limits defined in the appropriate Allison Installation Guideline is solely the responsibility of the entity making the alteration(s).
- **DAMAGE CAUSED by LACK of MAINTENANCE or by the USE of TRANSMISSION FLUIDS NOT RECOMMENDED in the OPERATOR'S MANUAL —** Defects and damage caused by any of the following are not covered:
  - — Failure to follow the recommendations of the maintenance schedule intervals applicable to the transmission;
  - — Failure to use transmission fluids or maintain transmission fluid levels recommended in the Operator's Manual.
- **MAINTENANCE —** Normal maintenance (such as replacement of filters, screens, and transmission fluid) is not covered and is the owner's responsibility.
- **REPAIRS by UNAUTHORIZED DEALERS —** Defects and damage caused by a service outlet that is not an authorized Allison Transmission Distributor or Dealer are not covered.
- **USE of OTHER THAN GENUINE ALLISON TRANSMISSION PARTS —** Defects and damage caused by the use of parts that are not genuine Allison Transmission parts are not covered.
- **EXTRA EXPENSES —** Economic loss and extra expenses are not covered. Examples include but are not limited to: loss of vehicle use; inconvenience; storage; payment for loss of time or pay; vehicle rental expense; lodging; meals; or other travel costs.
- **"DENIED PARTY" OWNERSHIP —** Warranty repair parts and labor costs are not reimbursed to any participating or non-participating OEMs, dealers or distributors who perform warranty work for, or on behalf of, end users identified by the United States as being a "denied party" or who are citizens of sanctioned or embargoed countries as defined by the U.S. Department of Treasury Office of Foreign Assets Control. Furthermore, warranty reimbursements are not guaranteed if the reimbursement would be contrary to any United States export control laws or regulations as defined by the U.S. Department of Commerce, the U.S. Department of State, or the U.S. Department of Treasury.

OTHER TERMS APPLICABLE TO CONSUMERS AS DEFINED by the MAGNUSON-MOSS WARRANTY ACT

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

Allison Transmission does not authorize any person to create for it any other obligation or liability in connection with these transmissions. **ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE APPLICABLE TO THESE TRANSMISSIONS IS LIMITED IN DURATION TO THE DURATION OF THIS WRITTEN WARRANTY. PERFORMANCE OF REPAIRS AND NEEDED ADJUSTMENTS IS THE EXCLUSIVE REMEDY UNDER THIS WRITTEN WARRANTY OR ANY IMPLIED WARRANTY. ALLISON TRANSMISSION SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES (SUCH AS, BUT NOT LIMITED TO, LOST WAGES OR VEHICLE RENTAL EXPENSES) RESULTING FROM BREACH OF THIS WRITTEN WARRANTY OR ANY IMPLIED WARRANTY.****

** Some states do not allow limitations on how long an implied warranty will last or the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

OTHER TERMS APPLICABLE TO OTHER END-USERS

THIS WARRANTY IS THE ONLY WARRANTY APPLICABLE TO THE ALLISON TRANSMISSION MODELS LISTED ABOVE AND IS EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. ALLISON TRANSMISSION DOES NOT AUTHORIZE ANY PERSON TO CREATE FOR IT ANY OTHER OBLIGATION OR LIABILITY IN CONNECTION WITH SUCH TRANSMISSIONS. ALLISON TRANSMISSION SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM BREACH OF THIS WARRANTY OR ANY IMPLIED WARRANTY.

QUESTIONS

If you have any questions regarding this warranty or the performance of warranty obligations, you may contact any Allison Transmission Distributor or Dealer or write to:

Allison Transmission, Inc.
P.O. Box 894
Indianapolis, IN 46206-0894
Attention: Warranty Administration PF-9

Form SE0616EN (201009)

Five (5) Year Material and Workmanship - Transmission Oil Cooler
Three (3) Year Collateral Damage Coverage

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	**The transmission cooler shall be free from component or structural failures caused by defects in material and/or workmanship. Collateral damage up to $10,000 per occurrence is available for the first three (3) years.**
Warranty Begins:	**The date of delivery to the first retail purchaser.**
Warranty Period Ends After:	**Five (5) Years on Oil Cooler and three (3) years on collateral damage coverage**
Conditions and Exclusions: **See Also Paragraphs 2 thru 4**	**This warranty does not cover repair due to accidents, misuse, and excessive vibration, flying debris, storage damage (freezing), negligence or modification. This warranty is void if any modification or repairs are performed without authorization. This also voids any future warranty.** **This warranty does not cover cost of maintenance or repairs due to lack of required maintenance services as recommended. Performance of the required maintenance and use of proper fluids are the responsibility of the owner.** **Towing is covered to the nearest distributor or authorized dealer only when necessary to prevent further damage to your transmission.** **Labor costs for the removal and reinstallation of goods may be covered when necessary to make repairs. Please contact your OEM for authorization.** **Replacement of cooler during the warranty period is limited to 100% of reasonable labor costs up to a maximum of $700 to remove, replace, or repair the oil cooler.**

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY.

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES.

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.

2/22/2012 WA0216

Effective 1 August, 2009

UNITED PLASTIC FABRICATING, INC.

WARRANTY

FOR: POLY-TANK®, POLYSIDE®, INTEGRATOR™, ELLIPSE™, ELLIP-T-TANK™ & DEFENDER™

LIFETIME SERVICE WARRANTY

United Plastic Fabricating, Inc. (hereinafter called "UPF") warrants each POLY-TANK®, Booster/Foam Tank POLYSIDE® Wetside Tank, Integrator Tank/Body, ELLIPSE™ Elliptical Tank, Ellip-T-Tank Tank and DEFENDER™ Skid Tank to be free from defects in material and workmanship for the service life of the original vehicle (vehicle must be actively used in an emergency response for fire suppression). All UPF Tanks must be installed and operated in accordance with the UPF Installation and Operating Guidelines. Failure to do so can void the warranty.

Every UPF Tank is inspected and tested before leaving our facility. Should your UPF Tank require service, please notify UPF via email, fax, in writing or by calling UPF at 1-978-975-4520. Please provide the serial number, a description of the service request, the location along with the phone number and name of the contact person. Our goal is to have scheduled work completed within a reasonable time period.

Under a valid warranty claim, UPF will cover the cost to repair the UPF Tank including the customary and reasonable costs to make the tank accessible such as the removal and reinstallation of the tank if authorized in advance (pre-approved) by UPF. The warranty will not cover tanks that have been improperly installed, operated, misused, abused, or modified from its intended or designed use. Serial number must not have been altered, defaced or removed. Tanks that are not stored or installed properly which results in the tank suffering UV damage will not be covered by this agreement.

Should UPF determine that the service claim is valid under this warranty for a tank located outside of the United States and Canada, UPF will assume the costs for labor and material for the warranty repair as described above plus all travel costs to the U.S. port of embarkation. Costs for airline travel outside of the U.S. and Canada will not be the responsibility of UPF.

In the event the tank shall become stationed in an area of the world that is considered to be a war zone or where unsafe conditions exist for the safe passage of United States Nationals, as reported by the United States Department of State, (http://www.state.gov), and a request to perform service or warranty repairs, UPF reserves the right to refuse to honor such requests. It is the purchaser's responsibility to relocate the tank to an area where such repairs can be performed without undue risk to UPF employees or their designee. UPF will make every reasonable effort to support our products though alternative means.

For Ellipse™ elliptical tanks, a separate five year warranty provided by the subcontractor is applied to the sub-frames, chute linings (rubber isolation strips) and metal components. The stainless steel wrap provided by UPF shall be warranted by the subcontractor performing the wrap installation in accordance with their warranty in place at the time of the installation. UPF will not be liable for any warranty costs associated with the wrap, sub-frames, chute linings (rubber isolation strips) and metal components but will assist with all claims on behalf of its customer.

For PolySide® wetsided tanks and Integrator™ Tank/Body units, all polypropylene components related to the tank shall carry the standard UPF lifetime

Continued on back

UNITED PLASTIC FABRICATING, INC.

WARRANTY

FOR: POLY-TANK®, POLYSIDE®, INTEGRATOR™, ELLIPSE™, ELLIP-T-TANK™ & DEFENDER™

service warranty. Other polypropylene components, including but not limited to compartments, wheel wells, fenders and other body related components shall be warranted by UPF for a period of ten years. The warranty for the PolySide® and Integrator™ units excludes paint or hardware, which shall be covered by the manufacturer of the paint/hardware.

All UPF tanks 50 gallons or less utilized for non-fire applications and installed on specialty vehicles such as ATVs, trailers, boats, etc. are covered under a separate warranty policy available from UPF. Further, UPF Protector™ foam and water trailers are warranted under a separate warranty policy available from UPF.

This UPF warranty is transferable within the United States only with prior written approval by UPF (except an original apparatus manufacturer may assign this warranty to the first titled owner/lessee of the apparatus).

UPF will NOT reimburse any unnecessary work and/or work that has not been pre-approved. Any and all third party charges must be pre-authorized and approved in writing by UPF prior to commencing the work. Any unauthorized third party repairs, alterations, actions or modifications will not be covered and can void the warranty. UPF will be the sole determining authority as to whether a service claim will be valid and covered under this warranty.

In no event will UPF be liable for an amount in excess of the purchase price of the booster/foam tank at the time of manufacture or for any loss or damage, whether direct, indirect, incidental, consequential, or otherwise arising out of failure of its product. Loss of contents (water, foam, etc.) shall not be the responsibility of UPF. Further, UPF is not responsible for costs associated with service repairs to chassis, sub-frames, bodies, valves, dumps, hoses, pressure vacuum vents, and other components (i.e. liquid level transducers, etc.). Further, UPF will not cover the cost for travel of the vehicle to and from a repair facility.

This warranty contains the entire warranty. It is the sole warranty and price agreements or representation, whether oral or written, are either merged herein or expressly cancelled. UPF neither assumes, nor authorizes any person supposing to act on its behalf to change, nor assume for it, any warranty or liability concerning its product.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Some states do not allow exclusion or limitation or incidental or consequential damage, so the above limitation or exclusion may not apply to you. Since some states do not allow limitations on the length of an implied warranty, the above limitation may not apply to you.

THERE ARE NO WARRANTIES, EXPRESSED OR IMPLIED, WHICH EXTEND BEYOND THE DESCRIPTION OF THE FACE HEREOF. THERE IS NO EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR A WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE. ADDITIONALLY, THIS WARRANTY IS IN LIEU OF ALL OTHER OBLIGATION OR LIABILITIES ON THE PART OF UPF.

POLY-TANK®,& POLYSIDE® are registered trademarks of UPF, Inc. INTEGRATOR™, ELLIPSE™, ELLIP-T-TANK™ & DEFENDER™ are trademarks of UPF, Inc. © 08/01/09 UPF, Inc. Printed in the USA

BULLETIN

TO: **All Dealer Service Representatives**

From: **Kevin Hanegraaf**

DATE: **January 4, 2010**

RE: **UPF Tank Warranty Policy – Truck in Accident**

Service Topic #292

To keep the UPF tank warranty valid on trucks that have been involved in a vehicular accident, it is UPF's policy that the customer must remove the tank from the truck and send it back to one of UPF's facilities for inspection. In the event that this does not take place, the warranty will be considered null and void.

The customer must remove and send the tank back to UPF for inspection in order to maintain the original warranty coverage, at which time it will be:

- *Filled with water*
- *Visually inspected*
- *Ultraviolet spark tested on articulating test stand in the dark*
- *Recommendation for repairs if necessary provided by UPF*
- *Fully evaluated and repaired by UPF*

If your customer chooses to leave the tank on the truck and wants a technician to inspect and/or repair the tank in the field, then **the warranty is no longer in effect**. This direction is upheld by UPF because the technician cannot inspect the entire tank when it is still installed on the truck.

> **Note:** This memo is intended to relay the information Pierce has received on UPF's tank warranty for trucks that are in a vehicular accident. In the event of an actual claim, we direct you to consult with UPF's service Manager Maura Watts (800-638-8265 x253)

Fire and Rescue Apparatus

Ten (10) Year Structural Integrity
Apparatus Body
Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	**The apparatus body shall be free from structural failures caused by defects in material and workmanship**
Warranty Begins:	**The date of the original purchase invoice (issued when the product ships from the factory).**
Warranty Period Ends After:	**Ten (10) Years - or - 100,000 Miles**
Conditions and Exclusions: **See Also Paragraphs 2 thru 4**	**This warranty applies only to the body tubular support and mounting structures and other structural components of the body of the vehicle model, as identified in the Pierce specifications for the Fire and Rescue Apparatus.** **This warranty does not apply to damage caused by corrosion.**

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY.

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES.

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.

2/8/2010 WA0009

AMDOR Inc. TERMS OF BUSINESS AND GENERAL INFORMATION

Warranty:

All AMDOR Inc. roll-up door products are warranted for a period of 10 years from the date of delivery (with the exception of wet paint adhesion - please see below). AMDOR Inc. liability covers the replacement or repair of any component that fails due to defects in material and / or workmanship during the coverage period. We accept no liability for claims made for damages to any part (or parts) of a vehicle and / or machine (of any type) or injury claims by a person or persons assumed or alleged to have been brought about by the use or misuse of any product supplied by AMDOR Inc. Warranty coverage does not extend to door attachments including (but not limited to) decals, emblems, stripes and adhesives.

In order to initiate the claims process please contact your authorized representative of AMDOR Inc. Warranty claims must be accompanied by a written description providing full and reasonable details as to the nature of the defect. Upon receipt of your claim arrangements will be made to inspect the defective product (if necessary). Justified warranty claims will be repaired, exchanged, or credited to the customer's account at AMDOR Inc.'s discretion. All warranty claims must be approved in writing by the Customer Service Manager for AMDOR Inc. There are no exceptions to this clause.

Limited warranty coverage includes the labor associated with the disassembly and assembly of products deemed to be defective by AMDOR Inc. Labor allowances are based on a set time schedule as determined by AMDOR Inc. The maximum allowable hourly labor rate is $ 50. All warranty labor claims must be approved in writing by an authorized representative of AMDOR Inc. prior to commencement of work. Allowances for removal and installation:

Curtain replacement:	3/4 hour
Balancer replacement:	1 hour
Door ajar switch	3/4 hour
Bottom Panel Assembly:	1/2 hour
Slat replacement:	3/4 hour
Door removal and replacement	1 1/2 hours

Items authorized for return must be accompanied by a Return Goods Authorization (RGA) number. We will accept collect shipments of items deemed to be defective provided that they are returned via the most economical carrier. Should items be

returned by means other than the most economical carrier the difference will be charged back to the sender.

AMDOR Inc. reserves the right to reject any claim when a product has been opened, interfered with or modified. Claims may also be rejected when damage to the product (or any sub-assembly) has been brought about by accident, misuse, abuse, vandalism, incorrect installation, temperature extremes, chemical exposure or any factor other than regular operating conditions.

Limited Wet Paint Match Adhesion Warranty

AMDOR Inc. warrants wet paint finishes applied by AMDOR utilizing our approved factory paint specification. All wet paint match colors must be approved in writing by an authorized OEM representative. AMDOR Inc. will provide a color spray out for this purpose. The time required for shipping and consideration of initial color spray outs will be considered over and above stated lead times. Warranty coverage will extend for a period of not less than 5 years from the date of delivery as determined by AMDOR Inc.'s Packing Slip. AMDOR reserves the right to determine whether individual units will be replaced and / or repaired by an AMDOR approved vendor. An allowance will be made for labor associated with the disassembly and assembly of individual units at the prescribed hourly rate of $ 50 per hour. Compensation for labor will not exceed the maximum time allowance permitted for door removal and replacement. Written approval including specified allowance for time must be obtained from AMDOR prior to initiating work. Warranty coverage will extend to the following visible paint system defects:

1./ Loss of mechanical adhesion as evidenced by peeling, cracking or blistering which exposes the substrate material.

2./ Corrosion of the substrate due to paint system failure.

3./ Fading which results in a substantial departure from the primary AMDOR approved body color.

Wet paint adhesion limited warranty coverage will be excluded when damages to the system are determined by AMDOR Inc. to be a result of the following:

1./ Damage caused through the use of attachments including (but not limited to) decals, labels, adhesives, non factory approved coatings.

2./ Loss of gloss, discoloration or damage due to improper maintenance (including but not limited to) mechanical wash systems, pressure washers, steam cleaners, non approved wash or polishing agents.

3./ Abuse, acts of nature, excessive heat / cold, chemical exposure, vandalism and / or accidents.

4./ Scratches, chips, abrasions, or dents from any source.

This document supercedes all previous written and / or verbal warranties provided by AMDOR Inc. and / or it's affiliates.

Warranty Statement
Effective May 30, 2020

Subject to the following general and specific terms and conditions, Hale Products, Inc. ("Seller") hereby warrants to the original Purchaser1 that Products sold under Hale and Class 1 brands will be free of defects in material and workmanship for the applicable Warranty Period. General terms and conditions applicable for all Products are set forth under the heading **General Terms and Conditions** below. Product specific terms and conditions, including Warranty Periods and Warranty Coverages, are set forth in the Tables following the **General Terms and Conditions.**

General Terms and Conditions

The following limitations, exclusions, procedures, and other terms and conditions shall apply for all Products: Warranty is voided if:

- Product is used for an application, with products or in a manner other than the application, products, and manner for which such Product is designed and intended
- Product is subjected to a use, service, condition or environment other than a use, service, condition or environment for which such Product is designed and intended
- Product is not properly installed
- Product is not properly tested and maintained in accordance with Seller's product manuals and supplemental instructions and guidelines, applicable industry standards and guidelines, and applicable legal and regulatory requirements
- Product is altered, modified, serviced (except routine maintenance performed in accordance with Seller's instruction manual for Product and Industry accepted standards and guidelines), or repaired by a person other than Seller or a person authorized by Seller to make such alteration or modification or perform such service or repair
- Seller is not paid the full amount of the purchase price for Product when due.

No Warranty covers:

- Ordinary wear and tear
- Failure due to compliance with a specification or design provided or required by Purchaser
- Failure due to improper operation, excess pressure, excess voltage or other similar cause
- Failure due to operator error
- Damage during or after shipment and failure attributable thereto or resulting there from
- Failure attributable to or resulting from the failure or substandard, inadequate or improper performance of any part, component or equipment not supplied by Seller
- Failure attributable to or resulting from the failure or substandard, inadequate or improper performance of any third party (e.g., not Hale or Class 1 brand) part, component, Product or equipment, whether or not combined, packaged, incorporated, installed or used with a Hale or Class 1 brand part, component, Product or equipment.

Seller shall have no obligation under any Warranty unless Purchaser promptly notifies Seller of the failure giving rise to the Warranty claim, such notice is received by Seller within the applicable Warranty Period, and Seller is provided with such information, data and records (including, but not limited to, in service date, run hours, and service and repair records) as Seller may reasonably request in evaluating the Warranty claim. The notice of failure must be given in writing, identify the Product claimed to be defective (including serial number, if any), and describe in reasonable detail the circumstances surrounding the failure.

Repaired Product and replacement Product shall be warranted only for the remainder of the original Warranty Period.

[1] The "original Purchaser" is the original purchaser from Hale Products, whether the original purchaser is a distributor, dealer or other reseller, an OEM, or an end user.

Seller reserves the right to use reconditioned parts for Warranty repairs and to use reconditioned
Products for Warranty replacements

Hale Products
607 NW 27th Avenue
Ocala, FL 34475
Haleproducts.com

Seller shall have the right to physically inspect Product claimed to be defective. If requested by Seller, Purchaser shall deliver the Product claimed to be defective to Seller at its manufacturing facility or to another party or location designated by Seller. In such event, Seller shall issue to Purchaser a Return Materials Authorization (RMA) for the Product to be delivered. The Product must be delivered to Seller within 30 days of issuance of the RMA. The RMA number must be included with the Product when delivered to Seller. Failure to make timely delivery to Seller of the Product claimed to be defective shall void any Warranty.

Purchaser or its customer shall be responsible for all freight and shipping charges in connection with the delivery of Product claimed to be defective to Seller at its manufacturing facility or to another party or location designated by Seller. Product claimed to be defective must be shipped by Purchaser freight prepaid, and Purchaser shall bear all risk of loss or damage during shipment.

Repaired and replacement Product and parts will be shipped to Purchaser freight collect, unless a determination is made prior to shipment that the warranty claim is valid, in which case Product and parts will be shipped to Purchaser freight prepaid from Supplier. Repaired or replacement Product will be shipped back to purchaser via UPS ground or IDEX approved standard freight. If Purchaser requires expedited UPS shipment, Purchaser will cover the difference between ground and service selected costs. Purchaser shall bear all risk of loss or damage for all freight collect shipments.

When a warranty claim is confirmed by Hale's Quality department, Hale will issue a credit for freight costs under the following conditions:

- Product was shipped by Purchaser freight prepaid to Supplier. Purchaser to provide a copy of paid freight bill upon Hale's request.
- Repaired or replacement Product was shipped to Purchaser freight collect. If Purchaser required expedited shipment, the difference between ground and expedited service costs will be deducted from total credit.

If requested to do so by Purchaser, Seller may, at its sole option and in its sole discretion, supply a replacement Product or part to Purchaser prior to making a final determination as to whether Warranty Coverage is available. If Seller ultimately determines that no Warranty Coverage is available for the Product claimed to be defective, whether the determination is based on the Warranty being voided, the Product failure being due to a cause not covered by the Warranty, the failure to make a timely and proper Warranty claim, or otherwise, Purchaser or its customer will be required to purchase the replacement Product or part that has been supplied to it by Seller at the price at which Purchaser is then entitled to purchase such Product or part under the Supply Agreement.

If Seller ultimately determines that no Warranty Coverage is available for a Product claimed to be defective, whether the determination is based on the Warranty being voided, the Product failure being due to a cause not covered by the Warranty, the failure to make a timely and proper Warranty claim, or otherwise, Purchaser shall have the option of either (i) having the Product returned to it freight collect, without repair or replacement, or (ii) if Seller determines that the Product is repairable, have the Product repaired by Seller or another party designated by it on a time and materials basis at Seller's then current standard charges for non-warranty repairs and then returned to Purchaser freight collect.

SELLER'S WARRANTY AS SET FORTH HEREIN IS SELLER'S SOLE AND EXCLUSIVE WARRANTY AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ALL WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGMENT ALL OF WHICH OTHER WARRANTIES ARE EXPRESSLY EXCLUDED.

THE RIGHTS AND REMEDIES SET FORTH HEREIN ARE THE SOLE AND EXCLUSIVE RIGHTS AND REMEDIES AGAINST SELLER. EXCEPT FOR THE SPECIFIC LIABILITIES AND OBLIGATIONS

PROVIDED HEREIN, SELLER SHALL HAVE NO LIABILITY OR OBLIGATION WITH RESPECT TO ANY PRODUCT CLAIMED TO BE DEFECTIVE IN ANY MANNER.

UNDER NO CIRCUMSTANCES SHALL SELLER BE LIABLE FOR SPECIAL, INCIDENTAL, INDIRECT, CONSEQUENTIAL OR PUNITIVE DAMAGES OF ANY KIND, INCLUDING, BUT NOT LIMITED TO, LOST OR UNREALIZED SALES, REVENUES, PROFITS, INCOME, COST SAVINGS OR BUSINESS, LOST OR UNREALIZED CONTRACTS, LOSS OF GOODWILL, DAMAGE TO REPUTATION, LOSS OF PROPERTY, LOSS OF INFORMATION OR DATA, LOSS OF PRODUCTION, DOWNTIME, OR INCREASED COSTS, IN CONNECTION WITH ANY PRODUCT, EVEN IF SELLER IS ADVISED OR PLACED ON NOTICE OF THE POSSIBILITY OF SUCH DAMAGES AND NOTWITHSTANDING THE FAILURE OF ANY ESSENTIAL PURPOSE OF ANY PRODUCT.

Hale Products, Inc.

Product Specific Warranty Terms and Conditions

Product*		Warranty Period	Coverage**
Pumps Mid-Ship, Rear Mount, and Booster (Excludes all Engine Driven Units)	Non-Marine Fire Service Applications	Earlier of (i) 5 years from in service date of vehicle or equipment in which Product is initially installed, or (ii) 5-1/2 years from date of shipment of Product to original Purchaser. Labor is only covered for the first two (2) years of this warranty coverage.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship.
			At time pump is ordered, original Purchaser may take Standard Warranty at no charge or purchase Extended Warranty for an additional charge which will be quoted by Seller at original purchaser's request at time of order.
			Under Standard Warranty, Seller will cover parts and labor for first 2 years of Warranty Period and parts only (no labor) for remainder of the Warranty Period.
			Under Extended Warranty (if purchased by original Purchaser), Seller will cover parts and labor for the full Warranty Period.
			When labor is covered, original Purchaser will be reimbursed at Seller's then current standard labor hours and rates for labor to make repair (if not repaired by Seller) and to remove defective Product and re-install repaired or replacement Product. Seller's approval of repair estimate is required prior to performance of repair work. If applicable, actual mileage will be reimbursed at Seller's then current mileage reimbursement rate. See the Hale Pump and Pump Accessories Labor Warranty Guide for details on issues covered and fees paid.
	Marine and Other Application	Earlier of (i) 2 years from the date of shipment of Product to original Purchaser, or (ii) 2,000 run hours.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. No labor is included.
Engine Driven Units (Excluding Engines ***)	Pump Ends Backpacks Floats	If not used for rental or contracting, 2 years from the date of shipment of Product to original Purchaser.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. Repair labor is included but any other labor (including removal and re- installation) and mileage are excluded. Original Purchaser will be reimbursed at Seller's then current standard labor hours and rates for labor to make repair (if not repaired by Seller). Seller's approval of repair estimate is required prior to performance of repair work.
		If not used for rental or contracting, 2 years from the date of shipment of Product to original Purchaser.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. No labor is included.
	HP Portables	If not used for rental or contracting, 3 years from the date of shipment of Product to original Purchaser	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. No labor is included. See Hale Portable Pump Labor Warranty Guide for details on issues covered and fees paid
		If used for rental or contracting, earlier of (i) 6 months from date of shipment to original Purchaser, or (ii) 1,000 run hours.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. No labor is included.
	Cross-Chassis Skids Trailer Units	Earlier of (i) 12 months from date of shipment to original Purchaser, or (ii) 1,000 run hours.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. No labor is included.

Hale Products, Inc.

Product Specific Warranty Terms and Conditions

Product*		Warranty Period	Coverage**
Pump Modules	Pump Body Weldments, Stainless Manifolds, and Fabricated non-painted or powder coated panels	10 years from the date of shipment of Product to original Purchaser.	Repair or replacement of Product that Seller determines failed (including cracks resulting from stress and rust through of panels) during Warranty Period due to a defect in material or workmanship. No labor is included.
			Pump modules are built to original Purchaser's specification or design. Although individual Hale and Class 1 brand components used for pump modules comply with NFPA standards, pump modules are not NFPA compliant. Original Purchaser is solely responsible for (i) ensuring finished pump houses are NFPA complaint and adhere to industry accepted standards and guidelines, and (ii) supplying manuals that include appropriate directions, instructions and warnings concerning pump house operation.
	Fabricated painted or powdered coated panels	2 years from the date of shipment of Product to original Purchaser	Repair or replacement of Product that Seller determines failed from paint, finish, and corrosion during Warranty Period due to a defect in material or workmanship. No labor is included.
Foam SmartFoam, SmartCAFS, CAFS Systems, SmartATP, and EZ Fill		3 years from the date of shipment to original Purchaser.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. No labor is included. Datalogger download from Product may be requested to determine cause of defect.
Foam FoamLogix Systems		1 year from the date of shipment to original Purchaser.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. No labor is included.
Pump Repair & Replacement Parts	Ordered for service and repair	90 days from date of shipment of Product to original Purchaser.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. No labor is included.
Pressure Gauges		3 years from date of shipment of Product to the original Purchaser.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. No labor is included.
Plumbing		2 years from date of shipment of Product to original Purchaser.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. No labor is included.
Valves	Akron Valve	10 years from date of shipment of Product to original Purchaser on everything except seal. No warranty on seal.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. No labor is included.
	Class 1 Valve	10 years from date of shipment of Product to original Purchaser on everything except seal. No warranty on seal.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. No labor is included.
	Hale Valve	10 years from date of shipment of Product to original Purchaser on everything except seal. No warranty on seal.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. No labor is included.

Hale Products, Inc.

Product Specific Warranty Terms and Conditions

Product*		Warranty Period	Coverage**
	SVS Torrent Valve	10 years from date of shipment of Product to original Purchaser on everything except seal. 2 years from date of shipment of Product to original Purchaser on seal.	Repair or replacement of Product that Hale determines failed during Warranty Period due to a defect in material or workmanship. No labor is included.
Electronics		2 years from date of shipment of Product to original Purchaser.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. No labor is included.
Monitors	Akron	5 years from date of shipment of Product to original Purchaser.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. No labor is included.
SafeBuy ~~Modules~~ Bundles	QMAX/QMAX-XS Pump Non-Marine Fire Service Applications	Earlier of (i) 8 years from in service date of Safebuy QMAX/QMAX-XS bundle in the vehicle or equipment in which Product is initially installed, or (ii) 8-1/2 years from date of shipment of Product to original Purchaser. This is predicated on the end user supplying Hale with their yearly service and pump testing records by the end of each calendar year.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. Under Safebuy Warranty, Seller will cover parts and labor for earlier of (i) 8 years from in service date of vehicle or equipment in which Product is initially installed, or (ii) 8-1/2 years from date of shipment of Product to original Purchaser. When labor is covered, original Purchaser will be reimbursed at Seller's then current standard labor hours and service rates for labor to make repair (if not repaired by Seller) and to remove defective Product and re-install repaired or replacement Product. Seller's approval of repair estimate is required prior to performance of repair work. If applicable, actual mileage will be reimbursed at Seller's then current mileage reimbursement rate. See the Hale Pump and Gearbox Labor Warranty Guide for details on issues covered and fee paid.
SAM Bundles-Pump with Loose Valves, Kits or Modules	Pumps-Mid-Ship, Rear Mount, and Booster (Excludes all Engine Driven Units) Non-Marine Fire Service Applications	Earlier of (i) 10 years from in service date of vehicle or equipment in which Product is initially installed, or (ii) 10-1/2 years from date of shipment of Product to original Purchaser.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. Under SAM Warranty, Seller will cover parts and labor for earlier of (i) 10 years from in service date of vehicle or equipment in which Product is initially installed, or (ii) 10-1/2 years from date of shipment of Product to original Purchaser.

Hale Products, Inc.

Product Specific Warranty Terms and Conditions

Product*		Warranty Period	Coverage**
SAM Bundles- Pump with Loose Valves, Kits or Modules			When labor is covered, original Purchaser will be reimbursed at Seller's then current standard labor hours and service rates for labor to make repair (if not repaired by Seller) and to remove defective Product and re-install repaired or replacement Product. Seller's approval of repair estimate is required prior to performance of repair work. If applicable, actual mileage will be reimbursed at Seller's then current mileage reimbursement rate. See the Hale Labor Warranty Guides for details on issues covered and fee paid.
	Akron Electric Valve Actuators and Navigator Pros	5 years from date of shipment of Product to original Purchaser.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. No labor is included.
	Electronics	4 years from date of shipment of Product to original Purchaser.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. No labor is included.

*When Products are combined to form a module or package, each Product will have its own separate Warranty Period and Warranty Coverage

* * For each Product, Seller will have the option to refund to Purchaser (in cash or by credit) the purchase price Seller was paid for such Product, less depreciation determined on a straight line basis over the Warranty Period, in lieu of repair or replacement (including, when applicable, labor). The decision whether to repair, replace or refund (and, if there is a refund, whether to refund in cash or by credit) shall be made by Seller in its sole discretion.

*** Seller makes no warranty with respect to engines. Any warranty with respect to engines is limited to whatever warranty may be provided by the engine manufacturer.

Hale Products
607 NW 27th Avenue
Ocala, FL 34475
Haleproducts.com

Ten (10) Year Material and Workmanship Stainless Steel Piping

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	**Stainless steel piping shall be free from structural failures caused by defects in material and workmanship, or perforation caused by corrosion.**
Warranty Begins:	**The date of the original purchase invoice (issued when the product ships from the factory).**
Warranty Period Ends After:	**Ten (10) Years - or - 100,000 Miles**
Conditions and Exclusions: **See Also Paragraphs 2 thru 4**	**Pierce's obligation under this warranty is limited to repairing or replacing without charge, as Pierce may elect, the stainless steel piping or components which Pierce determines to have failed due to defective material and workmanship, or perforation caused by corrosion.** **This warranty does not cover the use of fluoroprotein (FP) type foam. The sodium chloride within FP foam can cause long-term damage to system components if not thoroughly flushed immediately after use.**

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY.

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES.

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.

3/22/2012 WA0035

One (1) Year Material and Workmanship Foam System & Five (5) Year Material and Workmanship Control Head

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	**Limited warranty 1 year parts and labor for for the foam system and 5 years parts and labor for the control head.**
Warranty Begins:	**The date of the original purchase invoice (issued when the product ships from the factory).**
Warranty Period Ends After:	**One (1) Year & Five (5) Year**
Conditions and Exclusions: **See Also Paragraphs 2 thru 4**	**This warranty does not cover repair due to accidents, misuse, and excessive vibration, flying debris, storage damage (freezing), negligence or modification. This warranty is void if any modification or repairs are performed without authorization. This also voids any future warranty.** **This warranty does not cover cost of maintenance or repairs due to lack of required maintenance services as recommended. Performance of the required maintenance and use of proper fluids are the responsibility of the owner.**

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY.

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES.

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.

1/30/2013 WA0231

Fire and Rescue Apparatus

Ten (10) Year Pro-Rated Paint and Corrosion Custom Body

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	**Exterior surfaces of the body shall be free from blistering, peeling, corrosion or any other adhesion defect caused by defective manufacturing methods or paint material selection.**
Warranty Begins:	**The date of the original purchase invoice (issued when the product ships from the factory).**
Warranty Period Ends After:	**Ten (10) Years**
Conditions and Exclusions: **See Also Paragraphs 2 thru 4**	**This limited warranty is applicable to the vehicle in the following percentage costs of warranty repair, if any:** **Topcoat Durability & Appearance: Gloss, Color Retention & Cracking** **0-72 months 100%** **73-96 months 50%** **97-120 months 25%** **Integrity of Coating System: Adhesion, Blistering/Bubbling** **0-36 months 100%** **37-84 months 50%** **85-120 months 25%** **Corrosion: Dissimilar Metal and Crevice** **0-36 months 100%** **37-48 months 50%** **49-72 months 25%** **73-120 months 10%** **Corrosion Perforation** **0-120 months 100%** **This limited warranty applies only to exterior paint. Paint on the vehicle's interior is warranted only under the Pierce Basic One Year Limited Warranty.** **Items not covered by this warranty include:** **(a) Damage from lack of maintenance and cleaning (proper cleaning and maintenance procedures are detailed in the Pierce operation and maintenance manual).** **(b) UV paint fade.** **(c) Any cab not manufactured by Pierce.**

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY.

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES.

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.

2/8/2010 WA0057

Fire and Rescue Apparatus

One (1) Year Material and Workmanship
Graphics Fading and Deterioration

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	**Each graphic lamination shall be free from defects in material workmanship, fading, and deterioration.**
Warranty Begins:	**The date the apparatus is placed in service, or 60 days from the original buyer invoice date, whichever comes first.**
Warranty Period Ends After:	**One (1) Year**
Conditions and Exclusions: **See Also Paragraphs 2 thru 4**	**This warranty does not cover damage from lack of maintenance and cleaning (proper cleaning and maintenance procedures are detailed in the Pierce operation and maintenance manual).**

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY.

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES.

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.

2/22/2010 WA0168

Sample Financing Options

Conventional Diesel Fire Engine: $882,000

	First Payment Begins in August 2023			*First Payment Begins in August 2024*	
	7 Year	10 Year	15 Year	11 Year term, with 10 annual payments	15 Year term, with 14 annual payments
No Down Payments					
Annual Payment	$147,188	$109,258	$83,932	$117,060	$92,381
Number of Payments	7	10	15	10	14
Rate	4.24%	4.24%	4.94%	4.72%	4.94%
Total Payments	1,030,313	1,092,584	1,258,987	1,170,597	1,293,334
Total Principal	882,000	882,000	882,000	882,000	882,000
Total interest	148,313	210,584	376,987	288,597	411,334
With $80,000 Down					
(same rate and number of payments, as listed above)					
Annual Payment	$133,818	$99,329	$76,320	$106,442	$84,002
Total Payments	936,729	993,294	1,144,794	1,064,420	1,176,028
Total Principal	802,000	802,000	802,000	802,000	802,000
Total interest	134,729	191,294	342,794	262,420	374,028

Electric Fire Engine: $2 Million [1]

	First Payment Begins in August 2023			*First Payment Begins in August 2024*	
		10 Year		11 Year term, with 10 annual payments	
No Down Payments					
Annual Payment		$253,109		$264,989	
Number of Payments		10		10	
Rate		4.69%		4.69%	
Total Payments		2,531,090		2,649,890	
Total Principal		2,000,000		2,000,000	
Total interest		531,090		649,890	
With $200,000 Down					
(same rate and number of payments, as listed above)					
Annual Payment		$227,798		$238,491	
Total Payments		2,277,980		2,384,910	
Total Principal		1,800,000		1,800,000	
Total interest		477,980		584,910	

(1) Lending policies are more restrictive with new technologies. At this time, Community Leasing Partners (CLP) is not offering a fifteen-year term on a 100% electric fire engine. If a hybrid option is elected, the CLP representative would have to seek additional approval. Alternate financing terms and options may be pursued for the electric fire engine, based on Council direction.

CITY OF PACIFIC GROVE
300 Forest Avenue, Pacific Grove, California 93950

AGENDA REPORT

TO: Honorable Mayor and Members of the City Council
FROM: Jenny McAdams, Councilmember
MEETING DATE: October 5, 2022
SUBJECT: Empty Home Tax
CEQA: Does not constitute a "Project" per California Environmental Quality Act Guidelines Section 15378

RECOMMENDATION
Convene a conceptual discussion on an "Empty Homes Tax" in the City of Pacific Grove and direct staff to gather information and return to council regarding this concept.

DISCUSSION
Several cities where 2nd, 3rd, and 4th homes sit empty in their neighborhoods are discussing the concept of bringing an "Empty Home Tax" to their voters. Locally, the City of Santa Cruz has Measure N on their November ballot. The definition of an empty home is set by each City, which are the underutilized and empty homes that sit in neighborhoods within the City's boundary.

Implemented "Empty Home Tax" programs have shown to:

1. Encourage owners to rent out their homes long term.
2. Promote home sales to buyers who want to live full time in the City.
3. Provide annual revenues for critical infrastructure improvements and city services.
4. Provide annual revenues to support affordable housing, down payment assistance, renter assistance, and other housing programs.

Per the 2020 census, the City of Pacific Grove has 1,349 vacant homes. Homes that sit empty contribute to a loss in sales tax revenues as well as diminish the vibrancy and strength of communities and neighborhoods.

Total Housing Units 2020 Census:
See Attachment 1

Potential Pacific Grove Empty Home Tax Annual Revenues:

Empty Homes	$2,000 Tax	$3,000 Tax	$6,000 Tax
1,349	$2,698,000	$4,047,000	$8,094,000

1,500	$3,000,000	$4,500,000	$9,000,000
1,700	$3,400,000	$5,100,000	$10,200,000
2,000	$4,000,000	$6,000,000	12,000,000

GOAL ALIGNMENT
Financial Stability: Develop a strategic plan to better address current and future City expenditure and revenue needs while continuing to provide high quality municipal service.

Increase Affordable Housing: Determine policies, projects and programs that will advance the effort to create new affordable housing in the City.

City Asset Stewardship: Repair, maintain and improve City assets, including streets, sidewalks, sewer systems, buildings, parks and trails to better serve the community, anticipate future needs and prevent further degradation.

ELECTRONIC ATTACHMENTS

1. 2020 Census Data- City of Pacific Grove
2. City of Santa Cruz Empty Home Tax Measure N Information

OPTIONS

1. Provide other direction to staff.
2. Take no action.

FINANCIAL IMPACT:
There is no financial impact to hold a conceptual discussion.

GOAL ALIGNMENT: See Goal Alignment within Discussion section.

Attachments

Total Housing Units 2020

TOTAL HOUSING UNITS 2020 CENSUS

Attachment 1

Label	Monterey Co.	Santa Cruz Co.	Capitola	Carmel	Del Rey Oaks	Gonzales	Greenfield	King City	Marina	Monterey	Pacific Grove	Salina	San d City	Santa Cruz	Scotts Valley	Seaside	Soledad	Watsonville
Total Housing Units (2020 Census):	143,631	106,345	5,485	3,056	739	2,088	4,207	3,465	8,022	13,787	8,121	44,405	186	24,014	4,934	10,801	4,524	14,585
Occupied	131,789	96,261	4,624	1,721	699	2,042	4,090	3,282	7,608	12,399	6,772	43,163	163	21,731	4,690	10,149	4,447	14,239
Vacant	11,842	10,084	861	1,335	40	46	117	183	414	1,388	1,349	[illegible]	[illegible]	2,283	244	652	77	346