



PACIFIC CITY COUNCIL MEETING AGENDA
Council Chambers - City Hall. 100 3rd Ave. SE

September 25, 2023
Monday

Regular Meeting

- 1. CALL TO ORDER/PLEDGE OF ALLEGIANCE**
- 2. ROLL CALL OF COUNCIL MEMBERS**
- 3. ADDITIONS TO/APPROVAL OF AGENDA**
- 4. POLICE MEDAL OF MERIT**
- 5. AUDIENCE COMMENT** (Please limit your comments to 3 minutes for items not on the agenda. When recognized by the Mayor, please state your name and address for the official record. It is asked that you do not speak on the same matter twice.)
- 6. STAFF REPORTS**
 - A.** Mayor
 - B.** Public Safety/Emergency Management
 - C.** Community Development
 - D.** Finance
 - E.** Community Services
 - F.** Public Works
 - G.** Technology
 - H.** Boards and Committees
 - i. Sound Cities Association (SCA)
 - ii. South County Area Transportation Board (SCATBd)
 - iii. Valley Regional Fire Authority (VRFA)
 - I.** Council Members
- 7. OLD BUSINESS**
 - (04) **A. Resolution No. 2023-907:** Authorizing the Purchase of a vehicle pursuant to Washington State Department of Enterprise Services Cooperative Contract 05916
 - (09) **B. Motion:** Authorizing the Mayor to sign a Letter of Understanding defining immediate family under Bereavement Leave
 - (12) **C. Resolution No. 2023-908:** Waiving procurement requirements and authorizing the sole source purchase of law enforcement vehicles and associated fixtures
- 8. FIRST READING OF ORDINANCES**

None

9. FINAL READING/ADOPTION OF ORDINANCES

- (22) A. **Ordinance No. 2023-2077:** Relating to the Washington State Building Codes; amending Chapter 17.04 of the Pacific Municipal Code, adopting by reference the 2021 Editions of the International Building Code, the 2021 Edition of the International Residential Code, the 2021 Edition of the International Mechanical Code, the 2021 Edition of the International Fuel Gas Code, the 2021 Edition of the International Fire Code, the 2021 Edition of the Uniform Plumbing Code, the 2021 Edition of the International Energy Conservation Code, the 2021 Edition of the International Existing Building Code, the 2021 Edition of the International Swimming Pool and Spa Code, and the 2021 Edition of the International Property Maintenance Code, and amending same; providing for severability, and establishing an effective date.

10. NEW BUSINESS

(110) 11. **CONSENT AGENDA**

- A. 2023 Payroll and Voucher Approval
- B. Minutes of the 2023 City Council Retreat of September 16th
- C. Minutes of the 2023 City Council Meeting of September 11th
- D. Minutes of the 2023 Committee of the Whole of September 18th
- E. Minutes of the 2023 Workshop of September 18th

12. **CLOSED SESSION:** Per RCW 42.30.140(4)(a) to discuss collective bargaining of the City of Pacific

13. **ADJOURN**

Council may add other items not listed on this agenda unless specific notification period is required.

Please turn off cell phones during meeting and hold your questions for staff until the meeting has been adjourned. Meeting materials are available on the City's website at: www.pacificwa.gov or by contacting the City Clerk's office at (253) 929-1105.



The City of Pacific does not discriminate on the basis of disability in any of its programs, activities, or services. To request this information in an alternative format or to request a reasonable accommodation, please contact the City Clerk's Office at (253) 929-1105. Auxiliary listening aids are available for City Council workshops and meetings. TTY or speech to speech users please dial 711 to connect to Washington Relay Services.

Individuals who desire special accommodations should contact the City Clerk at 253-929-1105 or lcassell@ci.pacific.wa.us at least 48 business hours prior to Council Meeting, including individuals who would like to provide oral public comment but are unable to attend in person due to disability, limited mobility, or another reason that makes physical attendance difficult.

MEETING CALENDAR

| | | |
|---|-------------------------------|-----------|
| Committee of the Whole Meets 1 st and 3 rd Mondays 1 st Monday: Public Works, Governance, Public Safety 3 rd Monday: Finance, Technology, Human Services | October 2, 2023 6:30 p.m. | City Hall |
| Park Board Meets 3 rd Tuesday | October 17, 2023 6:30 p.m. | City Hall |
| Planning Commission Meets 4 th Tuesday | October 24, 2023 6:00 p.m. | City Hall |

The meeting calendar is subject to change

EVENT CALENDAR

| | | |
|------------------|---------------------------|------------------|
| Harvest Festival | October 31st | Gymnasium |
| Holiday Bazaar | November 4 th | Gymnasium |
| Veterans Day | November 10 th | City Hall Closed |

The event calendar is subject to change

Council may add other items not listed on this agenda unless specific notification period is required.

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TO: Mayor Guier and City Council Members
FROM: Rick Gehrke, Public Works Director
MEETING DATE: September 25, 2023
SUBJECT: Purchase of Vehicle

ATTACHMENTS: Resolution No. 2023-907, Purchase of Vehicle
Vendor Quote

Previous Council Review Date: Workshop of September 18th

Background: The City of Pacific's 2023 Budget included the projected purchase of a vehicle to serve the needs of staff to occur in 2023. The City identified a vehicle that meets the needs and specifications of the City through Washington Department of Enterprise Services Cooperative Contract No. 05916. The desired vehicle is currently available through vendor Bud Clary through DES Contract No. 05916 for a price of \$46,002.79

Staff confirmed that DES Contract No. 05916 meets all applicable procurement rules. Staff obtained a quote from Budy Clary and confirmed that the quote and specifications match the terms of DES Contract No. 05916. Staff recommends the Council authorize this budgeted purchase.

Budget Impact: The cost of the vehicle is \$46,002.79, which is within the budget authority for this purchase.

Motion for Consideration: I move to adopt a Resolution authorizing the purchase of a vehicle pursuant to DES Cooperative Contract No. 05916 in the amount of \$46,002.79.

Alternatives: None recommended.

**CITY OF PACIFIC
WASHINGTON**

RESOLUTION NO. 2023-907

**A RESOLUTION OF THE CITY OF PACIFIC, WASHINGTON, AUTHORIZING
THE PURCHASE OF A VEHICLE PURSUANT TO WASHINGTON STATE
DEPARTMENT OF ENTERPRISE SERVICES COOPERATIVE CONTRACT
05916**

WHEREAS, the 2023 City of Pacific Budget includes funding for the purchase of a new vehicle for staff use; and

WHEREAS, the Washington State Department of Enterprise Services (DES) partners with other public agencies to competitively bid purchases and services to leverage the state's collective buying power and save money, reduce risk and streamline purchasing for Washington's cities, including the City of Pacific; and

WHEREAS, the City identified the desired vehicle for purchase from vendor Bud Clary through DES Contract No. 05916, and confirmed that all applicable procurement requirements were met by the State in procuring Contract No. 05916; and

WHEREAS, the City obtained a quote from the vendor for the purchase of the vehicle and confirmed that the quoted price and specifications are consistent with the terms of DES Contract No. 05916; and

WHEREAS, the City Council finds it is in the best interests of the City to procure a vehicle from this vendor pursuant to the Washington DES Cooperative Contract;

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF PACIFIC, WASHINGTON, DOES RESOLVE AS FOLLOWS:

Section 1. The City Council authorizes the Mayor or her designee to execute all documents necessary to effectuate the purchase of a vehicle as set out on Exhibit A hereto for a total purchase price of \$46,002.79.

Section 2. This Resolution shall take effect and be in full force upon passage and signatures hereon.

**PASSED BY THE CITY COUNCIL AT A REGULAR MEETING THEREOF ON THE
25th DAY OF SEPTEMBER, 2023.**

CITY OF PACIFIC

LEANNE GUIER, MAYOR

ATTEST/AUTHENTICATED:

**LAURIE CASSELL, MMC
CITY CLERK**

APPROVED AS TO FORM:

CHARLOTTE ARCHER, CITY ATTORNEY

Vehicle Quote Number: 2023-9-256

This is a quote only. You must create a purchase request to order this vehicle(s)

Contract & Dealer Information

Contract #: 05916 Dealer Contact: Becky Davis
 Dealer: Bud Clary Chevrolet (W262) Dealer Phone: (360) 423-1700

Organization Information

Organization: PACIFIC, CITY OF - 21723
 Email: patrick.thill@budclary.com
 Quote Notes:
 Vehicle Location: PACIFIC COUNTY

Color Options & Qty

SUMMIT WHITE GAZ - 1
 Tax Exempt: N

Vehicle Options

| Order Code | Option Description | Qty | Unit Price | Ext. Price |
|---------------|--|-----|-------------|-------------|
| 2023-0809-001 | 2023 Chevrolet 1500 Silverado 4WD (CK10753) Double Cab 147" WT | 1 | \$35,876.00 | \$35,876.00 |
| 2023-0809-004 | 2023 Chevrolet Silverado 1500 4WD Crew Cab 147"WB WT (CK10543) | 1 | \$3,307.00 | \$3,307.00 |
| 2023-0809-006 | Engine, 5.3L EcoTec3 V8-Upgrade Engine, 5.3L EcoTec3 V8 (355 hp [265 kW] @ 5600 rpm, 383 lb-ft of torque [518 Nm] @ 4100 rpm); featuring available Dynamic Fuel Management that enables the engine to operate in 17 different patterns between 2 and 8 cylinders, depending on demand, to optimize power delivery and efficiency(Requires (G80) auto-locking differential on CC10543 Crew Cab models. Not available with C*10703 Regular Cab model.) | 1 | \$1,595.00 | \$1,595.00 |
| 2023-0809-014 | (Z82)Trailer Package includes trailer hitch, 7-pin and 4-pin connectors and (CTT) Hitch Guidance (Included with (PEB) WT Value Package | 1 | \$395.00 | \$395.00 |
| 2023-0809-015 | (ZLQ) WT Fleet Convenience Package includes (K34) cruise control and (DLF) power mirrors(Upgradeable to (DPO) trailer mirrors and includes (DD8) auto dimming rearview mirror. Not available with (PCV) WT Convenience Package.) | 1 | \$595.00 | \$595.00 |

Vehicle Quote Number: 2023-9-256

| | | | | |
|---------------|---|---|----------|----------|
| 2023-0809-017 | (G80)Auto-locking rear differential (Included with (Z71) Z71 Off-Road Package.) | 1 | \$395.00 | \$395.00 |
| 2023-0809-018 | (JL1)Trailer brake controller, integrated (Requires (Z82) Trailering Package. On Regular Cab models requires (PCV) WT Convenience Package, (ZLQ) WT Fleet Convenience Package or (PEB) WT Value Package.) | 1 | \$275.00 | \$275.00 |

Quote Totals

| | |
|------------------|-------------|
| Total Vehicles: | 1 |
| Sub Total: | \$42,438.00 |
| 8.4 % Sales Tax: | \$3,564.79 |
| Quote Total: | \$46,002.79 |



Agenda Bill No. 23-518

TO: Mayor Guier and City Council Members
FROM: Laurie Cassell, City Administrator
MEETING DATE: September 25, 2023
SUBJECT: Immediate Family Definitions

ATTACHMENTS: Letter of Understanding

Previous Council Review Date: Workshop of September 18th

Summary: This request came from the Teamsters Union No. 117 Public Works and Clerical CBA requesting to define the definition of immediate family in Article 16.03 (Bereavement Leave) in the CBA and the City of Pacific Policy Nos. 100-003 (Definitions of Terms) and 100-016 (Leaves) in the Administrative Policy and Procedures to be combined so that immediate family definitions are identical.

Recommended Action: Staff recommends Council approve the "Immediate Family" definitions in the Letter of Understanding.

Motion for Consideration: "I move to authorize the Mayor to sign a Letter of Understanding defining immediate family under Bereavement Leave."

Budget Impact: None.

Alternatives: None recommended

LETTER OF UNDERSTANDING
By and Between
(Public Works and Clerical Employees)
And
TEAMSTERS LOCAL UNION NO. 117
Affiliated with the
International Brotherhood of Teamsters

Re: Immediate Family Definitions

This Letter of Understanding (“LOU”) is entered into by and between the City of Pacific, Washington (“City”) and Teamsters Local 117 representing the Public Works and Clerical Employees unit (“Union”) to clarify the parties’ current collective bargaining agreement (“CBA”).

WHEREAS, at the request of the Public Works & Clerical Collective Bargaining members, the parties are clarifying their CBA;

NOW, THEREFORE, it is agreed between the City and the Union as follows:

1. The definition of immediate family in Article 16.03 Bereavement Leave in the Collective Bargaining Agreement and the City of Pacific policy nos. 100-003, Definitions of Terms, and 100-016, Leaves in the Administrative Policy and Procedures have different definitions as follows:

16.03 – Immediate family is defined to be persons related by blood, domestic partner, or marriage to an employee as follows: grandmother, grandfather, mother, father, husband, wife, son, daughter, son-in-law, daughter-in-law, legally adopted child, brother, sister, niece, nephew, grandchild, aunt, uncle, and any persons for whose financial or physical care the employee is principally responsible.

*Policy No. 100-003 – **Immediate family** – For the purpose of these guidelines, immediate family is defined as the employee’s parent, spouse, domestic partner, children, sister, brother, mother-in-law, father-in-law, sister-in-law, brother-in-law, Grandparents, grandchildren, aunt, uncle, step-relations equivalent to those listed, foster children and parents, legally adopted children and no other persons.*

*Policy No. 100-016 – Leaves (**Bereavement**)*

A regular full-time employee may be eligible for up to twenty-four (24) hours of bereavement leave for a death in the employee’s immediate family (as defined in Policy No. 100-003). In cases where attendance at services requires travel outside the State of Washington, employees shall be granted up to five (5) days bereavement with pay. This leave shall not be accumulated. Except as otherwise provided by an applicable collective bargaining agreement, and with department director approval, a regular full-time employee may also use up to fifty-six (56) additional hours of accrued sick leave in connection with bereavement leave, for a total absence of ninety-six (96) hours (two (2) regular work weeks + 2 days). Regular part-time employees shall receive bereavement leave, and may use accrued sick leave in connection with bereavement leave, on a pro-rata basis, based on the number of hours their normal work schedule bears to a 40-hour

workweek. Except as otherwise provided by an applicable collective bargaining agreement, and with department director approval, a regular employee may use sick leave, not to exceed eight (8) hours, to attend the funeral of close friends or other relatives.

2. The City and the Union agree to combine both lists as defining Immediate Family definitions to establish bereavement leave.

This LOU is effective when signed by the parties. This LOU is intended to clarify the CBA. All CBA provisions remain in effect.

CITY OF PACIFIC, WASHINGTON

TEAMSTERS LOCAL NO. 117

LEANNE GUIER
Mayor, City of Pacific

JOHN SCEARCY
Secretary-Treasurer

Date: _____

Date: _____



Agenda Bill No. 23-519

TO: Mayor Guier and City Council Members

FROM: Ronald Schaub, Chief of Police

MEETING DATE: September 25, 2023

SUBJECT: Purchase of Vehicle

ATTACHMENTS: Resolution No. 2023-908
Sales Quote

Previous Council Review Date: Workshop of September 18th

Subject:

A Resolution Waiving Procurement Requirements and Authorizing the Sole Source Purchase Of Law Enforcement Vehicles and Associated Fixtures

Background:

The City of Pacific, Washington, continuously strives to maintain and improve the efficiency and effectiveness of its law enforcement services. In our commitment to providing the highest level of public safety to our community, it is necessary to periodically update and replace law enforcement vehicles and associated fixtures.

Proposal:

We propose a resolution to waive procurement requirements and authorize the sole source purchase of law enforcement vehicles and associated fixtures. The procurement of these items will be done through a sole source provider due to the specialized nature of law enforcement vehicles and the need for compatibility with existing equipment.

Financial Implications:

The estimated cost for the purchase of law enforcement vehicles and associated fixtures is \$65,639 per vehicle (plus tax) this expenditure will be covered by the [Specify Funding Source, e.g., General Fund, Grant, etc.]. A detailed breakdown of the costs is attached herewith.

Sole Source Provider:

We recommend selecting Dana Safety Supply, Inc. as the sole source provider for law enforcement vehicles and associated fixtures due to their expertise in manufacturing and customizing vehicles to meet the specific needs of law enforcement agencies. Dana Safety Supply, Inc. has a proven track record of delivering high-quality, reliable vehicles and equipment.

Resolution:

The proposed resolution, if approved, will enable the City of Pacific to proceed with the sole source purchase of law enforcement vehicles and associated fixtures from Dana Safety Supply, Inc. This action aligns with our commitment to public safety and ensures that our law enforcement officers have access to the best equipment available to perform their duties effectively.

Recommendation:

We recommend that the City Council approve the resolution to waive procurement requirements and authorize the sole source purchase of law enforcement vehicles and associated fixtures from Dana Safety Supply, Inc.

**CITY OF PACIFIC
WASHINGTON**

RESOLUTION NO. 2023-908

**A RESOLUTION OF THE CITY OF PACIFIC, WASHINGTON, WAIVING
PROCUREMENT REQUIREMENTS AND AUTHORIZING THE SOLE
SOURCE PURCHASE OF LAW ENFORCEMENT VEHICLES AND
ASSOCIATED FIXTURES.**

WHEREAS, the City of Pacific owns a police vehicles which are customized for the Pacific Police Department's unique mission of ensuring public safety; and

WHEREAS, the City requires consistency in the police and emergency vehicle equipment and installation of the equipment to facilitate the seamless integration of the use and functioning of equipment utilized by officers and employees; and

WHEREAS, due to current market conditions – in part, due to a labor strike – staff has confirmed a dearth of available vehicles to meet demand, with none available through the State of Washington Department of Enterprise Services contract or through other purchasing cooperative; and

WHEREAS, the Police Department has identified Dana Public Safety Supply as the sole vendor currently available to facilitate the necessary purchase of new vehicles, the purchase of specialized equipment, and the installation of this equipment into the police vehicles; and

WHEREAS, many city, county and state agencies currently utilize the vendor due to the quality of the vehicles and equipment, as well as the quality and timeliness of the associated installation and maintenance service; and

WHEREAS, in particular, staff have confirmed that vendor warranties its work and uses non-proprietary parts and equipment, which decreases overall cost and provides for swifter repairs and upgrades, and SPS is the factory-authorized warranty center for all products they supply and is a certified or master distributor of these products; and

WHEREAS, staff has further confirmed that vendor is the only company that offers all required emergency vehicle products with certified installation and knowledge of availability of new equipment or products that must be compatible with existing police department equipment; and

WHEREAS, Staff have confirmed the vendor specializes in police and emergency equipment and uniquely offers a package service for both the purchase and installation of desired equipment to meet the Police Department specifications; and

WHEREAS, the City Council finds the vendor is a specialized supplier and installer of the desired police vehicle equipment identified herein, and thus this purchase is clearly and legitimately limited to the single source of supply and sole provider due to current market conditions, as set out in RCW 35.23.352(9), RCW 39.04.280(1)(a), and RCW 39.04.280(1)(b); and

WHEREAS, the City Council finds that vendor meets the needs and is best suited to provide this purchase and associated service for the City of Pacific; now, therefore;

THE CITY COUNCIL OF THE CITY OF PACIFIC, WASHINGTON, HEREBY RESOLVES AS FOLLOWS:

Section 1. It is the intent of the Pacific City Council that the recitals set forth above are hereby adopted and incorporated as findings in support of this Resolution.

Section 2. The Mayor or his designee is authorized to execute all documentation necessary to purchase the police and emergency vehicles, associated equipment, and installation services identified on Attachment A hereto, and to take all other actions necessary to effectuate these purchases, consistent with this authorization.

Section 3. The above-described circumstance justifies a waiver of any applicable bidding and purchasing requirements set out in the City's Procurement Policies, and as set forth in RCW 35.23.352(9), RCW 39.04.280(1)(a), and RCW 39.04.280(1)(b), as a sole source in this market for these goods and services. Thus, the bidding requirements are hereby waived pursuant to these authorities for the purchases described herein.

Section 4. The Resolution shall take full force and effect upon passage and signatures hereon unless a specific date is provided elsewhere in this resolution.

PASSED BY THE CITY COUNCIL AT A REGULAR MEETING THEREOF ON THE 25th DAY OF SEPTEMBER, 2023.

CITY OF PACIFIC

LEANNE GUIER, MAYOR

ATTEST/AUTHENTICATED:

LAURIE CASSELL, MMC
CITY CLERK

APPROVED AS TO FORM:

CHARLOTTE ARCHER, CITY ATTORNEY

DANA SAFETY SUPPLY, INC
 4809 KOGER BLVD
 GREENSBORO, NC 27407

Sales Quote

Telephone: 800-845-0405

| | |
|-----------------|----------|
| Sales Quote No. | 495737-A |
| Customer No. | MISC |

Bill To

City of Pacific

Ship To

City of Pacific

Contact:
 Telephone:
 E-mail:

Contact:
 Telephone:
 E-mail:

| Quote Date | Ship Via | F.O.B. | Customer PO Number | Payment Method | |
|----------------|------------------|------------------------|---|----------------|----------------|
| 07/31/23 | GROUND SHIPMENT | PPAY & ADD TO INVOICE | | NET30 | |
| Entered By | | Salesperson | Ordered By | Resale Number | |
| Patrick Hope | | Patrick Hope - Houston | | | |
| Order Quantity | Approve Quantity | Tax | Item Number / Description | Unit Price | Extended Price |
| 1 | 1 | N | INFO City of Pacific Warehouse: HOUS | 0.0000 | 0.00 |
| 1 | 1 | Y | MISC 2023 Police Explorer V6 Gas Engine - Black Warehouse: HOUS | 49,323.0000 | 49,323.00 |
| 1 | 1 | Y | EVP EMERGENCY VEHICLE PACKAGE Warehouse: HOUS | 16,307.0000 | 16,307.00 |
| 1 | 1 | Y | MISC Paint Doors White Warehouse: HOUS | 0.0000 | 0.00 |
| 1 | 1 | N | TRANSPORT VEHICLE TRANSPORTATION BY HIRED DRIVERS Warehouse: HOUS | 0.0000 | 0.00 |

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DANA SAFETY SUPPLY, INC
 4809 KOGER BLVD
 GREENSBORO, NC 27407

Sales Quote

Telephone: 800-845-0405

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| Sales Quote No. | 495737-A |
| Customer No. | MISC |

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| Bill To |
| City of Pacific |

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| Ship To |
| City of Pacific |

Contact:
 Telephone:
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Contact:
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| Quote Date | Ship Via | F.O.B. | Customer PO Number | Payment Method | |
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| 07/31/23 | GROUND SHIPMENT | PPAY & ADD TO INVOICE | | NET30 | |
| Entered By | | Salesperson | Ordered By | Resale Number | |
| Patrick Hope | | Patrick Hope - Houston | | | |
| Order Quantity | Approve Quantity | Tax | Item Number / Description | Unit Price | Extended Price |
| 1 | 1 | Y | GB8SP3J WEC LEGACY 48" LIGHTBAR BLUE/RED Warehouse: HOUS 48 IN, RED/WHITE DRIVER FRONT- BLUE/WHITE PASS FRONT W/ FULL FLOOD FEATURE RED/AMBER DRIVER REAR - BLUE/AMBER PASS REAR W/ TA FUNCTION. ** MOUNT KIT SOLD SEPERATELY ** ***** | 0.0000 | 0.00 |
| 1 | 1 | Y | MKEZ105 WEC STRAP KIT 2020+ PIUT Warehouse: HOUS | 0.0000 | 0.00 |
| 1 | 1 | Y | CCSRN3A WEC CCSRN3 W/ 8 POS/NEG INPUT EXPAN MODULE - 12 TOTAL Warehouse: HOUS | 0.0000 | 0.00 |
| 1 | 1 | Y | C3900U CODE3 100W SPEAKER W UNIV BRKT Warehouse: HOUS | 0.0000 | 0.00 |

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DANA SAFETY SUPPLY, INC
 4809 KOGER BLVD
 GREENSBORO, NC 27407

Sales Quote

Telephone: 800-845-0405

| | |
|-----------------|----------|
| Sales Quote No. | 495737-A |
| Customer No. | MISC |

Bill To

City of Pacific

Ship To

City of Pacific

Contact:
 Telephone:
 E-mail:

Contact:
 Telephone:
 E-mail:

| Quote Date | Ship Via | F.O.B. | Customer PO Number | Payment Method | |
|----------------|------------------|------------------------|--|----------------|----------------|
| 07/31/23 | GROUND SHIPMENT | PPAY & ADD TO INVOICE | | NET30 | |
| Entered By | | Salesperson | Ordered By | Resale Number | |
| Patrick Hope | | Patrick Hope - Houston | | | |
| Order Quantity | Approve Quantity | Tax | Item Number / Description | Unit Price | Extended Price |
| 1 | 1 | Y | 7170-0734-08 GJ CONSOLE BOX WITH CUP HOLDER AND SIDE Warehouse: HOUS 2020+ FORD POLICE INTERCEPTOR® UTILITY LOW-PROFILE CONSOLE BOX WITH CUP HOLDER AND SIDE | 0.0000 | 0.00 |
| 1 | 1 | N | INFO activate Headlight Flasher Warehouse: HOUS | 0.0000 | 0.00 |
| 1 | 1 | Y | MISC Taillight Flasher Warehouse: HOUS Flash reverse and brake light | 0.0000 | 0.00 |
| 2 | 2 | Y | WEC-VTX9J WEC VERTEX SUPER LED DUO BLUE RED Warehouse: HOUS Mounted in the reverse lights | 0.0000 | 0.00 |
| 2 | 2 | Y | TLI2J WEC ION T-SERIES LINEAR DUO R/B Warehouse: HOUS Mounted in grille or fog light section to replace vertex in headlights | 0.0000 | 0.00 |

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 GREENSBORO, NC 27407

Sales Quote

Telephone: 800-845-0405

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| Sales Quote No. | 495737-A |
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| Bill To |
| City of Pacific |

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| Ship To |
| City of Pacific |

Contact:
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E-mail:

Contact:
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| Quote Date | Ship Via | F.O.B. | Customer PO Number | Payment Method | |
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| 07/31/23 | GROUND SHIPMENT | PPAY & ADD TO INVOICE | | NET30 | |
| Entered By | Salesperson | Ordered By | Resale Number | | |
| Patrick Hope | Patrick Hope - Houston | | | | |
| Order Quantity | Approve Quantity | Tax | Item Number / Description | Unit Price | Extended Price |
| 2 | 2 | Y | ENT2B3J SOI INTERSECTOR 18-LED UNDER MIRROR LIGHT RED/BLU Warehouse: FTWO UNIVERSAL 180 DEGREE EXTERNAL UNDER-MIRROR OR SURFACE MOUNT ***** ***** | 0.0000 | 0.00 |
| 4 | 4 | Y | I2J WEC DUO LINEAR ION RED/BLUE BLK Warehouse: FTWO rear side glass | 0.0000 | 0.00 |
| 1 | 1 | Y | BK2019ITU20 SMC PB450L4 PUSH BUMPER - 2020+ PIUT Warehouse: HOUS | 0.0000 | 0.00 |
| 1 | 1 | Y | MISC Setina Pit Bar Warehouse: FTWO | 0.0000 | 0.00 |
| 1 | 1 | Y | PK0355ITU20TM SMC #10 VS RP TALL MAN PART Warehouse: HOUS | 0.0000 | 0.00 |
| 1 | 1 | Y | WK0514ITU20 SMC VERTICALSTEEL WINDOW BARS FOR 2020+ PIUT Warehouse: HOUS | 0.0000 | 0.00 |

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DANA SAFETY SUPPLY, INC
 4809 KOGER BLVD
 GREENSBORO, NC 27407

Sales Quote

Telephone: 800-845-0405

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| Sales Quote No. | 495737-A |
| Customer No. | MISC |

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| Bill To |
| City of Pacific |

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| City of Pacific |

Contact:
 Telephone:
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Contact:
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| 07/31/23 | GROUND SHIPMENT | PPAY & ADD TO INVOICE | | NET30 | |
| Entered By | | Salesperson | Ordered By | Resale Number | |
| Patrick Hope | | Patrick Hope - Houston | | | |
| Order Quantity | Approve Quantity | Tax | Item Number / Description | Unit Price | Extended Price |
| 1 | 1 | Y | MISC Dual Universal Gun Rack Warehouse: HOUS | 0.0000 | 0.00 |
| 1 | 1 | Y | GK10271UHKSSCAXL SMC SINGLE T-RAIL GUNLOCK W/UNIV LOCK XL & H/C KE O/R Warehouse: HOUS | 0.0000 | 0.00 |
| 1 | 1 | Y | TK0232ITU20 SMC VAULT WITH REGULAR LOCKS AND HANDLES Warehouse: HOUS | 0.0000 | 0.00 |
| 1 | 1 | Y | TPA9289 SMC CARGO BOX SLIDING RADIO TRAY (TRN) Warehouse: HOUS RADIO TRAY FOR CARGO BOX WITH NO LOCK ***** *DO NOT USE RADIO TRAY WITH ULTIMATE K9. RADIO TRAY BLOCKS SPARE TIRE* | 0.0000 | 0.00 |
| 3 | 3 | Y | MMSU-1 MAGNETIC MIC SINGLE UNIT CONVERSION KIT Warehouse: HOUS | 0.0000 | 0.00 |
| 1 | 1 | Y | INSTALL DSS INSTALLATION OF EQUIPMENT Warehouse: HOUS | 0.0000 | 0.00 |

| | |
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| Print Date | 07/31/23 |
| Print Time | 03:03:28 PM |
| Page No. | 5 |

Printed By: Patrick Hope

Continued on Next Page

DANA SAFETY SUPPLY, INC
 4809 KOGER BLVD
 GREENSBORO, NC 27407

Sales Quote

Telephone: 800-845-0405

| | |
|-----------------|----------|
| Sales Quote No. | 495737-A |
| Customer No. | MISC |

Bill To

City of Pacific

Ship To

City of Pacific

Contact:
 Telephone:
 E-mail:

Contact:
 Telephone:
 E-mail:

| Quote Date | Ship Via | F.O.B. | Customer PO Number | Payment Method |
|--------------|-----------------|------------------------|--------------------|----------------|
| 07/31/23 | GROUND SHIPMENT | PPAY & ADD TO INVOICE | | NET30 |
| Entered By | | Salesperson | Ordered By | Resale Number |
| Patrick Hope | | Patrick Hope - Houston | | |

| Order Quantity | Approve Quantity | Tax | Item Number / Description | Unit Price | Extended Price |
|----------------|------------------|-----|---|------------|----------------|
| 1 | 1 | Y | INSTALL KIT MISC INSTALLATION SUPPLIES I.E. Warehouse: HOUS LOOM, WIRE, HARDWARE, CONNECTORS, ETC ***** | 0.0000 | 0.00 |
| 1 | 1 | N | INFO Customer Supplied Radar & Radio Warehouse: FTWO | 0.0000 | 0.00 |

Approved By: _____
 Approve All Items & Quantities
Quote Good for 30 Days

| | |
|------------|-------------|
| Print Date | 07/31/23 |
| Print Time | 03:03:28 PM |
| Page No. | 6 |

| | |
|--------------------|------------------|
| Subtotal | 65,630.00 |
| Freight | 0.00 |
| Order Total | 65,630.00 |

Printed By: Patrick Hope



Agenda Bill No. 23-849

TO: Mayor Guier and City Council Members
FROM: Rick Gehrke, Public Works Director
MEETING DATE: September 25, 2023
SUBJECT: 2021 Washington State Building Code Adoption

-
- ATTACHMENTS:**
1. Ordinance No. 2023-2077 2021 Washington State Building Code Adoption
 2. Ordinance No. 2023-2077 (Track Changes Courtesy Copy)
 3. 2021 IBC Important Changes
 4. 2021 IRC Important Changes
 5. Estimated Costs of the 2021 IRC Code Changes
-

Previous Council Review Date: Workshop of 5/15/2023 and Meeting of 5/22/2023

Background

The City of Pacific adopted the 2018 editions of the codes that comprise the Washington State Building Code on April 14, 2021 through Ordinance No. 2021-2039. Every three years, the State Building Code Council (SBCC) adopts the updated editions of the codes that comprise the Washington State Building Code. The adoption of the 2021 Washington State Building Code was completed in December 2022 and early 2023; all new codes will be effective July 1, 2023. To be in compliance with [RCW 19.27.031](#), the City must adopt these changes before the July 1, 2023 effective date. The substantive changes to the IBC/IRC in the 2021 editions of the codes are discussed in Attachments 2 and 3 to this Agenda Bill.

The enclosed report titled “Estimated Costs of the 2021 IRC Code Changes” prepared for the National Association of Home Builders identifies the costs to the consumer for a new 2,607SF single-family home to increase by \$4,878 to \$21,727, per Tables 2 and 3.

Staff will provide a public outreach campaign to applicants alerting them of this upcoming change and update respective city application forms.

Recommendation: Staff recommends approval of Ordinance No. 2023-2077 amending [Section 17.04.010](#) of the Pacific Municipal Code to adopt the 2021 editions of the State Building Codes, to be effective July 1, 2023.

Budget Impact: The cost of new IBC books for our building inspector is \$1,063.17. The cost of training and certification renewal for our building inspector is \$953, excluding incidentals, for a total of \$2,016.17. These fees have already been paid from the City’s existing Building Division training budget as training occurred back in April 2023.

AGENDA ITEM NO. 10A

Motion for Consideration: I move to approve Ordinance No. 2023-2077 amending Section [17.04.010](#) of the Pacific Municipal Code to adopt the 2021 editions of the State Building Codes, effective July 1, 2023.

**CITY OF PACIFIC
WASHINGTON**

ORDINANCE NO. 2023-2077

AN ORDINANCE OF PACIFIC, WASHINGTON, RELATING TO THE WASHINGTON STATE BUILDING CODES; AMENDING CHAPTER 17.04 OF THE PACIFIC MUNICIPAL CODE, ADOPTING BY REFERENCE THE 2021 EDITIONS OF THE INTERNATIONAL BUILDING CODE, THE 2021 EDITION OF THE INTERNATIONAL RESIDENTIAL CODE, THE 2021 EDITION OF THE INTERNATIONAL MECHANICAL CODE, THE 2021 EDITION OF THE INTERNATIONAL FUEL GAS CODE, THE 2021 EDITION OF THE INTERNATIONAL FIRE CODE, THE 2021 EDITION OF THE UNIFORM PLUMBING CODE, THE 2021 EDITION OF THE INTERNATIONAL ENERGY CONSERVATION CODE, THE 2021 EDITION OF THE INTERNATIONAL EXISTING BUILDING CODE, THE 2021 EDITION OF THE INTERNATIONAL SWIMMING POOL AND SPA CODE, AND THE 2021 EDITION OF THE INTERNATIONAL PROPERTY MAINTENANCE CODE, AND AMENDING SAME; PROVIDING FOR SEVERABILITY, AND ESTABLISHING AN EFFECTIVE DATE.

WHEREAS, the State of Washington enacted the Washington State Building Code, codified at RCW 19.27.031, to establish state laws regulating construction in Washington, and created the State Building Code Council to establish the minimum building, mechanical, fire, plumbing and energy code requirements necessary to promote the health, safety and welfare of the people of the state of Washington, by reviewing, developing and adopting the state building code; and

WHEREAS, consistent with RCW Chapter 19.27.031, the City adopted by reference the State Building Code, codified at Chapter 17.04 of the Pacific Municipal Code (PMC), with local amendments thereto; and

WHEREAS, in late 2022 and early 2023, the State Building Code Council adopted the 2021 code editions of the of the Group 1 and Group 2 Codes that comprise the Washington State Building Code, with an effective date of July 1, 2023, and the Council desires to timely adopt these updated editions; and

WHEREAS, the SEPA Responsible Official has determined that adoption of this Ordinance is exempt from SEPA under WAC 197-11-800(19);

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

Section 1. Section 17.04.010 of the Pacific Municipal Code is hereby amended to read as follows:

17.04.010 Washington State Building Code adopted.

The city adopts the Washington State Building Code as follows:

A. The International Building Code (~~2018~~ 2021 Edition), as published by the International Code Council, and amended by the Washington State Building Code Council in Chapter 51-50 WAC, to be known hereafter as the “International Building Code” or the “IBC,” together with:

Appendix E: Supplemental Accessibility Requirements;

Appendix J: Grading.

B. ICC/ANSI A117.1-2009, as referenced by Chapter 11 of the IBC.

C. The International Residential Code (~~2018~~ 2021 Edition), published by the International Code Council, and amended by the Washington State Building Code Council in Chapter 51-51 WAC, with the exception of Chapter 11 and Chapters 25 through 43, to be known hereafter as the “International Residential Code” or the “IRC,” together with:

Appendix F: Passive Radon Gas Control Methods;

Appendix G: Flood-Resistant Construction;

Appendix Q: Dwelling Unit Fire Sprinkler Systems.

D. The International Mechanical Code (~~2018~~ 2021 Edition), published by the International Code Council, and amended by the Washington State Building Code Council in Chapter 51-52 WAC, to be known as the “International Mechanical Code” or the “IMC.”

E. The International Fuel Gas Code (~~2018~~ 2021 Edition), published by the International Code Council and amended by the Washington State Building Code Council to be known as the “International Fuel Gas Code” or the “IFGC.”

F. The International Fire Code (~~2018~~ 2021 Edition), as published by the International Code Council, and as amended by the State Building Code Council in Chapter 51-54A WAC, and as further amended by the City which shall be known hereafter as the “International Fire Code” or the “IFC,” together with:

Appendix B: Fire-Flow Requirements for Buildings;

Appendix D: Fire Apparatus Access Roads.

Appendix E: Hazard Categories

Appendix H: Hazardous Materials Management Plan (HMMP), and Hazardous Materials Inventory Statement (HMIS) Instructions

Appendix I: Requirements for Fire Fighter Air Replenishment

CITY AMENDMENTS TO THE INTERNATIONAL FIRE CODE 2018 2021 EDITION ARE LISTED AS FOLLOWS:

1. **Chapter 1, Scope and Administration, Part 2 – Administrative Provisions, Section 105 Permits, [A] 105.3.2 Extensions** is hereby amended as follows:

The fire code official is authorized to grant, in writing, one or more extensions of time, for periods not more than 180 days each. The extension shall be requested in writing and justifiable cause demonstrated.

2. **Chapter 5 FIRE SERVICE FEATURES, Section 503, FIRE APPARATUS ACCESS ROADS, Subsection 503.2 Specifications** is hereby amended as follows:

Fire apparatus access roads shall be installed and arranged in accordance with the City of Pacific Engineering Design Standards as applicable based on the type of access.

3. **Chapter 5 FIRE SERVICE FEATURES, Section 503, FIRE APPARATUS ACCESS ROADS, Subsection 503.3 Marking** is hereby amended as follows:

Fire apparatus access roads may be established or relocated at the time of plan review, pre-construction site inspection, and/or post construction site inspection as well as any time during the life of the occupancy. Fire apparatus access roads shall be identified in accordance with PMC 10.30.090 Fire Lanes. Means of identification shall be maintained in clean and legible condition at all times and be replaced or repaired when necessary to provide adequate visibility.

4. **Chapter 5 FIRE SERVICE FEATURES, Section 503, FIRE APPARATUS ACCESS ROADS, Subsection 503.4 Obstruction of fire apparatus access roads** is hereby amended as follows:

Fire apparatus access roads shall not be obstructed in any manner, including the parking of vehicles. Widths and clearances established by the City of Pacific Engineering Design Standards shall be maintained at all times.

503.4.1. Traffic calming devices. Traffic calming devices shall be prohibited unless approved by the fire code official.

5. **Chapter 5 FIRE SERVICE FEATURES, Section 505, PREMISES IDENTIFICATION, Subsection 505.1 Address identification** is hereby amended as follows:

New and existing buildings shall be provided with approved address identification in accordance with the City of Pacific Premise Identification Guidelines.

A. The owner, agent, occupant, lessee or tenant of any building or portion thereof situated within the city limits shall maintain a building number thereon as provided in this chapter.

B. Each figure of the building number shall be a minimum of four inches in height on single-family residential occupancies. Individual suite numbers on commercial occupancies and individual multifamily unit numbers shall be a minimum of two inches in height. Numbers shall be of a color that will contrast with the structure's background color and shall be either illuminated during periods of darkness, or be reflective, so the address numbers are easily seen at night.

C. The building(s) shall have the building address numerals located on the upper 25 percent of the building face fronting the public street or right-of-way. This requirement shall not apply to single-family residences or duplexes. This requirement may be reduced in the downtown area where buildings are located closer to the public way or right-of-way. Numeral size shall be as follows:

| Setback from Public Way or Right-of-Way Centerline | Less than 75 Feet from Public Way or Right-of-Way Centerline | Greater than 75 Feet from Public Way or Right-of-Way Centerline |
|---|---|--|
| Multifamily | 12" High | 18" High |
| Small Commercial | 12" High | 18" High |
| Large Commercial (> 20,000 SF or (over 30 Feet in height) | 18" High | 24" High |
| Monument Sign | 8" High | N/A |

D. It shall be the duty of the building official to assign the correct building number to all structures within the city at the time of issuance of building permits, or upon the request of any owner, occupant or lessee. The building official shall also assign site addresses to all lots created or modified through a subdivision. The building official is authorized to develop standards and procedures for the assignment of building numbers in a logical and consistent manner throughout the city. The building official shall consult with other affected city departments and responsible authorities in the development and application of such standards.

6. Chapter 5 FIRE SERVICE FEATURES, Section 507, FIRE PROTECTION WATER SUPPLIES, Subsection 507.5.1 Where required is hereby amended as follows:

Where required.

Where a portion of a building or structure hereafter constructed or moved into the city is more than 150 feet in vehicular travel from a hydrant, as measured by an approved route, on-site fire hydrants and mains shall be provided where required by the fire code official.

Exceptions:

1. For Group R-3 and Group U occupancies, the distance requirement shall be 450 feet, as measured by an approved route.

2. For buildings equipped throughout with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2, the distance requirement shall be 600 feet (183 m).

7. Chapter 5 FIRE SERVICE FEATURES, Section 507, FIRE PROTECTION WATER SUPPLIES, Subsection 507.5.5 Clear space around hydrants is hereby amended as follows:

A 5 foot (1524 mm) clear space shall be maintained around the circumference of fire hydrants except as otherwise required or approved.

8. Chapter 5 FIRE SERVICE FEATURES, Section 510, EMERGENCY RESPONDER RADIO COVERAGE, Subsection 510.1 Emergency responder radio coverage in new buildings is hereby amended as follows:

Approved radio coverage for emergency responders shall be provided within buildings meeting any of the following conditions:

1. High rise buildings;
2. The total building area is 50,000 square feet or more;
3. The total basement area is 10,000 square feet or more; or
4. There are floors used for human occupancy more than 30 feet below the finished floor of the lowest level of exit discharge.
5. Buildings or structures where the Fire or Police Chief determines that in-building radio coverage is critical because of its unique design, location, use or occupancy.

The radio coverage system shall be installed in accordance with Sections 510.4 through 510.5.5 of this code and with the provisions of NFPA 1221 (2019). This section shall not require improvement of the existing public safety communication systems.

Exceptions:

1. Buildings and areas of buildings that have minimum radio coverage signal strength levels of the King County Regional 800 MHz Radio System within the

building in accordance with Section 510.4.1 without the use of a radio coverage system.

2. In facilities where emergency responder radio coverage is required and such systems, components or equipment required could have a negative impact on the normal operations of that facility, the fire marshal shall have the authority to accept an automatically activated emergency responder radio coverage system.

3. One- and two-family dwellings and townhouses.

9. Chapter 5 FIRE SERVICE FEATURES, Section 510, EMERGENCY RESPONDER RADIO COVERAGE, Subsection 510.4 Technical requirements is hereby amended as follows:

510.4 Technical requirements. Systems, components and equipment required to provide the emergency responder radio coverage system shall comply with Sections 510.4.1 through 510.4.2.8

510.4.1 Emergency responder communication enhancement system signal strength. The building shall be considered to have acceptable emergency responder communications enhancement system coverage when signal strength measurements in 95 percent of all areas on each floor of the building meet the signal strength requirements in Sections 510.4.1.1 through 510.4.1.3.

Exception: Critical areas, such as the fire command center(s), the fire pump room(s), interior exit stairways, exit passageways, elevator lobbies, standpipe cabinets, sprinkler sectional valve locations, and other areas required by the fire code official, shall be provided with 99 percent floor area radio coverage.

510.4.1.1 Minimum signal strength into the building. The minimum inbound signal strength shall be sufficient to provide usable voice communications as specified by the fire code official. The inbound signal level shall be a minimum of -95dBm in 95% of the coverage area and 99% in critical areas and sufficient to provide not less than a Delivered Audio Quality (DAQ) of 3.0 or an equivalent Signal-to-Interference-Plus-Noise Ratio (SINR) applicable to the technology for either analog or digital signals.

510.4.1.2 Minimum signal strength out of the building. The minimum outbound signal strength shall be sufficient to provide usable voice communications throughout the coverage area as specified by the fire code official. The outbound signal level shall be sufficient to provide not less than a DAQ of 3.0 or an equivalent SINR applicable to the technology for either analog or digital signals. A minimum signal strength of -95 dBm shall be received by the King County Regional 800 MHz Radio System when transmitted from within the building.

510.4.1.3 System performance. Signal strength shall be sufficient to meet the requirements of the applications being utilized by public safety for emergency operations through the coverage area as specified by the radio system manager in Section 510.4.2.2.

510.4.2 System design.

The emergency responder radio coverage system shall be designed in accordance with Sections 510.4.2.1 through 510.4.2.8 and NFPA 1221 (2019).

510.4.2.1 Amplification systems and components. Buildings and structures that cannot support the required level of radio coverage shall be equipped with systems and components to enhance the public safety radio signals and achieve the required level of radio coverage specified in Sections 510.4.1 through 510.4.1.3. Public safety communications enhancement systems utilizing radio-frequency-emitting devices and cabling shall be allowed by the Public Safety Radio System Operator. Prior to installation, all RF-emitting devices shall have the certification of the radio licensing authority and be suitable for public safety use.

510.4.2.2 Technical criteria. The Public Safety Radio System Operator shall provide the various frequencies required, the location of radio sites, the effective radiated power of radio sites, the maximum propagation delay in microseconds, the applications being used and other supporting technical information necessary for system design upon request by the building owner or owner's representative.

510.4.2.3 Power supply sources. Emergency responder radio coverage systems shall be provided with dedicated standby batteries or provided with 2-hour standby batteries and connected to the facility generator power system in accordance with Section 1203. The standby power supply shall be capable of operating the emergency responder radio coverage system at 100-percent system capacity for a duration of not less than 12 hours.

510.4.2.4 Signal booster requirements. If used, signal boosters shall meet the following requirements:

1. All signal booster components shall be contained in a National Electrical Manufacturer's Association (NEMA) 4, IP66-type waterproof cabinet or equivalent.

Exception: Listed battery systems that are contained in integrated battery cabinets.

2. Battery systems used for the emergency power source shall be contained in a NEMA 3R or higher-rated cabinet, IP65-type waterproof cabinet or equivalent.

3. Equipment shall have FCC or other radio licensing authority certification and be suitable for public safety use prior to installation.

4. Where a donor antenna exists, isolation shall be maintained between the donor antenna and all inside antennas to not less than 20dB greater than the system gain under all operating conditions.
5. Bi-Directional Amplifiers (BDAs) used in emergency responder radio coverage systems shall be fitted with anti-oscillation circuitry and per-channel AGC.
6. The installation of amplification systems or systems that operate on or provide the means to cause interference on any emergency responder radio coverage networks shall be coordinated and approved by the Public Safety Radio System Operator.
7. Unless otherwise approved by the Public Safety Radio System Operator, only channelized signal boosters shall be permitted.

Exception: Broadband BDA's may be utilized when specifically authorized in writing by the Public Safety Radio System Operator.

510.4.2.5 System monitoring. The emergency responder radio enhancement system shall include automatic supervisory and trouble signals that are monitored by a supervisory service and are annunciated by the fire alarm system in accordance with NFPA 72. The following conditions shall be separately annunciated by the fire alarm system, or, if the status of each of the following conditions is individually displayed on a dedicated panel on the radio enhancement system, a single automatic supervisory signal may be annunciated on the fire alarm system indicating deficiencies of the radio enhancement system:

1. Loss of normal AC power supply.
2. System battery charger(s) failure.
3. Malfunction of the donor antenna(s).
4. Failure of active RF-emitting device(s).
5. Low-battery capacity at 70-percent reduction of operating capacity.
6. Active system component malfunction.
7. Malfunction of the communications link between the fire alarm system and the emergency responder radio enhancement system.

510.4.2.6 Additional frequencies and change of frequencies. The emergency responder radio coverage system shall be capable of modification or expansion in the event frequency changes are required by the FCC or other radio licensing authority, or additional frequencies are made available by the FCC or other radio licensing authority.

510.4.2.7 Design documents. The fire code official shall have the authority to require "as-built" design documents and specifications for emergency responder

communications coverage systems. The documents shall be in a format acceptable to the fire code official.

510.4.2.8 Radio communication antenna density. Systems shall be engineered to minimize the near-far effect. Radio enhancement system designs shall include sufficient antenna density to address reduced gain conditions.

Exceptions:

1. Class A narrow band signal booster devices with independent AGC/ALC circuits per channel.
2. Systems where all portable devices within the same band use active power control

10. Chapter 5 FIRE SERVICE FEATURES, Section 510, EMERGENCY RESPONDER RADIO COVERAGE, Subsection 510.5 Installation requirements is hereby amended as follows:

510.5 Installation requirements. The installation of the public safety radio coverage system shall be in accordance with NFPA 1221 and Sections 510.5.1 through 510.5.7.

510.5.1 Approval prior to installation. Amplification systems capable of operating on frequencies licensed to any public safety agency by the FCC or other radio licensing authority shall not be installed without prior coordination and approval of the Public Safety Radio System Operator.

510.5.2 Minimum qualifications of personnel. The minimum qualifications of the system designer and lead installation personnel shall include both of the following:

1. A valid FCC-issued general radio telephone operator's license.
2. Certification of in-building system training issued by an approved organization or approved school, or a certificate issued by the manufacturer of the equipment being installed.

510.5.3 Acceptance test procedure. Where an emergency responder radio coverage system is required, and upon completion of installation, the building owner shall have the radio system tested to verify that two-way coverage on each floor of the building is in accordance with Section 510.4.1. The test procedure shall be conducted as follows:

1. Each floor of the building shall be divided into a grid of 20 approximately equal test areas, with a maximum test area size of 6,400 square feet. Where the floor area exceeds 128,000 square feet, the floor shall be divided into as many approximately equal test areas as needed, such that no test area exceeds the maximum square footage allowed for a test area.

2. Coverage testing of signal strength shall be conducted using a calibrated spectrum analyzer for each of the test grids. A diagram of this testing shall be created for each floor where coverage is provided, indicating the testing grid used for the test in Section 510.5.3.1, and including signal strengths and frequencies for each test area. Indicate all critical areas.

3. Functional talk-back testing shall be conducted using two calibrated portable radios of the latest brand and model used by the agency's radio communications system or other equipment approved by the fire code official. Testing shall use Digital Audible Quality (DAQ) metrics, where a passing result is a DAQ of 3 or higher. Communications between handsets shall be tested and recorded in the grid square diagram required by section 510.5.3(2): each grid square on each floor; between each critical area and a radio outside the building; between each critical area and the fire command center or fire alarm control panel; between each landing in each stairwell and the fire command center or fire alarm control panel.

4. Failure of more than 5% of the test areas on any floor shall result in failure of the test.

Exception: Critical areas shall be provided with 99 percent floor area coverage.

5. In the event that two of the test areas fail the test, in order to be more statistically accurate, the floor shall be permitted to be divided into 40 equal test areas. Failure of not more than two nonadjacent test areas shall not result in failure of the test. If the system fails the 40-area test, the system shall be altered to meet the 95-percent coverage requirement.

6. A test location approximately in the center of each test area shall be selected for the test, with the radio enabled to verify two-way communications to and from the outside of the building through the public agency's radio communications system. Once the test location has been selected, that location shall represent the entire test area. Failure in the selected test location shall be considered to be a failure of that test area. Additional test locations shall not be permitted.

7. The gain values of all amplifiers shall be measured, and the test measurement results shall be kept on file with the building owner so that the measurements can be verified during annual tests. In the event that the measurement results become lost, the building owner shall be required to rerun the acceptance test to reestablish the gain values.

8. As part of the installation, a spectrum analyzer or other suitable test equipment shall be utilized to ensure spurious oscillations are not being generated by the subject signal booster. This test shall be conducted at the time of installation and at subsequent annual inspections.

9. Systems incorporating Class B signal booster devices or Class B broadband fiber remote devices shall be tested using two portable radios simultaneously

conducting subjective voice quality checks. One portable radio shall be positioned not greater than 10 feet (3048 mm) from the indoor antenna. The second portable radio shall be positioned at a distance that represents the farthest distance from any indoor antenna. With both portable radios simultaneously keyed up on different frequencies within the same band, subjective audio testing shall be conducted and comply with DAQ levels as specified in Sections 510.4.1.1 and 510.4.1.2.

10. Documentation maintained on premises. At the conclusion of the testing, and prior to issuance of the building Certificate of Occupancy, the building owner or owner's representative shall place a copy of the following records in the DAS enclosure or the building engineer's office. The records shall be available to the fire code official and maintained by the building owner for the life of the system:

- a. A certification letter stating that the emergency responder radio coverage system has been installed and tested in accordance with this code, and that the system is complete and fully functional.
- b. The grid square diagram created as part of testing in Sections 510.5.3(2) and 510.5.3(3).
- c. Data sheets and/or manufacturer specifications for the emergency responder radio coverage system equipment; back up battery; and charging system (if utilized).
- d. A diagram showing device locations and wiring schematic,
- e. A copy of the electrical permit.

11. Acceptance test reporting to fire marshal. At the conclusion of the testing, and prior to issuance of the building Certificate of Occupancy, the building owner or owner's representative shall submit to the fire marshal a report of the acceptance test by way of the department's third-party vendor thecomplianceengine.com.

510.5.4 FCC compliance.

The emergency responder radio coverage system installation and components shall comply with all applicable federal regulations including, but not limited to, FCC 47 CFR Part 90.219.

510.5.5 Mounting of the donor antenna (s). To maintain proper alignment with the system designed donor site, donor antennas shall be permanently affixed on the highest possible position on the building or where approved by the fire code official. A clearly visible sign shall be placed near the antenna stating, "movement" or repositioning of this antenna is prohibited without approval from the fire code official." The antenna installation shall be in accordance with the applicable requirements in the International Building Code for weather protection of the building envelope.

510.5.6 Wiring. The backbone, antenna distribution, radiating, or any fiber-optic cables shall be rated as plenum cables. The backbone cables shall be connected to the antenna distribution, radiating, or copper cables using hybrid coupler devices of a value determined by the overall design. Backbone cables shall be routed through an enclosure that matches the building's required fire-resistance rating for shafts or interior exit stairways. The connection between the backbone cable and the antenna cables shall be made within an enclosure that matches the building's fire-resistance rating for shafts or interior exit stairways, and passage of the antenna distribution cable in and out of the enclosure shall be protected as a penetration per the International Building Code.

510.5.7 Identification Signs. Emergency responder radio coverage systems shall be identified by an approved sign located on or near the Fire Alarm Control Panel or other approved location stating "This building is equipped with an Emergency Responder Radio Coverage System. Control Equipment located in room_____".

A sign stating "Emergency Responder Radio Coverage System Equipment" shall be placed on or adjacent to the door of the room containing the main system components.

11. Chapter 5 FIRE SERVICE FEATURES, Section 510, EMERGENCY RESPONDER RADIO COVERAGE, Subsection 510.6 Maintenance is hereby amended as follows:

510.6 Maintenance.

The emergency responder radio coverage system shall be maintained operational at all times in accordance with Sections 510.6.1 through 510.6.47.

510.6.1 Testing and proof of compliance. The owner of the building or owner's authorized agent shall have the emergency responder radio coverage system inspected and tested annually or where structural changes occur including additions or remodels that could materially change the original field performance tests. Testing shall consist of the following items (1) through (7):

1. In-building coverage test as required by the fire marshal as described in Section 510.5.3 "Acceptance test procedure" or 510.6.1.1 "Alternative in-building coverage test".

Exception: Group R Occupancy annual testing is not required within dwelling units.

2. Signal boosters shall be tested to verify that the gain/output level is the same as it was upon initial installation and acceptance or set to optimize the performance of the system.

3. Backup batteries and power supplies shall be tested under load of a period of 1 hours to verify that they will properly operate during an actual power outage. If within the 1-hour test period the battery exhibits symptoms of failure, the test

shall be extended for additional 1-hour periods until the integrity of the battery can be determined.

4. If a fire alarm system is present in the building, a test shall be conducted to verify that the fire alarm system is properly supervising the emergency responder communication system as required in Section 510.4.2.5. The test is performed by simulating alarms to the fire alarm control panel. The certifications in Section 510.5.2 are sufficient for the personnel performing this testing.

5. Other active components shall be checked to verify operation within the manufacturer's specifications.

6. At the conclusion of the testing, a report, which shall verify compliance with Section 510.6.1, shall be submitted to the fire marshal by way of the department's third-party vendor thecomplianceengine.com

7. At the conclusion of testing, a record of the inspection and maintenance along with an updated grid diagram of each floor showing tested strengths in each grid square and each critical area shall be added to the documentation maintained on the premises in accordance with Section 510.5.3.

510.6.1.1 Alternative In-building coverage test. When the comprehensive test documentation required by Section 510.5.3 is available, or the most recent full five-year test results are available if the system is older than six years, the in-building coverage test required by the fire code official in Section 510.6.1.1, may be conducted as follows:

1. Functional talk-back testing shall be conducted using two calibrated portable radios of the latest brand and model used by the agency's radio communications system or other equipment approved by the fire code official. Testing shall use Digital Audible Quality (DAQ) metrics, where a passing result is a DAQ of 3 or higher. Communications between handsets in the following locations shall be tested: between the fire command center or fire alarm control panel and a location outside the building; between the fire alarm control panel and each landing in each stairwell.

2. Coverage testing of signal strength shall be conducted using a calibrated spectrum analyzer for:

(a) Three grid areas per floor. The three grid areas to be tested on each floor are the three grid areas with poorest performance in the acceptance test or the most recent annual test, whichever is more recent; and

(b) Each of the critical areas identified in acceptance test documentation required by Section 510.5.3, or as modified by the fire marshal, and

(c) One grid square per serving antenna.

3. The test area boundaries shall not deviate from the areas established at the time of the acceptance test, or as modified by the fire code official. The building shall be considered to have acceptable emergency responder radio coverage when the required signal strength requirements in 510.4.1.1 and 510.4.1.2 are located in 95 percent of all areas on each floor of the building and 99 percent in Critical Areas, and any non-functional serving antenna are repaired to function within normal ranges. If the documentation of the acceptance test or most recent previous annual test results are not available or acceptable to the fire marshal, the radio coverage verification testing described in 510.5.3 shall be conducted.

510.6.2 Additional frequencies. The building owner shall modify or expand the emergency responder radio coverage system at his or her expense in the event frequency changes are required by the FCC or other radio licensing authority, or additional frequencies are made available by the FCC public safety radio system operator or FCC license holder. Prior approval of a public safety radio coverage system on previous frequencies does not exempt this section.

510.6.3 Nonpublic safety system. Where other nonpublic safety amplification systems installed in buildings reduce the performance or cause interference with the emergency responder communications coverage system, the nonpublic safety amplification system shall be corrected or removed.

510.6.4 Field testing. Agency personnel shall have the right to enter onto the property at any reasonable time to conduct field testing to verify the required level of radio coverage or to disable a system that due to malfunction or poor maintenance has the potential to impact the emergency responder radio system in the region.

12. Chapter 9 FIRE PROTECTION AND LIFE SAFETY SYSTEMS, SECTION 901 GENERAL, Subsection 901.2 Construction documents, is hereby amended as follows:

901.2 Construction documents. The fire code official shall have the authority to require construction documents and calculations for all fire protection systems and to require permits be issued for the installation, rehabilitation or modification of any fire protection system. Construction documents for fire protection systems shall be submitted for review and approval prior to system installation.

901.2.1 Statement of compliance. Before requesting final approval of the installation, where required by the fire code official, the installing contractor shall furnish a written statement to the fire code official that the subject fire protection system has been installed in accordance with approved plans and has been tested in accordance with the manufacturer's specifications and the appropriate installation standard. Any deviations from the design standards shall be noted and copies of the approvals for such deviations shall be attached to the written statement.

901.2.2 Construction Documents. In addition to the requirements in the building and fire codes, all plans for automatic fire extinguishing systems, including sprinkler system underground piping, shall bear the stamp and signature of a Washington State professional engineer who is registered as qualified in fire protection engineering, or registered as a certified sprinkler contractor through the Washington State Fire Marshal's Office, or as approved by the fire code official.

13. Chapter 9 FIRE PROTECTION AND LIFE SAFETY SYSTEMS, SECTION 901 GENERAL, Subsection 901.4 Installation, Subsection 901.4.3 Fire Areas, is hereby amended as follows:

901.4.3 Fire areas. Where buildings, or portions thereof, are divided into fire areas so as not to exceed the limits established for requiring a fire protection system in accordance with this chapter, such fire areas shall be separated by fire barriers constructed in accordance with Section 707 of the International Building Code or horizontal assemblies constructed in accordance with Section 711 of the International Building Code, or both, having a fire-resistance rating of not less than that determined in accordance with Section 707.3.10 of the International Building Code.

901.4.3.1 Fire Area Applicability. For purposes of this chapter, a "fire wall," "fire barrier," or "horizontal assembly" shall only be considered to separate a building so as to not exceed the limits established for requiring an automatic fire extinguishing system and only upon approval of the building official and/or the fire code official.

14. Chapter 9 FIRE PROTECTION AND LIFE SAFETY SYSTEMS, SECTION 903 AUTOMATIC SPRINKLER SYSTEMS, Subsection 903.1 General, is hereby amended as follows:

903.1 General. *Automatic sprinkler systems* shall comply with this section and these systems shall be installed and maintained in an operable condition as specified in this chapter in the following locations as determined by the building and or fire code official.

a. All new buildings that do not have adequate fire flow to achieve the minimum fire flows required by the City of Pacific or do not have adequate emergency fire vehicle access as required in the fire code and as determined by the fire code official. Additional fire suppression or other safety measures may be required when additional fire flows are required by the fire code official as referenced in Appendix B of the International Fire Code.

b. All new buildings except those classed as Group R-3 and Group U, when any of the following occur:

1. The building has more than 10,000 square feet of floor area, or is higher than 30 feet, or requires more than 2,500 gallons per minute of fire flow.

c. All new buildings that contain more than 8,000 square feet of Group A occupancies.

d. All building(s) which undergo any alteration or repair which changes the character of the occupancy or use and which increase the fire or life safety or structure hazard.

e. All buildings which undergo any additions that increase the floor area of a building beyond the thresholds above. For such additions, exiting building areas shall comply with this chapter.

15. Chapter 9 FIRE PROTECTION AND LIFE SAFETY SYSTEMS, SECTION 903 AUTOMATIC SPRINKLER SYSTEMS, Subsection 901.2.11 Specific buildings areas and hazards, is hereby amended as follows by adding the following subsection:

903.2.11.8 Speculative use warehouses. Where the occupant, tenant, or use of the building or storage commodity has not been determined or it is otherwise a speculative use warehouse or building, an automatic sprinkler system shall be designed and installed in accordance with the following:

1. The design area shall be not less than 2,000 square feet.
2. The density shall be not less than that for class IV non-encapsulated commodities on wood pallets, with no solid, slatted, or wire mesh shelving, and with aisles that are 8 feet or more in width and up to 20 feet in height.
3. Sprinkler piping that is 4 inches and larger in width shall be used and the structural engineer of record shall provide written verification approving of the point and dead loads.

16. Chapter 9 FIRE PROTECTION AND LIFE SAFETY SYSTEMS, SECTION 903 AUTOMATIC SPRINKLER SYSTEMS, is hereby amended, adding a new subsection 903.7 as follows:

903.7 Automatic sprinkler riser rooms. All automatic sprinkler system risers shall be located in a dedicated room. The room enclosure shall meet minimum code requirements for applicable fire resistive ratings and be provided with an exterior door, lighting, heat, and a smoke barrier ceiling. This requirement shall include any NFPA 13 and 13R fire sprinkler systems.

EXCEPTION: Fire sprinkler systems installed according to the IRC shall have an approved location for the riser.

17. Chapter 9 FIRE PROTECTION AND LIFE SAFETY SYSTEMS, SECTION 907 FIRE ALARM AND DETECTION SYSTEMS, subsection 907.1 General is hereby amended as follows:

907.1 General. This section covers the application, installation, performance and maintenance of fire alarm systems and their components in new and existing buildings and structures. The requirements of Section 907.2 are applicable to new buildings and structures. The requirements of Section 907.9 are applicable to existing buildings and structures.

907.1.1 Construction documents. Construction documents for fire alarm systems shall be of sufficient clarity to indicate the location, nature and extent of the work proposed and show in detail that it will conform to the provisions of this code, the International Building Code and relevant laws, ordinances, rules and regulations, as determined by the fire code official.

907.1.2 Fire alarm shop drawings. Shop drawings for fire alarm systems shall be prepared in accordance with NFPA 72 and submitted for review and approval prior to system installation.

907.1.3 Equipment. Equipment systems and their components shall be listed and approved for the purposes for which they were installed. All new systems shall be addressable. Each device shall have its own address and annunciate individual device addresses at a UL Central Station.

907.1.4 Approved Fire Alarm and Detection Systems. In addition to any requirement of 907.2 or 907.3, all new buildings exceeding 5,000 square feet gross floor area or additions increasing the total area to greater than 5,000 square feet shall be required to provide an approved, full notification, automatic fire detection and alarm system. Fire walls shall not be considered to separate a building to enable deletion of the required fire detection system.

EXCEPTIONS:

1. Group "U" Occupancies.
2. One and two family residences.

18. Chapter 9 FIRE PROTECTION AND LIFE SAFETY SYSTEMS, SECTION 907 FIRE ALARM AND DETECTION SYSTEMS, subsection 907.5 Occupant notification systems, subsection 907.5.2 Audible alarms, subsection 907.5.2.3 Visible alarms, subsection 907.2.3.1 Public use areas and common use areas is hereby amended as follows:

907.5.2.3.1 Employee Work Areas. Visible and audible alarm notification appliances shall be provided in employee work areas. For purposes of this chapter, a "fire wall," "fire barrier" or "horizontal assembly" shall not be considered to separate a building so as to avoid the required automatic fire alarm and detection system. A building shall have a minimum distance of five feet from

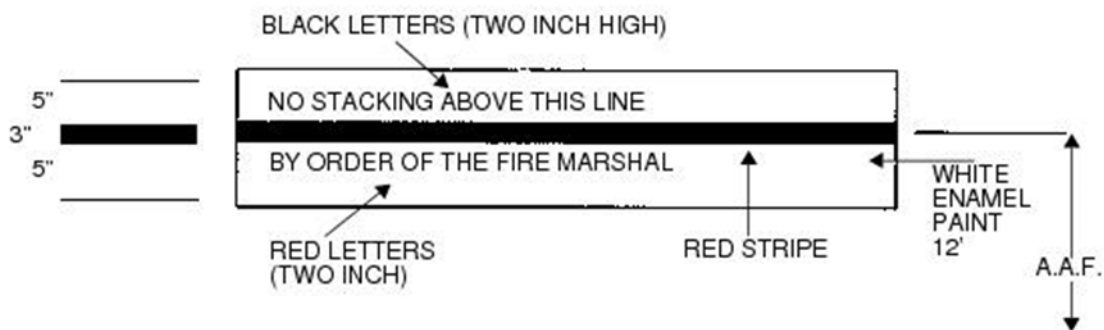
any point of the building to any point of another building and from the property line in order to be considered a separate building.

Exception: Where employee work areas have audible alarm coverage, the notification appliance circuits serving the employee work areas shall be initially designed with not less than 20-percent spare capacity to account for the potential of adding visible notification appliances in the future to accommodate hearing-impaired employee(s).

19. Chapter 32 HIGH PILE COMBUSTIBLE STORAGE, SECTION 3205 HOUSEKEEPING AND MAINTENANCE, subsection 3205.6 Designation of storage heights is hereby amended as follows:

3205.6 Designation of storage heights. Where required by the *fire code official*, a visual method of indicating the maximum allowable storage height shall be provided.

3205.6.1 – Signage. Facilities designed in accordance with this section shall include the appropriate signage (as shown below) and shall be properly posted.



1. This sign must be posted prior to building being stocked and/or occupied.
2. Mount signs at 50'0" O.C. on all walls starting 25'0" from any exterior corner; also on two sides of each column or other location approved by the fire marshal.
3. Signage required on end of racks, if installed.
4. In accordance with the International Fire Code as amended.

20. Chapter 61 LIQUEFIED PETROLEUM GAS, SECTION 6107 SAFETY PRECAUTIONS AND DEVICES is hereby amended as follows:

6107.1 Safety devices. Safety devices on LP-gas containers, equipment and systems shall not be tampered with or made ineffective.

6107.2 Smoking and other sources of ignition. "No Smoking" signs complying with Section 310 shall be posted where required by the fire code official. Smoking within 25 feet (7620 mm) of a point of transfer, while filling operations are in progress at LP-gas containers or vehicles, shall be prohibited.

6107.3 Clearance to combustibles. Weeds, grass, brush, trash and other combustible materials shall be kept not less than 10 feet (3048 mm) from LP-gas tanks or containers.

6107.4 Protecting containers from vehicles. Where exposed to vehicular damage due to proximity to alleys, driveways or parking areas, LP-gas containers, regulators and piping shall be protected in accordance with NFPA 58.

6107.5 Protecting containers from displacement. LP-gas containers greater than or equal to 125-gallons must be anchored or strapped to prevent lateral displacement. Anchors or straps must be an approved, listed device. Methods of securing LP-gas containers 2,000-gallons or greater must be designed by a licensed professional.

Sec. 6107.6 Earthquake shut-off valves. LP-gas containers greater than or equal to 125-gallons must be protected with an approved, listed earthquake shut-off device.

6107.7 Non-compliant installed LP-gas containers. Existing, non-compliant LP-gas containers must be upgraded to comply with sections 6107.5 and 6107.6 when accessory to a building undergoing a change in use or when tank is replaced or modified.

21. APPENDIX D FIRE APPARATUS ACCESS ROADS, SECTION D104 COMMERCIAL AND INDUSTRIAL DEVELOPMENTS is hereby amended as follows:

D104.1 Buildings exceeding three stories or 30 feet in height. Buildings or facilities exceeding 30 feet (9144 mm) or three stories in height shall have not fewer than two means of fire apparatus access for each structure.

D104.2 Buildings exceeding 62,000 square feet in area. Buildings or facilities having a gross building area of more than 62,000 square feet (5760 m²) shall be provided with two separate and *approved* fire apparatus access roads.

Exception: Projects having a gross *building area* of up to 124,000 square feet (11 520 m²) that have a single approved fire apparatus access road where all buildings are equipped throughout with approved automatic sprinkler systems.

D104.3 Remoteness. Where two fire apparatus access roads are required, they shall be placed a distance apart equal to not less than one half of the length of the maximum overall diagonal dimension of the lot or area to be served, measured in a straight line between accesses.

D 104.3.1 Where the area to be served is adjacent to only one public access road or remoteness distance is not feasible due to topography, waterways, nonnegotiable grades, existing improvements or other similar conditions, fire apparatus access roads shall be located as distant as possible.

22. APPENDIX D FIRE APPARATUS ACCESS ROADS, SECTION D106 MULTIPLE-FAMILY RESIDENTIAL DEVELOPMENT is hereby amended as follows:

D106.1 Projects having more than 100 dwelling units. Multiple-family residential projects having more than 100 dwelling units shall be equipped throughout with two separate and approved fire apparatus access roads.

Exception: Projects having up to 200 dwelling units shall have not fewer than one approved fire apparatus access road where all buildings, including nonresidential occupancies, are equipped throughout with approved automatic sprinkler systems installed in accordance with Section 903.3.1.1 or 903.3.1.2.

D106.2 Projects having more than 200 dwelling units. Multiple-family residential projects having more than 200 dwelling units shall be provided with two separate and approved fire apparatus access roads regardless of whether they are equipped with an approved automatic sprinkler system.

D106.3 Remoteness. Where two fire apparatus access roads are required, they shall be placed a distance apart equal to not less than one-half of the length of the maximum overall diagonal dimension of the property or area to be served, measured in a straight line between accesses.

D 106.3.1 Where the area to be served is adjacent to only one public access road or remoteness distance is not feasible due to topography, waterways, nonnegotiable grades, existing improvements or other similar conditions, fire apparatus access roads shall be located as distant as possible.

23. APPENDIX D FIRE APPARATUS ACCESS ROADS, SECTION D107 ONE-OR-TWO-FAMILY RESIDENTIAL DEVELOPMENTS is hereby amended as follows:

D107.1 One- or two-family dwelling residential developments. Developments of one- or two-family dwellings where the number of dwelling units exceeds 30 shall be provided with two separate and approved fire apparatus access roads.

Exceptions:

1. Where there are more than 30 dwelling units on a single public or private fire apparatus access road and all dwelling units are equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1, 903.3.1.2 or 903.3.1.3, access from two directions shall not be required.

2. The number of dwelling units on a single fire apparatus access road shall not be increased unless fire apparatus access roads will connect with future development, as determined by the *fire code official*.

D107.2 Remoteness. Where two fire apparatus access roads are required, they shall be placed a distance apart equal to not less than one-half of the length of the maximum overall diagonal dimension of the property or area to be served, measured in a straight line between accesses.

D 107.2.1 Where the area to be served is adjacent to only one public access road or remoteness distance is not feasible due to topography, waterways, nonnegotiable grades, existing improvements or other similar conditions, fire apparatus access roads shall be located as distant as possible.

24. **APPENDIX D FIRE APPARATUS ACCESS ROADS**, is hereby amended to include the following statement at the end of the Appendix:

In case of conflict between the requirements contained in Appendix D of the ~~2018~~ 2021 International Fire Code, and the City of Pacific Design Standards, the requirements of the City of Pacific Design Standards shall govern.

G. The Uniform Plumbing Code (~~2018~~ 2021 Edition), published by the International Association of Plumbing and Mechanical Officials, and amended by the Washington State Building Code Council in Chapter 51-56 WAC, which shall be known hereafter as the “Uniform Plumbing Code” or the “UPC,” excluding Chapters 12 and 14 and those requirements of the Uniform Plumbing Code relating to venting and combustion air of fuel fired appliances as found in Chapter 5, and those portions of the code addressing building sewers, but including:

Appendix A: Recommended Rules for Sizing the Water Supply System;

Appendix B: Explanatory Notes on Combination Waste and Vent Systems; and

Appendix I: Installation Standards.

H. International Energy Conservation Code (~~2018~~ 2021 Edition)/Washington State Energy Code* as set forth in Chapter 51-11C WAC (Commercial); Chapter 51-11R WAC (Residential), together with Appendices A, B, C and D.

*Based on the 2015 IECC; “Residential” includes one- and two-family dwellings, townhouses and Group R-2 and R-3 buildings three stories or less; “Commercial” includes all buildings not covered under the definition “Residential.”

I. The International Existing Building Code (~~2018~~ 2021 Edition), published by the International Code Council, to be known hereafter as the “International Existing Building Code” or the “IEBC.”

J. The International Swimming Pool and Spa Code (~~2018~~ 2021 Edition) published by the International Code Council, to be known hereafter as the “International Swimming Pool and Spa Code” or the “ISPSC.”

K. The International Property Maintenance Code (~~2018~~ 2021 Edition), published by the International Code Council, to be known hereafter as the “International Property Maintenance Code” or the “IPMC.”

L. The Washington State Manufactured Homes Installation Requirements, or Mobile Homes Installation Requirements. Pursuant to RCW 43.22.440, the installation standards of Chapter 296-150M WAC are adopted as amended by the state of Washington.

M. The Washington State Factory Built Housing and Commercial Structures Installation Requirements, or Modular Installation Requirements. Pursuant to RCW 43.22.455, the installation standards of Chapter 296-150F WAC are adopted as amended by the state of Washington. (Ord. 1948 § 5, 2017).

Section 2. Severability. If any section, sentence, clause or phrase of this Ordinance should be held to be unconstitutional or unlawful by a court of competent jurisdiction, such invalidity or unconstitutionality shall not affect the validity or constitutionality of any other section, sentence, clause or phrase of this Ordinance.

Section 3. Publication. This Ordinance shall be published by an approved summary consisting of the title.

Section 4. Effective Date. This Ordinance shall take effect and be in full force and effect five days after publication, or following publication on July 1, 2023, whichever occurs later.

**ADOPTED BY THE CITY COUNCIL AT A REGULAR MEETING
THEREOF ON THE 25th DAY OF SEPTEMBER, 2023.**

CITY OF PACIFIC

LEANNE GUIER, MAYOR

ATTEST/AUTHENTICATED:

LAURIE CASSELL, MMC
CITY CLERK

APPROVED AS TO FORM:

CHARLOTTE ARCHER, CITY ATTORNEY

CITY OF PACIFIC
WASHINGTON
ORDINANCE NO. 2023-XXX-

AN ORDINANCE OF PACIFIC, WASHINGTON, RELATING TO THE ~~ADOPTION OF THE~~ WASHINGTON STATE BUILDING CODES; REVISING AMENDING CHAPTER 17.04 OF THE PACIFIC MUNICIPAL CODE BUILDING CODE, ADOPTING BY REFERENCE THE 2021 EDITIONS OF THE INTERNATIONAL BUILDING CODE, THE 2021 EDITION OF THE INTERNATIONAL RESIDENTIAL CODE, THE 2021 EDITION OF THE INTERNATIONAL MECHANICAL CODE, THE 2021 EDITION OF THE INTERNATIONAL FUEL GAS CODE, THE 2021 EDITION OF THE INTERNATIONAL FIRE CODE, THE 2021 EDITION OF THE UNIFORM PLUMBING CODE, THE 2021 EDITION OF THE INTERNATIONAL ENERGY CONSERVATION CODE, THE 2021 EDITION OF THE INTERNATIONAL EXISTING BUILDING CODE, THE 2021 EDITION OF THE INTERNATIONAL SWIMMING POOL AND SPA CODE, AND THE 2021 EDITION OF THE INTERNATIONAL PROPERTY MAINTENANCE CODE, AND AMENDING SAME; PROVIDING FOR SEVERABILITY, AND ADDING ESTABLISHING AN EFFECTIVE DATE.

WHEREAS, the State of Washington ~~has adopted~~enacted the Washington State Building Code, codified at in RCW 19.27.031, which includes a number of the 2018 editions of the various International Building Codes to be adopted and enforced by local jurisdictions after July 1, 2020 to establish state laws regulating construction in Washington, and created the State Building Code Council to establish the minimum building, mechanical, fire, plumbing and energy code requirements necessary to promote the health, safety and welfare of the people of the state of Washington, by reviewing, developing and adopting the state building code; and

WHEREAS, consistent with RCW Chapter 19.27.031, the City adopted by reference the State Building Code, codified at These codes were adopted through Ordinance 2021-2039, under Chapter 17.04 Building Code of the Pacific Municipal Code (PMC), with local amendments thereto; and

WHEREAS, in late 2022 and early 2023, the The State of Washington State Building Code Council has adopted the 2021 version code editions of the of the 2021 Group 1 and Group 2 Codes that comprise the International Washington State Building Codes and various editions of the codes, with an effective date of July 1, 2023, and the Council desires to timely adopt these updated editions; and

WHEREAS, the SEPA Responsible Official has determined that adoption of this Ordinance is exempt from SEPA under WAC 197-11-800-(19);

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

Section 1. ~~Chapter Section~~ 17.04.010 of the Pacific Municipal Code is hereby amended to read as follows:

17.04.010 Washington State Building Code adopted.

The city adopts the Washington State Building Code as follows:

- A. The International Building Code (~~2018~~ 2021 Edition), as published by the International Code Council, and amended by the Washington State Building Code Council in Chapter 51-50 WAC, to be known hereafter as the “International Building Code” or the “IBC,” together with:

Appendix E: Supplemental Accessibility Requirements;

Appendix J: Grading.

- B. ICC/ANSI A117.1-2009, as referenced by Chapter 11 of the IBC.

- C. The International Residential Code (~~2018~~ 2021 Edition), published by the International Code Council, and amended by the Washington State Building Code Council in Chapter 51-51 WAC, with the exception of Chapter 11 and Chapters 25 through 43, to be known hereafter as the “International Residential Code” or the “IRC,” together with:

Appendix F: Passive Radon Gas Control Methods;

Appendix G: Flood-Resistant Construction;

Appendix Q: Dwelling Unit Fire Sprinkler Systems.

- D. The International Mechanical Code (~~2018~~ 2021 Edition), published by the International Code Council, and amended by the Washington State Building Code Council in Chapter 51-52 WAC, to be known as the “International Mechanical Code” or the “IMC.”

- E. The International Fuel Gas Code (~~2018~~ 2021 Edition), published by the International Code Council and amended by the Washington State Building Code Council to be known as the “International Fuel Gas Code” or the “IFGC.”

- F. The International Fire Code (~~2018~~ 2021 Edition), as published by the International Code Council, and as amended by the State Building Code Council in Chapter 51-54A WAC, and as further amended by the City which shall be known hereafter as the “International Fire Code” or the “IFC,” together with:

Appendix B: Fire-Flow Requirements for Buildings;

Appendix D: Fire Apparatus Access Roads.

Appendix E: Hazard Categories

Appendix H: Hazardous Materials Management Plan (HMMP), and Hazardous Materials Inventory Statement (HMIS) Instructions

Appendix I: Requirements for Fire Fighter Air Replenishment

CITY AMENDMENTS TO THE INTERNATIONAL FIRE CODE ~~2018~~ 2021 EDITION 2021 EDITION ARE LISTED AS FOLLOWS:

1. **Chapter 1, Scope and Administration, Part 2 – Administrative Provisions, Section 105 Permits, [A] 105.3.2 Extensions** is hereby amended as follows:

The fire code official is authorized to grant, in writing, one or more extensions of time, for periods not more than 180 days each. The extension shall be requested in writing and justifiable cause demonstrated.

2. **Chapter 5 FIRE SERVICE FEATURES, Section 503, FIRE APPARATUS ACCESS ROADS, Subsection 503.2 Specifications** is hereby amended as follows:

Fire apparatus access roads shall be installed and arranged in accordance with the City of Pacific Engineering Design Standards as applicable based on the type of access.

3. **Chapter 5 FIRE SERVICE FEATURES, Section 503, FIRE APPARATUS ACCESS ROADS, Subsection 503.3 Marking** is hereby amended as follows:

Fire apparatus access roads may be established or relocated at the time of plan review, pre-construction site inspection, and/or post construction site inspection as well as any time during the life of the occupancy. Fire apparatus access roads shall be identified in accordance with PMC 10.30.090 Fire Lanes. Means of identification shall be maintained in clean and legible condition at all times and be replaced or repaired when necessary to provide adequate visibility.

4. **Chapter 5 FIRE SERVICE FEATURES, Section 503, FIRE APPARATUS ACCESS ROADS, Subsection 503.4 Obstruction of fire apparatus access roads** is hereby amended as follows:

Fire apparatus access roads shall not be obstructed in any manner, including the parking of vehicles. Widths and clearances established by the City of Pacific Engineering Design Standards shall be maintained at all times.

503.4.1. Traffic calming devices. Traffic calming devices shall be prohibited unless approved by the fire code official.

5. **Chapter 5 FIRE SERVICE FEATURES, Section 505, PREMISES IDENTIFICATION, Subsection 505.1 Address identification** is hereby amended as follows:

New and existing buildings shall be provided with approved address identification in accordance with the City of Pacific Premise Identification Guidelines.

- A. The owner, agent, occupant, lessee or tenant of any building or portion thereof situated within the city limits shall maintain a building number thereon as provided in this chapter.
- B. Each figure of the building number shall be a minimum of four inches in height on single-family residential occupancies. Individual suite numbers on commercial occupancies and individual multifamily unit numbers shall be a minimum of two inches in height. Numbers shall be of a color that will contrast with the structure’s background color and shall be either illuminated during periods of darkness, or be reflective, so the address numbers are easily seen at night.
- C. The building(s) shall have the building address numerals located on the upper 25 percent of the building face fronting the public street or right-of-way. This requirement shall not apply to single-family residences or duplexes. This requirement may be reduced in the downtown area where buildings are located closer to the public way or right-of-way. Numeral size shall be as follows:

| Setback from Public Way or Right-of-Way Centerline | Less than 75 Feet from Public Way or Right-of-Way Centerline | Greater than 75 Feet from Public Way or Right-of-Way Centerline |
|---|---|--|
| Multifamily | 12" High | 18" High |
| Small Commercial | 12" High | 18" High |
| Large Commercial | 18" High | 24" High |

| | | |
|--|---------|-----|
| (> 20,000 SF or (over 30 Feet in height) | | |
| Monument Sign | 8" High | N/A |

D. It shall be the duty of the building official to assign the correct building number to all structures within the city at the time of issuance of building permits, or upon the request of any owner, occupant or lessee. The building official shall also assign site addresses to all lots created or modified through a subdivision. The building official is authorized to develop standards and procedures for the assignment of building numbers in a logical and consistent manner throughout the city. The building official shall consult with other affected city departments and responsible authorities in the development and application of such standards.

6. Chapter 5 FIRE SERVICE FEATURES, Section 507, FIRE PROTECTION WATER SUPPLIES, Subsection 507.5.1 Where required is hereby amended as follows:

Where required.

Where a portion of a building or structure hereafter constructed or moved into the city is more than 150 feet in vehicular travel from a hydrant, as measured by an approved route, on-site fire hydrants and mains shall be provided where required by the fire code official.

Exceptions:

1. For Group R-3 and Group U occupancies, the distance requirement shall be 450 feet, as measured by an approved route.
2. For buildings equipped throughout with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2, the distance requirement shall be 600 feet (183 m).

7. Chapter 5 FIRE SERVICE FEATURES, Section 507, FIRE PROTECTION WATER SUPPLIES, Subsection 507.5.5 Clear space around hydrants is hereby amended as follows:

A 5 foot (1524 mm) clear space shall be maintained around the circumference of fire hydrants except as otherwise required or approved.

8. Chapter 5 FIRE SERVICE FEATURES, Section 510, EMERGENCY RESPONDER RADIO COVERAGE, Subsection 510.1 Emergency responder radio coverage in new buildings is hereby amended as follows:

Approved radio coverage for emergency responders shall be provided within buildings meeting any of the following conditions:

1. High rise buildings;
2. The total building area is 50,000 square feet or more;
3. The total basement area is 10,000 square feet or more; or
4. There are floors used for human occupancy more than 30 feet below the finished floor of the lowest level of exit discharge.
5. Buildings or structures where the Fire or Police Chief determines that in-building radio coverage is critical because of its unique design, location, use or occupancy.

The radio coverage system shall be installed in accordance with Sections 510.4 through 510.5.5 of this code and with the provisions of NFPA 1221 (2019). This section shall not require improvement of the existing public safety communication systems.

Exceptions:

1. Buildings and areas of buildings that have minimum radio coverage signal strength levels of the King County Regional 800 MHz Radio System within the building in accordance with Section 510.4.1 without the use of a radio coverage system.
2. In facilities where emergency responder radio coverage is required and such systems, components or equipment required could have a negative impact on the normal operations of that facility, the fire marshal shall have the authority to accept an automatically activated emergency responder radio coverage system.
3. One- and two-family dwellings and townhouses.

9. **Chapter 5 FIRE SERVICE FEATURES, Section 510, EMERGENCY RESPONDER RADIO COVERAGE, Subsection 510.4 Technical requirements** is hereby amended as follows:

510.4 Technical requirements. Systems, components and equipment required to provide the emergency responder radio coverage system shall comply with Sections 510.4.1 through 510.4.2.8

510.4.1 Emergency responder communication enhancement system signal strength. The building shall be considered to have acceptable emergency responder communications enhancement system coverage when signal strength measurements in 95 percent of all areas on each floor of the building meet the signal strength requirements in Sections 510.4.1.1 through 510.4.1.3.

Exception: Critical areas, such as the fire command center(s), the fire pump room(s), interior exit stairways, exit passageways, elevator lobbies, standpipe cabinets, sprinkler sectional valve locations, and other areas required by the fire code official, shall be provided with 99 percent floor area radio coverage.

510.4.1.1 Minimum signal strength into the building. The minimum inbound signal strength shall be sufficient to provide usable voice communications as specified by the fire code official. The inbound signal level shall be a minimum of -95dBm in 95% of the coverage area and 99% in critical areas and sufficient to provide not less than a Delivered Audio Quality (DAQ) of 3.0 or an equivalent Signal-to-Interference-Plus-Noise Ratio (SINR) applicable to the technology for either analog or digital signals.

510.4.1.2 Minimum signal strength out of the building. The minimum outbound signal strength shall be sufficient to provide usable voice communications throughout the coverage area as specified by the fire code official. The outbound signal level shall be sufficient to provide not less than a DAQ of 3.0 or an equivalent SINR applicable to the technology for either analog or digital signals. A minimum signal strength of -95 dBm shall be received by the King County Regional 800 MHz Radio System when transmitted from within the building.

510.4.1.3 System performance. Signal strength shall be sufficient to meet the requirements of the applications being utilized by public safety for emergency operations through the coverage area as specified by the radio system manager in Section 510.4.2.2.

510.4.2 System design.

The emergency responder radio coverage system shall be designed in accordance with Sections 510.4.2.1 through 510.4.2.8 and NFPA 1221 (2019).

510.4.2.1 Amplification systems and components. Buildings and structures that cannot support the required level of radio coverage shall be equipped with systems and components to enhance the public safety radio signals and achieve the required level of radio coverage specified in Sections 510.4.1 through 510.4.1.3. Public safety communications enhancement systems utilizing radio-frequency-emitting devices and cabling shall be allowed by the Public Safety Radio System Operator. Prior to installation, all RF-emitting devices shall have the certification of the radio licensing authority and be suitable for public safety use.

510.4.2.2 Technical criteria. The Public Safety Radio System Operator shall provide the various frequencies required, the location of radio sites, the effective radiated power of radio sites, the maximum propagation delay in

microseconds, the applications being used and other supporting technical information necessary for system design upon request by the building owner or owner's representative.

510.4.2.3 Power supply sources. Emergency responder radio coverage systems shall be provided with dedicated standby batteries or provided with 2-hour standby batteries and connected to the facility generator power system in accordance with Section 1203. The standby power supply shall be capable of operating the emergency responder radio coverage system at 100-percent system capacity for a duration of not less than 12 hours.

510.4.2.4 Signal booster requirements. If used, signal boosters shall meet the following requirements:

1. All signal booster components shall be contained in a National Electrical Manufacturer's Association (NEMA) 4, IP66-type waterproof cabinet or equivalent.

Exception: Listed battery systems that are contained in integrated battery cabinets.

2. Battery systems used for the emergency power source shall be contained in a NEMA 3R or higher-rated cabinet, IP65-type waterproof cabinet or equivalent.
3. Equipment shall have FCC or other radio licensing authority certification and be suitable for public safety use prior to installation.
4. Where a donor antenna exists, isolation shall be maintained between the donor antenna and all inside antennas to not less than 20dB greater than the system gain under all operating conditions.
5. Bi-Directional Amplifiers (BDAs) used in emergency responder radio coverage systems shall be fitted with anti-oscillation circuitry and per-channel AGC.
6. The installation of amplification systems or systems that operate on or provide the means to cause interference on any emergency responder radio coverage networks shall be coordinated and approved by the Public Safety Radio System Operator.
7. Unless otherwise approved by the Public Safety Radio System Operator, only channelized signal boosters shall be permitted.

Exception: Broadband BDA's may be utilized when specifically authorized in writing by the Public Safety Radio System Operator.

510.4.2.5 System monitoring. The emergency responder radio enhancement system shall include automatic supervisory and trouble signals that are monitored by a supervisory service and are annunciated by the fire alarm system in accordance with NFPA 72. The following conditions shall be separately annunciated by the fire alarm system, or, if the status of each of the following conditions is individually displayed on a dedicated panel on the radio enhancement system, a single automatic supervisory signal may be annunciated on the fire alarm system indicating deficiencies of the radio enhancement system:

1. Loss of normal AC power supply.
2. System battery charger(s) failure.
3. Malfunction of the donor antenna(s).
4. Failure of active RF-emitting device(s).
5. Low-battery capacity at 70-percent reduction of operating capacity.
6. Active system component malfunction.
7. Malfunction of the communications link between the fire alarm system and the emergency responder radio enhancement system.

510.4.2.6 Additional frequencies and change of frequencies. The emergency responder radio coverage system shall be capable of modification or expansion in the event frequency changes are required by the FCC or other radio licensing authority, or additional frequencies are made available by the FCC or other radio licensing authority.

510.4.2.7 Design documents. The fire code official shall have the authority to require “as-built” design documents and specifications for emergency responder communications coverage systems. The documents shall be in a format acceptable to the fire code official.

510.4.2.8 Radio communication antenna density. Systems shall be engineered to minimize the near-far effect. Radio enhancement system designs shall include sufficient antenna density to address reduced gain conditions.

Exceptions:

1. Class A narrow band signal booster devices with independent AGC/ALC circuits per channel.
2. Systems where all portable devices within the same band use active power control

10. Chapter 5 FIRE SERVICE FEATURES, Section 510, EMERGENCY RESPONDER RADIO COVERAGE, Subsection 510.5 Installation requirements is hereby amended as follows:

510.5 Installation requirements. The installation of the public safety radio coverage system shall be in accordance with NFPA 1221 and Sections 510.5.1 through 510.5.7.

510.5.1 Approval prior to installation. Amplification systems capable of operating on frequencies licensed to any public safety agency by the FCC or other radio licensing authority shall not be installed without prior coordination and approval of the Public Safety Radio System Operator.

510.5.2 Minimum qualifications of personnel. The minimum qualifications of the system designer and lead installation personnel shall include both of the following:

1. A valid FCC-issued general radio telephone operator's license.
2. Certification of in-building system training issued by an approved organization or approved school, or a certificate issued by the manufacturer of the equipment being installed.

510.5.3 Acceptance test procedure. Where an emergency responder radio coverage system is required, and upon completion of installation, the building owner shall have the radio system tested to verify that two-way coverage on each floor of the building is in accordance with Section 510.4.1. The test procedure shall be conducted as follows:

1. Each floor of the building shall be divided into a grid of 20 approximately equal test areas, with a maximum test area size of 6,400 square feet. Where the floor area exceeds 128,000 square feet, the floor shall be divided into as many approximately equal test areas as needed, such that no test area exceeds the maximum square footage allowed for a test area.
2. Coverage testing of signal strength shall be conducted using a calibrated spectrum analyzer for each of the test grids. A diagram of this testing shall be created for each floor where coverage is provided, indicating the testing grid used for the test in Section 510.5.3.1, and including signal strengths and frequencies for each test area. Indicate all critical areas.
3. Functional talk-back testing shall be conducted using two calibrated portable radios of the latest brand and model used by the agency's radio communications system or other equipment approved by the fire code official. Testing shall use Digital Audible Quality (DAQ) metrics,

where a passing result is a DAQ of 3 or higher. Communications between handsets shall be tested and recorded in the grid square diagram required by section 510.5.3(2): each grid square on each floor; between each critical area and a radio outside the building; between each critical area and the fire command center or fire alarm control panel; between each landing in each stairwell and the fire command center or fire alarm control panel.

4. Failure of more than 5% of the test areas on any floor shall result in failure of the test.

Exception: Critical areas shall be provided with 99 percent floor area coverage.

5. In the event that two of the test areas fail the test, in order to be more statistically accurate, the floor shall be permitted to be divided into 40 equal test areas. Failure of not more than two nonadjacent test areas shall not result in failure of the test. If the system fails the 40-area test, the system shall be altered to meet the 95-percent coverage requirement.
6. A test location approximately in the center of each test area shall be selected for the test, with the radio enabled to verify two-way communications to and from the outside of the building through the public agency's radio communications system. Once the test location has been selected, that location shall represent the entire test area. Failure in the selected test location shall be considered to be a failure of that test area. Additional test locations shall not be permitted.
7. The gain values of all amplifiers shall be measured, and the test measurement results shall be kept on file with the building owner so that the measurements can be verified during annual tests. In the event that the measurement results become lost, the building owner shall be required to rerun the acceptance test to reestablish the gain values.
8. As part of the installation, a spectrum analyzer or other suitable test equipment shall be utilized to ensure spurious oscillations are not being generated by the subject signal booster. This test shall be conducted at the time of installation and at subsequent annual inspections.
9. Systems incorporating Class B signal booster devices or Class B broadband fiber remote devices shall be tested using two portable radios simultaneously conducting subjective voice quality checks. One portable radio shall be positioned not greater than 10 feet (3048 mm) from the indoor antenna. The second portable radio shall be positioned at a distance that represents the farthest distance from any indoor antenna. With both portable radios simultaneously keyed up on different

frequencies within the same band, subjective audio testing shall be conducted and comply with DAQ levels as specified in Sections 510.4.1.1 and 510.4.1.2.

10. Documentation maintained on premises. At the conclusion of the testing, and prior to issuance of the building Certificate of Occupancy, the building owner or owner's representative shall place a copy of the following records in the DAS enclosure or the building engineer's office. The records shall be available to the fire code official and maintained by the building owner for the life of the system:
 - a. A certification letter stating that the emergency responder radio coverage system has been installed and tested in accordance with this code, and that the system is complete and fully functional.
 - b. The grid square diagram created as part of testing in Sections 510.5.3(2) and 510.5.3(3).
 - c. Data sheets and/or manufacturer specifications for the emergency responder radio coverage system equipment; back up battery; and charging system (if utilized).
 - d. A diagram showing device locations and wiring schematic,
 - e. A copy of the electrical permit.

11. Acceptance test reporting to fire marshal. At the conclusion of the testing, and prior to issuance of the building Certificate of Occupancy, the building owner or owner's representative shall submit to the fire marshal a report of the acceptance test by way of the department's third-party vendor thecomplianceengine.com.

510.5.4 FCC compliance.

The emergency responder radio coverage system installation and components shall comply with all applicable federal regulations including, but not limited to, FCC 47 CFR Part 90.219.

510.5.5 Mounting of the donor antenna (s). To maintain proper alignment with the system designed donor site, donor antennas shall be permanently affixed on the highest possible position on the building or where approved by the fire code official. A clearly visible sign shall be placed near the antenna stating, "movement" or repositioning of this antenna is prohibited without approval from the fire code official." The antenna installation shall be in accordance with the applicable requirements in the International Building Code for weather protection of the building envelope.

510.5.6 Wiring. The backbone, antenna distribution, radiating, or any fiber-optic cables shall be rated as plenum cables. The backbone cables shall be connected to the antenna distribution, radiating, or copper cables using

hybrid coupler devices of a value determined by the overall design. Backbone cables shall be routed through an enclosure that matches the building's required fire-resistance rating for shafts or interior exit stairways. The connection between the backbone cable and the antenna cables shall be made within an enclosure that matches the building's fire-resistance rating for shafts or interior exit stairways, and passage of the antenna distribution cable in and out of the enclosure shall be protected as a penetration per the International Building Code.

510.5.7 Identification Signs. Emergency responder radio coverage systems shall be identified by an approved sign located on or near the Fire Alarm Control Panel or other approved location stating "This building is equipped with an Emergency Responder Radio Coverage System. Control Equipment located in room_____".

A sign stating "Emergency Responder Radio Coverage System Equipment" shall be placed on or adjacent to the door of the room containing the main system components.

- 11. Chapter 5 FIRE SERVICE FEATURES, Section 510, EMERGENCY RESPONDER RADIO COVERAGE, Subsection 510.6 Maintenance** is hereby amended as follows:

510.6 Maintenance.

The emergency responder radio coverage system shall be maintained operational at all times in accordance with Sections 510.6.1 through 510.6.47.

510.6.1 Testing and proof of compliance. The owner of the building or owner's authorized agent shall have the emergency responder radio coverage system inspected and tested annually or where structural changes occur including additions or remodels that could materially change the original field performance tests. Testing shall consist of the following items (1) through (7):

1. In-building coverage test as required by the fire marshal as described in Section 510.5.3 "Acceptance test procedure" or 510.6.1.1 "Alternative in-building coverage test".

Exception: Group R Occupancy annual testing is not required within dwelling units.

2. Signal boosters shall be tested to verify that the gain/output level is the same as it was upon initial installation and acceptance or set to optimize the performance of the system.

3. Backup batteries and power supplies shall be tested under load of a period of 1 hours to verify that they will properly operate during an actual power outage. If within the 1-hour test period the battery exhibits symptoms of failure, the test shall be extended for additional 1-hour periods until the integrity of the battery can be determined.
4. If a fire alarm system is present in the building, a test shall be conducted to verify that the fire alarm system is properly supervising the emergency responder communication system as required in Section 510.4.2.5. The test is performed by simulating alarms to the fire alarm control panel. The certifications in Section 510.5.2 are sufficient for the personnel performing this testing.
5. Other active components shall be checked to verify operation within the manufacturer's specifications.
6. At the conclusion of the testing, a report, which shall verify compliance with Section 510.6.1, shall be submitted to the fire marshal by way of the department's third-party vendor thecomplianceengine.com
7. At the conclusion of testing, a record of the inspection and maintenance along with an updated grid diagram of each floor showing tested strengths in each grid square and each critical area shall be added to the documentation maintained on the premises in accordance with Section 510.5.3.

510.6.1.1 Alternative In-building coverage test. When the comprehensive test documentation required by Section 510.5.3 is available, or the most recent full five-year test results are available if the system is older than six years, the in-building coverage test required by the fire code official in Section 510.6.1.1, may be conducted as follows:

1. Functional talk-back testing shall be conducted using two calibrated portable radios of the latest brand and model used by the agency's radio communications system or other equipment approved by the fire code official. Testing shall use Digital Audible Quality (DAQ) metrics, where a passing result is a DAQ of 3 or higher. Communications between handsets in the following locations shall be tested: between the fire command center or fire alarm control panel and a location outside the building; between the fire alarm control panel and each landing in each stairwell.
2. Coverage testing of signal strength shall be conducted using a calibrated spectrum analyzer for:

- (a) Three grid areas per floor. The three grid areas to be tested on each floor are the three grid areas with poorest performance in the acceptance test or the most recent annual test, whichever is more recent; and
 - (b) Each of the critical areas identified in acceptance test documentation required by Section 510.5.3, or as modified by the fire marshal, and
 - (c) One grid square per serving antenna.
3. The test area boundaries shall not deviate from the areas established at the time of the acceptance test, or as modified by the fire code official. The building shall be considered to have acceptable emergency responder radio coverage when the required signal strength requirements in 510.4.1.1 and 510.4.1.2 are located in 95 percent of all areas on each floor of the building and 99 percent in Critical Areas, and any non-functional serving antenna are repaired to function within normal ranges. If the documentation of the acceptance test or most recent previous annual test results are not available or acceptable to the fire marshal, the radio coverage verification testing described in 510.5.3 shall be conducted.

510.6.2 Additional frequencies. The building owner shall modify or expand the emergency responder radio coverage system at his or her expense in the event frequency changes are required by the FCC or other radio licensing authority, or additional frequencies are made available by the FCC public safety radio system operator or FCC license holder. Prior approval of a public safety radio coverage system on previous frequencies does not exempt this section.

510.6.3 Nonpublic safety system. Where other nonpublic safety amplification systems installed in buildings reduce the performance or cause interference with the emergency responder communications coverage system, the nonpublic safety amplification system shall be corrected or removed.

510.6.4 Field testing. Agency personnel shall have the right to enter onto the property at any reasonable time to conduct field testing to verify the required level of radio coverage or to disable a system that due to malfunction or poor maintenance has the potential to impact the emergency responder radio system in the region.

12. **Chapter 9 FIRE PROTECTION AND LIFE SAFETY SYSTEMS, SECTION 901 GENERAL, Subsection 901.2 Construction documents,** is hereby amended as follows:

901.2 Construction documents. The fire code official shall have the authority to require construction documents and calculations for all fire protection systems and to require permits be issued for the installation, rehabilitation or modification of any fire protection system. Construction documents for fire protection systems shall be submitted for review and approval prior to system installation.

901.2.1 Statement of compliance. Before requesting final approval of the installation, where required by the fire code official, the installing contractor shall furnish a written statement to the fire code official that the subject fire protection system has been installed in accordance with approved plans and has been tested in accordance with the manufacturer's specifications and the appropriate installation standard. Any deviations from the design standards shall be noted and copies of the approvals for such deviations shall be attached to the written statement.

901.2.2 Construction Documents. In addition to the requirements in the building and fire codes, all plans for automatic fire extinguishing systems, including sprinkler system underground piping, shall bear the stamp and signature of a Washington State professional engineer who is registered as qualified in fire protection engineering, or registered as a certified sprinkler contractor through the Washington State Fire Marshal's Office, or as approved by the fire code official.

13. **Chapter 9 FIRE PROTECTION AND LIFE SAFETY SYSTEMS, SECTION 901 GENERAL, Subsection 901.4 Installation, Subsection 901.4.3 Fire Areas,** is hereby amended as follows:

901.4.3 Fire areas. Where buildings, or portions thereof, are divided into fire areas so as not to exceed the limits established for requiring a fire protection system in accordance with this chapter, such fire areas shall be separated by fire barriers constructed in accordance with Section 707 of the International Building Code or horizontal assemblies constructed in accordance with Section 711 of the International Building Code, or both, having a fire-resistance rating of not less than that determined in accordance with Section 707.3.10 of the International Building Code.

901.4.3.1 Fire Area Applicability. For purposes of this chapter, a "fire wall," "fire barrier," or "horizontal assembly" shall only be considered to separate a building so as to not exceed the limits established for requiring an automatic fire extinguishing system and only upon approval of the building official and/or the fire code official.

14. Chapter 9 FIRE PROTECTION AND LIFE SAFETY SYSTEMS, SECTION 903 AUTOMATIC SPRINKLER SYSTEMS, Subsection 903.1 General, is hereby amended as follows:

903.1 General. *Automatic sprinkler systems* shall comply with this section and these systems shall be installed and maintained in an operable condition as specified in this chapter in the following locations as determined by the building and or fire code official.

- a. All new buildings that do not have adequate fire flow to achieve the minimum fire flows required by the City of Pacific or do not have adequate emergency fire vehicle access as required in the fire code and as determined by the fire code official. Additional fire suppression or other safety measures may be required when additional fire flows are required by the fire code official as referenced in Appendix B of the International Fire Code.
- b. All new buildings except those classed as Group R-3 and Group U, when any of the following occur:
 1. The building has more than 10,000 square feet of floor area, or is higher than 30 feet, or requires more than 2,500 gallons per minute of fire flow.
- c. All new buildings that contain more than 8,000 square feet of Group A occupancies.
- d. All building(s) which undergo any alteration or repair which changes the character of the occupancy or use and which increase the fire or life safety or structure hazard.
- e. All buildings which undergo any additions that increase the floor area of a building beyond the thresholds above. For such additions, exiting building areas shall comply with this chapter.

15. Chapter 9 FIRE PROTECTION AND LIFE SAFETY SYSTEMS, SECTION 903 AUTOMATIC SPRINKLER SYSTEMS, Subsection 901.2.11 Specific buildings areas and hazards, is hereby amended as follows by adding the following subsection:

903.2.11.8 Speculative use warehouses. Where the occupant, tenant, or use of the building or storage commodity has not been determined or it is otherwise a speculative use warehouse or building, an automatic sprinkler system shall be designed and installed in accordance with the following:

1. The design area shall be not less than 2,000 square feet.

2. The density shall be not less than that for class IV non-encapsulated commodities on wood pallets, with no solid, slatted, or wire mesh shelving, and with aisles that are 8 feet or more in width and up to 20 feet in height.

3. Sprinkler piping that is 4 inches and larger in width shall be used and the structural engineer of record shall provide written verification approving of the point and dead loads.

- 16. Chapter 9 FIRE PROTECTION AND LIFE SAFETY SYSTEMS, SECTION 903 AUTOMATIC SPRINKLER SYSTEMS,** is hereby amended, adding a new subsection 903.7 as follows:

903.7 Automatic sprinkler riser rooms. All automatic sprinkler system risers shall be located in a dedicated room. The room enclosure shall meet minimum code requirements for applicable fire resistive ratings and be provided with an exterior door, lighting, heat, and a smoke barrier ceiling. This requirement shall include any NFPA 13 and 13R fire sprinkler systems.

EXCEPTION: Fire sprinkler systems installed according to the IRC shall have an approved location for the riser.

- 17. Chapter 9 FIRE PROTECTION AND LIFE SAFETY SYSTEMS, SECTION 907 FIRE ALARM AND DETECTION SYSTEMS, subsection 907.1 General** is hereby amended as follows:

907.1 General. This section covers the application, installation, performance and maintenance of fire alarm systems and their components in new and existing buildings and structures. The requirements of Section 907.2 are applicable to new buildings and structures. The requirements of Section 907.9 are applicable to existing buildings and structures.

907.1.1 Construction documents. Construction documents for fire alarm systems shall be of sufficient clarity to indicate the location, nature and extent of the work proposed and show in detail that it will conform to the provisions of this code, the International Building Code and relevant laws, ordinances, rules and regulations, as determined by the fire code official.

907.1.2 Fire alarm shop drawings. Shop drawings for fire alarm systems shall be prepared in accordance with NFPA 72 and submitted for review and approval prior to system installation.

907.1.3 Equipment. Equipment systems and their components shall be listed and approved for the purposes for which they were installed. All new systems shall be addressable. Each device shall have its own address and annunciate individual device addresses at a UL Central Station.

907.1.4 Approved Fire Alarm and Detection Systems. In addition to any requirement of 907.2 or 907.3, all new buildings exceeding 5,000 square feet gross floor area or additions increasing the total area to greater than 5,000 square feet shall be required to provide an approved, full notification, automatic fire detection and alarm system. Fire walls shall not be considered to separate a building to enable deletion of the required fire detection system.

EXCEPTIONS:

1. Group “U” Occupancies.
2. One and two family residences.

18. **Chapter 9 FIRE PROTECTION AND LIFE SAFETY SYSTEMS, SECTION 907 FIRE ALARM AND DETECTION SYSTEMS, subsection 907.5 Occupant notification systems, subsection 907.5.2 Audible alarms, subsection 907.5.2.3 Visible alarms, subsection 907.2.3.1 Public use areas and common use areas** is hereby amended as follows:

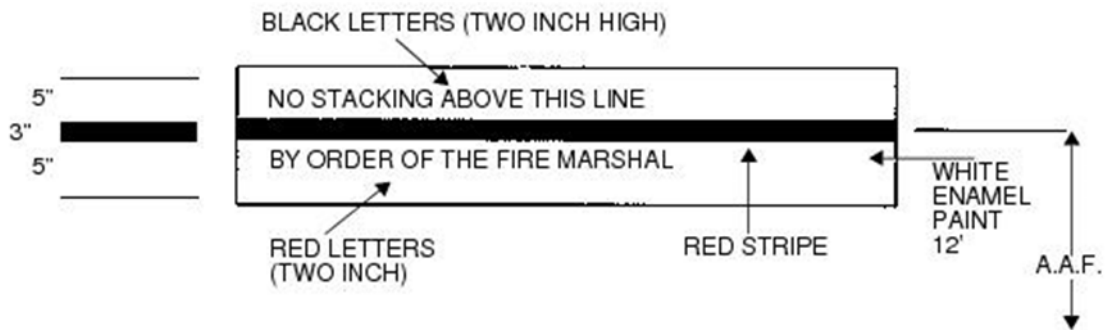
907.5.2.3.1 Employee Work Areas. Visible and audible alarm notification appliances shall be provided in employee work areas. For purposes of this chapter, a “fire wall,” “fire barrier” or “horizontal assembly” shall not be considered to separate a building so as to avoid the required automatic fire alarm and detection system. A building shall have a minimum distance of five feet from any point of the building to any point of another building and from the property line in order to be considered a separate building.

Exception: Where employee work areas have audible alarm coverage, the notification appliance circuits serving the employee work areas shall be initially designed with not less than 20-percent spare capacity to account for the potential of adding visible notification appliances in the future to accommodate hearing-impaired employee(s).

19. **Chapter 32 HIGH PILE COMBUSTIBLE STORAGE, SECTION 3205 HOUSEKEEPING AND MAINTENANCE, subsection 3205.6 Designation of storage heights** is hereby amended as follows:

3205.6 Designation of storage heights. Where required by the *fire code official*, a visual method of indicating the maximum allowable storage height shall be provided.

3205.6.1 – Signage. Facilities designed in accordance with this section shall include the appropriate signage (as shown below) and shall be properly posted.



1. This sign must be posted prior to building being stocked and/or occupied.
2. Mount signs at 50'0" O.C. on all walls starting 25'0" from any exterior corner; also on two sides of each column or other location approved by the fire marshal.
3. Signage required on end of racks, if installed.
4. In accordance with the International Fire Code as amended.

20. Chapter 61 LIQUEFIED PETROLEUM GAS, SECTION 6107 SAFETY PRECAUTIONS AND DEVICES is hereby amended as follows:

6107.1 Safety devices. Safety devices on LP-gas containers, equipment and systems shall not be tampered with or made ineffective.

6107.2 Smoking and other sources of ignition. "No Smoking" signs complying with Section 310 shall be posted where required by the fire code official. Smoking within 25 feet (7620 mm) of a point of transfer, while filling operations are in progress at LP-gas containers or vehicles, shall be prohibited.

6107.3 Clearance to combustibles. Weeds, grass, brush, trash and other combustible materials shall be kept not less than 10 feet (3048 mm) from LP-gas tanks or containers.

6107.4 Protecting containers from vehicles. Where exposed to vehicular damage due to proximity to alleys, driveways or parking areas, LP-gas containers, regulators and piping shall be protected in accordance with NFPA 58.

6107.5 Protecting containers from displacement. LP-gas containers greater than or equal to 125-gallons must be anchored or strapped to prevent lateral displacement. Anchors or straps must be an approved, listed device. Methods

of securing LP-gas containers 2,000-gallons or greater must be designed by a licensed professional.

Sec. 6107.6 Earthquake shut-off valves. LP-gas containers greater than or equal to 125-gallons must be protected with an approved, listed earthquake shut-off device.

6107.7 Non-compliant installed LP-gas containers. Existing, non-compliant LP-gas containers must be upgraded to comply with sections 6107.5 and 6107.6 when accessory to a building undergoing a change in use or when tank is replaced or modified.

21. **APPENDIX D FIRE APPARATUS ACCESS ROADS, SECTION D104 COMMERCIAL AND INDUSTRIAL DEVELOPMENTS** is hereby amended as follows:

D104.1 Buildings exceeding three stories or 30 feet in height. Buildings or facilities exceeding 30 feet (9144 mm) or three stories in height shall have not fewer than two means of fire apparatus access for each structure.

D104.2 Buildings exceeding 62,000 square feet in area. Buildings or facilities having a gross building area of more than 62,000 square feet (5760 m²) shall be provided with two separate and *approved* fire apparatus access roads.

Exception: Projects having a gross *building area* of up to 124,000 square feet (11 520 m²) that have a single approved fire apparatus access road where all buildings are equipped throughout with approved automatic sprinkler systems.

D104.3 Remoteness. Where two fire apparatus access roads are required, they shall be placed a distance apart equal to not less than one half of the length of the maximum overall diagonal dimension of the lot or area to be served, measured in a straight line between accesses.

D 104.3.1 Where the area to be served is adjacent to only one public access road or remoteness distance is not feasible due to topography, waterways, nonnegotiable grades, existing improvements or other similar conditions, fire apparatus access roads shall be located as distant as possible.

22. **APPENDIX D FIRE APPARATUS ACCESS ROADS, SECTION D106 MULTIPLE-FAMILY RESIDENTIAL DEVELOPMENT** is hereby amended as follows:

D106.1 Projects having more than 100 dwelling units. Multiple-family residential projects having more than 100 dwelling units shall be equipped throughout with two separate and approved fire apparatus access roads.

Exception: Projects having up to 200 dwelling units shall have not fewer than one approved fire apparatus access road where all buildings, including nonresidential occupancies, are equipped throughout with approved automatic sprinkler systems installed in accordance with Section 903.3.1.1 or 903.3.1.2.

D106.2 Projects having more than 200 dwelling units. Multiple-family residential projects having more than 200 dwelling units shall be provided with two separate and approved fire apparatus access roads regardless of whether they are equipped with an approved automatic sprinkler system.

D106.3 Remoteness. Where two fire apparatus access roads are required, they shall be placed a distance apart equal to not less than one-half of the length of the maximum overall diagonal dimension of the property or area to be served, measured in a straight line between accesses.

D 106.3.1 Where the area to be served is adjacent to only one public access road or remoteness distance is not feasible due to topography, waterways, nonnegotiable grades, existing improvements or other similar conditions, fire apparatus access roads shall be located as distant as possible.

23. APPENDIX D FIRE APPARATUS ACCESS ROADS, SECTION D107 ONE-OR-TWO-FAMILY RESIDENTIAL DEVELOPMENTS is hereby amended as follows:

D107.1 One- or two-family dwelling residential developments.

Developments of one- or two-family dwellings where the number of dwelling units exceeds 30 shall be provided with two separate and approved fire apparatus access roads.

Exceptions:

1. Where there are more than 30 dwelling units on a single public or private fire apparatus access road and all dwelling units are equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1, 903.3.1.2 or 903.3.1.3, access from two directions shall not be required.
2. The number of dwelling units on a single fire apparatus access road shall not be increased unless fire apparatus access roads will connect with future development, as determined by the *fire code official*.

D107.2 Remoteness. Where two fire apparatus access roads are required, they shall be placed a distance apart equal to not less than one-half of the length of the maximum overall diagonal dimension of the property or area to be served, measured in a straight line between accesses.

D 107.2.1 Where the area to be served is adjacent to only one public access road or remoteness distance is not feasible due to topography, waterways, nonnegotiable grades, existing improvements or other similar conditions, fire apparatus access roads shall be located as distant as possible.

24. **APPENDIX D FIRE APPARATUS ACCESS ROADS**, is hereby amended to include the following statement at the end of the Appendix:

In case of conflict between the requirements contained in Appendix D of the 2018 2021 International Fire Code, and the City of Pacific Design Standards, the requirements of the City of Pacific Design Standards shall govern.

- G. The Uniform Plumbing Code (2018 2021 Edition), published by the International Association of Plumbing and Mechanical Officials, and amended by the Washington State Building Code Council in Chapter 51-56 WAC, which shall be known hereafter as the “Uniform Plumbing Code” or the “UPC,” excluding Chapters 12 and 14 and those requirements of the Uniform Plumbing Code relating to venting and combustion air of fuel fired appliances as found in Chapter 5, and those portions of the code addressing building sewers, but including:

Appendix A: Recommended Rules for Sizing the Water Supply System;

Appendix B: Explanatory Notes on Combination Waste and Vent Systems; and

Appendix I: Installation Standards.

- H. International Energy Conservation Code (2018 2021 Edition)/Washington State Energy Code* as set forth in Chapter 51-11C WAC (Commercial); Chapter 51-11R WAC (Residential), together with Appendices A, B, C and D.

*Based on the 2015 IECC; “Residential” includes one- and two-family dwellings, townhouses and Group R-2 and R-3 buildings three stories or less; “Commercial” includes all buildings not covered under the definition “Residential.”

- I. The International Existing Building Code (2018 2021 Edition), published by the International Code Council, to be known hereafter as the “International Existing Building Code” or the “IEBC.”

- J. The International Swimming Pool and Spa Code (~~2018~~ 2021 Edition) published by the International Code Council, to be known hereafter as the “International Swimming Pool and Spa Code” or the “ISPSC.”
- K. The International Property Maintenance Code (~~2018~~ 2021 Edition), published by the International Code Council, to be known hereafter as the “International Property Maintenance Code” or the “IPMC.”
- L. The Washington State Manufactured Homes Installation Requirements, or Mobile Homes Installation Requirements. Pursuant to RCW 43.22.440, the installation standards of Chapter 296-150M WAC are adopted as amended by the state of Washington.
- M. The Washington State Factory Built Housing and Commercial Structures Installation Requirements, or Modular Installation Requirements. Pursuant to RCW 43.22.455, the installation standards of Chapter 296-150F WAC are adopted as amended by the state of Washington. (Ord. 1948 § 5, 2017).

Section 2. Severability. If any section, sentence, clause or phrase of this Ordinance should be held to be unconstitutional or unlawful by a court of competent jurisdiction, such invalidity or unconstitutionality shall not affect the validity or constitutionality of any other section, sentence, clause or phrase of this Ordinance.

Section 3. Publication. This Ordinance shall be published by an approved summary consisting of the title.

Section 4. Effective Date. This Ordinance shall take effect and be in full force and effect five days after publication, or following publication on July 1, 2023, whichever occurs later as provided by law.

PASSED by the City Council of Pacific this ___ day of ____, 2023.

Leanne Guier
Mayor

AUTHENTICATED:

City Clerk

APPROVED AS TO FORM:
Office of the City Attorney

Charlotte Archer, City Attorney

PUBLISHED:
EFFECTIVE DATE:



2021 International Building Code (IBC)

BASIC

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This code applies to all buildings except detached one- and two-family dwellings and townhouses up to three stories. The 2021 IBC® contains many important changes such as:

- Puzzle rooms (escape rooms) are now defined and regulated as special amusement areas, requiring compliance with Section 411 and special means of egress requirements.
- For the purposes of determining the allowable number of control areas in a building, each portion separated by one or more fire walls is now considered as a separate building.
- In Group E occupancies, enhanced classroom acoustics in compliance with ICC A117.1 are to be provided in all classrooms having of volume of 20,000 cubic feet or less.
- The requirements for metal composite materials and systems (MCM) installed on the exterior walls of Types I, II, III and IV construction were simplified and sprinkler allowances were deleted
- The use of intermodal shipping containers as buildings is now specifically addressed through provisions intended to supplement existing applicable IBC requirements.
- Automatic sprinkler protection is now required in Group S-2 open parking garages where any fire area exceeds 48,000 square feet.
- The 2017 edition of ICC A117.1 was adopted.
- Parapets of a minimum height are now required for aggregate-surfaced roofs to prevent blow-off.
- Mixed occupancy buildings with assembly spaces are placed in Risk Category III when the total public assembly occupant load is greater than 2500 people.
- The 2021 IBC snow map is updated to match ASCE 7-16 snow maps by adding a reference to ASCE 7 snow tables in states with large case study areas.
- Secondary rain loads are updated to be consistent with ASCE 7.
- Special inspection requirements were added to address the anchorage and connection of mass timber structural elements.
- Installation of firestop, fire-resistant joint systems and perimeter fire barrier systems in residential-use buildings now requires special inspection in Group R fire areas having an occupant load exceeding 250 people.
- Frost protection for egress doors was added to the foundation requirements.
- ACI standards ACI 117 and ITG 7 were added by reference to provide acceptable tolerances for concrete construction.
- Three new types of construction (Types IV-A, IV-B, and IV-C) allow mass timber buildings of taller heights, more stories above grade, and greater allowable areas compared to existing provisions for heavy timber buildings.



2021 International Residential Code (IRC) BASIC

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This comprehensive code comprises all building, plumbing, mechanical, fuel gas and electrical requirements for one- and two-family dwellings and townhouses up to three stories. The 2021 IRC® contains many important changes such as:

- Braced wall lines must be placed on a physical wall or placed between multiple walls.
- The rated separation for two-family dwellings is 1 hour whether or not a lot line exists between units.
- Emergency escape and rescue openings require a clear 36-inch-wide path to a public way.
- An engineered design is required for storm shelters.
- A habitable attic is limited to one-half the area of the story below and the dwelling requires sprinklers.
- Updated Wind Speed maps match IBC and ASCE 7 maps.
- Deck design now considers snow load, tributary area for footing and post height, and guard details.
- Specific requirements for deck guardrails were added.
- Component and cladding wind pressures in Table R301.2(2) are updated for new design wind speeds and hip or gable roof profiles.
- Minimum footing size tables are revised to more accurately reflect current practice.
- Cripple wall requirements apply only to exterior cripple walls.
- New appendices for cob construction and 3D printed construction are added.
- A 30 percent reduction of airflow is permitted for balanced ventilation systems.
- Commercial gas cooking appliances are prohibited.
- The head pressure for a water test of DWV systems increased to 10 feet.
- Air vacuum testing is now permitted for plastic piping DWV systems.
- Section P2904 for dwelling sprinklers is expanded to more closely align with NFPA 13D.
- An emergency service disconnect is required in a readily accessible outdoor location.
- A surge-protective device (SPD) is now required at the service panel.
- The number of receptacle outlets required for peninsular and island countertops in kitchens is determined by the area of the countertop surface.
- GFCI protection is now required for damp and wet locations not included in the other 10 areas requiring GFCI protection.



Home Innovation
RESEARCH LABS™

**ESTIMATED COSTS OF THE
2021 IRC CODE CHANGES**

Prepared For

National Association of Home Builders

January 18, 2022

Report No. CR1428-01182022

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ACRONYMS, ABBREVIATIONS, AND DEFINITIONS

| | |
|------|---|
| ASTM | American Society for Testing and Materials |
| CPVC | Chlorinated polyvinyl chloride |
| CY | Cubic yards |
| DHW | Domestic hot water |
| dia. | Diameter |
| EA | Each |
| ESS | Energy storage systems |
| HR | Hour |
| HVAC | Heating, ventilation, and air conditioning |
| ICC | International Code Council |
| IECC | International Energy Conservation Code |
| IN | Inch |
| IRC | International Residential Code |
| LF | Linear feet |
| MPH | Miles per hour |
| NPT | National pipe thread |
| O&P | Overhead and profit |
| PEX | Cross-linked polyethylene |
| PSF | Pounds per square foot |
| SF | Square feet |
| u.i. | United inches, a metric for window size consisting of the sum of the height and width of the window |
| WSP | Wood structural panel |

BACKGROUND

The 2021 International Residential Code (IRC) includes several changes which impact construction costs for residential construction.¹ The objective of this analysis is to quantify the incremental construction cost associated with constructing a house compliant with the 2021 IRC relative to a 2018 IRC baseline. Home Innovation Research Labs (Home Innovation) estimated the expected cost impacts of selected code changes provided by the National Association of Home Builders (NAHB) using four standard Reference Houses sited in various cities nationwide. Cost estimates are aggregated in ranges of high to low based on various methods or components that might be used to comply with the code.

METHODOLOGY

National Construction Cost

Reference Houses and their site locations were initially defined in a report titled *Estimated Costs of the 2015 IRC Code Changes*.² The four Reference Houses were selected for their similarity to new home offerings in the six metropolitan areas selected as site locations – Miami, Dallas, Los Angeles, Seattle, New York, and Chicago, and their size proximity to a national average of 2,607 SF. Additional information on the basis for the Reference House configurations is provided in Appendix C. Elevations and floor plans for these Reference Houses are provided in Appendices D through G. These single-family detached houses define the reference or base house that provides the starting point for estimation of the incremental cost or savings of the code change for the 2021 IRC relative to the 2018 IRC.

For this study, construction costs were developed primarily based on RSMeans 2021 Residential Cost Data.³ Costs for some materials were sourced from distributor websites. Costs associated with testing or fees provided by an energy rater, engineer, or other third party were estimated based on an internet search of associated web sites. Cost details are provided for individual code changes in Appendix A.

Appendix A costs are reported as both total to the builder and total to consumer. The total cost to builder includes overhead and profit (designated in the tables as “w/O&P”) applied to individual component costs (materials and labor) to represent the cost charged by the sub-contractor. The total cost to consumer is based on applying a builder’s gross profit margin of 19.0% to the builder’s total cost.⁴ These costs represent national average costs. For specific locations, the Appendix A costs could be modified by applying the appropriate location adjustment factor from RSMeans; selected location adjustment factors from RSMeans are listed in Appendix B.

¹ International Code Council, www.iccsafe.org/Pages/default.aspx

² Estimated Costs of the 2015 Code Changes, Home Innovation Research Labs, www.homeinnovation.com/trends_and_reports/featured_reports/estimated_costs_of_the_2015_irc_code_changes

³ RSMeans, <https://www.rsmeans.com/>

⁴ Industry average gross profit margin for 2017, as reported in NAHB’s Builder’s Cost of Doing Business Study, 2019 Edition, https://eyeonhousing.org/2019/03/builders-profit-margins-continue-to-slowly-increase/?_ga=2.73913042.1310550892.1620653840-1896975365.1593698293

Reference House Features

The Reference House features used in this analysis are shown in Table 1.

Table 1. Features of the Reference Houses

| Feature | Reference House | | | |
|-------------------------------------|-----------------|----------------|----------------|----------|
| | 1 | 2 | 3 | 4 |
| Square Feet | 2,607 | 2,607 | 2,607 | 2,607 |
| Foundation | Slab | Slab | Basement | Basement |
| Number of Stories | 1 | 2 | 1 | 2 |
| Number of Bedrooms | 3 | 4 | 3 | 4 |
| Number of Bathrooms | 2 | 2.5 | 2 | 3 |
| Garage, attached | 2-car | 2-car | 2-car | 2-car |
| Heat, Gas Furnace | Yes | Yes | Yes | Yes |
| Cooling, (Electric) central air | Yes | Yes | Yes | Yes |
| Hot Water, Gas 50 gallon tank | Yes | Yes | Yes | Yes |
| 9 ft. Ceilings, 1 st | Yes | Yes | Yes | Yes |
| 8 ft. Ceilings, 2 nd | n/a | n/a | Yes | Yes |
| Energy Star appliances | Yes | Yes | Yes | Yes |
| Laundry Room | Yes | Yes | Yes | Yes |
| Walls, 2x4 (Climate Zones 1 & 2) | Yes | Yes | n/a | n/a |
| Walls, 2x6 (Climate Zones 3 thru 8) | n/a | n/a | Yes | Yes |
| Basement, Conditioned, Unfinished | n/a | n/a | Yes | Yes |
| Furnace Location | Attic | Attic | Basement | Basement |
| Water Heater Location | Interior | Garage | Basement | Basement |
| Window SF/% gross wall | 360/18% | 315/12% | 360/18% | 330/12% |
| Cladding | Brick, 4 sides | Brick, 4 sides | Brick, 4 sides | Stucco |
| Roof Pitch | 12/12 | 6/12 | 9/12 | 4/12 |

RESULTS

Estimated Cost of 2021 IRC Code Compliance for Reference Houses by Location

Table 2 summarizes the estimated construction costs of the selected code changes that affect the Reference Houses. The costs are aggregated by location and house configuration. The results are grouped into four climate zone categories and reported in ranges of “High” and “Low” based on the code changes that would typically be applicable to the Reference Houses in those locations. It was assumed that the Reference Houses were not built in coastal zones or subject to flooding.

Table 3 summarizes the estimated construction costs of selected code changes that may or may not affect the Reference Houses and are not included in the aggregated summary. These code changes typically apply only in specific locations (e.g., hurricane-prone areas or flood zones), to items that would be an optional feature for most homes (e.g., decks), or to alternative methods of compliance. Those costs can be added to or subtracted from the aggregated costs in Table 2 as applicable to a particular location or a specific building.

The energy efficiency requirements in the IRC (Chapter 11) are the same as the residential provisions in the International Energy Conservation Code (IECC). Tables 2 and 3 include a line item cost for code changes in the 2021 IECC. This cost represents the total cost of selected changes that were estimated separately in a previous report by Home Innovation.⁵

A detailed analysis of each individual code change is provided in Appendix A.

⁵ Home Innovation Research Labs: 2021 IECC Residential Cost Effectiveness Analysis: https://www.nahb.org/-/media/NAHB/advocacy/docs/top-priorities/codes/code-adoption/2021-iecc-cost-effectiveness-analysis-hirl.pdf?_ga=2.27433528.541784929.1640700746-460189115.1639582871

Table 2. Estimated Cost to Consumer of 2021 IRC Code Compliance

| | | Selected Cities | Miami, Dallas | | Los Angeles, Seattle, New York | | Chicago, Helena | | Duluth, Fairbanks | |
|--|--|---|-----------------|----------------|--------------------------------|----------------|-----------------|----------------|-------------------|----------------|
| | | Climate Zones | 1 & 2 | | 3 & 4 | | 5 & 6 | | 7 & 8 | |
| | | Reference Houses | 1 & 2 | | 1, 2, 3, & 4 | | 3 & 4 | | 3 & 4 | |
| | | Cost Range (\$) | | | | | | | | |
| Ref # | Description of Change | 2021 IRC Section | High | Low | High | Low | High | Low | High | Low |
| R-8 (RB164) | Revises the minimum footing size in tables for consistency with common engineering practices. | R403.1; Tables R403.1(1-3) | \$329 | \$0 | \$329 | (\$398) | (\$346) | (\$1,061) | (\$693) | (\$1,061) |
| R-9 (RB183) | Requires vapor retarders for slab-on-ground floors be 10-mil and conform to ASTM D1743 Class A requirements (formerly required 6-mil) | R506.2.3 Vapor retarder | \$1,093 | \$543 | \$1,100 | \$543 | \$1,100 | \$543 | \$1,100 | \$543 |
| R-10 (RB238) | Requires an insulation stop be installed around exterior window and door openings to allow drainage of water. | R703.4.1 Flashing installation | \$1,419 | \$1,259 | \$1,419 | \$1,259 | \$1,419 | \$1,312 | \$1,419 | \$1,312 |
| R-11 (RB242) | Divides the water-resistant barrier requirements behind stucco into sections for dry climates and moist or marine climates, and for moist or marine climates requires a 3/16-inch air space or material with high drainage efficiency. | R703.7.3 Water-resistant barriers (stucco) | \$2,654 | \$0 | \$2,802 | \$0 | \$2,802 | \$0 | \$0 | \$0 |
| R-12 (RB289) | Adds testing requirements to Appendix AF Radon Control Methods. | AF104 Testing | \$278 | \$0 | \$278 | \$0 | \$278 | \$0 | \$278 | \$0 |
| Sub-Total IRC Building Provisions to Consumer | | | \$5,772 | \$1,802 | \$5,927 | \$1,404 | \$5,252 | \$794 | \$2,105 | \$794 |
| Sub-Total IECC Provisions to Consumer | | | \$8,369 | \$3,979 | \$11,755 | \$3,474 | \$11,900 | \$4,426 | \$8,354 | \$6,618 |
| Total to Consumer | | | \$14,141 | \$5,781 | \$17,682 | \$4,878 | \$17,152 | \$5,220 | \$10,459 | \$7,412 |

Table 3. Additional Cost to Consumer of 2021 IRC Code Compliance Not Attributed to the Reference Houses

| | | Selected Cities | Miami, Dallas | | Los Angeles, Seattle, New York | | Chicago | | Fairbanks | |
|----------------|---|--|---------------|-----------|--------------------------------|-----------|---------|-----------|-----------|-----------|
| | | Climate Zones | 1 & 2 | | 3 & 4 | | 5 & 6 | | 7 & 8 | |
| | | Reference Houses | 1 & 2 | | 1, 2, 3, & 4 | | 3 & 4 | | 3 & 4 | |
| | | Cost Range (\$) | | | | | | | | |
| Ref # | Description of Change | 2021 IRC Section | High | Low | High | Low | High | Low | High | Low |
| R-1 (G12.2) | Modifies the definition of "windborne debris region" to include sites within one mile of the mean high water line of an Exposure D condition. | R202 Definitions | \$7,174 | \$6,105 | \$7,174 | \$6,105 | \$7,174 | \$6,378 | NA | NA |
| R-2 (RB40) | Adds hillside homes as an irregular building type to be addressed by engineered design. | R301.2.2.6 Irregular buildings | \$2,222 | \$1,728 | \$2,222 | \$1,728 | \$2,222 | \$1,728 | \$2,222 | \$1,728 |
| R-3 (RB43) | Restores the ability to construct a story of a dwelling using 12-foot-high bearing walls without requiring an engineered design. | R301.3 Story height | \$0 | (\$1,481) | \$0 | (\$1,481) | \$0 | (\$1,481) | \$0 | (\$1,481) |
| R-4 (RB46) | Separates the live load requirements for guards and handrails and only requires guards to resist a 200-pound load in the outward and downward directions. | R301.5 Live load; Table R301.5 | \$394 | (\$301) | \$394 | (\$301) | \$394 | (\$301) | \$394 | (\$301) |
| R-5 (RB90) | For emergency escape and rescue openings, adds a requirement that window opening control devices shall not exceed 70 inches above the finished floor. | R310.1.1 Operational constraints - control devices | \$1,031 | \$0 | \$1,031 | \$0 | \$1,031 | \$0 | \$1,031 | \$0 |
| R-6 (RB152) | Requires a habitable attic to be considered a story above grade plan except where it meets specific criteria. | R326 Habitable attics | \$5,031 | \$4,671 | \$5,031 | \$4,671 | \$5,031 | \$4,671 | \$5,031 | \$4,671 |

| | | | | | | | | | | |
|------------------------|--|--|----------------|------------|----------------|------------|----------------|------------|----------------|------------|
| R-7 (RB154) | Replaces the term "Stationary Storage Battery Systems" with "Energy Storage Systems (ESS)" and expands requirements for ESS installations. | R202 Definitions; R328 Energy Storage Systems | \$1,919 | \$667 | \$3,548 | \$1,919 | \$3,548 | NA | \$3,548 | NA |
| R-13 (RB3) | Requires glazed areas in kitchens be openable unless a local exhaust system is installed. | R303.1 Habitable rooms | \$0 | (\$222) | \$0 | (\$222) | \$0 | (\$222) | \$0 | (\$222) |
| R-14 (RP10) | Limits the developed length of hot water piping to 100 feet. | P2905.3 Hot water supply to fixtures | \$784 | \$0 | \$784 | \$0 | \$784 | \$0 | \$784 | \$0 |
| IECC Provisions | | | \$1,401 | \$0 | \$4,045 | \$0 | \$4,164 | \$0 | \$4,105 | \$0 |

APPENDIX A: COST DETAILS OF INDIVIDUAL CODE CHANGES

R-1 (G12.2)

IRC R202 Definitions

Summary of Code Change:

The code change modifies the definition of "windborne debris region" to include sites within one mile of the mean high water line of an Exposure D condition (defined by 5,000 feet or more of open water upwind of the site) instead of just one mile from a coastal mean high water line.

Cost Implication of Code Change:

This revision could require buildings adjacent to wide rivers or large inland lakes but not directly fronting on the Atlantic Ocean or Gulf of Mexico to provide windborne debris protection where not already required by code. Analysis is based on the additional cost to install impact resistant glass (Table R-1-A) or panel type hurricane shutters (Table R-1-D) for the Reference Houses.

Note that installing wood structural panels for protection is an option that is primarily used for existing homes. Table R-1-F shows the estimated cost of wood structural panels as a low cost option for reference, but this cost is not included in rollup Table 3.

Applicability of Code Change:

Applicable for areas within hurricane-prone regions, Exposure D condition, ultimate design wind speed of 140 mph or greater.

Table R-1-A. Incremental Cost of Impact Resistant Windows

| Component | Reference House | | | |
|----------------------------|-----------------|--------------|--------------|--------------|
| | 1 | 2 | 3 | 4 |
| Standard window, insulated | (5,133) | (4,525) | (5,133) | (4,728) |
| Impact resistant window | 10,944 | 9,648 | 10,944 | 10,080 |
| Total to Builder | 5,811 | 5,123 | 5,811 | 5,352 |
| Total to Consumer | 7,174 | 6,324 | 7,174 | 6,607 |

Table R-1-B. Unit Cost of Windows

| Component | Unit | Material | Labor | Total | w/O&P | Cost/SF |
|--|------|----------|-------|--------|--------|---------|
| Vinyl double-hung, 101 u.i. | EA | 197.00 | | 197.00 | 216.70 | 13.51 |
| Impact resistant vinyl double-hung, 101 u.i. | EA | 420.00 | | 420.00 | 462.00 | 28.80 |

Table R-1-C. Window and Glass Door Area, SF

| Reference House | Window | Door | Total |
|-----------------|--------|------|-------|
| 1 | 360 | 20 | 380 |
| 2 | 315 | 20 | 335 |
| 3 | 360 | 20 | 380 |
| 4 | 330 | 20 | 350 |

Table R-1-D. Cost of Hurricane Panels, Clear Polycarbonate

| Component | Reference House | | | |
|--------------------------------------|-----------------|--------------|--------------|--------------|
| | 1 | 2 | 3 | 4 |
| Hurricane panel, clear polycarbonate | 5,609 | 4,945 | 5,609 | 5,166 |
| Total to Builder | 5,609 | 4,945 | 5,609 | 5,166 |
| Total to Consumer | 6,925 | 6,105 | 6,925 | 6,378 |

Table R-1-E. Unit Cost of Polycarbonate Hurricane Panels

| Component | Unit | Material | Labor | Total | w/O&P |
|---------------------------------------|------|----------|-------|-------|-------|
| Hurricane panels, clear polycarbonate | SF | 10.00 | 2.28 | 12.28 | 14.76 |

Table R-1-F. Cost of Hurricane Panels, Wood Structural Panels

| Component | Reference House | | | |
|--------------------------|-----------------|--------------|--------------|--------------|
| | 1 | 2 | 3 | 4 |
| WSP, 1/2 CDX | 2,737 | 2,395 | 2,737 | 2,509 |
| Total to Builder | 2,737 | 2,395 | 2,737 | 2,509 |
| Total to Consumer | 3,379 | 2,956 | 3,379 | 3,097 |

Table R-1-G. Unit Cost of Wood Structural Panel

| Component | Unit | Material | Labor | Total | w/O&P | Quantity | Cost |
|------------------------------------|------|----------|-------|-------|--------|----------|------------|
| 4' x 8' x 1/2 CDX | EA | 16.64 | | 16.64 | 18.30 | 1 | 18 |
| Storm panel screws | EA | 2.34 | | 2.34 | 2.58 | 16 | 41 |
| Labor: cut, install, remove, store | HR | | | | 108.90 | 0.5 | 54 |
| Total | | | | | | | 114 |

R-2 (RB40)

IRC R301.2.2.6 Irregular buildings

Summary of Code Change:

The code change adds hillside light-frame construction houses as an irregular building type to be addressed by an engineered design, where all criteria apply for grade slope, cripple wall height, and living space below the lowest framed floor, with an exception for concrete or masonry foundations over the full length of all sides except the downhill side.

Cost Implication of Code Change:

This code change may increase the cost of hillside light-frame construction where applicable. Analysis is based on the estimated cost of an engineered design for an average size house. The analysis does not include the additional cost of foundation reinforcing, blocking within the lowest framed floor, tie-backs, and other structural elements as the design of such elements will be project-specific and depend on the seismic design category, grade slope, cripple wall height, foundation type and other features of the house.

Applicability of Code Change:

This code change is applicable to hillside light-frame construction (not applicable to the Reference Houses because those have either slab-on-grade or full basement foundations).

Table R-2-A. Cost of an engineered design for a hillside home: high estimate

| Component | Unit | Material | Labor | Total | w/O&P | Quantity | Cost |
|--------------------------|------|----------|-------|-------|---------|----------|--------------|
| Engineering fee | EA | | | | 1800.00 | 1 | 1,800 |
| Total to Builder | | | | | | | 1,800 |
| Total to Consumer | | | | | | | 2,222 |

Table R-2-B. Cost of an engineered design for a hillside home: low estimate

| Component | Unit | Material | Labor | Total | w/O&P | Quantity | Cost |
|--------------------------|------|----------|-------|-------|---------|----------|--------------|
| Engineering fee | EA | | | | 1400.00 | 1 | 1,400 |
| Total to Builder | | | | | | | 1,400 |
| Total to Consumer | | | | | | | 1,728 |

R-3 (RB43)

IRC R301.3 Story height

Summary of Code Change:

The code change adds an exception allowing a story of a dwelling to be constructed using 12-foot-high bearing walls provided the wall studs meet Exception 2 or 3 of Section R602.3.1 or are engineered for gravity and out-of-plane wind loads, and wall bracing amounts for the story in question are adjusted in accordance with Section R602.10.

Cost Implication of Code Change:

Analysis is based on the estimated cost savings where an engineered design is no longer required. The analysis does not include any additional cost savings associated with reduced wall bracing, hold-downs, and other structural elements as the design of such elements will be project-specific and depend on the seismic design category and other features of the house.

Applicability of Code Change:

Applicable for designs with bearing walls up to 12-feet-high.

Table R-3-B. Cost saving where an engineered design is no longer required: high estimate

| Component | Unit | Material | Labor | Total | w/O&P | Quantity | Cost |
|--------------------------|------|----------|-------|-------|---------|----------|----------------|
| Engineered design | EA | | | | 1200.00 | (1) | (1,200) |
| Total to Builder | | | | | | | (1,200) |
| Total to Consumer | | | | | | | (1,481) |

Table R-3-A. Cost saving where an engineered design is no longer required: low estimate

| Component | Unit | Material | Labor | Total | w/O&P | Quantity | Cost |
|--------------------------|------|----------|-------|-------|--------|----------|--------------|
| Engineered design | EA | | | | 600.00 | (1) | (600) |
| Total to Builder | | | | | | | (600) |
| Total to Consumer | | | | | | | (741) |

R-4 (RB46)

IRC Table R301.5

Summary of Code Change:

The code change separates the live load requirements for guards and handrails and only requires guards to resist a 200-pound load in the outward and downward directions, i.e., the guard system is intended to protect against a fall from a higher elevation to a lower elevation.

Cost Implication of the Code Change:

This change may increase or decrease the cost of construction. For 2021, IRC Section R507 Exterior Decks adds a new section R507.10 Exterior guards that requires guard loads be transferred to the deck framing with a continuous load path to the deck joists. Where guards are connected to the side of a deck joist, the joist must be connected to the adjacent joists to prevent rotation of the joist. Section R507.10 does not prescribe methods of attachment.

Analysis is based on two scenarios for a 20-foot wide by 14-foot deep deck, with 11 guard posts (based on maximum 6-foot spacing) installed inside the deck joists. The first scenario represents a cost increase, assuming the guard posts were previously only bolted to the rim joist or side joist with two ½" diameter bolts each post, and no blocking or other method of transferring loads to adjacent joists or deck framing is provided, and now blocking and longer bolts are required (Table R-4-A). The second scenario represents a cost savings, assuming loads from the guard posts were previously transferred to the deck framing using blocking and tension ties at both the top and bottom bolts, and now tension ties are only required for the top bolts (Table R-4-B).

Applicability of Code Change:

Applicable where outdoor decks are installed that require a guard.

Table R-4-A. Incremental Cost of Guard Post Connection Using Blocking & Commodity Fasteners

| Component | Unit | Material | Labor | Total | w/O&P | Quantity | Cost |
|--------------------------|------|----------|-------|-------|-------|----------|------------|
| Blocking, 2x10 treated | LF | 2.08 | 1.35 | 3.43 | 4.49 | 50 | 224 |
| Blocking, 4x4 treated | LF | 2.26 | 1.35 | 3.61 | 4.68 | 8 | 37 |
| Drill hole for bolts | IN | | 0.65 | 0.65 | 1.06 | 33 | 35 |
| 1/2 galv bolts, 6" | EA | 2.11 | 2.09 | 4.20 | 5.72 | (22) | (126) |
| 1/2 galv bolts, 10" | EA | 2.77 | 2.26 | 5.03 | 6.73 | 22 | 148 |
| Total to Builder | | | | | | | 319 |
| Total to Consumer | | | | | | | 394 |

Table R-4-B. Cost Savings of Guard Post Connection Using Blocking and (1) Tension-Tie per post instead of (2)

| Component | Unit | Material | Labor | Total | w/O&P | Quantity | Cost |
|--------------------------|------|----------|-------|-------|-------|----------|--------------|
| Tension tie, with screws | EA | 14.89 | 3.56 | 18.45 | 22.17 | (11) | (244) |
| Total to Builder | | | | | | | (244) |
| Total to Consumer | | | | | | | (301) |

R-5 (RB90)

IRC R310.1.1 Operational constraints and opening control devices (R310 Emergency Escape and Rescue Openings)

Summary of Code Change:

For emergency escape and rescue openings, the code change adds a requirement that window opening control devices shall be not more than 70 inches above the finished floor.

Cost Implication of the Code Change:

This change may increase the cost of construction in some cases. There is no cost impact for an example single-hung or double-hung window, 48-inches tall, installed in a 9-foot tall wall, with a 24-inch vertical opening, 44-inch sill height (maximum allowed), and 2-inch tall latch, where the latch height would be 70 inches.

For a casement window or sliding window with high and low latches, the height of the high latch could exceed 70 inches. For an example casement window, 60-inches tall, with a 32-inch sill height, low latch 20-inches above the sill, and high latch 40-inches above the sill, the height of the high latch above the floor would be 72 inches. The analysis is based on the cost to install a 24-inch tall casement above a 36-inch tall egress casement, in place of a 60-inch tall casement window, based on a quantity of two egress windows in the master bedroom and one egress window in the other three bedrooms. It is assumed that installing a compliant single-hung or double-hung window is not an acceptable choice where the house has all casement windows.

Applicability of Code Change:

Applicable where the latch height of an emergency escape window exceeds 70 inches.

Table R-5-A. Incremental Cost of Compliance for Example Casement Window

| Component | Unit | Material | Labor | Total | w/O&P | Quantity | Cost |
|---|------|----------|-------|--------|--------|----------|--------------|
| Vinyl-clad casement, insulated low-E, 2'x5' | EA | 355.00 | 36.50 | 391.50 | 450.00 | (5) | (2,250) |
| Vinyl-clad casement, insulated low-E, 2'x3' | EA | 266.00 | 29.50 | 295.50 | 340.00 | 5 | 1,700 |
| Vinyl-clad casement, insulated low-E, 2'x2' | EA | 208.00 | 29.50 | 237.50 | 277.00 | 5 | 1,385 |
| Total to Builder | | | | | | | 835 |
| Total to Consumer | | | | | | | 1,031 |

R-6 (RB152)

IRC R326 Habitable attics (new)

Summary of Code Change:

The code change requires a habitable attic to be considered a story above grade plane except where it meets specific criteria. For a habitable attic not to be considered a story above grade plane, it must be no greater than 1/3 of the floor area below and can only be located over a first or second story above grade plane. A habitable attic can be up to 1/2 of the floor area below or located over a third story above grade plane if an automatic fire sprinkler system is installed.

Cost Implication of the Code Change:

This code change may increase the cost of construction in some cases. Analysis is based on the additional cost to install a fire sprinkler system for an example townhouse where a habitable attic is provided above the third story of the townhouse, effectively creating a four-story townhouse.⁶ The estimated cost of the sprinkler system is shown in Table R-6-A. The water source is assumed to be public (municipal); homes on well water commonly require a stored water source with pump and tank which can add significantly to the cost of a sprinkler system.

The National Fire Protection Agency (NFPA) reports that the average cost of a residential sprinkler system in 2013 was \$1.35 per “sprinklered” square foot.⁷ That cost rises to \$1.63 when adjusted for inflation through 2021.⁸ The estimated cost of a sprinkler system based on this value for the example townhouse is shown in Table R-6-C.

Applicability of Code Change:

Applicable where a space meeting the criteria to be considered a habitable attic is provided.

⁶ Example townhouse adapted from the Standard Reference Townhouse used by Home Innovation in a prior study: https://www.homeinnovation.com/trends_and_reports/featured_reports/2018_icc_cost_analysis_for_mf_buildings

⁷ Home Fire Sprinkler Cost Assessment – 2013: <https://www.nfpa.org/-/media/Files/News-and-Research/Fire-statistics-and-reports/Suppression/HomeFireSprinklerCostAssessment2013.ashx>

⁸ CPI Inflation Calculator: https://www.bls.gov/data/inflation_calculator.htm

Table R-6-A. Cost of Sprinkler System

| Component | Unit | Material | Labor | Total | w/O&P | Quantity* | Cost |
|--|------|----------|-------|--------|--------|-----------|--------------|
| Flow alarm | EA | 116.00 | 12.70 | 128.70 | 149.00 | 1 | 149 |
| Flow switch (valve supervisory switch) | EA | 267.00 | 20.50 | 287.50 | 330.00 | 1 | 330 |
| Sprinkler head, fast response glass bulb, 135-155°F | EA | 37.00 | 20.50 | 57.50 | 74.00 | 12 | 888 |
| Sprinkler head escutcheons, standard, brass tone, 1" | EA | 3.80 | 8.25 | 12.05 | 17.65 | 12 | 212 |
| CPVC fire suppression pipe, 1" | LF | 1.81 | 1.74 | 3.55 | 4.84 | 200 | 968 |
| CPVC fire suppression tee, 1" | EA | 5.05 | 21.50 | 26.55 | 41.00 | 14 | 574 |
| CPVC fire suppression 90 elbow, 1" | EA | 4.11 | 14.55 | 18.66 | 28.50 | 12 | 342 |
| CPVC fire suppression cap, 1" | EA | 1.55 | 7.35 | 8.90 | 13.70 | 4 | 55 |
| CPVC fire suppression coupling, 1" | EA | 2.38 | 14.55 | 19.93 | 26.50 | 2 | 53 |
| CPVC fire suppression adapter, metal thread, 1"x1/2" | EA | 5.25 | 7.35 | 12.60 | 17.75 | 12 | 213 |
| Total to Builder | | | | | | | 3,784 |
| Total to Consumer | | | | | | | 4,671 |

***Table R-6-B. Quantity of Sprinkler Heads, 4-story townhouse**

| Room | Qty |
|----------------------|-----------|
| Bedrooms (3) | 4 |
| Bedroom Hallway | 1 |
| Attic Loft | 1 |
| Living Room | 1 |
| Dining Room | 1 |
| Family Room | 1 |
| Kitchen | 1 |
| Garage, ground level | 2 |
| Total | 12 |

Table R-6-C. Cost of Sprinkler System based on NFPA reported average cost

| Component | Unit | Material | Labor | Total | w/O&P | Quantity | Cost |
|--------------------------|------|----------|-------|-------|-------|----------|--------------|
| Reported Cost | SF | | | | 1.63 | 2,500 | 4,075 |
| Total to Builder | | | | | | | 4,075 |
| Total to Consumer | | | | | | | 5,031 |

R-7 (RB154)

IRC R328 Energy Storage Systems

Summary of Code Change:

The code change replaces the term “Stationary Storage Battery Systems” with “Energy Storage Systems (ESS)” and expands requirements for ESS installations. ESS can only be installed in garages, detached accessory structures, outdoors, or inside a dwelling in enclosed utility closets, basements, storage, or utility spaces with finished or noncombustible walls and ceilings. Depending on where an ESS is installed, smoke alarms (and in certain cases heat detectors), vehicle barriers, mechanical ventilation (where charging could produce hydrogen or other flammable gases), and/or an enclosed space with finished or noncombustible walls and ceilings must be provided.

Cost Implication of the Code Change:

Analysis is based on the additional cost for an ESS-ready space in a garage or basement. It is assumed that the ESS does not produce hydrogen or flammable gases and therefore does not require ventilation (otherwise, an explosion-proof ventilation fan would be required). For an ESS-ready space in a garage, it is assumed bollards for protection from vehicles and a smoke detector are provided (Table R-7-A). Alternatively, a cost is provided for protection from vehicles using a curb (Table R-7-B). For an ESS-ready space in a basement, it is assumed a 12-foot by 12-foot enclosed space with wood-frame walls finished with Type X gypsum is provided with a smoke detector for the enclosed space (Table R-7-C).

Applicability of Code Change:

Applicable where an indoor ESS or ESS-ready space is to be installed. Note that manufacturer instructions may limit ESS installation in garages to where the garage temperature will not fall below freezing.

Table R-7-A. ESS-Ready Garage Location: Bollards for Protection from Vehicles

| Component | Unit | Material | Labor | Equipment | Total | w/O&P | Quantity | Cost |
|---|------|----------|--------|-----------|--------|--------|----------|--------------|
| Impact protection: (3) Safety Bollards, steel, bolted, concrete filled, 5" dia. | LF | 58.00 | 1.93 | 1.68 | 61.61 | 68.50 | 16 | 1,096 |
| Footing for bollard | CY | 208.00 | 140.00 | 0.96 | 348.96 | 460.00 | 0.5 | 230 |
| Smoke detector, hardwired, ceiling | EA | 126.00 | 55.00 | | 181.00 | 228.00 | 1 | 228 |
| Total to Builder | | | | | | | | 1,554 |
| Total to Consumer | | | | | | | | 1,919 |

Table R-7-B. ESS-Ready Garage Location: Curbs for Protection from Vehicles

| Component | Unit | Material | Labor | Equipment | Total | w/O&P | Quantity | Cost |
|---|------|----------|-------|-----------|--------|--------|----------|------------|
| Impact protection: precast concrete curb, 6" wide | LF | 9.05 | 2.10 | 1.22 | 12.37 | 14.70 | 16 | 235 |
| Drilling concrete floor for rebar | EA | 0.05 | 5.85 | | 5.90 | 9.65 | 8 | 77 |
| Smoke detector, hardwired, ceiling | EA | 126.00 | 55.00 | | 181.00 | 228.00 | 1 | 228 |
| Total to Builder | | | | | | | | 540 |
| Total to Consumer | | | | | | | | 667 |

Table R-7-C. ESS-Ready Basement Location: 12' x 12' Room

| Component | Unit | Material | Labor | Equipment | Total | w/O&P | Quantity | Cost |
|--------------------------------------|------|----------|-------|-----------|--------|--------|----------|--------------|
| Partition wall, 2x4, 16oc, 8' tall | LF | 6.35 | 4.89 | | 11.24 | 15.00 | 48 | 720 |
| Door, pre-hung interior, louvered | EA | 216.00 | 34.50 | | 250.50 | 294.00 | 1 | 294 |
| Door, lockset | EA | 14.23 | 24.50 | | 38.73 | 56.08 | 1 | 56 |
| Electrical, duplex outlet, 120V | EA | 7.30 | 23.50 | | 30.80 | 46.00 | 4 | 184 |
| Electrical, lighting switch & outlet | EA | 6.85 | 20.00 | | 26.85 | 40.00 | 1 | 40 |
| Electrical, porcelain lamp holder | EA | 2.75 | 8.55 | | 11.30 | 16.95 | 1 | 17 |
| Electrical, exhaust fan hook-up | EA | 5.90 | 10.70 | | 16.60 | 24.00 | 1 | 24 |
| Smoke detector, hardwired, ceiling | EA | 126.00 | 55.00 | | 181.00 | 228.00 | 1 | 228 |
| HVAC supply branch duct | LF | 1.94 | 2.05 | | 3.99 | 5.50 | 15 | 83 |
| HVAC supply branch register | EA | 61.50 | 21.50 | | 83.00 | 103.00 | 1 | 103 |
| Drywall, 5/8" Type X, finished | SF | 0.43 | 0.61 | | 1.04 | 1.46 | 576 | 841 |
| Paint, latex, spray primer & 1 coat | SF | 0.15 | 0.15 | | 0.30 | 0.41 | 576 | 236 |
| Paint, door | EA | 10.70 | 22.50 | | 33.20 | 48.00 | 1 | 48 |
| Total to Builder | | | | | | | | 2,874 |
| Total to Consumer | | | | | | | | 3,548 |

R-8 (RB164)

IRC R403.1 General (R403 Footings); Tables R403.1(1-3)

Summary of Code Change:

The code change revises the minimum footing width in the footing tables to correct errors in applying structural load combinations and revise the dead and live load assumptions to reflect the most common framing and finishes used in houses. The revisions generally result in smaller footing widths due to the less conservative loading assumptions, though footings for one- and two-story slab-on-grade homes may increase due to correcting the errors in the engineering calculations.

Cost Implication of the Code Change:

The cost analysis compares footing requirements for the Reference Houses using a soil bearing capacity of 2,000 psf, and live/snow loads of 30 psf and 70 psf. The difference in the amount of concrete required for the footings in cubic yards (CY) is used to calculate the cost impact. It is assumed that excavation costs remain the same.

Applicability of Code Change:

Applicable for all Reference Houses.

Table R-8-A. Incremental Cost of Footing, 30 psf snow load

| Component | Reference House | | | |
|-------------------------------|-----------------|------------|--------------|--------------|
| | 1 | 2 | 3 | 4 |
| Concrete, 3000 psi, over 5 CY | | | (280) | (322) |
| Concrete, 3000 psi, 1-5 CY | 0 | 266 | | |
| Total to Builder | 0 | 266 | (280) | (322) |
| Total to Consumer | 0 | 329 | (346) | (398) |

Table R-8-B. Incremental Cost of Footing, 70 psf snow load

| Component | Reference House | | | |
|-------------------------------|-----------------|------------|--------------|----------------|
| | 1 | 2 | 3 | 4 |
| Concrete, 3000 psi, over 5 CY | | | (561) | (859) |
| Concrete, 3000 psi, 1-5 CY | 0 | 133 | | |
| Total to Builder | 0 | 133 | (561) | (859) |
| Total to Consumer | 0 | 164 | (693) | (1,061) |

Table R-8-C. Unit Cost of Footing

| Component | Unit | Material | Labor | Equip | Total | w/O&P |
|-------------------------------|------|----------|-------|-------|--------|--------|
| Concrete, 3000 psi, over 5 CY | CY | 245.00 | 52.50 | 0.36 | 297.86 | 355.00 |
| Concrete, 3000 psi, 1-5 CY | CY | 266.00 | 91.00 | 0.63 | 357.63 | 440.00 |

Table R-8-D. Quantity of Additional Concrete based on Minimum Footing Size, for Brick Veneer/Stucco, 2,000 psf soil

| Reference House | LF | Snow | 2018 IRC | | | 2021 IRC | | | Additional |
|----------------------|-----|--------|----------|-----------|-----|----------|-----------|-----|------------|
| | | Load | Width | Thickness | CY | Width | Thickness | CY | CY |
| 1 (1-story slab) | 256 | 30 psf | 12 | 6 | 4.7 | 12 | 6 | 4.7 | 0.0 |
| 2 (2-story slab) | 196 | | 12 | 6 | 3.6 | 14 | 6 | 4.2 | 0.6 |
| 3 (1-story basement) | 256 | | 16 | 6 | 6.3 | 14 | 6 | 5.5 | (0.8) |
| 4 (2-story basement) | 196 | | 21 | 6 | 6.4 | 18 | 6 | 5.4 | (0.9) |
| 1 (1-story slab) | 256 | 70 psf | 12 | 6 | 4.7 | 12 | 6 | 4.7 | 0.0 |
| 2 (2-story slab) | 196 | | 15 | 6 | 4.5 | 16 | 6 | 4.8 | 0.3 |
| 3 (1-story basement) | 256 | | 20 | 6 | 7.9 | 16 | 6 | 6.3 | (1.6) |
| 4 (2-story basement) | 196 | | 24 | 7 | 8.5 | 20 | 6 | 6.0 | (2.4) |

R-9 (RB183)

IRC R506.2.3 Vapor retarder

Summary of Code Change:

The code change requires vapor retarders for slab-on-ground floors to be minimum 10-mil and conform to ASTM D1743 Class A requirements (formerly required minimum 6-mil construction-grade sheet polyethylene).

Cost Implication of the Code Change:

This code change will increase the cost of construction. Analysis is based on the additional cost of slab-on-ground floors for the Reference Houses, including basements and garages. Note that the vapor barrier is not required for garages, but garages are included as conventional practice and so the contractor need not stock two types of vapor barrier.

Applicability of Code Change:

Applicable for all Reference Houses.

Table R-9-A. Incremental Cost of Vapor Retarder

| Component | Reference House | | | |
|----------------------------|-----------------|------------|--------------|------------|
| | 1 | 2 | 3 | 4 |
| Vapor retarder, 6-mil poly | (498) | (247) | (502) | (247) |
| 10-mil, ASTM E1745 Class A | 1,383 | 687 | 1,393 | 687 |
| Total to Builder | 885 | 440 | 891 | 440 |
| Total to Consumer | 1,093 | 543 | 1,100 | 543 |

Table R-9-B. Unit Cost of Vapor Retarder

| Component | Unit | Material | Labor | Total | w/O&P |
|----------------------------|------|----------|-------|-------|-------|
| Vapor retarder, 6-mil poly | SF | 0.04 | 0.08 | 0.12 | 0.17 |
| 10-mil, ASTM E1745 Class A | SF | 0.31 | 0.08 | 0.39 | 0.46 |

Table R-9-C. Slab-on-ground floor area, SF

| Reference House | First floor | Garage | Basement | Total |
|----------------------|-------------|--------|----------|-------|
| 1 (1-story slab) | 2,600 | 380 | | 2,980 |
| 2 (2-story slab) | 1,080 | 400 | | 1,480 |
| 3 (1-story basement) | | 400 | 2,600 | 3,000 |
| 4 (2-story basement) | | 400 | 1,080 | 1,480 |

R-10 (RB238)

IRC R703.4.1 Flashing installation

Summary of Code Change:

The code change requires air sealing be installed around exterior window and door openings, on the interior side of the rough opening gap, to allow for drainage of water.

Cost Implication of the Code Change:

This code change will increase the cost of construction. Analysis is based on the additional cost to install backer rod, to maintain the rough opening gap for drainage, and seal the backer rod from the interior.

Applicability of Code Change:

Applicable for all Reference Houses.

Table R-10-A. Incremental Cost of Backer Rod and Sealant

| Component | Reference House | | | |
|--|-----------------|--------------|--------------|--------------|
| | 1 | 2 | 3 | 4 |
| Backer rod, polyethylene, 1/4" dia. | 443 | 393 | 443 | 410 |
| Sealant, latex acrylic, 1/4" x 1/4" bead | 706 | 627 | 706 | 653 |
| Total to Builder | 1,150 | 1,020 | 1,150 | 1,063 |
| Total to Consumer | 1,419 | 1,259 | 1,419 | 1,312 |

Table R-10-B. Unit Cost of Backer Rod and Sealant

| Component | Unit | Material | Labor | Total | w/O&P |
|--|------|----------|-------|-------|-------|
| Backer rod, polyethylene, 1/4" dia. | LF | 0.03 | 0.63 | 0.65 | 1.06 |
| Sealant, latex acrylic, 1/4" x 1/4" bead | LF | 0.10 | 0.96 | 1.06 | 1.69 |

Table R-10-C. Total Perimeter of Windows and Doors, LF

| Reference House | Window Area | Window Perimeter | Door Area | Door Perimeter | Total Perimeter |
|-----------------|-------------|------------------|-----------|----------------|-----------------|
| 1 | 360 | 378 | 42 | 40 | 418 |
| 2 | 315 | 331 | 42 | 40 | 371 |
| 3 | 360 | 378 | 42 | 40 | 418 |
| 4 | 330 | 347 | 42 | 40 | 387 |

R-11 (RB242)

IRC R703.7.3 Water-resistive barriers (R703.7 Stucco)

Summary of Code Change:

The code change divides the water-resistive barrier requirements behind stucco into sections for dry climates and moist or marine climates, and for moist or marine climates requires a 3/16-inch air space or material with high drainage efficiency.

Cost Implication of the Code Change:

This code change will increase the cost of construction where applicable. Analysis is based on the incremental cost to install a drainage mat product in addition to the required two layers of water resistive barrier, as shown in Table R-11-A; this cost represents the “high” cost. The low cost would be zero where the code change is not applicable. A cost was also developed for an alternative approach: a drainable house wrap (e.g., Tyvek StuccoWrap) applied as the second layer of water resistive barrier instead of Grade D building paper (Table R-11-D); this cost represents an intermediate cost and therefore is not included in Table 2.

Applicability of Code Change:

Applicable for houses with stucco exterior wall cladding in moist and marine climates.

Table R-11-A. Incremental Cost of Drainage Mat

| Component | Reference House | | | |
|---------------------------|-----------------|-------|-------|-------|
| | 1 | 2 | 3 | 4 |
| Drainage Mat (Rainscreen) | 1,585 | 2,150 | 1,761 | 2,269 |
| Total to Builder | 1,585 | 2,150 | 1,761 | 2,269 |
| Total to Consumer | 1,957 | 2,654 | 2,174 | 2,802 |

Table R-11-B. Unit Cost of Water Resistive Barrier & Drainage Mat Products

| Component | Unit | Material | Labor | Total | w/O&P |
|---------------------------|------|----------|-------|-------|-------|
| Drainage Mat (Rainscreen) | SF | 0.58 | 0.08 | 0.66 | 0.77 |
| House wrap, drainable | SF | 0.24 | 0.08 | 0.32 | 0.39 |
| Building Paper | SF | 0.06 | 0.08 | 0.14 | 0.19 |

Table R-11-C. Gross Wall Area, SF

| Reference House | SF |
|----------------------|-------|
| 1 (1-story slab) | 2,070 |
| 2 (2-story slab) | 2,808 |
| 3 (1-story basement) | 2,300 |
| 4 (2-story basement) | 2,964 |

Table R-11-D. Incremental Cost of Drainable House Wrap as the Second Layer of Water Resistive Barrier

| Component | Reference House | | | |
|--------------------------|-----------------|-------|-------|-------|
| | 1 | 2 | 3 | 4 |
| House wrap, drainable | 811 | 1,100 | 901 | 1,161 |
| Building paper | (393) | (534) | (437) | (563) |
| Total to Builder | 417 | 566 | 464 | 598 |
| Total to Consumer | 515 | 699 | 572 | 738 |

R-12 (RB289)

IRC AF104 Testing (Radon)

Summary of Code Change:

The code change adds testing requirements to Appendix AF Radon Control Methods. Testing may be performed by the contractor, a registered design profession (engineer or architect), or an independent third party (i.e., a radon tester certified by the National Radon Proficiency Program or National Radon Safety Board), and the code change includes detailed testing instructions.

Cost Implication of the Code Change:

Analysis is based on the additional cost of radon testing by a certified third party professional.

Applicability of Code Change:

Applicable where radon-resistant construction is required.

Table R-12-A. Cost of Radon Testing

| Component | Unit | Material | Labor | Total | w/O&P | Quantity | Cost |
|----------------------------|------|----------|-------|-------|--------|----------|------------|
| Radon testing, third party | EA | | | | 225.00 | 1 | 225 |
| Total to Builder | | | | | | | 225 |
| Total to Consumer | | | | | | | 278 |

R-13 (RB3)

IRC R303.1 Habitable rooms

Summary of Code Change:

The code change requires the glazed areas in the kitchen be openable unless a local exhaust system is installed in accordance with section M1505.

Cost Implication of the Code Change:

Since now the kitchen window need not be openable where an exhaust hood is installed in accordance with M1505 (required), the analysis is based on a potential cost saving to install a non-openable kitchen window.

Applicability of Code Change:

Applicable where the house design includes a kitchen with a window.

Table R-13-A. Cost Savings for Non-Openable Kitchen Window

| Component | Unit | Material | Labor | Total | w/O&P | Quantity | Cost |
|---|------|----------|-------|--------|--------|----------|--------------|
| 47" x 47" vinyl 2-lite casement window | EA | 500.00 | 34.50 | 534.50 | 605.00 | (1) | (605) |
| 47" x 47" vinyl picture (fixed pane) window | EA | 315.00 | 49.00 | 364.00 | 425.00 | 1 | 425 |
| Total to Builder | | | | | | | (180) |
| Total to Consumer | | | | | | | (222) |

R-14 (RP10)

IRC P2905.3

Summary of Code Change:

The code change adds a new section that limits the maximum length of hot water piping, from the source of hot water to the fixtures that require hot water, to 100 feet. Where more than 100 feet of piping is required, either an additional water heater or a recirculation system would need to be installed.

Cost Implication of the Code Change:

This code change will increase the cost of construction where applicable. Analysis is based on the additional cost to install a hot water circulation system.

Applicability of Code Change:

Applicable where the developed length of hot water piping exceeds 100 feet (most likely not applicable at the Reference Houses).

Table R-14-A. Cost of Domestic Hot Water (DHW) Recirculation System

| Component | Unit | Material | Labor | Total | w/O&P | Quantity | Cost |
|--|------|----------|-------|--------|--------|----------|------------|
| DHW recirculation pump, mechanical timer | HR | 205.19 | | 205.19 | 225.71 | 1 | 226 |
| Electrical outlet, 120V | EA | 7.30 | 23.50 | 30.80 | 46.00 | 1 | 46 |
| Check valve, 3/4 | EA | 7.79 | 11.90 | 19.69 | 28.20 | 1 | 28 |
| Shutoff valve, ball valve, 3/4 | EA | 13.99 | 11.90 | 25.89 | 35.02 | 2 | 70 |
| Dedicated return pipe, PEX, 3/4 | LF | 1.05 | | 1.05 | 1.16 | 125 | 145 |
| PEX piping labor (25% of fittings labor) | EA | | 20.83 | 20.83 | 34.36 | 1 | 34 |
| PEX coupling, 3/4 x 3/4 NPT | EA | 1.78 | 11.90 | 13.68 | 21.50 | 4 | 86 |
| Total to Builder | | | | | | | 635 |
| Total to Consumer | | | | | | | 784 |

APPENDIX B: LOCATION ADJUSTMENT FACTORS

| State | City | Cost Adjustment Factor | State | City | Cost Adjustment Factor |
|----------------------|------------------|------------------------|----------------|------------------|------------------------|
| Alabama | Birmingham | 0.84 | Montana | Billings | 0.89 |
| Alabama | Mobile | 0.83 | Nebraska | Omaha | 0.90 |
| Alaska | Fairbanks | 1.21 | Nevada | Las Vegas | 1.03 |
| Arizona | Phoenix | 0.84 | New Hampshire | Portsmouth | 0.95 |
| Arizona | Tucson | 0.84 | New Jersey | Jersey City | 1.18 |
| Arkansas | Little Rock | 0.83 | New Mexico | Albuquerque | 0.86 |
| California | Alhambra | 1.15 | New York | Long Island City | 1.36 |
| California | Los Angeles | 1.15 | New York | Syracuse | 0.99 |
| California | Riverside | 1.13 | North Carolina | Charlotte | 0.99 |
| California | Stockton | 1.20 | North Carolina | Hickory | 0.93 |
| Colorado | Boulder | 0.90 | North Carolina | Raleigh | 0.94 |
| Colorado | Colorado Springs | 0.87 | North Dakota | Fargo | 0.87 |
| Colorado | Denver | 0.91 | Ohio | Columbus | 0.91 |
| Connecticut | New Haven | 1.10 | Oklahoma | Oklahoma City | 0.84 |
| Delaware | Dover | 1.02 | Oklahoma | Tulsa | 0.83 |
| District of Columbia | Washington, D.C. | 0.92 | Oregon | Bend | 1.02 |
| Florida | Fort Meyers | 0.79 | Pennsylvania | Norristown | 1.05 |
| Florida | Miami | 0.83 | Pennsylvania | State College | 0.94 |
| Florida | Orlando | 0.82 | Rhode Island | Providence | 1.09 |
| Florida | Tampa | 0.81 | South Carolina | Greenville | 0.97 |
| Georgia | Atlanta | 0.90 | South Dakota | Sioux Falls | 0.92 |
| Hawaii | Honolulu | 1.22 | Tennessee | Memphis | 0.87 |
| Idaho | Boise | 0.89 | Texas | Austin | 0.80 |
| Illinois | Chicago | 1.25 | Texas | Dallas | 0.84 |
| Indiana | Indianapolis | 0.92 | Texas | Houston | 0.84 |
| Iowa | Des Moines | 0.92 | Texas | San Antonio | 0.83 |
| Kansas | Wichita | 0.81 | Utah | Ogden | 0.84 |
| Kentucky | Louisville | 0.89 | Utah | Provo | 0.85 |
| Louisiana | Baton Rouge | 0.85 | Utah | Salt Lake City | 0.85 |
| Maine | Portland | 0.94 | Vermont | Burlington | 0.95 |
| Maryland | Baltimore | 0.93 | Virginia | Fairfax | 1.00 |
| Massachusetts | Boston | 1.18 | Virginia | Winchester | 0.99 |
| Michigan | Ann Arbor | 0.99 | Washington | Tacoma | 1.05 |
| Minnesota | Minneapolis | 1.09 | West Virginia | Charleston | 0.94 |
| Mississippi | Biloxi | 0.83 | Wisconsin | La Crosse | 0.95 |
| Missouri | Springfield | 0.86 | Wyoming | Casper | 0.85 |

Source: RSMMeans *Residential Cost Data 2021*. Sample cities are listed in this table; check RSMMeans for additional locations.

APPENDIX C: REFERENCE HOUSES

Reference House Configurations

The four Reference House designs used in this analysis are based on the data contained in the Census Bureau report, *Characteristics of New Single-Family Construction Completed*.⁹ The report provides information about building foundation type (Table 1) and number of stories for new single-family detached construction over the previous nine-year period. (Table 2).

Table 1. New Construction Foundation Types

| | |
|------------|-----|
| Slab | 54% |
| Crawlspace | 17% |
| Basement | 30% |

Table 2. New Construction Number of Stories

| | |
|-------------|-----|
| One-story | 53% |
| Two-story | 43% |
| Three-story | 3% |

The Census data supports defining the four Reference Houses as follows to encompass approximately 85% of the last decade's new single-family construction:

- One-story on slab foundation
- Two-story on slab foundation
- One-story on basement foundation
- Two-story on basement foundation

Table 3 covers the locations where each type of Reference House foundation would be pragmatically constructed. All these selected cities, except Chicago, lie within the top ten states for construction starts in 2013.¹⁰ Chicago was selected to represent a Climate Zone 5 house.

Table 3. Sites for Reference Houses

| Reference House | Climate Zone | 1 | 2 | 3 | 4 |
|-----------------|--------------|------|------|----------|----------|
| | | Slab | Slab | Basement | Basement |
| Miami | 1 | X | X | | |
| Dallas | 2 | X | X | | |
| Los Angeles | 3 | X | X | | |
| Seattle | 4 | X | X | X | X |
| New York | 4 | X | X | X | X |
| Chicago | 5 | | | X | X |
| Fairbanks | 8 | | | X | X |

⁹ Characteristics of New Housing, U.S. Census Bureau, www.census.gov/construction/chars/completed.html

¹⁰ Housing Construction Starts, www.census.gov/construction/bps/pdf/2013statepiechart.pdf

Based on data from Home Innovation’s 2013 Annual Builder Practices Survey¹¹(ABPS), the typical Heating, Ventilation, and Air Conditioning (HVAC) systems used in new houses are summarized in Table 4. According to the ABPS, 44% of new homes are cooled with a central air conditioner. These results influenced the selection of a gas furnace with a central (electric) air conditioner as the HVAC system in each of the Reference Houses.

Table 4. Typical HVAC Systems Supplied with New Houses

| Feature | % of Stock |
|---|------------|
| Furnace or Boiler, natural gas or propane | 48% |
| Central Air Conditioner, electric | 44% |
| Standard Heat Pump with Backup Heat | 41% |
| Geothermal Heat Pump | 4% |
| Electric furnace, baseboard, or radiant | 4% |
| Furnace or Boiler, oil | 2% |

The furnace location has been designated as a platform in the attic for both slab Reference Houses, a practice that is common in Florida and Texas, where the weather is temperate year-round, and thus, the location is practical. A house built on a slab foundation in a cold climate zone would have the HVAC and water heating equipment located within conditioned space.

Reference House Features

The statistics presented in the foregoing tables support Reference House features that are detailed in Table 1.

Table 1. Features of the Reference Houses

| Feature | Reference House | | | |
|-------------------------------------|-----------------|----------------|----------------|----------|
| | 1 | 2 | 3 | 4 |
| Square Feet | 2,607 | 2,607 | 2,607 | 2,607 |
| Foundation | Slab | Slab | Basement | Basement |
| Number of Stories | 1 | 2 | 1 | 2 |
| Number of Bedrooms | 3 | 4 | 3 | 4 |
| Number of Bathrooms | 2 | 2.5 | 2 | 3 |
| Garage, attached | 2-car | 2-car | 2-car | 2-car |
| Heat, Gas Furnace | Yes | Yes | Yes | Yes |
| Cooling, (Electric) central air | Yes | Yes | Yes | Yes |
| Hot Water, Gas 50 gallon tank | Yes | Yes | Yes | Yes |
| 9 ft. Ceilings, 1 st | Yes | Yes | Yes | Yes |
| 8 ft. Ceilings, 2 nd | n/a | n/a | Yes | Yes |
| Energy Star appliances | Yes | Yes | Yes | Yes |
| Laundry Room | Yes | Yes | Yes | Yes |
| Walls, 2x4 (Climate Zones 1 & 2) | Yes | Yes | n/a | n/a |
| Walls, 2x6 (Climate Zones 3 thru 8) | n/a | n/a | Yes | Yes |
| Basement, Conditioned, Unfinished | n/a | n/a | Yes | Yes |
| Furnace Location | Attic | Attic | Basement | Basement |
| Water Heater Location | Interior | Garage | Basement | Basement |
| Window SF/% gross wall | 360/18% | 315/12% | 360/18% | 330/12% |
| Cladding | Brick, 4 sides | Brick, 4 sides | Brick, 4 sides | Stucco |
| Roof Pitch | 12/12 | 6/12 | 9/12 | 4/12 |

¹¹ Annual Builder Practices Survey, www.homeinnovation.com/trends_and_reports/data/new_construction

APPENDIX D: REFERENCE HOUSE 1

One-Story with Slab Foundation



Courtesy: LionsGate Homes at The Creekside



APPENDIX E: REFERENCE HOUSE 2

Two-Story with Slab Foundation



Courtesy: Meritage Homes at Riverstone

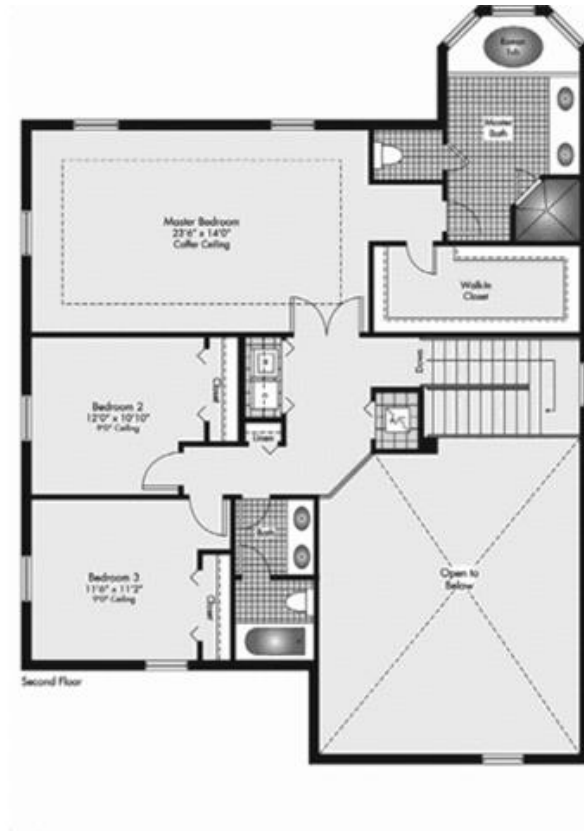


APPENDIX G: REFERENCE HOUSE 4

Two-Story with Basement Foundation



Courtesy: Lennar at Sorrento Estates





Home Innovation
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2023 CONSENT AGENDA

AGENDA ITEM NO. Consent Agenda 11 MEETING DATE: September 25, 2023
SUBJECT: Claim Voucher Approval PREPARED BY: Kari Kurtz, Finance Director
rb/kk

SUMMARY:

Approval for:

Payroll period of: 09/01/23 through 09/15/23
Claims vouchers for: 09/12/23 through 09/25/23

PAYROLL CHECKS: 5873 through 5874 1,557.29

CLAIMS CHECKS: 58676 through 58743 200,486.09

EFT'S 87,717.24

PAYROLL AUTO DEPOSIT: 111,223.55

CLAIMS CHECKS VOIDED:

TOTAL EXPENDITURES: \$ 400,984.17

RECOMMENDATION: Approval of payment for Claims

MOTION: Move to approve the Consent Agenda including approval of Claims Vouchers.

ATTACHMENTS: Check Register

CHECK REGISTER

City Of Pacific

Time: 09:47:20 Date: 09/22/2023

09/12/2023 To: 09/25/2023

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| Trans | Date | Type | Acct # | Chk # | Claimant | Amount | Memo |
|-------|------------|---------|--------|-------|---------------------------------|-----------|--|
| 5933 | 09/25/2023 | Claims | 1 | EFT | WA STATE DEPT OF REVENUE | 16,125.69 | B&O TAXES - AUGUST 2023 |
| 5979 | 09/20/2023 | Claims | 1 | EFT | PUGET SOUND ENERGY | 64.75 | ACCT: #220031673738 (08/31/23, 2nd AVE SW) |
| 6044 | 09/12/2023 | Claims | 1 | EFT | CENTURYLINK | 818.07 | ACCT: #206-Z22-0482 920B (08/22/23) |
| 6050 | 09/14/2023 | Claims | 1 | EFT | CENTURYLINK | 67.82 | ACCT: #253-826-7888 999B (08/28/23) |
| 6051 | 09/21/2023 | Claims | 1 | EFT | CENTURYLINK | 19.20 | ACCT: #79489727 (08/24/23) |
| 6052 | 09/20/2023 | Claims | 1 | EFT | COMCAST BUSINESS | 307.28 | PW: ACCT #8498340200265769 |
| 6096 | 09/18/2023 | Payroll | 1 | EFT | WA STATE DEPT RETIREMENT SYSTEM | 15,438.70 | Pay Cycle(s) 08/18/2023 To 09/05/2023 - LEOFF 2 |
| 6097 | 09/15/2023 | Payroll | 1 | EFT | AFLAC | 1,391.96 | Pay Cycle(s) 08/18/2023 To 09/05/2023 - AFLAC ACC Pre; Pay Cycle(s) 08/18/2023 To 09/05/2023 - AFLAC CAN PRE; Pay Cycle(s) 08/18/2023 To 09/05/2023 - AFLAC STD Post; Pay Cycle(s) 08/18/2023 To 09/05/2 |
| 6127 | 09/13/2023 | Claims | 1 | EFT | PAYMENTECH | 4,594.73 | PAYMENTECH FEES - AUGUST 2023 |
| 6138 | 09/20/2023 | Payroll | 1 | EFT | | 1,565.33 | 09/01/23 - 09/15/23 Payroll |
| 6139 | 09/20/2023 | Payroll | 1 | EFT | | 1,730.31 | 09/01/23 - 09/15/23 Payroll |
| 6140 | 09/20/2023 | Payroll | 1 | EFT | | 90.81 | 09/01/23 - 09/15/23 Payroll |
| 6141 | 09/20/2023 | Payroll | 1 | EFT | | 1,855.93 | 09/01/23 - 09/15/23 Payroll |
| 6142 | 09/20/2023 | Payroll | 1 | EFT | | 1,949.30 | 09/01/23 - 09/15/23 Payroll |
| 6143 | 09/20/2023 | Payroll | 1 | EFT | | 2,253.35 | 09/01/23 - 09/15/23 Payroll |
| 6144 | 09/20/2023 | Payroll | 1 | EFT | | 1,800.66 | 09/01/23 - 09/15/23 Payroll |
| 6145 | 09/20/2023 | Payroll | 1 | EFT | | 3,755.63 | 09/01/23 - 09/15/23 Payroll |
| 6146 | 09/20/2023 | Payroll | 1 | EFT | | 3,868.65 | 09/01/23 - 09/15/23 Payroll |
| 6147 | 09/20/2023 | Payroll | 1 | EFT | | 1,270.34 | 09/01/23 - 09/15/23 Payroll |
| 6148 | 09/20/2023 | Payroll | 1 | EFT | | 2,661.24 | 09/01/23 - 09/15/23 Payroll |
| 6149 | 09/20/2023 | Payroll | 1 | EFT | | 1,647.45 | 09/01/23 - 09/15/23 Payroll |
| 6150 | 09/20/2023 | Payroll | 1 | EFT | | 971.51 | 09/01/23 - 09/15/23 Payroll |
| 6151 | 09/20/2023 | Payroll | 1 | EFT | | 3,257.85 | 09/01/23 - 09/15/23 Payroll |
| 6152 | 09/20/2023 | Payroll | 1 | EFT | | 1,659.21 | 09/01/23 - 09/15/23 Payroll |
| 6153 | 09/20/2023 | Payroll | 1 | EFT | | 3,395.37 | 09/01/23 - 09/15/23 Payroll |
| 6154 | 09/20/2023 | Payroll | 1 | EFT | | 2,064.27 | 09/01/23 - 09/15/23 Payroll |
| 6155 | 09/20/2023 | Payroll | 1 | EFT | | 1,350.46 | 09/01/23 - 09/15/23 Payroll |
| 6156 | 09/20/2023 | Payroll | 1 | EFT | | 1,848.51 | 09/01/23 - 09/15/23 Payroll |
| 6157 | 09/20/2023 | Payroll | 1 | EFT | | 90.81 | 09/01/23 - 09/15/23 Payroll |
| 6159 | 09/20/2023 | Payroll | 1 | EFT | | 4,333.62 | 09/01/23 - 09/15/23 Payroll |
| 6160 | 09/20/2023 | Payroll | 1 | EFT | | 3,119.45 | 09/01/23 - 09/15/23 Payroll |
| 6161 | 09/20/2023 | Payroll | 1 | EFT | | 826.92 | 09/01/23 - 09/15/23 Payroll |
| 6162 | 09/20/2023 | Payroll | 1 | EFT | | 4,343.10 | 09/01/23 - 09/15/23 Payroll |
| 6163 | 09/20/2023 | Payroll | 1 | EFT | | 1,378.52 | 09/01/23 - 09/15/23 Payroll |
| 6164 | 09/20/2023 | Payroll | 1 | EFT | | 2,710.58 | 09/01/23 - 09/15/23 Payroll |
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| 6166 | 09/20/2023 | Payroll | 1 | EFT | | 90.81 | 09/01/23 - 09/15/23 Payroll |
| 6167 | 09/20/2023 | Payroll | 1 | EFT | | 1,872.84 | 09/01/23 - 09/15/23 Payroll |
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| 6169 | 09/20/2023 | Payroll | 1 | EFT | | 882.41 | 09/01/23 - 09/15/23 Payroll |
| 6170 | 09/20/2023 | Payroll | 1 | EFT | | 3,680.72 | 09/01/23 - 09/15/23 Payroll |
| 6171 | 09/20/2023 | Payroll | 1 | EFT | | 1,867.19 | 09/01/23 - 09/15/23 Payroll |
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| 6173 | 09/20/2023 | Payroll | 1 | EFT | | 2,835.33 | 09/01/23 - 09/15/23 Payroll |
| 6174 | 09/20/2023 | Payroll | 1 | EFT | | 2,792.39 | 09/01/23 - 09/15/23 Payroll |
| 6175 | 09/20/2023 | Payroll | 1 | EFT | | 3,091.57 | 09/01/23 - 09/15/23 Payroll |
| 6176 | 09/20/2023 | Payroll | 1 | EFT | | 2,085.07 | 09/01/23 - 09/15/23 Payroll |
| 6177 | 09/20/2023 | Payroll | 1 | EFT | | 45.40 | 09/01/23 - 09/15/23 Payroll |

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| Trans | Date | Type | Acct # | Chk # | Claimant | Amount | Memo |
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| 6178 | 09/20/2023 | Payroll | 1 | EFT | | 70.81 | 09/01/23 - 09/15/23 Payroll |
| 6179 | 09/20/2023 | Payroll | 1 | EFT | | 1,318.97 | 09/01/23 - 09/15/23 Payroll |
| 6180 | 09/20/2023 | Payroll | 1 | EFT | | 3,323.30 | 09/01/23 - 09/15/23 Payroll |
| 6181 | 09/20/2023 | Payroll | 1 | EFT | | 2,201.39 | 09/01/23 - 09/15/23 Payroll |
| 6182 | 09/20/2023 | Payroll | 1 | EFT | | 4,011.48 | 09/01/23 - 09/15/23 Payroll |
| 6183 | 09/20/2023 | Payroll | 1 | EFT | | 2,404.22 | 09/01/23 - 09/15/23 Payroll |
| 6184 | 09/20/2023 | Payroll | 1 | EFT | | 1,757.38 | 09/01/23 - 09/15/23 Payroll |
| 6185 | 09/20/2023 | Payroll | 1 | EFT | | 1,271.34 | 09/01/23 - 09/15/23 Payroll |
| 6186 | 09/20/2023 | Payroll | 1 | EFT | | 5,020.90 | 09/01/23 - 09/15/23 Payroll |
| 6187 | 09/20/2023 | Payroll | 1 | EFT | | 45.40 | 09/01/23 - 09/15/23 Payroll |
| 6189 | 09/20/2023 | Payroll | 1 | EFT | | 1,298.99 | 09/01/23 - 09/15/23 Payroll |
| 6190 | 09/20/2023 | Payroll | 1 | EFT | | 2,392.40 | 09/01/23 - 09/15/23 Payroll |
| 6191 | 09/20/2023 | Payroll | 1 | EFT | | 2,866.08 | 09/01/23 - 09/15/23 Payroll |
| 6192 | 09/20/2023 | Payroll | 1 | EFT | | 1,254.37 | 09/01/23 - 09/15/23 Payroll |
| 6193 | 09/20/2023 | Payroll | 1 | EFT | INTERNAL REVENUE SERVICE | 41,878.44 | 941 Deposit for Pay Cycle(s) 09/20/2023 - 09/20/2023 |
| 6194 | 09/21/2023 | Payroll | 1 | EFT | WA STATE DEPT RETIREMENT SYSTEM | 3,580.75 | Pay Cycle(s) 09/20/2023 To 09/20/2023 - DCP - DRS |
| 6195 | 09/21/2023 | Payroll | 1 | EFT | WA STATE SUPPORT REGISTRY | 75.00 | Pay Cycle(s) 09/20/2023 To 09/20/2023 - Child Support |
| 6230 | 09/15/2023 | Claims | 1 | EFT | VERIZON WIRELESS | 1,704.47 | ADMIN: CELL PHONES (07/27/23 08/26/23) |
| 6231 | 09/21/2023 | Claims | 1 | EFT | VERIZON WIRELESS | 1,562.13 | POLICE: CELL PHONES (07/26/23 - 08/25/23) |
| 6232 | 09/20/2023 | Claims | 1 | EFT | WA STATE DEPT OF LICENSING | 75.00 | ADMIN: DRIVING RECORDS (KNUTSEN, MARUNGO, AUBREY, STEVENSON, KNUTSON) |
| 6236 | 09/21/2023 | Claims | 1 | EFT | WA STATE DEPT OF LICENSING | 13.25 | ADMIN: REPORT OF SALE (Vactor Truck) |
| 6158 | 09/20/2023 | Payroll | 1 | 5873 | | 85.81 | 09/01/23 - 09/15/23 Payroll |
| 6188 | 09/20/2023 | Payroll | 1 | 5874 | | 1,471.48 | 09/01/23 - 09/15/23 Payroll |
| 6058 | 09/12/2023 | Claims | 1 | 58676 | TESLA ELECTRIC, LLC | 51,156.07 | PW: WAR MEMORIAL LIGHTING |
| 6115 | 09/18/2023 | Claims | 1 | 58677 | LAURA MARUNGO | 525.73 | ADMIN: PER DIEM - WFOA ANNUAL CONFERENCE |
| 6247 | 09/25/2023 | Claims | 1 | 58678 | AHBL INC | 27,991.65 | PW: PROJECT #2230100.10, BUTTE AVE SE SEWER MAIN / PROJECT #2230271.10, SEATTLE BLVD & CEDAR LANE WATER MAIN |
| 6248 | 09/25/2023 | Claims | 1 | 58679 | ALPINE PRODUCTS INC | 1,608.57 | PW: STREETS |
| 6249 | 09/25/2023 | Claims | 1 | 58680 | ARAMARK | 174.22 | DOOR MATS - 09/11/23; DOOR MATS - 09/18/23 |
| 6250 | 09/25/2023 | Claims | 1 | 58681 | BHC CONSULTANTS, LLC | 2,424.21 | CD: COMPREHENSIVE PLAN UPDATE (07/22/23 - 07/25/23) |
| 6251 | 09/25/2023 | Claims | 1 | 58682 | BLACKPOINT | 96.43 | IT: AUTHPOINT MULTI-FACTOR - OCTOBER 2023 |
| 6252 | 09/25/2023 | Claims | 1 | 58683 | BLUE RAVEN SOLAR | 6.50 | CD: PERMIT REFUND |
| 6253 | 09/25/2023 | Claims | 1 | 58684 | BOSTEC INC | 410.40 | POLICE: BA TESTING |
| 6254 | 09/25/2023 | Claims | 1 | 58685 | ALVINA BURBANK | 26.47 | 1491.01 - 761 OAKHURST DR |
| 6255 | 09/25/2023 | Claims | 1 | 58686 | CANON FINANCIAL SERVICES, INC. | 827.31 | COPY MACHINE LEASES (PW, SENIOR, ADMIN - SEPT 2023) |
| 6256 | 09/25/2023 | Claims | 1 | 58687 | CASCADE SHOOTING FACILITIES | 1,630.50 | POLICE: MEMBERSHIP RENEWAL Thru 05/01/24 |

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| Trans | Date | Type | Acct # | Chk # | Claimant | Amount | Memo |
|-------|------------|--------|--------|-------|--|-----------|--|
| 6257 | 09/25/2023 | Claims | 1 | 58688 | CITY OF PACIFIC - SR. CENTER PETTY CASH | 122.85 | SENIOR: PETTY CASH (04/29/23 - 08/22/23) |
| 6258 | 09/25/2023 | Claims | 1 | 58689 | CITY OF PACIFIC | 3,991.88 | UTILITES - AUGUST 2023 |
| 6259 | 09/25/2023 | Claims | 1 | 58690 | CITY OF SUMNER | 3,635.00 | METRO ANIMAL SERVICES - SEPTEMBER 2023 |
| 6260 | 09/25/2023 | Claims | 1 | 58691 | CITY OF SUNNYSIDE | 2,340.00 | POLICE: INMATE HOUSING |
| 6261 | 09/25/2023 | Claims | 1 | 58692 | COPIERS NORTHWEST INC | 494.65 | COPY MACHINE OVERAGES (08/15/23 - 09/14/23) |
| 6262 | 09/25/2023 | Claims | 1 | 58693 | CORDI & BEJARANO INC | 6,602.10 | COURT: PROSECUTOR SERVICES - AUGUST 2023 |
| 6263 | 09/25/2023 | Claims | 1 | 58694 | CRIMINAL JUSTICE TRAINING COMMISSION | 4,307.00 | POLICE: TRAINING (ZAHNOW, METZGER) |
| 6264 | 09/25/2023 | Claims | 1 | 58695 | DATABAR INCORPORATED | 1,900.67 | PW: UTILITY BILLING - SEPTEMBER 2023 |
| 6265 | 09/25/2023 | Claims | 1 | 58696 | ELEPHANT CAR WASH - 3GENELE, LLC | 38.50 | CITY CAR WASHES (07/18/23 - 08/15/23) |
| 6266 | 09/25/2023 | Claims | 1 | 58697 | ERICKSON COMMERCIAL REFRIGERATION | 405.00 | YOUTH: ICE MACHINE REPAIR |
| 6267 | 09/25/2023 | Claims | 1 | 58698 | ESA | 3,664.65 | PW: PROJECT #D202300900, CULTURAL RESOURCES FOR IUT / WAR MEMORIAL |
| 6268 | 09/25/2023 | Claims | 1 | 58699 | EVOLUTION CONTROLS, LLC | 625.00 | PW: EMERGENT REPAIR OF SCADA SYSTEM |
| 6269 | 09/25/2023 | Claims | 1 | 58700 | FERGUSON ENTERPRISES, INC. | 2,108.94 | PW: HYDRANT METER |
| 6270 | 09/25/2023 | Claims | 1 | 58701 | FIRE SYSTEMS WEST INC | 495.90 | YOUTH: ANNUAL MONITORING AGREEMENT (10/22/23 - 10/21/24) |
| 6271 | 09/25/2023 | Claims | 1 | 58702 | GENA FRYBARGER | 250.00 | YOUTH: RENTAL DEPOSIT REFUND |
| 6272 | 09/25/2023 | Claims | 1 | 58703 | GRAND HVAC LEASING USA, LLC | 94.67 | PW: HOT WATER TANK LEASE - SEPTEMBER 2023 |
| 6273 | 09/25/2023 | Claims | 1 | 58704 | H.D. FOWLER CO INC | 35.29 | PW: WATER; PW: WATER |
| 6274 | 09/25/2023 | Claims | 1 | 58705 | NORTHWEST CASCADE DBA: HONEY BUCKET | 411.95 | PW: ELLINGSON (09/03/23 - 09/30/23); PW: PARKS ADA UNIT(09/07/23 - 10/04/23) |
| 6275 | 09/25/2023 | Claims | 1 | 58706 | INSIGHT PEST SOLUTIONS | 281.86 | CITY HALL: PEST CONTROL SERVICES - 09/19/2023 |
| 6276 | 09/25/2023 | Claims | 1 | 58707 | INSLEE, BEST, DOEZIE & RYDER, P.S. | 5,482.50 | ADMIN: LEGAL SERVICES - AUGUST 2023 |
| 6277 | 09/25/2023 | Claims | 1 | 58708 | BRUCE JAMIESON | 48.95 | 1323.01 - 516 2ND AVE NE |
| 6278 | 09/25/2023 | Claims | 1 | 58709 | KING COUNTY FINANCE DLS ROADS DIVISION | 5,067.38 | PW: RSD SIGNAL PROJECTS: 1143555 |
| 6279 | 09/25/2023 | Claims | 1 | 58710 | KING COUNTY FINANCE I-NET | 439.00 | ADMIN: KC INET CONTRACT - AUGUST 2023 |
| 6280 | 09/25/2023 | Claims | 1 | 58711 | KING COUNTY FINANCE | 78.00 | FINANCE: LIEN FILLING FEE (ROSENTHAL, 393 WHITE RIVER DRIVE); FINANCE: LIEN FILING FEE (PHILLIPS, 205 5th AVE NW |
| 6281 | 09/25/2023 | Claims | 1 | 58712 | KNOWBE4 INC. | 4,524.37 | IT: SECURITY AWARENESS TRAINING SUBSCRIPTION - 01/30/23 - 11/29/26 |
| 6282 | 09/25/2023 | Claims | 1 | 58713 | LANDMARK TREE CARE | 10,028.20 | PW: TREE TRIMMING & REMOVAL (1st AVE); PW: STUMP GRINDING |

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| Trans | Date | Type | Acct # | Chk # | Claimant | Amount | Memo |
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| 6283 | 09/25/2023 | Claims | 1 | 58714 | LAW OFFICE OF MICHAEL E. HARBESON | 1,700.00 | COURT: CONFLICT PUBLIC DEFENSE SERVICES - JUNE, JULY, AUGUST 2023 |
| 6284 | 09/25/2023 | Claims | 1 | 58715 | RANDY LITCH | 200.00 | SR: VARIETY DANCE, 09/29/23 |
| 6285 | 09/25/2023 | Claims | 1 | 58716 | MCLENDON HARDWARE | 69.01 | PW: PARKS; PW: CITY HALL |
| 6286 | 09/25/2023 | Claims | 1 | 58717 | MARK & NATALIE MCROBIE | 207.16 | 0980.01 - 429 4TH AVE SE; 0980.01 - 429 4TH AVE SE |
| 6287 | 09/25/2023 | Claims | 1 | 58718 | CASEY M METZGER | 70.47 | POLICE: REIMBURSEMENT - FUEL |
| 6288 | 09/25/2023 | Claims | 1 | 58719 | MOUNTAIN MIST | 89.94 | BOTTLED WATER - 09/13/23 |
| 6289 | 09/25/2023 | Claims | 1 | 58720 | NATIONAL CONSTRUCTION RENTALS | 157.10 | PW: TEMP PANELS (09/09/23 - 10/06/23) |
| 6290 | 09/25/2023 | Claims | 1 | 58721 | NORTHSTAR CHEMICAL INC. | 3,477.33 | PW: SODIUM HYDROXIDE |
| 6291 | 09/25/2023 | Claims | 1 | 58722 | O'REILLY AUTOMOTIVE, INC. | 176.24 | PW: SERVICE TRUCK; PW: SHOP; PW: SHOP |
| 6292 | 09/25/2023 | Claims | 1 | 58723 | CARLOS OROPEZA-GONZALEZ | 579.25 | CD: PERMIT #BLD-23-017 REFUND |
| 6293 | 09/25/2023 | Claims | 1 | 58724 | PACIFIC OFFICE AUTOMATION | 355.19 | POLICE: COPIER LEASE - OVERAGES 2023 QTR 2; POLICE: COPIER - AUGUST 2023 |
| 6294 | 09/25/2023 | Claims | 1 | 58725 | PAPE' MACHINERY, INC. | 326.85 | PW: MOWER; PW: MOWER |
| 6295 | 09/25/2023 | Claims | 1 | 58726 | SCORE | 1,136.64 | POLICE: INMATE ACUTE MEDICAL - JULY 2023 |
| 6296 | 09/25/2023 | Claims | 1 | 58727 | SHOPE ENTERPRISES, INC. | 337.70 | PW: STREETS |
| 6297 | 09/25/2023 | Claims | 1 | 58728 | SHRED-IT USA INC. | 585.04 | ADMIN: SHREDDING, PURGING - SEPTEMBER 2023 |
| 6298 | 09/25/2023 | Claims | 1 | 58729 | SOUND PUBLISHING INC | 480.78 | ADMIN: LEGAL NOTICES - AUGUST 2023 |
| 6299 | 09/25/2023 | Claims | 1 | 58730 | SPOK, INC. | 27.88 | PW: ON CALL PAGER - SEPTEMBER 2023 |
| 6300 | 09/25/2023 | Claims | 1 | 58731 | STONEWAY ELECTRIC SUPPLY | 1,334.44 | PW: FLAG POLE SUPPLIES |
| 6301 | 09/25/2023 | Claims | 1 | 58732 | TACOMA PIERCE CO HEALTH DEPT. | 2,040.00 | PW: UNDERGROUND STORAGE TANK PERMIT PARCEL #0420013063 SITE ID SD0003352 |
| 6302 | 09/25/2023 | Claims | 1 | 58733 | TESLA ELECTRIC, LLC | 14,823.57 | PW: EXTEND POWER TO DOORS, SR EGRESS LIGHTING, BATHROOM HEATERS, POWER TO FILL STATION |
| 6303 | 09/25/2023 | Claims | 1 | 58734 | GREGORY THOMAS | 250.00 | YOUTH: RENTAL REFUND |
| 6304 | 09/25/2023 | Claims | 1 | 58735 | US BANK N.A. - CUSTODY TREASURY DIV. | 36.00 | FINANCE: CUSTODY CHARGES - AUGUST 2023 |
| 6305 | 09/25/2023 | Claims | 1 | 58736 | UW VALLEY MEDICAL CENTER | 38.00 | POLICE: DRUG TESTING, AUBREY |
| 6306 | 09/25/2023 | Claims | 1 | 58737 | VALLEY COMMUNICATIONS | 25,084.61 | POLICE: 911 CALLS / 800 MHZ - AUGUST 2023 |
| 6307 | 09/25/2023 | Claims | 1 | 58738 | VALLEY REGIONAL FIRE AUTHORITY | 1,504.75 | CD: PERMIT #BLD-23-026; CD: PERMIT #FIR-23-004 |
| 6308 | 09/25/2023 | Claims | 1 | 58739 | WA STATE TREASURER | 38.00 | STATE BUILDING CODE FEES - AUGUST 2023 |

CHECK REGISTER

City Of Pacific

Time: 09:47:20 Date: 09/22/2023

09/12/2023 To: 09/25/2023

Page: 5

| Trans | Date | Type | Acct # | Chk # | Claimant | Amount | Memo |
|--|------------|--------|--------|-------|----------------------------------|------------|--|
| 6309 | 09/25/2023 | Claims | 1 | 58740 | WASHINGTON STATE PATROL | 39.75 | POLICE: BACKGROUND CHECKS - AUGUST 2023 |
| 6310 | 09/25/2023 | Claims | 1 | 58741 | ERIC & KRISTI WEDUM | 167.63 | 0453.01 - 124 2ND AVE SW |
| 6311 | 09/25/2023 | Claims | 1 | 58742 | WELLS FARGO FINANCIAL LEASING | 202.89 | PW: PLOTTER LEASE (09/08/23 - 10/07/23) |
| 6312 | 09/25/2023 | Claims | 1 | 58743 | WILBUR-ELLIS COMPANY, LLC | 597.50 | PW: PARKS |
| | | | | | | | |
| 001 General Fund | | | | | | 206,342.59 | |
| 096 Customer/Developer Deposits | | | | | | 500.00 | |
| 101 Street | | | | | | 15,634.82 | |
| 301 Roads Capital Improvements | | | | | | 2,040.00 | |
| 305 Parks Capital Improvement | | | | | | 56,155.16 | |
| 401 Water | | | | | | 45,356.05 | |
| 402 Sewer | | | | | | 29,182.33 | |
| 406 Water Capital Improvement | | | | | | 2,287.53 | |
| 408 Sewer Capital Improvement | | | | | | 25,704.12 | |
| 409 Storm | | | | | | 21,142.09 | |
| 500 Information Technology | | | | | | 9,579.19 | |
| 601 Customer Deposits | | | | | | 1,589.00 | |
| 800 Payroll EE Benefit Clearing | | | | | | -14,528.71 | |
| | | | | | | | |
| | | | | | | Claims: | 225,838.48 |
| * Transaction Has Mixed Revenue And Expense Accounts | | | | | | 400,984.17 | Payroll: 175,145.69 |

Reviewed for Accuracy

Finance Director: _____



Regular Meeting
September 11, 2023
6:30 p.m.

CALL TO ORDER/PLEDGE OF ALLEGIANCE

Mayor Guier called the regularly scheduled meeting to order at 6:30 p.m. and led the Pledge of Allegiance.

ROLL CALL

Present: Council Members Kerry Garberding, Katie Garberding, Boles, Mayor Pro Tem Putnam, Council President Kave (via phone), and Mayor Guier

Absent: Council Members Petersen and Stutler

COUNCIL MEMBER KATIE GARBERDING MOVED to excuse Council Member Petersen and Stutler. Seconded by Council Member Putnam.

Voice vote was taken and carried 5-0

STAFF PRESENT

Police Chief Ronald Schaub, City Engineer David Yaghoobi, Community Services Director Kevin Caviezel, IT Director Lorden Ingraham, Finance Director Kari Kurtz, Public Works Director Rick Gehrke, and City Administrator-City Clerk Laurie Cassell

ADDITIONS TO/APPROVAL OF AGENDA

The Mayor removed the Closed Session and Executive Session. The agenda was approved as amended unanimously by council.

AUDIENCE COMMENT

None

STAFF REPORTS

A. Mayor

- Budget Retreat is this Saturday, September 16th
- Remembrance flags were placed by the reader board for 911

B. Public Safety/Emergency Management

- Provided update on calls for service
- Working on RFP for vehicle maintenance
- Completing towing contracts
- Police Specialist II/CSO started last Monday
- Nova Global coming to present on the traffic cameras on September 18th

- Competing the 2024 work schedule for the officers

C. Community Development

- None

D. Finance

- Assistant Utility Billing Clerk started last Monday, September 5th
- Finance Tech Lead starts tomorrow, September 12th
- State Auditor's Office set up our 3 year audit and single audit to begin this week

E. Community Services

- Discussed the Fall events coming up for the Community Center
- Working on completing the Recreation and Conservation Grant

F. Public Works

- Concrete has been poured for the War Memorials
- Pavers to be installed at the War Memorial sites by the end of the month
- Storm line replacement cleaning to carry over to winter
- Alder Lane pump station has 90% drawings complete
- Working on the HVAC system for the Senior Center
- Reprogramming for the 3rd Ave crossing has be completed
- WSDOT is clearing beaver dams on the west side of HWY 167
- New legislation regarding the service connections from the meter to the house

G. Technology

- Set up stations for the 3 new hired employees
- Revize website is ready for training

H. Board and Committees

- i. Sound Cities Association (SCA) – the next meeting in September is canceled
- ii. South County Area Transportation Board (SCATBd) the next meeting is October 17, 2023
- iii. Valley Regional Fire Authority (VRFA) – the next meeting is a special meeting scheduled for September 12, 2023

I. Council Members

- None

OLD BUSINESS

- A. Resolution No. 2023-901:** Authorizing the Mayor to sign a contract with Olson Brothers Pro-Vac, LLC, for storm drainage cleaning and inspection services said services in the amount of \$89,159.91.

COUNCIL MEMBER KERRY GARBERDING MOVED to approve **Resolution No. 901:** Authorizing the Mayor to sign a contract with Olson Brothers Pro-Vac, LLC, for storm drainage cleaning and inspection services said services in the amount of \$89,159.91. Seconded by Council Member Katie Garberding.

Roll call vote was taken resulting as follows:

Ayes: Katie Garberding, Kerry Garberding, Kave, Putnam, Boles,

Nays:

Absent: Petersen, Stutler

The motion carried 5-0

- B. Resolution No. 2023-902:** Authorizing the Mayor to execute a contract with Fence Specialist for the City Utility Facilities Security Fencing Project PH 2 in the amount of \$14,849.45

COUNCIL MEMBER KATIE GARBERDING MOVED to approve **Resolution No. 2023-902:** Authorizing the Mayor to execute a contract with Fence Specialist for the City Utility Facilities Security Fencing Project PH 2 in the amount of \$14,849.45. Seconded by Council Member Putnam.

Roll call vote was taken resulting as follows:

Ayes: Kerry Garberding, Kave, Putnam, Boles, Katie Garberding

Nays:

Absent: Petersen, Stutler

The motion carried 5-0

- C. Resolution No. 2023-903:** Authorizing the Mayor to execute a contract with Automated Gate for the City Utility Facilities Security Fencing Project PH 2 in the amount of \$30,485.73

COUNCIL MEMBER KERRY GARBERDING to approve **Resolution No. 2023-903:** Authorizing the Mayor to execute a contract with Automated Gate for the City Utility Facilities Security Fencing Project PH 2 in the amount of \$30,485.73. Seconded by Council Member Boles.

Roll call vote was taken resulting as follows:

Ayes: Kave, Putnam, Boles, Katie Garberding, Kerry Garberding

Nays:

Absent: Petersen, Stutler

The motion carried 5-0

- D. Resolution No. 2023-904:** Authorizing Change Order No. 4 to the Stewart Road Improvements Project.

COUNCIL MEMBER KATIE GARBERDING MOVED to approve **Resolution No. 2023-904:** Authorizing Change Order No. 4 to the Stewart Road Improvements Project. Seconded by Council Member Kerry Garberding.

Roll call vote was taken resulting as follows:

Ayes: Putnam, Boles, Katie Garberding, Kerry Garberding, Kave

Nays:

Absent: Petersen, Stutler

The motion carried 5-0

- E. Resolution No. 2023-905:** Authorizing an Authorized Representative/Agent for Grant Funding Assistance through the Recreation and Conservation Office

COUNCIL MEMBER KERRY GARBERDING MOVED to approve **Resolution No. 2023-905:** Authorizing an Authorized Representative/Agent for Grant Funding Assistance through the Recreation and Conservation Office. Seconded by Council Member Putnam.

Roll call vote was taken resulting as follows:

Ayes: Putnam, Boles, Katie Garberding, Kerry Garberding, Kave

Nays:

Absent: Petersen, Stutler

The motion carried 5-0

FIRST READING OF ORDINANCES

None

FINAL READING/ADOPTION OF ORDINANCES

None

NEW BUSINESS

- A. Resolution No. 2023-906:** Authorizing Amendment No. 2 to the Interlocal Cooperative Agreement with King County for Community Development Block Grant Program

COUNCIL MEMBER PUTNAM MOVED to approve **Resolution No. 2023-906:** Authorizing Amendment No. 2 to the Interlocal Cooperative Agreement with King County for Community Development Block Grant Program. Seconded by Council Member Kerry Garberding.

Roll call vote was taken resulting as follows:

Ayes: Boles, Katie Garberding, Kerry Garberding, Kave, Putnam

Nays:

Absent: Petersen, Stutler

The motion carried 5-0

CONSENT AGENDA

- A.** 2023 Payroll and Voucher Approval
- B.** Minutes of the 2023 City Council Meeting of August 28th
- C.** Minutes of the 2023 Committee of the Whole of September 5th
- D.** Minutes of the 2023 Workshop of September 5th

Mayor Guier added (3) invoices to the consent agenda for approval for Tesla Electric on the 3 War Memorial sites that is paid out of the appropriations from the State funding as follows:

Roy Rd - \$13,509.27

Countyline Rd - \$16,337.70

3rd Avenue SW - \$21,309.10

COUNCIL MEMBER PUTNAM MOVED to approve adding the (3) invoices to the consent agenda for approval for Tesla Electric on the 3 War Memorial sites that is paid out of the appropriations from the State funding. Seconded by Council Member Boles.

Voice vote approving the consent agenda was taken and carried 5-0

COUNCIL MEMBER PUTNAM MOVED to approve the consent agenda. Seconded by Council Member Kerry Garberding.

Voice vote approving the consent agenda was taken and carried 5-0

ADJOURN

Being no further business, Mayor Guier adjourned the meeting at 7:11 p.m.

Laurie Cassell, MMC
City Clerk



**PACIFIC CITY COUNCIL
SPECIAL MEETING MINUTES
100 3rd Avenue SE Pacific, WA**

**Special Council Meeting
September 16, 2023**

**Council Retreat
9:00 a.m.-2:00 p.m.**

CALL TO ORDER/PLEDGE OF ALLEGIANCE

Mayor Guier called the meeting to order at 9:00 a.m.

ROLL CALL OF COUNCIL MEMBERS

Present: Council Members Boles, Katie Garberding, Kerry Garberding, Petersen, Putnam and Mayor Guier.

Absent: Council member Kave and Council Member Stutler

COUNCIL MEMBER KERRY GARBERDING MOVED to excuse Council Member Kave and Stutler. Seconded by Council Member Putnam.

Voice vote was taken and carried 5-0

STAFF PRESENT

IT Director Lorden Ingraham, Community Services Director Kevin Caviezel, Police Chief Ron Schaub, Public Works Director Rick Gehrke, Finance Director Kari Kurtz, and City Administrator-City Clerk Laurie Cassell

PRESENTATIONS

A. Public Works, Rick Gehrke, Public Works Director

- See attached PowerPoint Presentation

B. IT Department, Lorden Ingraham, IT Director

- See attached PowerPoint Presentation

C. Community Services, Kevin Caviezel, Community Services Director

- See attached PowerPoint Presentation

D. Community Development

- See attached PowerPoint Presentation

E. Police Department, Ron Schaub, Police Chief

- See attached PowerPoint Presentation

F. Finance, Kari Kurtz, Finance Director

- See attached PowerPoint Presentation

G. Administration, Laurie Cassell, City Admin-Clerk/Personnel Director

- See attached PowerPoint Presentation

COUNCIL BUDGETARY INPUT

- Hire a FTE 2nd traffic officer
- Hire a FTE Procurement & Grants Manager
- Hire a Stormwater FTE and hire 2 seasonal employees
- Police Department to receive most of their wish list
- Public Works equipment wish list to have actual quote amounts to make decisions on items
- Future discussion on new accounting software
- Create a Deputy City Clerk position
- Advertise for a City Clerk/Personnel Director removing the Administrator role
- Further discussion on the car tabs for future road revenue
- Designating an Officer for ticketing overweight trucks

ADJOURN

Being no further business, Mayor Guier adjourned the meeting at 2:00 p.m.

Laurie Cassell, MMC
City Clerk



2024 Budget Presentation

- A. Public Works, Rick Gehrke, Public Works Director
- B. IT Department, Lorden Ingraham, Systems Analyst
- C. Community Services, Kevin Caviezel, Community Services Director
- D. Community Development
- Break for 15 minutes
- E. Police Department, Ron Schaub, Police Chief
- F. Finance, Kari Kurtz, Finance Director
- G. Administration, Laurie Cassell, City Administrator/City Clerk/Personnel



Public Works

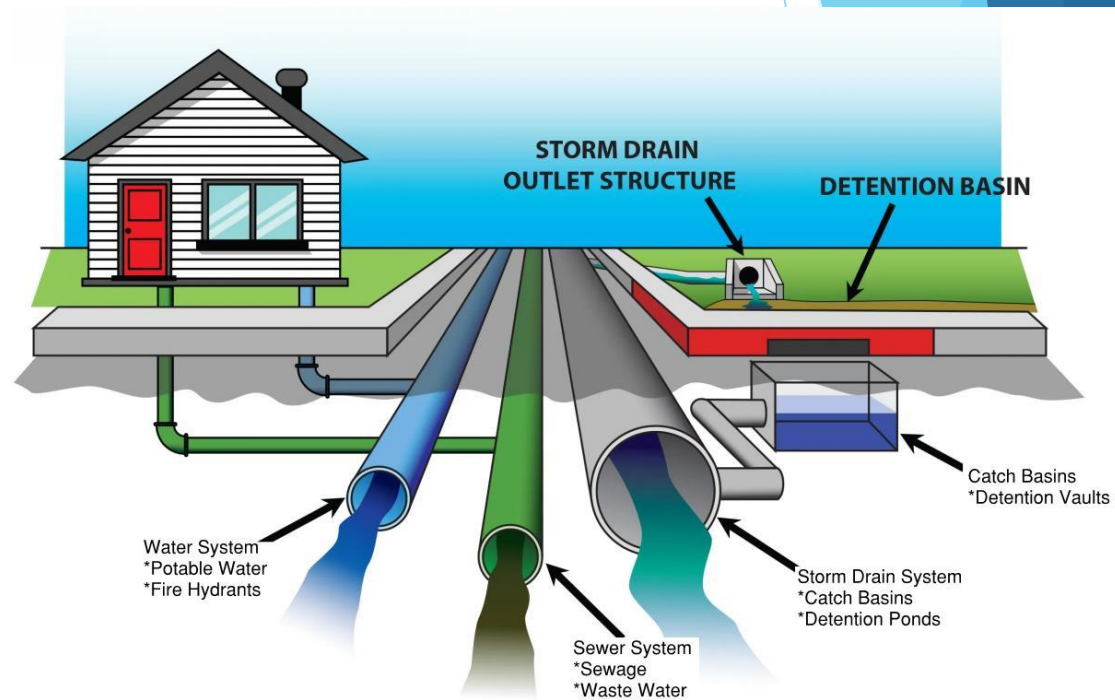
2024 Budget Presentation



Public Works Department

The Public Works Department is responsible for the city's infrastructure: Streets, Storm Water, Sewer, Drinking Water, Solid Waste,

- Streets
 - 24+ Miles of Streets
 - 5 Traffic Signals
 - Streetlights
- Storm Drainage
 - 30+ Miles of Storm Lines
 - 12 Storm Ponds
 - 800+ Storm Structures
- Sewer Utility
 - 30+ Miles of Sewer Lines
 - 4 Sewer Pump Stations
- Water Utility
 - 29+ Miles of Pipe
 - 2,700+ Service Connections
- Solid Waste
 - Garbage, Recycling, Compost
- Parks
 - 32 Park and Recreation Properties (50.5 Acres)



Public Works Department

➤ Street Budget:

- The Street Budget is funded by revenues derived from:
 - The General Fund
 - Transfers from Utilities
 - Grants for Overlays (Federally Classified Streets Only)
 - Transportation Impact Fees
- The Street Budget is responsible for:
 - (8) FTE (shared between: Street, Sewer, Water)
 - Traffic signal O&M
 - Street Light O&M
 - Street Sweeping (Shared with Drainage Utility)
 - Street Overlay
 - Chip Sealing
 - Striping
 - Street Reconstruction
 - Sidewalks
 - Maintenance Equipment Costs



Public Works Department

➤ Storm Drainage Utility Budget:

- The Storm Drainage Budget is funded by revenues derived from:
 - The General Fund
 - Transfers from Utilities
 - Grants
 - Developer Impact Fees
 - The Storm Drainage Budget is responsible for:
 - (1) FTE Storm Technician
 - *potential future FTE Storm Tech.
 - *potential future Seasonal Storm Tech.
 - Storm Lines, Catch Basins Structures, Ponds
 - Maintenance Equipment Costs
- 

Public Works Department

➤ Sewer & Water Utility Budgets:

- Each individual utility must be self sufficient per WAC.
- Each Utility Budget is funded by revenues derived from:
 - Established Rates for O&M
 - Grants Revenue
 - General Facility Charges
 - Low Interest Loans
- Each Utility Budget is responsible for:
 - O&M (Salaries, Utilities, Equipment, Etc.)
 - Maintenance Equipment Costs
 - Major Repairs
 - Set aside funding for future Capital Improvement / Repair Projects



Public Works Department

➤ Solid Waste:

- The City-Wide Solid Waste contract is managed by:
 - The Public Works Dept.
 - Waste Management is current provider.

➤ Solid Waste includes:

- Trash
- Recycling
- Compost

➤ The Solid Waste fees are funded directly by:

- The individual rate payer.
- 9/18 Wastemanagement will be doing a presentation on tipping fees.



Public Works Department

➤ Parks and Recreation Budget:

➤ The Parks and Recreation Budget is funded by:

- The General Fund
- Grant Revenues or Special Levies (for Capital Improvement / Repair Projects)
- Park Impact Fees (for Capital Improvement / Repair Projects)

➤ The Parks and Recreation Budget is responsible for:

- Park O&M (Salaries, Utilities, Supplies, Repairs, Etc.)
- Maintenance Equipment Costs
- Set aside funding for future Capital Improvement / Repair Projects



Public Works

*unfunded

2024 Department Staffing Goals

| # | Name | Title | Status |
|----|------------------------|----------------------------------|--|
| 1 | Rick Gehrke | Public Works Director | FT |
| 2 | David Yaghoobi | City Engineer | FT (shared w/Comm. Develop) |
| 3 | Cathy Fisher | PW Admin | FT (shared w/Comm. Develop) |
| 4 | Bill Brookhart | Public Works Lead | FT |
| 5 | Tom McCulley | PW Maint. Worker III | FT |
| 6 | James Schunke | PW Project Coordinator | FT (deputy emergency manager) |
| 7 | Michael Rodriguez | Storm Water Technician | FT |
| 8 | Timothy Bush | PW Maint. Worker II | FT |
| 9 | Lucas Bright | PW Maint. Worker II | FT |
| 10 | Ruben Rios-Terron | PW Maint. Worker II | FT |
| 11 | Charles Black | PW Maint. Worker I | FT |
| 12 | Arlo Doepker | PW Maint. Worker I | FT |
| 13 | Skylar Christie | PW Maint. Worker I | FT |
| 14 | Jason Knox | Parks Facilities | FT |
| 15 | Vicki Raefield | Facilities Maintenance/Custodian | FT |
| 16 | Vacant - Pasi Suaava | Seasonal Public Works – Parks | Seasonal (interviewing for FT) |
| 17 | Vacant - Bryan Heredia | Seasonal Public Works – Parks | Seasonal (leaving Sept 15.) |
| 18 | Vacant | Seasonal Public Works – PW | *Seasonal (no more than 5-months, annually or period?) |
| 19 | Vacant | Seasonal Public Works – Storm W. | *Seasonal (1 - FTE to offset Stormwater cleaning) |
| 20 | Vacant | Storm Water Technician | *FT (1 - FTE to offset Stormwater cleaning) |
| 21 | Vacant | Procurement & Grants Mngr. | *FT (1) |

Public Works

2023 Capital Facilities Projects Accomplishments

| Project Number | Project Name | Status |
|----------------|---|-----------------------------------|
| TR1501 | Stewart Road | 100% complete |
| TR2003 | West Valley ROW | 90% complete |
| PW-23-001 | PW _ Building Landscaping | 100% complete |
| PW-23-002 | PW _ Building Deck Replacement | Design Only |
| PW-23-003 | Security Upgrades | 90% complete |
| PW-23-004 | PW _ Backup Generator | Submittal Delays |
| PW-23-005 | War Memorials | 11/10/2023 |
| PW-23-006 | SD_Public Safety Bldg Storm Water Replacement | Cleaned. Testing over winter. |
| PW-23-007 | SS_Alder Lane Pump Station | 90% dwgs, added scope for grinder |
| PW-23-008 | TR_Ellingson Overlay | Pending TIB funding 12/15/2023 |
| PW-23-009 | WT_Water Main Replacement Seattle & Cedar | 30% dwgs, comments by me. |
| PW-23-010 | SS_Sanitary Sewer Replacement Butte & Countyline Rd | Contemplating next steps. |
| PW-23-011 | SS_Tacoma Blvd Pump Station _ Grinder | Awaiting for new vendor pricing. |

Public Works

2023 Capital Facilities Projects Status/Accomplishments

| Project Number | Project Name | Status |
|--|--|----------------------------------|
| PW-23-012 | TR_IUT & 3rd Ave Crosswalk Signage | 100% Complete |
| PW-23-013 | PW _ Alpac Damaged Fence | 100% Complete |
| PW-23-014 | WT_Booster Pump Station _ Pump Inspections | Not scheduled yet. |
| PW-23-015 | PW _ Shop & Wellfield Fencing PH 2 | Pre-con next week |
| PW-23-016 | PW _ Milwaukee Ditch Improvements 2023 | Awaiting WSDOT |
| PW-23-017 | PW _ Dog Park @ White River Estates | Cancelled |
| PW-23-018 | WT_Chlorination System Upgrades | In DOH review |
| PW-23-019 | SD_CB Cleaning 2023 | Pre-con next week |
| PW-23-020 | PW_Senior Center HVAC | Prepping Scope Documents for RFP |
| PW-23-021 | PW _ ON-CALL Engineering | As-Needed |
| PW-23-022 | PW _ CI Hall Bathroom Heaters | 100% Complete |
| PW-23-023 | WT_Bulk Water Fill Station | 70% Complete |
| PW-23-024 | ST_Street Striping 2023 | Awaiting for SPM pricing |
| Annual Storm Drain Pond Cleaning | | 100% Complete |
| 200 Work Orders | | Ongoing & Completed |
| Provided Inspection to Multiple Private Development Projects | | Ongoing & Completed |

Public Works

2024 Grants Applications & Awards

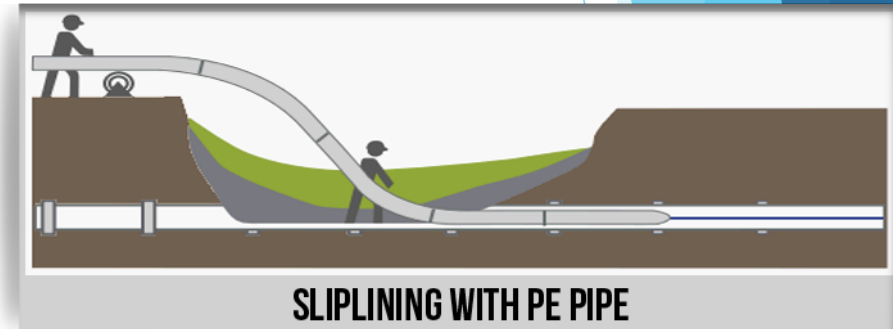
- Department of Ecology Capacity Grant - **Awarded \$75,000**
- Department of Ecology Storm Water Grant - **Pending \$130,000**
- Federal WSDOT \$800,000, need to keep moving fwd, West Valley ROW acquisitions need to continue.
- Transportation Improvement Board (TIB) _ Ellingson Overlay - **Potentially Pending \$1.8M**
- King County 2024 Waste Reduction & Recycling Grant - **PENDING \$20,000**
- King County 2024 Local Hazardous Waste Management Grant - **PENDING \$14,113**



Public Works

2024 Grant & Low Interest Loan Applications

- Transportation Improvement Board (TIB):
 - Complete Streets Application
 - West Valley Construction (Pierce Co.)
- Department of Ecology:
 - Stormwater Improvements
 - Sanitary Sewer Slip Lining
- King County:
 - Sanitary Sewer Slip Lining
- Public Works Trust Fund (PWTF):
 - Sanitary Sewer Slip Lining
 - Loan from the state w/1% interest.



Public Works

2024 Budget Equipment Needs

| # | Description | Price | Justification | Assumed Daily Usage per yr @ 260 max. | Priority Level (PWD determined) |
|----|----------------------------------|-----------|---|---------------------------------------|---------------------------------|
| 1 | F-250 Truck w/Tommy Lift Gate. | \$65,000 | Need PW Truck Long Bed w/Tommy Gate for Picking up barrels, trash etc. Should be a ¾ ton truck for pulling trailers. | 260 @ Daily | 2 |
| 2 | F-450 Bucket Truck (USED) | \$40,000 | Need PW Bucket Truck for tree trimming, lights, flags. We could buy from local City Pacific vendors. We borrowed CI Algona's truck 4x this year. | 12 | 11 |
| 3 | HD Flatbed Tilt Trailer 15T | \$35,000 | (NEW/USED) for the snorkel boom, backhoe, excavator, pipe, hauling other vehicles, etc... | 12 | 10 |
| 4 | Sweeper | \$450,000 | 16 years old, we re-built the vacuum wheel 2x @ \$10K ea., we rebuilt the bottom skirt 1x @ \$1200. Get a non-CDL sweeper for anyone to drive. Hours on the sweeper = | 12 | 12 |
| 5 | Brusher Attachment for Excavator | \$20,000 | Used for mowing of hard-to-reach areas of the MS4 storm drain system. Supplement the existing brusher when, existing brusher is broken | 130 @ 6-months | 1 |
| 6 | Brusher Attachment for Tractor | \$115,000 | needs to be replaced as it has been rebuilt multiple times and have replaced the cutting head 3x @ \$20K ea. Tractor is 12 years old. | 130 @ 6-months | 8 |
| 7 | New Brushing Tractor | \$225,000 | Likely best course is to replace the existing tractor, not just the brusher attachments. Hours on the tractor = | 130 @ 6-months | 7 |
| 8 | Forklift all-terrain 6K# (used) | \$75,000 | loading / unloading of equipment, supplies, man-lift supplement w/a cage. Could also be used in lieu of a bucket truck, although not as navigable. | 65 @ 2x week | 6 |
| 9 | Jumping Jack | \$10,000 | existing is 15-yr old, problematic motor operation | 12 | 9 |
| 10 | (3) weed eaters | \$1,300 | gas operated, older ones in the fleet are problematic | 130 @ 6-months | 3 |
| 11 | (1) backpack blower | \$1,000 | gas operated, older one in the fleet is problematic | 130 @ 6-months | 4 |
| 12 | (1) JD Gator or ??? | \$25,000 | Could be used for efficiently driving thru the IUT, all Parks & ROW for weed spraying, trash pick-up. It could be the small China truck, possibly right-hand drive. | 130 @ 6-months | 5 |

Public Works

2024 Budget Project Needs

| # | Description | Price | Justification | Assumed Daily Usage per yr @ 260 max. | Priority Level (PWD determined) |
|----|--|-----------|---|---------------------------------------|---------------------------------|
| 1 | 2nd SW CB Replacement | \$15,000 | Failed existing sewer pipe at 2nd street SW. Either pipe replacement or add CB. Road is sinking. Possibly a slip-line is required. | 365 @ Daily | 6 |
| 2 | 114 Alder Lane N | \$15,000 | Failed existing pipe at 2nd street SW. Either pipe replacement or add CB. Road is sinking. | 365 @ Daily | 5 |
| 3 | New USA Pole mount Flags | \$4,000 | no cheap junk. USA made, 40 flags x \$100ea | 90 | 2 |
| 4 | Misc City Hall Remodeling | \$50,000 | Occasional remodel, addition or change to the built environment. | 260 @ Daily | 4 |
| 5 | Water Line Lead Investigation | \$300,000 | Investigation & replacement of 1986 or older water lines that contain lead, post meter to a residence. (new unfunded mandate) | 365 @ Daily | 3 |
| 6 | Water Leak Repairs @ Reservoir | \$50,000 | 750,000 Gallon reservoir has multiple new leaks | 365 @ Daily | 1 |
| 7 | PW-Dumpster Enclosure | \$10,000 | AHBL plans for the new PW shop, indicate site improvements such as: Dumpster Enclosure onsite, and this could be done partially internally. However paving and street improvement are not finished yet at Shop. | 260 @ Daily | 9 |
| 8 | PW-Entry Slab | \$15,000 | AHBL plans for the new PW shop, indicate site improvements such as: secondary entry slab @ east elevation. needed for the fence PH 2. | 12 | 7 |
| 9 | Striping 2024 | \$25,000 | annual striping work around the city ±12 streets. SPM | 365 @ Daily | 8 |
| 10 | ULID Sewer Manhole Coatings | \$300,000 | Everything in Pierce Co. has hi water infiltration. Ravenscoatings, Qty 70 x \$4000 | 365 @ Daily | 13 |
| 11 | Senior Center Window Screens | \$7500 | SR Center: new bug screens on outside of all windows are needed everywhere. | 260 @ Daily | 10 |
| 12 | PW-23-002 PW _ Building Deck Replac. | \$35,000 | PW Shop needs new deck, currently not usable and a safety hazard. | 260 @ Daily | 12 |
| 13 | PW-23-006 SD_Public Safety Bldg Storm Water Replacement | \$55,000 | Recently cleaned last week. Temp fix that might hold us over till the major Police station remodel? But if not need \$55K for replacement. | 365 @ Daily | 11 |

Public Works

2024 Budget Project Needs

| # | Description | Price | Justification | Assumed Daily Usage per yr @ 260 max. | Priority Level (PWD determined) |
|----|--|--------------|--|---------------------------------------|---------------------------------|
| 14 | PW-23-007 SS_Alder Lane Pump Station _ CONTRACTOR | \$325,000 | Currently, only the funding for an AE consultant is provided. We will need to budget for the installation of the equipment. | Infrastructure Utility 365 @ Daily | 3 |
| 15 | PW-23-008 TR_Ellingson Overlay | \$187,389.90 | PENDING TIB AWARD 12/15/2023 AE Consultant & Contractor Costs, TIB portion is: \$1,686,509.10 | Infrastructure Utility 365 @ Daily | 4 |
| 16 | PW-23-009 WT_Water Main Replacement Seattle & Cedar_ CONTRACTOR | \$800,000 | Currently, only the funding for an AE consultant is provided. We will need to budget for the installation of the project. | Infrastructure Utility 365 @ Daily | 5 |
| 17 | PW-23-010 SS_Sanitary Sewer Replacement Butte & Countyline Rd_ CONTRACTOR | \$650,000 | Currently, only the funding for an AE consultant is provided. We will need to budget for the installation of the project. AE would like to see ~1000LF replaced. The wait/do nothing option is ok for stalling this project. | Infrastructure Utility 365 @ Daily | 6 |
| 18 | PW-23-011 SS_Tacoma Blvd Pump Station _ Grinder_ CONTRACTOR | \$100,000 | We will need to budget for the installation of the project. Hoping to not have to hire and AE consultant. Assumption is Pumptech will provide PW a agitator pump and we will need someone to install it. Still @ 90% SD set. | Infrastructure Utility 365 @ Daily | 2 |
| 19 | PW-23-014 WT_Booster Pump Station _ Pump Inspections | \$16,000 | Need to hire a specialty pump company to do harmonic balancing, bearing replacements, seal replacements, etc for (1) of the water system pumps...currently 15 yrs in svc. | Infrastructure Utility 365 @ Daily | 7 |
| 20 | PW-23-018 WT_Chlorination System Upgrades | \$100,000 | Currently we are adding shallow well chlorine gas to the system and we would like to add a system that creates its own chlorine gas safely. | Infrastructure Utility 365 @ Daily | 8 |
| 21 | Industrial District Manhole Cover Replacement | \$160,000 | Following Streets have failing sewer frames/grates: Skinner, Ellingson, Valentine, Roy. | Infrastructure Utility 365 @ Daily | 9 |
| 22 | Water Leak Repairs @ Reservoir | \$80,000 | 750,000 Gallon reservoir has multiple new leaks | 365 @ Daily | 1 |

Public Works

Annual Budget Maintenance Items FYI

| # | Description | Price | Justification |
|---|--|-------------------|---|
| 1 | Chip Sealing Annually | \$50,000-\$90,000 | Chip Sealing streets 7,000 – 15,000 SY per yr, on a regular annual rotation. |
| 2 | Striping Annually | \$23,000 | annual striping work around the city ±12 streets |
| 3 | Storm Drain Cleaning Annually | \$120,000 | Currently, contract is valued at \$126K, however per request of the Council, possibly the City can do some or all of this work, TBD. |
| 4 | Mowing ROW | alot | 6-8 months out of the year mowing is done in various areas. |
| 5 | Sidewalk Replacements | \$50,000 | Annual replacements. |
| 6 | Storm Pond Cleaning Annually | \$75,000 | Annual rehabilitation work. However, the issue is invasive growth that effects that affects capacity for what they were designed for. |
| 7 | Catch Basin Replacements | \$20,000 | Money towards replacing failing CB infrastructure as needed. |
| 8 | Flood Control Measures along waterways | \$13,000 | Preventing flooding along primarily the Milwaukee Creek. Includes HPA permitting, beaver dam removals, consultants, etc.. |
| 9 | Wetland Cleaning | \$20,000 | Until out of the 10-year maintenance. Need licensed wetland maintenance. |

Public Works

Long Range Budget Project Needs

| # | Description | Price | Justification | Assumed Daily Usage per yr @ 260 max. |
|---|--|------------------------------|--|---------------------------------------|
| 1 | New PW Shop | \$3,500,000 | Needed by 2025. New Public Works Building at the existing Countyline Rd Facility. | 260 @ Daily |
| 2 | New City Hall / Civic Center | \$20,000,000 \$40,000,000 | Needed by 2030. The entire City Hall Complex & Park will need to be constructed. A master plan will need to be started now, to consider all that is important. | 365 @ Daily |
| 3 | Permanent Reservoir Tank | \$3,000,000 | Needed by 2030. 500,000 - 750,000 Gallon tank. Needed for storage demand capacity. | 365 @ Daily |
| 4 | Sewer Main Line Improv. City wide | ??? | Needed by 2025. The existing sewer system was put in the 1970's. | 365 @ Daily |
| 5 | PW Decant Facility | \$1,500,000 | Needed by 2025. If we want to utilize our own staff for Storm Drain Cleaning regularly. | 260 @ Daily |
| 6 | Sewer Lift Station Replacements (West Cedar) | \$500,000 | Continue with the replacement cycles of removing the confined spaces. Include also the wet well. | 365 @ Daily |
| 7 | Sewer Lift Station Replacements (Webstone) | \$300,000 | Continue with the replacement cycles of removing the confined spaces. | 365 @ Daily |
| 8 | Shirer Development Area | \$1,500,000 | All the utilities feeding this are questionable and needs a eventual replacement. (sewer, water, storm, sidewalks, streets) Pacific & Cedar. Ideally, good for redevelopment. | 365 @ Daily |
| 9 | Police Station Remodel | \$1,750,000 | Needed by 2025. Police Station will need a interior/exterior remodel after VRFA leaves. Need new flooring in the entire facility. Suggest that VRFA provides some relief funding from their departure. | 365 @ Daily |

Public Works

2024 1-year Goals

- Create long-term systems & procedures in the event of key staff turn-over.
 - Internal stakeholders, need calendar reminders, to do lists, etc..
 - External stakeholders, need clear direction, instruction, up-date website portal to extract information, etc..
- Update the City policy on PW Bidding.
- Update the City contracts for PW Construction.
- Update the City policy on PW Invoicing.
- Create a dedicated earmarked fund for a future PW building.
 - Unused Capital Project Contingency Dollars can roll into this.
- Succession planning for aging staff.
- Cross-Train PW staff.

Public Works

2024 3-5 year Goals

- Construct new PW building.
- Police Station Remodel
- Decant Facility
- Sewer Lift Station Replacements (West Cedar)
- Sewer Lift Station Replacements (Webstone)

Public Works

2024 10-year Goals

- Construct new City Hall / Civic Center.
- Shirer Development Area, newer utilities.

Public Works

Utility Rates – Pacific Residents & Businesses

| <u>Year</u> | <u>Rate</u> |
|-------------|---|
| <u>2022</u> | <u>\$91.57 for each residential unit</u> <u>(\$49.27 Metro Charge and \$42.30</u> <u>City of Pacific charge)</u> |
| <u>2023</u> | <u>\$94.67 for each residential unit</u> <u>(\$50.26 Metro Charge and \$44.42</u> <u>City of Pacific charge)</u> |
| <u>2024</u> | <u>\$97.90 for each residential unit</u> <u>(\$51.26 Metro Charge and \$46.64</u> <u>City of Pacific charge)</u> |
| <u>2025</u> | <u>\$101.25 for each residential unit</u> <u>(\$52.29 Metro Charge and \$48.97</u> <u>City of Pacific charge)</u> |
| <u>2026</u> | <u>\$104.75 for each residential unit</u> <u>(\$53.33 Metro Charge and \$51.42</u> <u>City of Pacific charge)</u> |



| <u>Year</u> | <u>Base Unit Price for</u> <u>First 700 Cubic Feet</u> | <u>Rate Per 100 Cubic</u> <u>Feet, Over 700</u> <u>Cubic Feet</u> | <u>Minimum</u> <u>for Non-</u> <u>Residential</u> <u>and Multi-</u> <u>Family</u> <u>Residential</u> |
|-------------|---|---|---|
| <u>2022</u> | <u>\$91.57</u> | <u>\$14.48, per 100</u> <u>cubic feet</u> | <u>\$91.57</u> |
| <u>2023</u> | <u>\$94.67</u> | <u>\$15.20</u> | <u>\$94.67</u> |
| <u>2024</u> | <u>\$97.90</u> | <u>\$15.96</u> | <u>\$97.90</u> |
| <u>2025</u> | <u>\$101.25</u> | <u>\$16.76</u> | <u>\$101.25</u> |
| <u>2026</u> | <u>\$104.75</u> | <u>\$17.60</u> | <u>\$104.75</u> |



Information Technology

2024 Budget Presentation



Information Technology

Information Technology provides technical support, resources, and services to help staff work smarter, faster, and with greater efficiency.

- Work closely with all departments to provide needed resources as well as evaluate new technologies to enhance efficiencies & increase productivity
- E-mail system for all departments
- Police department networks for incident dispatch, response and documentation
- Police digital criminal justice information
- Community Development digital communication systems
- Financial software system

Direct management of:

- Over 100 computers
- 8 servers
- Over 100 user and system accounts
- Over 150 e-mail accounts
- Network connectivity between City Hall, Police Headquarters, the Community Center, the Senior Center and the Public Works Shop
- 3 firewalls
- 4 switches/routers
- Network circuits and access points
- Wi-Fi access points

Information Technology

Information Technology provides technical support, resources, and services to help staff work smarter, faster, and with greater efficiency.

Direct management of (continued):

- Public Works SCADA system
- City Clerk access to public records & storage capacity
- Telemetry network from the well site to the Public Works Shop
- Software installation and licensing from 217 different publishers
 - Security
 - Anti-Virus
 - DNS filtering
 - Spam filtering
 - User training
 - Device security updates
 - Network security scanning
- Network design, administration & security
- Website administration
- Computer software procurement & installation
- Hardware & software maintenance, upgrades and replacements
- Employee technical support & training
- Assist departments in implementing new technology

Information Technology

2023 Accomplishments

- CJIS Audit by WSP. WSP is assigned by FBI to administer and audit the technical security for Criminal Justice Agencies once every three years.
- Implemented Active Directory Auditing to satisfy CJIS security policy.
- Fixed issue where some of the MICs in Council Chambers were not recording audio.
- Optimized sound levels of the speakers in the activity center and fixed lack of sound through HDMI connection.
- Onboarded 14 new employees.
- Increased Internet bandwidth from 40 Mbps to 100 Mbps
- Near 100% network/server uptime
- Implemented Managed Detection and Response for our endpoints.
- Implemented Malicious Domain Blocking and Reporting (MDBR) through Multi-State Information Sharing & Analysis (MS-ISAC).
- Upgraded Youth computer lab PCs. This upgrade encouraged kids from not using the systems at all to consistent use

Information Technology

2023 Accomplishments (Continued)

- Replaced Canon copier at Public Works Shop under new lease.
- Procured and installed new Sharp collaboration board at the Public Works shop. This can be used for Public Works projects and will be part of the Emergency Operations Center.
- Expanded storage capacity for email, files, and backups.
- Updated facility door-lock system server software and database.
- Extended Firewall licensing through 12/31/2025.
- Website redesign and content migration. Transition to new website should happen before year-end.
- Received state approval for “State and Local Cybersecurity Grant Program” (SLCGP) grant of \$16,692 toward development of an overall cybersecurity/strategic planning.

Information Technology

2024 Goals

- Perform Cybersecurity assessment to determine Pacific's cybersecurity needs and apply for next cycle's SLCGP funding.
- Replace aging computer workstations - Primary systems that are 5+ years old
- Assess options for business phone. End of new hardware and software production ended June 30, 2022. End of Life/tech support for current system is June 30, 2026.
- Implement NetMotion for VPN access to resolve issues with Police Mobile connection disruptions.
- Complete a Business Continuity Plan.
- Continue Microsoft 365 evaluation and implementation.
- Clean-up and archive network accounts and file storage.



Community Services

2024 Budget Presentation

**Parks and
Recreation**



Community Services

2024 Staffing

- Community Services Director
- Youth Services Lead
- Senior Services Lead
- Activities Coordinator/Bus Driver
- Seasonal Youth Activities Coordinator

Community Services

2023 Accomplishments

- We continue to expand our bus trips at the Senior Center. These trips include weekly shopping, dining and walking trips. We also had trips to the Seattle Mariners Game, Poulsbo, Gig Harbor Waterfront and Tulip Festival.
- Meals on Wheels program has increased from 235 per month in 2022 to 258 meals per month in 2023.
- The Community Yard Sale was held in June and had a record number of 22 spaces sold. 18 were sold in 2022.
- We give out approximately 50 weekend food bags to seniors each month.
- The Resource Navigator has increased number of clients from 27 per month in 2022 to 37 per month in 2023. This funded by the King County VSHSL levy.
- Family Bingo Night continues to be popular and there has been approximately 45 participants each month. We also have our quarterly drawing for a 32" TV.

Community Services

2023 Accomplishments

- We offered Skyhawks Sports Camps during spring and summer this year. We continue to have good attendance for tots classes. We have more planned for the fall.
- We coordinated Summer Lunch Program with the Auburn School District. This program averaged 100 participants each day. This is up from 70 per day in 2022.
- Hired Seasonal Youth Activity Assistant that helped with Summer Lunch Program, youth activities and arts/craft projects for the kids.
- Our second annual Concerts in the Park during August were a big success. We had two concerts in Steiger Memorial Park. We had a record attendance of over 120 at the second concert of 2023. In 2022 our first concert has approximately 40 in attendance.
- We had Kids Summer Entertainment with Reptile Isle and Alex Zerbe the Juggler. This was enjoyed by both the kids and parents. There were 60 plus in attendance for Reptile Isle this year.
- Received \$2500 donation from Umpqua Bank for Summer Concerts and National Night Out.
- Installed new climbing boulder at Steiger Park.
- Purchased new playground equipment for Milwaukee Park which will be installed sometime in November.
- Online gaming competition in our Youth Computer Lab with Algona Community Center.

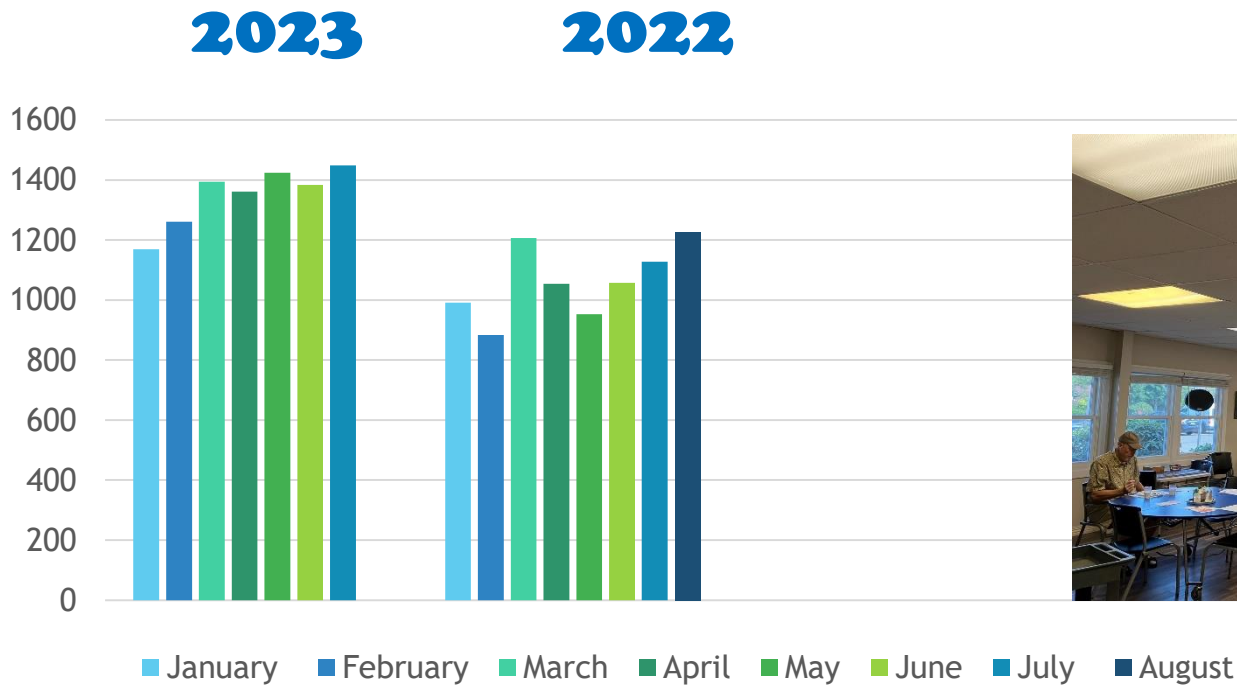
Community Services

2023 Highlights



Community Services

Senior Center Participation



Community Services

2024 Goals

- Continue Summer Concerts in the Park and partner with Community Recreation Foundation of Pacific.
- Continue to improve communication and advertisement of community events and activities through social media, banners, reader board and other marketing materials.
- Hire summer seasonal worker to assist with community events and summer youth activities.
- Apply for the King County VHSL Grant again and continue to look for other grant opportunities for youth and senior programs.
- Obtain sponsorships for community events.
- Continue to improve and expand Community Events. These include Summer Concerts, Harvest Festival, Family Bingo Night, Holiday Bazaar and Community Yard Sale. New events such as Parent's Night Out, Grandparents Tea and more.
- Continue to expand our Sports Camps and Clinics with Skyhawks and other organizations.
- Continue with Fundraisers such as Pancake Breakfast, Taco Tuesday, Community Yard Sale and Holiday Bazaar.

Community Services

2024 Goals

- Continue to work with other organizations such as Community Recreation Foundation of Pacific and Pacific Partnerships.
- Continue to expand and provide a variety of activities and bus trips for the seniors.
- Expand the number of youth and adult class offerings at the community center. This includes arts/crafts and youth science classes.
- Combining of Community Services and Parks into a Parks and Recreation Department.
- New Community Garden at Steiger Park with 10'x10' plots available to residents.
- 9 Hole Disc Golf Course at City Park in partnership with NW Disc Golf.
- Offer new preschool indoor soccer league.

2024 Budget Needs

Replace message kiosk at Steiger Park - \$3000

Replace sign in front of Senior Center - \$2000

Disc Golf Course -\$4000

Community Garden- \$1000



Community Development 2024 Budget Presentation



Community Development

2023 accomplishments and staffing

2023 Staffing:

Community Development Director (Full Time)
City Engineer Full Time * (1)
Associate Planner Full Time (1)
Building Official - Full Time (1)
Permit Tech - Full Time (1)
Code Enforcement - Full Time (1)
Admin Assistant * (Filing and Scheduling) (1)
*shared with Public Works

2023 Accomplishments

Construction Permits: 134
Land Use Applications: 19
Code Enforcement Cases: 16
Adjusted application/permit fees for inflation

2023 Code Revisions:

Proper Permit Processing Order (SDPs/BPs)
PB/PC Member Reduction
PB/PC Chair Term and Election
PB/PC Youth Position Residency

2023 Comp Plan Updates:

2024 Comp Plan Periodic Update underway.
Public Outreach and Vision Statement complete.

Technology

Implemented DropBox, Bluebeam, SmartGov,
and new Public/Internal GIS system

Grants

\$875,411 worth of grant money brought into the
City under various projects.

Joint PW Projects

West Valley Hwy ROW Acquisition
Beaver Management
Tree Removal/Trimming on City-Owned Tracts
Interurban Trail War Memorials

Community Development

2024 Goals and Staffing

2024 Staffing: (No Change from 2023)

Community Development Director (Full Time)

City Engineer Full Time * (1)

Associate Planner Full Time (1)

Building Official - Full Time (1)

Permit Tech - Full Time (1)

Code Enforcement - Full Time (1)

Admin Assistant * (Filing and Scheduling) (1)

*shared with Public Works

2024 Goals

Permitting

Use SmartGov for all permit routing, review, and payment.

100% electronic plan review and submittal

Code Enforcement (No Change from 2023)

Complete actions and monitor junk vehicles

Complete actions and monitor RV parking

Identify and track nuisance properties

Comp Plan

Mid-Year Presentation to PC/CC

Final Adoption of Plan in December 2024

Economic Development (No Change from 2023)

Pursue Grants for Economic Development Plan

City Code

Achieve compliance with state housing laws by June 2025

Clean-up zoning district names/abbreviations between Comp Plan, PMC, and Maps

Acquisitions

King County Open Space/Tacoma Wetlands Park

New Inspector Vehicle - \$50,000

Community Development

Stats as of 8/10/2023

2 ADUs
 3 BLAs
 8 Pre-Applications
 2 SEPAs
 4 Site Development Permits
= 19 Land Use Actions

24 Building Permits
 3 Demo Permits
 36 Mechanical Permits
 14 Plumbing Permits
 3 Fire Permits
 3 Hydrant Permits
 3 Overload Permits
 47 ROW Permits
 1 Sewer Permit
= 134 Permits

| Grant | Amount |
|--------------------------|-----------|
| KC GASA | \$35,000 |
| Port of Seattle | \$7,215 |
| RMSA | \$10,000 |
| KC Con Future | \$234,200 |
| State Legis. | \$400,000 |
| TIB Relight WA | \$17,996 |
| PCFCZD | \$11,000 |
| DOE Stormwater | \$25,000 |
| KC Vets | \$20,000 |
| Commerce Comp Plan Grant | \$125,200 |
| | \$875,411 |

| | 2022 | 2023 |
|------------------------|------|------|
| Land Use Actions | 29 | 19 |
| Building Permits | 153 | 134 |
| Code Enforcement Cases | 12 | 16 |



2024 Budget Presentation

15 Minute Break

When we come back:

E. Police Department, Ron Schaub, Police Chief

F. Finance, Kari Kurtz, Finance Director

G. Administration, Laurie Cassell, City Administrator/City Clerk/Personnel



Police
Department
2024 Budget Presentation



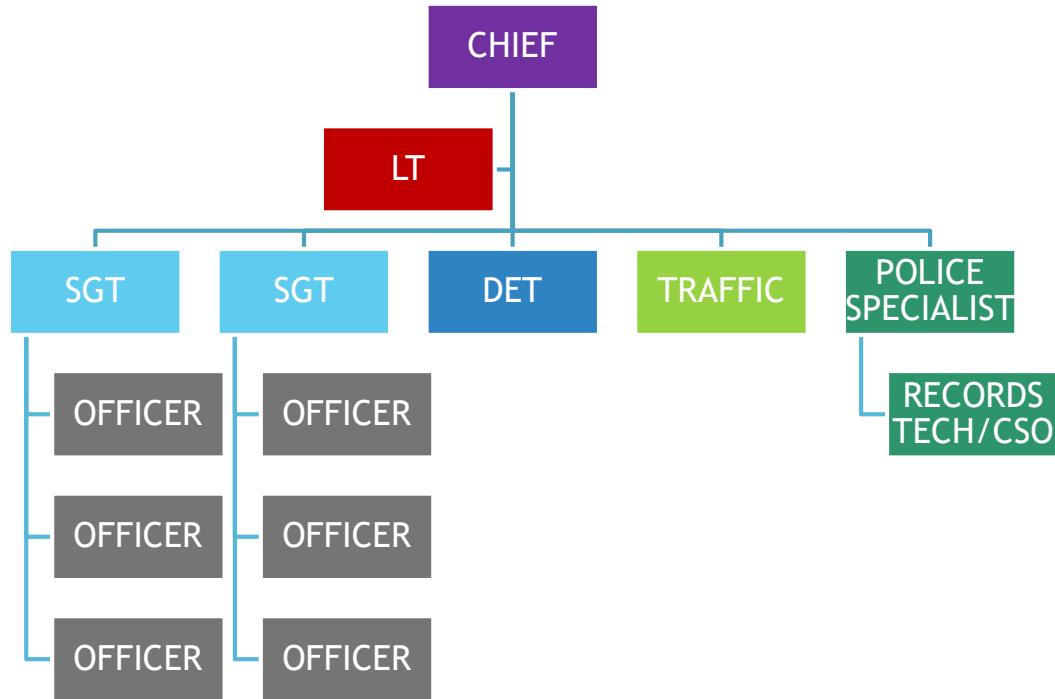
Police Department

Vision Statement

- Setting the standard of excellence in small city policing
- The Pacific Police Department's mission is to make the City of Pacific a safe place to live, work, and play.

Police Department

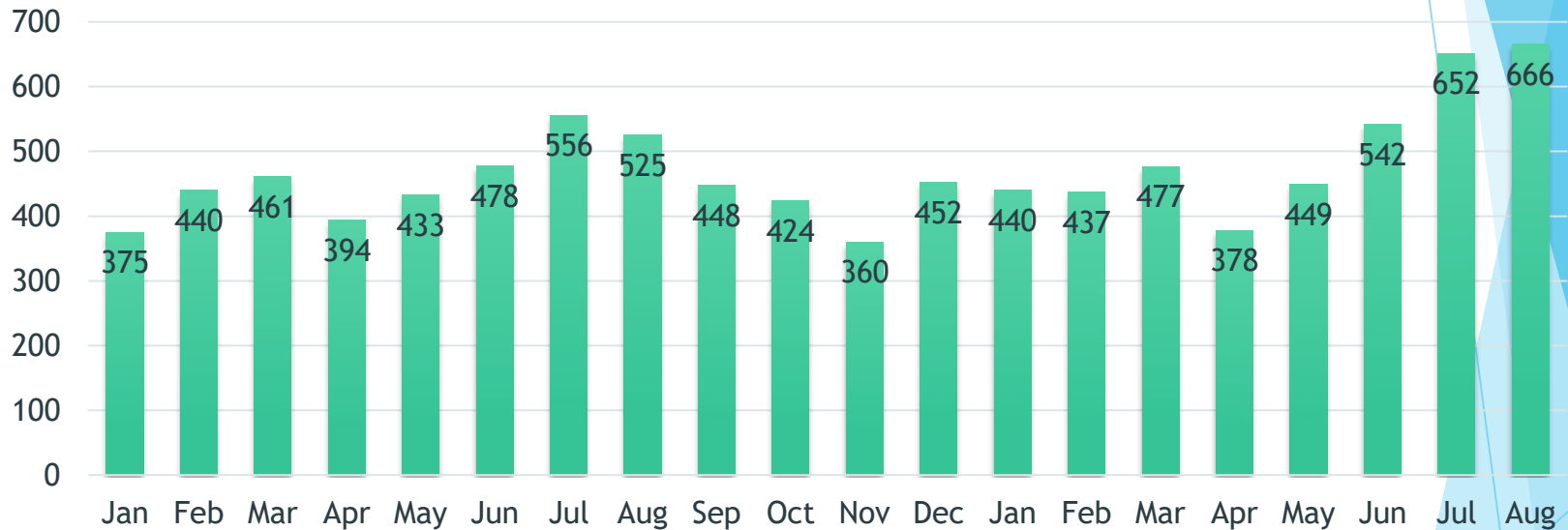
Organization Chart



Police Department

Department Calls For Service (CFS)

Calls for Service 2022-Present



Police Department

Traffic Data

| PACIFIC | |
|-----------------------------------|-------------------|
| ROADWAY | AVG. DAILY VOLUME |
| STEWART RD SE - VALENTINE AVE SE | 20439 |
| ELLINGSON RD W - MILWAUKEE BLVD S | 7830 |
| VALENTINE AVE SE - ROY RD SW | 6778 |
| 500 BLOCK - BUTTE AVE SE | 5839 |
| 100 BLOCK - PACIFIC AVE S | 5800 |
| MILWAUKEE BLVD N - 3RD AVE NW | 4336 |
| W VALLEY - 5TH AVE SW | 2374 |
| 3RD AVE NW - MILWAUKEE BLVD N | 1899 |
| 3RD AVE SE - MILWAUKEE BLVD S | 1810 |
| TOTAL | 57105 |

Police Department

Departmental Priorities

- Continue to improve our ongoing training program
- Continue to develop our high-quality employees
- Begin the accreditation process in 2024
- Complete the implementation of a new traffic school
- Putting off until July 2024 due to a change with WSP
- Fully integrate the records tech - CSO into daily operations
- 2nd full-time traffic officer -see upcoming slide

Police Department

Major Equipment Requests

- Additional rifle-rated shield - \$10000
- Additional LIDAR unit - \$2700
- Evidence dryer - \$6000
- 3 patrol rifles - \$6600
- Training program for new records specialist - CSO - \$5000
- Updated PD reader board
 - In partnership with VRFA

Police Department

Major Equipment Requests

- Taser + body camera refresh
 - Beginning October 2024
 - Current Tasers will be out of warranty and no longer covered by axon if there is legal action
- Updated office furniture
- Potential partnership with NovoaGlobal photo enforcement

Police Department

Major Equipment Requests

- Salary + benefits
 - Base wages + benefits - \$133.120
- NOI revenue
 - 2000 tickets per year goal
 - 1 dedicated traffic car
 - 3000 tickets per year goal
 - 2 dedicated traffic cars

| NOIs | CITY | STATE | TOTALS |
|------|---------------|---------------|-----------|
| | \$ 47.71 | \$ 97.29 | \$ 145.00 |
| 500 | \$ 23,855.00 | \$ 48,645.00 | |
| 1000 | \$ 47,710.00 | \$ 97,290.00 | |
| 1500 | \$ 71,565.00 | \$ 145,935.00 | |
| 2000 | \$ 95,420.00 | \$ 194,580.00 | |
| 2500 | \$ 119,275.00 | \$ 243,225.00 | |
| 3000 | \$ 143,130.00 | \$ 291,870.00 | |
| 3500 | \$ 166,985.00 | \$ 340,515.00 | |
| 4000 | \$ 190,840.00 | \$ 389,160.00 | |
| 4500 | \$ 214,695.00 | \$ 437,805.00 | |
| 5000 | \$ 238,550.00 | \$ 486,450.00 | |



Finance

2024 Budget Presentation



Finance

2023 Achievements

- Continued to maintain a high level standard of customer service to both internal and external customers, as well as performing essential duties of the finance team despite being short staffed
- Attended professional training through Washington Finance Officers Association and Association of Washington Cities
- Enrolled Finance Technicians in governmental accounting courses
- Preparing for State Audits for 2020-2022
- Preparing for Federal Single Audit of grant funds for 2020-2022
- Maintained up-to-date financial reports
- Developing a process for project accounting to better track PW projects
- Processed an average of 180 vendor invoices per month.
- Closely monitored past due utility accounts keeping the average number of shut offs to 35 a month
- Monitored leak alarms daily. This allows us to contact customer in a timely manner to prevent water loss. On average this is 16 customers per month.

Finance

2024 Goals

- Review and evaluate procedures and policies to increase internal controls, productivity and efficiency
- Work with the bank to allow remote check deposits via check scanner
- Work with the bank to set up wire transfers between the Local Government Investment Pool and the general checking account at Umpqua Bank
- Implement monthly reconciliations of various accounts to ensure accuracy of data
- Monitor monthly financial reports to mitigate financial damage to our City
- Audit sales tax report to ensure every business obtains a license and reports business and occupation taxes
- Audit delinquent business and occupation taxes to recoup lost revenue and increase general fund

Finance

2024 Goals (Continued)

- Continue to serve all active business members in and outside the community
- Continue to provide a high level of customer service for both internal and external customers
- Preparation of the 2025 Annual Budget
- Continue training through Washington Financial Officers Association, Association of Washington Cities, and other resources
- Collaborate with all Directors to share ideas and work on new processes as a team.
- Continue to provide a positive team environment where everyone feels appreciated and voices are heard

Finance

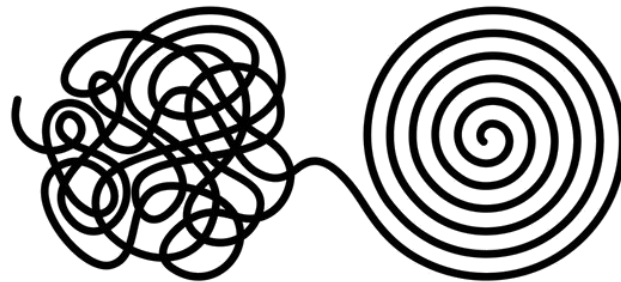
Wish List

- Research, evaluate and implement new ERP software to provide increased production, efficiency, and accuracy of data.
- Some options to research are:
 - Springbrook Cirrus - which is a cloud version
 - Caselle - offers cloud version and on premise



Administration

2024 Budget Presentation



Admin

2023 Accomplishments

- Entire personnel policies were approved and implemented May 2023
- Achieved the AWC Well City Award
- Administrative Assistant scheduled to achieve the Certified Municipal Clerk (CMC) certification by the end of the year
- Closed 44+ records requests as filled
- Processed the annual records destruction of documents in August
- All meeting minutes prepared and approved to date
- Pacific Municipal Code remains updated
- Completed annual asset management requirements
- Maintained information on the City website for various departments
- Community outreach through social media and E-newsletter Pacific Pulse
- Quarterly wellness team building activities
- Wednesday Words of Wisdom
- Successfully held a field trip for the ALPAC 2nd graders

Admin

2024 Goals

- Achieve Well City Award
- Renew all expired contracts
- Create a system for project files
- Continue to fill vacant positions as needed
- Build on training using RMSA-U for all employees
- Set up committee to review and revise the Employee Safety Handbook
- Maintain the new website content
- Continue building on the records management system
- Complete transfer of archival records to WA State Archives



Council Budgetary Input





Adjourn





City Council Minutes

Committee of the Whole
Monday, September 18, 2023

CALL TO ORDER/PLEDGE OF ALLEGIANCE

Mayor Pro Tem Putnam called the regularly-scheduled meeting to order at 6:30 p.m. and led the Pledge of Allegiance.

ROLL CALL

Present: Council Members Boles, Katie Garberding, Kerry Garberding, Stutler, Mayor Pro Tem Putnam and Mayor Guier

Absent: Council President Kave and Council Member Petersen

STAFF PRESENT

Public Works Director Rick Gehrke, Police Chief Schaub, City Engineer David Yaghoobi and City Administrator-City Clerk Laurie Cassell

ADDITIONS TO/APPROVAL OF AGENDA

The agenda was approved unanimously by Council

DISCUSSION

A. WASTE MANAGEMENT

- Laura Moser and Carey McNally presented on the 2nd amendment to the WM contract for the pass through adjustment to the disposal component

B. PUBLIC SAFETY

1. Traffic Cameras

- Heidi Traverso, with NovoaGlobal presented a Powerpoint on the statistics in the City of Pacific for a traffic study on our main arterial Roads and school zones

Mayor Pro Tem Putnam adjourned the Committee of the Whole at 7:26 p.m.

Laurie Cassell, MMC
City Clerk



Workshop
Monday, September 18, 2023
Immediately following Committee of the Whole

CALL TO ORDER

Council President Kave called the regularly scheduled meeting to order at 7:27 p.m.

ROLL CALL

Present: Council Members Katie Garberding, Kerry Garberding, Boles, Stutler, Mayor Pro Tem Putnam and Mayor Guier

Absent: Council President Kave and Council Member

STAFF PRESENT

Public Works Director Rick Gehrke, Police Chief Schaub, City Engineer David Yaghoobi, and City Administrator-City Clerk Laurie Cassell

ADDITIONS TO/APPROVAL OF AGENDA

Chief Schaub added Resolution No. 2023-908 for a purchase of Law Enforcement vehicles and associated fixtures

AGENDA ITEMS

- A. AB 23-517: Resolution No. 2023-907:** Authorizing the Purchase of a vehicle pursuant to Washington State Department of Enterprise Services Cooperative Contract 05916

On Council consensus, the item was forwarded to the meeting of September 25, 2023

- B. AB 23-518: Motion:** Authorizing the Mayor to sign a Letter of Understanding defining immediate family under Bereavement Leave

On Council consensus, the item was forwarded to the meeting of September 25, 2023

- C. AB 23-519: Resolution No. 2023-908:** Waiving procurement requirements and authorizing the sole source purchase of law enforcement vehicles and associated fixtures

On Council consensus, the item was forwarded to the meeting of September 25, 2023

GOOD OF THE ORDER

Council Member Kerry Garberding and Council Member Kerry Garberding will be attending the next Council Meeting via phone.

ADJOURN

Council President Kave adjourned the workshop at 7:40 p.m.

Laurie Cassell, MMC
City Clerk