

CITY OF BETHEL

City Council Meeting Agenda, August 27, 2024 – 6:30 PM

Website: <https://www.cityofbethel.org/council>

Location: Council Chambers, City Hall, 300 Chief Eddie Hoffman Highway, Bethel

Council Members: Mayor Mark Springer, Vice-Mayor Sophie Swope, Rose Henderson, Beth Hessler, Patrick Snow, Teresa Keller, Mikayla Miller

Zoom Meeting Link: <https://us06web.zoom.us/j/4888456188?pwd=bkN1dGI4MHpGZ1kwOUVYWU5kd0xhZz09>

Zoom Meeting ID: 488 845 6188

Zoom Meeting Passcode: 13871

Zoom Meeting Conference Line Numbers: 833 548 0276 US Toll-free

833 548 0282 US Toll-free

877 853 5257 US Toll-free

888 475 4499 US Toll-free



1. CALL TO ORDER

2. PLEDGE OF ALLEGIANCE

3. ROLL CALL

4. PEOPLE TO BE HEARD – FIVE MINUTES PER PERSON

- 4.1. *Written Public Comments can be submitted by opening your phone camera and hovering over this URL code. The link to the submission form will appear. You may also go to www.cityofbethel.org. Written public comment must be submitted 24 hours before the meeting.*



5. APPROVAL OF CONSENT AGENDA AND REGULAR AGENDA

6. APPROVAL OF MEETING MINUTES

- 6.1. *8-13-2024 Regular City Council Meeting

7. REPORTS OF STANDING COMMITTEES

- 7.1. Committee/Commission Agendas And Draft Meeting Minutes

8. SPECIAL ORDER OF BUSINESS

9. UNFINISHED BUSINESS

- 9.1. Public Hearing Of Ordinance 24-06: Amending Bethel Municipal Code 2.60 Committees, Commissions, And AD HOC Committees To Reduce Voting Members Under Special Circumstances (Council Member Snow)
- 9.2. Public Hearing Of Ordinance 24-07: Amending Bethel Municipal Code Chapter 2.60, Committees, Commissions And Ad Hoc Committees To Reduce The Meeting Schedule Requirement To Every Other Month (Acting City Manager Strickler)
- 9.3. Public Hearing Of Ordinance 24-08: Authorizing The Disposal Of City Property By Means Of Demolition Of The Building Located At 105 Ptarmigan In Accordance With BMC 4.08.030 (A),

Posted August 21, 2024. Item 10.5 and QR CODE posted on 8/23/2024 at AC Co., Swanson's, City Hall, and the Post Office.

Kevin Morgan, Deputy City Clerk

City Clerk's Office Contact Information: Email cityclerk@cityofbethel.net Phone 907-543-1384

Items noted with an asterisk (*) are consent agenda items, unless removed from the consent agenda they are approved upon the approval of the agenda. Ordinances introduced at this meeting may be set for public hearing at the next regular meeting.

The Council may by unanimous consent, after 12:00 AM Fix the Time to Which To Adjourn until the following day at 6:30 PM

Property No Longer Necessary For Municipal Purposes (Acting City Manager Strickler)

- 9.4. Public Hearing Of Ordinance 24-09: Authorizing The Disposal Of Municipal Land Through A Land Lease To The Yukon Kuskokwim Health Corporation In Accordance With Bethel Municipal Code 4.08.030, Disposal To Entity Providing Necessary Public Service (Acting City Manager Strickler)

10. NEW BUSINESS

- 10.1. *Introduction Of Budget Ordinance 23-11(h): Amending The Adoption Annual Operating Budget For Fiscal Year 2024, July 1, 2023-June 30, 2024 (Acting City Manager Strickler)
- 10.2. *Introduction Of Budget Modification 24-04(b): Amending the Operating Budget For Fiscal Year 2025, July 1, 2024-June 30, 2025 (Acting City Manager Strickler)
- 10.3. *Introduction Of Budget Ordinance 24-05 (b): Amending The Capital Improvement Budget For Fiscal Year 2025, July 1, 2024-June 30, 2025 (Acting City Manager Strickler)
- 10.4. *AM 24-24: Direct Administration To Negotiate And Execute A Contract For The Construction Of A New Animal Control Facility (Acting City Manager Strickler)
- 10.5. *Introduction Of Ordinance 24-10: Applying For, And Conditionally Approving An Amendment To The Official Land Use Map Of Bethel By Adopting A General Use Zoning Designation To Land Owned By The City Of Bethel Consisting Of A Property Located At Fifth Avenue, Lot 4, 5, 6, Block 7, USS 3230 (Acting City Manager Strickler)

11. REPORTS

- 11.1. Mayor's Report
- 11.2. City Manager's Report
- 11.3. Clerk's Report

12. COUNCIL MEMBER COMMENTS

13. EXECUTIVE SESSION

14. ADJOURNMENT

Posted August 21, 2024. Item 10.5 and QR CODE posted on 8/23/2024 at AC Co., Swanson's, City Hall, and the Post Office.

Kevin Morgan, Deputy City Clerk

City Clerk's Office Contact Information: Email cityclerk@cityofbethel.net Phone 907-543-1384

Items noted with an asterisk (*) are consent agenda items, unless removed from the consent agenda they are approved upon the approval of the agenda. Ordinances introduced at this meeting may be set for public hearing at the next regular meeting.

The Council may by unanimous consent, after 12:00 AM Fix the Time to Which To Adjourn until the following day at 6:30 PM

1. CALL TO ORDER

A Regular Meeting of the Bethel City Council was held on August 13, 2024 at 6:30 p.m., in the Council Chambers, Bethel, Alaska.

Vice-Mayor Swope called the meeting to order at 6:31 p.m.

2. PLEDGE OF ALLEGIANCE

3. ROLL CALL

Comprising a quorum of the Council, the following members were present:
City Council Member Rose Henderson City Council Member Patrick Snow Vice-Mayor Sophie Swope City Council Member Teresa Keller City Council Member Mikayla Miller
Members Absent:
Mayor Mark Springer City Council Member Beth Hessler
Also in attendance were the following:
Acting City Manager Lori Strickler, Acting City Clerk Kevin Morgan, City Attorney Libby Bakalar (telephonically)

4. PEOPLE TO BE HEARD – Five minutes per person

Krystin Williams-Bethel- Spoke about the difficulty of identifying land for sale in Bethel.

Item 4.1. - Written Public Comments

No Written Comments submitted.

5. APPROVAL OF CONSENT AGENDA AND REGULAR AGENDA

Main Motion: Approve the Regular and Consent Agenda.

Moved by: Rose Henderson

Seconded by: Teresa Keller

In favor: Rose Henderson, Patrick Snow, Sophie Swope, Teresa Keller, Mikayla Miller

Opposed: None

Results: Motion Carries

-Remove from Consent Agenda, Item 10.4, AM 24-22- Council Member Miller

6. APPROVAL OF MEETING MINUTES

Item 6.1. - *6-25-2024 Regular City Council Meeting
Passed on the consent agenda.

Item 6.2. - *7-23-2024 Regular City Council Meeting
Passed on the consent agenda.

Item 6.3. - *8-6-2024 Special City Council Meeting
Passed on the consent agenda.

7. REPORTS OF STANDING COMMITTEES

Item 7.1. - Committee/Commission Agendas And Draft Meeting Minutes
Port Commission, Council Member Henderson- No Meeting since the last meeting.

Planning Commission- No one available to provide a report.

Community Action Grant Committee, Council Member Keller- No meetings Scheduled yet.

Community Parks and Recreation Committee, Vice-Mayor Swope- No quorum at last meeting.

Finance Committee, Council Member Snow- No meeting Since the last meeting.

Public Works Committee, No one available to provide a report.

Public Safety and Transportation Commission, Council Member Miller- No meeting due to technical difficulties.

8. SPECIAL ORDER OF BUSINESS

9. UNFINISHED BUSINESS

Item 9.1. - Public Hearing Of Ordinance 24-06: Amending Bethel Municipal Code 2.60 Committees, Commissions, And AD HOC Committees To Reduce Voting Members Under Special Circumstances (Council Member Snow)
Vice-Mayor Swope opened the Public Hearing.

*No one present to be heard.
Vice-Mayor Swope closed the Public Hearing.*

Main Motion: Adopt Ordinance 24-06.

Moved by: Patrick Snow
Seconded by: Rose Henderson

Motion to Postpone until the next meeting.

Moved by: Patrick Snow
Seconded by: Rose Henderson
In favor: Rose Henderson, Patrick Snow, Sophie Swope, Teresa Keller, Mikayla Miller
Opposed: None
Results: Motion Carries

10. NEW BUSINESS

Item 10.1. - *Introduction Of Ordinance 24-07: Amending Bethel Municipal Code Chapter 2.60, Committees, Commissions And Ad Hoc Committees To Reduce The Meeting Schedule Requirement To Every Other Month (Acting City Manager Strickler)
Passed on the consent agenda.

Item 10.2. - *Introduction Of Ordinance 24-08: Authorizing The Disposal Of City Property By Means Of Demolition Of The Building Located At 105 Ptarmigan In Accordance With BMC 4.08.030 (A), Property No Longer Necessary For Municipal Purposes (Acting City Manager Strickler)

Passed on the consent agenda.

Item 10.3. - *Introduction Of Ordinance 24-09: Authorizing The Disposal Of Municipal Land Through A Land Lease To The Yukon Kuskokwim Health Corporation In Accordance With Bethel Municipal Code 4.08.030, Disposal To Entity Providing Necessary Public Service (Acting City Manager Strickler)

Passed on the consent agenda.

Item 10.4. - *AM 24-22: Authorize The City Manager To Negotiate And Execute Two Agreements With The University Of Alaska Fairbanks (UAF) And To Authorize The Contributions From The FY2025 Budget: (1) \$112,000 To The UAF Cooperative Extension 4-H Program, And (2) \$72,600 To The Kuskokwim Consortium Library (Acting City Manager Strickler)

Council Member Miller declares a conflict of interest as this agreement is used to fund her position at the Library.

Vice-Mayor Swope rules that Council Member Miller has a conflict of interest. Council Member Miller steps down and does not take part in the discussion or the voting for this item of business.

Main Motion Approve AM 24-22.

Moved by:	Rose Henderson
Seconded by:	Patrick Snow
In favor:	Rose Henderson, Patrick Snow, Sophie Swope, Teresa Keller
Opposed:	None
Results:	Motion Carries

Item 10.5. - *AM 24-23: Direct Administration To Negotiate And Execute A Contract For The Construction Of Two Three-Plexes As Part Of The City's \$3 Million Grant Award From The Alaska Housing Finance Corporation (Acting City Manager Strickler)

Council Member Miller rejoins the meeting.

This Item Passed on the consent agenda.

11. REPORTS

Item 11.1. - Mayor's Report

Item 11.2. - City Manager's Report

Item 11.3. - Clerk's Report

12. COUNCIL MEMBER COMMENTS

Vice-Mayor Sophie Swope- The days are getting shorter; wear reflective gear as it gets darker. Take advantage of the upcoming fish opening. There are open city council seats if you want to run for office.

Council Member Henderson- School starts tomorrow; hope the kids get a lot of rest. It is getting dark early; start wearing reflective gear. Due to construction at BRHS, there will be difficulty dropping students off at the school. Pay attention to BRHS notices for the parking situation. Hearing positive feedback from the public concerning the Police Department news updates. Congratulations to officer Zeus from the K-9 unit for his recent catch. There are Fire Department raffle tickets currently for sale to support the volunteer firefighter program.

Council Member Snow- No Comment.

Council Member Keller- No Comment.

Council Member Miller- No Comment.

13. EXECUTIVE SESSION

14. ADJOURNMENT

Main Motion: Adjournment.

Moved by:	Rose Henderson
Seconded by:	Mikayla Miller
In favor:	Rose Henderson, Patrick Snow, Sophie Swope, Teresa Keller, Mikayla Miller
Opposed:	None
Results:	Motion Carries

Meeting ended at 7:17 p.m.

Sophie Swope, Vice-Mayor

ATTEST:

Kevin Morgan,
Acting City Clerk

**Public Safety and
Transportation
Commission Meeting
City of Bethel, Alaska
Special Meeting
August 15, 2024**

I. CALL TO ORDER

A Special Meeting of the Public Safety & Transportation Commission was held at City Hall on August 15, 2024. Chair, Joy Anderson, called the meeting to order at 6:34 p.m.

II. ROLL CALL

Comprising a quorum of the Council, the following members were present:
Chair, Joy Anderson Mikayla Miller Melanie Fredericks Jesslyn Elliott
Members Absent:
Farah Sears Musa Saliu John Hastie
Also in attendance were the following:
Chief of Public Safety, James Harris Recorder, Kelsi Kime

III. PEOPLE TO BE HEARD – Five minutes per person

None.

Item A. - Please submit written public comments to police@cityofbethel.net by 4:00 p.m. the day of the meeting.

IV. APPROVAL OF AGENDA

Moved By:	Melanie Fredericks	Motion to approve agenda.
Seconded By:	Jesslyn Elliott	
Vote on Motion:	Motion carried by unanimous vote.	

V. APPROVAL OF MEETING MINUTES

Item A. - August 7, 2024 Meeting Minutes

Moved By:	Mikayla Miller	Motion to approve August 7, 2024 Meeting Minutes
Seconded By:	Jesslyn Elliot	
Vote on Motion:	Motion carried by unanimous vote.	

VI. UNFINISHED BUSINESS

Item A. - Neighborhood Watch Program. (Melanie Fredricks)

Item B. - Consideration of BMC Title 5 Amendment to Allow Transportation Network Companies to Operate in Bethel. (Mikayla Miller)

Item C. - National Night Out. (Christopher Wigner)

VII. NEW BUSINESS

Item A. - Drafting A Resolution for Neighborhood Watch Program

Item B. - Cancellation of September 4, 2024 Public Safety & Transportation Commission Meeting (Joy Anderson)

Moved By:	Melanie Fredericks	Motion to cancel September 4, 2024 PSTC Meeting
Seconded By:	Jesslyn Elliott	
Vote on Motion:	Motion carried by unanimous vote.	

VIII. EX OFFICIO REPORT

Item A. - Manager's Report

Item B. - Inspector's Report

IX. MEMBER COMMENTS

Joy Anderson: Thank you to everyone in attendance and the work being done.

Mikayla Miller: Potential updates on meeting frequency requirements should not impact on next year's PSTC meetings schedule. Will be absent for the upcoming City Council meeting.

Melanie Fredericks: Welcome James Harris and Kelsi Kime. Thank you for moving the Neighborhood Watch Program discussion along.

Jesslyn Elliott: No Comment

X. ADJOURNMENT

Moved By:	Mikayla Miller	Motion to adjourn.
Seconded By:	Jesslyn Elliott	
Vote on Motion:	Motion carried by unanimous vote.	

Meeting ended at 7:51 p.m.

APPROVED THIS ___ DAY OF _____ 2024.

Joy Anderson,
Commission Chair

Kelsi Kime, Ex Officio
Recorder of Minutes



CITY OF BETHEL
PORT COMMISSION
MONDAY, AUGUST 19, 2024, 7:00 PM

LOCATION: 300 CHIEF EDDIE HOFFMAN HIGHWAY, BETHEL, ALASKA

JOIN MEETING AT ZOOM.US:
[HTTPS://US06WEB.ZOOM.US/J/3350154000?PWD=HYFLQJB5BBF9IUAXHBN9SOZQAFWPLS.1&OMN=81314125060](https://us06web.zoom.us/j/3350154000?pwd=HYFLQJB5BBF9IUAXHBN9SOZQAFWPLS.1&OMN=81314125060)
MEETING ID: 335 015 4000
PASSCODE: 140569
US TOLL-FREE PHONE NUMBERS: 888 475 4499; 833 548 0276; 833 548 0282; 877 853 5257

MEMBERS

Alan Murphy, **Chair**
Stacey Reardon
Michael Meeks
Rich Pope, **Vice-Chair**
Rose Henderson, **Council Rep.**
Victoria Sosa

STAFF

Port Director: Ed Flores, Ex Officio Member
Recorder: Sharmin Shompa
Email: port@cityofbethel.net
Phone: 907-543-2310
Website: www.cityofbethel.org

I. CALL TO ORDER

II. ROLL CALL

III. PEOPLE TO BE HEARD – FIVE MINUTES PER PERSON

- A. Please submit written public comments to port@cityofbethel.net by 4:00 p.m. the day of the meeting.

IV. APPROVAL OF AGENDA

V. APPROVAL OF MEETING MINUTES

- A. 07/15/2024 Regular Port Commission Meeting Minutes

VI. UNFINISHED BUSINESS

- A. Review Ordinance 24-07 Meeting Frequency Reduction for Committees and Commissions

VII. NEW BUSINESS

- A. Small Boat Harbor Parking
B. Harbor Improvements

VIII. EX OFFICIO REPORT

- A. July Managers Reports

IX. MEMBER COMMENTS

X. ADJOURNMENT

Posted 08/12/2024 at City Hall, AC Co., Swanson's, and the Post Office.

Ex-Officio Staff



CITY OF BETHEL

PUBLIC WORKS COMMITTEE

WEDNESDAY, AUGUST 21, 2024, 5:30 PM

LOCATION: 300 CHIEF EDDIE HOFFMAN HIGHWAY, BETHEL, ALASKA

JOIN MEETING AT ZOOM.US:

[HTTPS://US06WEB.ZOOM.US/J/3350154000?PWD=HYFLQJB5BBF9IUAXHBN9SOZQAFWPLS.1&OMN=81314125060](https://us06web.zoom.us/j/3350154000?pwd=HYFLQJB5BBF9IUAXHBN9SOZQAFWPLS.1&OMN=81314125060)

MEETING ID: 335 015 4000

PASSCODE: 140569

US TOLL-FREE PHONE NUMBERS: 888 475 4499; 833 548 0276; 833 548 0282; 877 853 5257

MEMBERS

Ryan Butte, Juan Delgado, Mark Springer- Council Rep. John Llyod

STAFF

Ex-Officio Members: Bill Arnold, Public Works Director

pwadmin@cityofbethel.net

907-543-3110

I. CALL TO ORDER

II. ROLL CALL

III. PEOPLE TO BE HEARD – FIVE MINUTES PER PERSON

- A. Please submit written public comments to pwadmin@cityofbethel.net by 4:00 p.m. the day of the meeting.

IV. APPROVAL OF AGENDA

V. APPROVAL OF MEETING MINUTES

VI. UNFINISHED BUSINESS

- A. Review of Committee Duties and Responsibilities and Determination of Committee Topics of Interest for 2024
- B. Commission Consideration Of Draft Ordinance to Reduce The Frequency Of Meetings For Committees and Commissions (Administration) ON THE COUNCIL AGENDA FOR ADOPTION 8-13-24
- C. Commission Consideration of Draft Ordinance Modifying Membership Requirements From Seven To Five Temporarily When Less Than Five Members Are Appointed (Administration) ADOPTED BY THE CITY COUNCIL

VII. NEW BUSINESS

- A. Captial Project Update
- B. Mass Notification for Utility Customers (Butte)

VIII. EX OFFICIO REPORT

IX. MEMBER COMMENTS

X. ADJOURNMENT

Posted <<DATE>> at City Hall, AC Co., Swanson's, and the Post Office.

Ex-Officio Staff



CITY OF BETHEL

FINANCE COMMITTEE

MONDAY, AUGUST 26, 2024, 5:30 PM

LOCATION: 300 CHIEF EDDIE HOFFMAN HIGHWAY, BETHEL, ALASKA

JOIN MEETING AT ZOOM.US:

[HTTPS://US06WEB.ZOOM.US/J/3350154000?PWD=HYFLQJB5BBF9IUAXHBN9SOZQAFWPLS.1&OMN=81314125060](https://us06web.zoom.us/j/3350154000?pwd=HYFLQJB5BBF9IUAXHBN9SOZQAFWPLS.1&OMN=81314125060)

MEETING ID: 335 015 4000

PASSCODE: 140569

US TOLL-FREE PHONE NUMBERS: 888 475 4499; 833 548 0276; 833 548 0282; 877 853 5257

MEMBERS

John Hamilton, Chair
John Lloyd, Vice Chair
Robert Rey
Victoria Sosa
Patrick Snow (Council Rep)
Carolann Willard
Vacancies: 3

STAFF

Ex Officio Members
Aaron Vassalotti
Cindy Sharp
Alexandra Batchelor
finance@cityofbethel.net
907-543-1381

I. CALL TO ORDER

II. ROLL CALL

III. PEOPLE TO BE HEARD – FIVE MINUTES PER PERSON

- A. Please submit written public comments to finance@cityofbethel.net by 4:00 p.m. the day of the meeting.

IV. APPROVAL OF AGENDA

- A. 08/26/2024

V. APPROVAL OF MEETING MINUTES

- A. 05/21/2024
- B. 07/22/2024

VI. UNFINISHED BUSINESS

VII. NEW BUSINESS

- A. Committee Meeting Frequency (Lori Strickler, Acting City Manager)
- B. Business License Repeal (Lori Strickler, Acting City Manager)

VIII. EX OFFICIO REPORT

- A. July Report and Finance Budget
- B. Managers Reports

IX. MEMBER COMMENTS

Posted <<DATE>> at City Hall, AC Co., Swanson's, and the Post Office.

Ex-Officio Staff

X. ADJOURNMENT

Posted <<DATE>> at City Hall, AC Co., Swanson's, and the Post Office.

Ex-Officio Staff



CITY OF BETHEL

COMMUNITY PARKS AND RECREATION COMMITTEE

MONDAY, AUGUST 12, 2024, 6:00 PM

LOCATION: 300 CHIEF EDDIE HOFFMAN HIGHWAY, BETHEL, ALASKA

JOIN ZOOM MEETING:

[HTTPS://US06WEB.ZOOM.US/J/89727002271?PWD=BVJWYWFWNWUZEgFSAU80UVZCYWVXQT09](https://us06web.zoom.us/j/89727002271?pwd=BVJWYWFWNWUZEgFSAU80UVZCYWVXQT09)

MEETING ID: 897 2700 2271

PASSCODE: 924366

PHONE NUMBERS: 888 475 4499 US TOLL-FREE

833 548 0276 US TOLL-FREE

833 548 0282 US TOLL-FREE

877 853 5257 US TOLL-FREE

MEMBERS

Brian Lefferts, Chair
Sophie Swope, Council Rep.
Brian Jackson
Michelle DeWitt
Alternate 2-Vacant

Beverly Hoffman, Vice-Chair
Kathy Hanson
Jessica Pew
Sean Glasheen, Alternate 1

STAFF

Ex-Officos: Jason Spann, Facility Maint. Foreman
Email: pwadmin@cityofbethel.net Phone: 907-543-3110

I. CALL TO ORDER

II. ROLL CALL

III. PEOPLE TO BE HEARD – FIVE MINUTES PER PERSON

- A. Please submit written public comments to pwadmin@cityofbethel.net by 4:00 p.m. the day of the meeting.

IV. APPROVAL OF AGENDA

V. APPROVAL OF MEETING MINUTES

- A. 07/08/2024 Meeting Minutes

VI. UNFINISHED BUSINESS

- A. Community Center Construction Project ** NO UPDATES-Just a Placeholder*
- B. Cordova Pool energy Audit Report
- C. Boardwalk Maintenance Plan (City Administration)
- D. Consideration of Draft Ordinance Modifying Membership Requirements Under Special Circumstances (City Administration) UPDATE, the Bethel City Council adopted this on 7/23/24
- E. Consideration of Draft Ordinance Modifying The Monthly Meeting Requirements for Committees And Commissions (City Administration)

VII. NEW BUSINESS

- A. Year to Date Actuals End of FY 24 (Lefferts)
- B. Equitable Access Program Data (Lefferts)
- C. Budget Purchase Request Shredder for Cut Willows and Trail Cover (Lefferts)

Posted <<DATE>> at City Hall, AC Co., Swanson's, and the Post Office.

Ex-Officio Staff

VIII. EX OFFICIO REPORT

- A. July Department Reports

IX. MEMBER COMMENTS

X. ADJOURNMENT

Posted <<DATE>> at City Hall, AC Co., Swanson's, and the Post Office.

Ex-Officio Staff



CITY OF BETHEL
PUBLIC SAFETY AND TRANSPORTATION COMMISSION
THURSDAY, AUGUST 15, 2024, 6:30 PM

LOCATION:

JOIN MEETING AT ZOOM.US:
<https://us06web.zoom.us/j/3350154000?pwd=HYFLQJB5BBF9IUAXHBN9SOZQAFWPLS.1&OMN=81314125060>
MEETING ID: 335 015 4000
PASSCODE: 140569
US TOLL-FREE PHONE NUMBERS: 888 475 4499; 833 548 0276; 833 548 0282; 877 853 5257

MEMBERS

Joy Anderson, Chair
Melanie Fredericks
Farah Sears
Musa Sailu
John Hastie
Jesslyn Elliot
Mikayla Miller, Council Rep.

STAFF

James Harris, Ex Officio Member
Kelsi Kime, Ex Officio Member
Kkime@cityofbethel.net
907-543-3781

I. CALL TO ORDER

II. ROLL CALL

III. PEOPLE TO BE HEARD – FIVE MINUTES PER PERSON

- A. Please submit written public comments to police@cityofbethel.net by 4:00 p.m. the day of the meeting.

IV. APPROVAL OF AGENDA

V. APPROVAL OF MEETING MINUTES

- A. August 7, 2024 Meeting Minutes

VI. UNFINISHED BUSINESS

- A. Neighborhood Watch Program. (Melanie Fredricks)
- B. Consideration of BMC Title 5 Amendment to Allow Transportation Network Companies to Operate in Bethel. (Mikayla Miller)
- C. National Night Out. (Christopher Wigner)

VII. NEW BUSINESS

- A. Drafting A Resolution for Neighborhood Watch Program
- B. Cancellation of September 4, 2024 Public Safety & Transportation Commission Meeting (Joy Anderson)

VIII. EX OFFICIO REPORT

Posted <<DATE>> at City Hall, AC Co., Swanson's, and the Post Office.

Ex-Officio Staff

- A. Manager's Report
- B. Inspector's Report

IX. MEMBER COMMENTS

X. ADJOURNMENT

Posted <<DATE>> at City Hall, AC Co., Swanson's, and the Post Office.

Ex-Officio Staff

City of Bethel, Alaska

Planning Commission

August 8, 2024

Regular Meeting

Bethel, Alaska

I. CALL TO ORDER:

A regular meeting of the Planning Commission was held virtually via Zoom and in person at the City Hall Council Chambers in Bethel, Alaska on August 8, 2024. The Chair of the Commission, Kathy Hanson called the meeting to order at 6:30 PM.

II. ROLL CALL:

Compromising a quorum of the Commission, the following members were present for roll call: Kathy Hanson, Alex Wasierski, Haley Hanson, Sundi Scott, and Council Rep. Mary Beth Hessler.

Excused Absence: Lorin Bradbury and Shadi Rabi

Also Present: Pauline Boratko, Recorder, Lee Foley, City Planner, Libby Bakalar, City Attorney.

III. PEOPLE TO BE HEARD: no one wished to be heard

IV. APPROVAL OF THE AGENDA:

MOVED:	Haley Hanson	Motion to approve the agenda.
SECONDED:	Sundi Scott	
VOTE ON MOTION	Unanimous	

V. APPROVAL OF THE MINUTES:

MOVED:	Haley Hanson	Motion to approve regular meeting minutes for July 11, 2024
SECONDED:	Sundi Scott	
VOTE ON MOTION	Unanimous	

MOVED:	Haley Hanson	Motion to approve special meeting minutes for July 18, 2024
SECONDED:	Sundi Scott	
VOTE ON MOTION	Unanimous	

VI. UNFINISHED BUSINESS:

A. Follow up discussion and recommendation on proposed fee schedule

MOVED:	Alex Wasierski	Motion to recommend the proposed fee schedule
SECONDED:	Haley Hanson	
VOTE ON MOTION	Unanimous	

B. Follow up discussion and recommendation on Blue Sky land swap: commissioners discussed the blue sky land swap

- C. Follow up discussion with City Lawyer on fill requirements: commissioners discussed with the City Lawyer on fill requirements.

VII. NEW BUSINESS:

- A. Proposed change to the to commission meetings to every 3 months: commissioners did not support the meetings to be every 3 months.

VIII. PLANNER'S REPORT:

IX. COMMISSIONER'S COMMENTS:

- H. Hanson- no comment.
A. Wasierski- no comment
M. Hessler- Thank you Pauline and Lee.
S. Scott- no comment
K. Hanson- no comment

X. ADJOURNMENT:

MOVED:	Haley Hanson	Motion to adjourn the meeting.
SECONDED:	Sundi Scott	
VOTE ON MOTION	Unanimous	

With no further business the meeting adjourned 7:21 pm

APPROVED THIS ____ DAY OF _____, 2024

Kathy Hanson, Chair

ATTEST: Pauline Boratko, Recorder

Introduced by: Council Member Snow
Introduction Date: July 9, 2024
Public Hearing Date: August 13, 2024
August 27, 2024
Action:
Vote:

CITY OF BETHEL, ALASKA

ORDINANCE #24-06

AN ORDINANCE BY THE BETHEL CITY COUNCIL AMENDING BETHEL MUNICIPAL CODE CHAPTER 2.60, COMMITTEES, COMMISSIONS AND AD HOC COMMITTEES TO REDUCE THE NUMBER OF ADULT VOTING MEMBERS AND QUORUM STANDARDS FOR COMMITTEES AND COMMISSIONS UNDER SPECIAL CIRCUMSTANCES

WHEREAS, Bethel Municipal Code 2.60 creates seven committees and commissions that act as advisory bodies to the Council: the Planning Commission, the Port Commission, the Public Safety and Transportation Commission, the Community Action Grant Committee, the Finance Committee, the Community Parks and Recreation Committee, and the Public Works Committee;

WHEREAS, BMC 2.60.010 defines a “quorum” as the minimum number of members of a committee, commission, or ad hoc committee that must be present at any meeting to conduct business;

WHEREAS, BMC 2.60.040 provides that “all committees and commissions shall consist of seven (7) appointed adult voting members;

WHEREAS, BMC 2.60.050 provides that “four (4) members shall constitute a quorum for the transaction of business for committees and commissions”; and

WHEREAS, numerous committees and commissions are having consistent trouble meeting quorum, which prevents these bodies from conducting business;

NOW THEREFORE BE IT ENACTED BY THE CITY COUNCIL OF THE CITY OF BETHEL, ALASKA,

Section 1. Classification. This ordinance is permanent in nature and shall be placed in the Bethel Municipal Code.

Introduced by: Council Member Snow
Introduction Date: July 9, 2024
Public Hearing Date: August 13, 2024
August 27, 2024
Action:
Vote:

Section 2. Amendment. Bethel Municipal Code 2.60 is amended, old language is stricken, and new language is underlined.

2.60.040 Composition of committees, commissions, and ad hoc committees.

A. All committees and commissions shall consist of seven (7) council-appointed adult voting members. One (1) member shall be a member of the city council and act as the council representative to provide a direct line of communication between the advisory board and the city council. Each council member shall be appointed to only one (1) committee, commission, and/or ad hoc committee.

B. In addition to the seven (7) adult voting members, the council may appoint up to two (2) alternative members and one (1) youth member to any advisory committee or commission.

C. An ad hoc committee may have fewer but not more members than the number provided under subsections [A](#) and [B](#) of this section, and in no event less than five (5) members.

D. Each committee or commission shall annually elect a chair and a vice chair from its membership. An ad hoc committee shall elect a chair and vice chair at the first (1st) meeting of the body. The vice chair shall act in the absence of the chair or in the event the chair is unable to act.

E. The city manager is responsible for the effective management of committee, commission, and ad hoc committee operations and shall provide the staff required to assist the body in discharging its duties. The city manager shall appoint at least one (1) ex officio member to provide staff support to each committee, commission, and ad hoc committee. Ex officio members report to and take direction from the city manager and not from the body to which they are appointed.

The duties of the ex officio member include but are not limited to: preparation and posting of agendas, packet materials, meeting minutes, and other relevant documents

Introduced by: Council Member Snow
Introduction Date: July 9, 2024
Public Hearing Date: August 13, 2024
August 27, 2024
Action:
Vote:

in accordance with Alaska Statutes ([44.62.310](#) through [44.62.319](#)), Bethel Municipal Code, and city policy. The ex officio member appointed to the body shall also provide subject matter expertise to the body.

An ex officio member is a nonvoting member of the body, but may add items to the agenda and participate in discussion.

F. If a committee or commission has five or less council appointed adult voting members, the city council may by resolution authorize a temporary exemption to Section 2.06.040 A, reducing council appointed membership requirement to five (5). The exemption shall expire when the exempted committee exceeds five council appointed adult voting members or on the date provided by the resolution. Under the five-member exemption, three (3) members shall constitute a quorum for the transaction of business and three (3) affirmative votes shall be necessary to carry any question.

SECTION 3. Effective Date. This ordinance shall become effective upon passage by the Bethel City Council.

ENACTED THIS _____ DAY OF _____ 2024, BY A VOTE OF _____ IN FAVOR AND _____ OPPOSED.

ATTEST:

Mark Springer, Mayor

Lori Strickler, City Clerk

Introduced by: Acting City Manager Strickler
Introduction Date: August 13, 2024
Public Hearing Date: August 27, 2024
Action:
Vote:

CITY OF BETHEL, ALASKA

ORDINANCE #24-07

AN ORDINANCE BY THE BETHEL CITY COUNCIL AMENDING BETHEL MUNICIPAL CODE CHAPTER 2.60, COMMITTEES, COMMISSIONS AND AD HOC COMMITTEES TO REDUCE THE MEETING SCHEDULE REQUIREMENT TO EVERY OTHER MONTH

WHEREAS, Bethel Municipal Code 2.60 creates seven committees and commissions that act as advisory bodies to the Council: the Planning Commission, the Port Commission, the Public Safety and Transportation Commission, the Community Action Grant Committee, the Finance Committee, the Community Parks and Recreation Committee, and the Public Works Committee;

WHEREAS, Bethel Municipal Code 2.60.060 Notice of Public Meetings, requires regular meetings of the committees and commissions to be scheduled once a month unless otherwise authorized by council;

WHEREAS, reducing the meeting schedule requirement to every other month will provide administration more time to work directly with the ex officio members to develop meaningful agendas and packets, this will result in public meetings with more developed action items for our committee/commission volunteers to discuss;

WHEREAS, a reduction in the meeting frequency will also relieve operational takes during a time of significant staff shortages ensuring the operational tasks of the municipality are carried out while still supporting strong government through public engagement;

WHEREAS, the City hoped that through the reduction in regular scheduled meetings, and a focus on more developed agendas and packet materials, the City will attract more volunteer participation in our public meeting process;

WHEREAS, although each committee and commission will be required to have regular meetings every other month, at any point, a special meeting may be called in accordance with BMC;

Introduced by: Acting City Manager Strickler
Introduction Date: August 13, 2024
Public Hearing Date: August 27, 2024
Action:
Vote:

NOW THEREFORE BE IT ENACTED BY THE CITY COUNCIL OF THE CITY OF BETHEL, ALASKA,

Section 1. Classification. This ordinance is permanent in nature and shall be placed in the Bethel Municipal Code.

Section 2. Amendment. Bethel Municipal Code 2.60 is amended, old language is stricken, and new language is underlined.

2.60.060. Notice of public meetings.

A. Regular meetings shall be scheduled ~~once a month~~ every other month unless otherwise authorized by council. A regular meeting may be postponed or rescheduled to another date upon a vote of the majority of the members at a previous regular or special meeting.

B. Special meetings are called to transact business held outside the regular meeting schedule. Special meetings may be called at any date and time by the chair, or by three (3) voting members.

C. Meetings shall be held at City Hall, 300 Chief Eddie Hoffman Highway, whenever reasonably possible, and shall comply with BMC 2.04.070, in providing teleconference and written participation to all public meetings. Agendas constitute the meeting notice and shall contain, at a minimum, the date, place and time of the meeting, the name of the body, the names of the members of the body, people to be heard, and any item to be discussed by the body.

D. Public notice of meetings shall be prepared and posted in at least four (4) conspicuous public places within the city, including at the location of the meeting. Notice of a regular meeting shall be posted no later than five (5) days before the meeting. Notice of a special meeting shall be posted no later than three (3) days before the meeting, except the planning commission special meeting agenda shall be posted no later than five (5) days before the meeting.

E. The meetings of all bodies shall be open to the public in accordance with the Alaska Open Meetings Act, and shall permit teleconference and written participation in accordance with BMC 2.04.080.

F. Each committee, commission, and ad hoc committee shall follow Robert's Rules of Order Newly Revised; however, the rules of debate may be relaxed by the body to promote discussion.

Introduced by: Acting City Manager Strickler
Introduction Date: August 13, 2024
Public Hearing Date: August 27, 2024
Action:
Vote:

G. Committee, commission, and ad hoc committee reports and recommendations shall be decided by a quorum of the body at a public meeting.

H. Any committee, commission and ad hoc committee may appoint seated members of its body to a subcommittee. The number of members appointed to a subcommittee shall be three (3) or fewer, to avoid creating a quorum of the body. The subcommittee can make such investigation or exercise such authority as may be delegated to it by the advisory board. A subcommittee reports to the body from which it was appointed, and not to the council. No action of the subcommittee is official until approved by a majority vote of the advisory body.

SECTION 3. Effective Date. This ordinance shall become effective upon passage by the Bethel City Council.

ENACTED THIS _____ DAY OF _____ 2024, BY A VOTE OF _____ IN FAVOR AND _____ OPPOSED.

ATTEST:

Mark Springer, Mayor

Kevin Morgan, Acting City Clerk

CITY OF BETHEL, ALASKA

Ordinance #24-08

AN ORDINANCE AUTHORIZING THE DISPOSAL OF CITY PROPERTY BY MEANS OF DEMOLITION OF THE BUILDING LOCATED AT 105 PTARMIGAN IN ACCORDANCE WITH BMC 4.08.030 (A), PROPERTY NO LONGER NECESSARY FOR MUNICIPAL PURPOSES

WHEREAS, the City of Bethel owns a parcel of land located on Plat #87-6 Block 3 Tract E which is a replat of a plat of Turnkey III Housing Development, Bethel, Alaska, located in Sections 5 and 8 of Township 8 North R.7IW. S.M.; lot dimensions 66.81ft x 162.39ft x 105.44ft x 141.38ft totaling 12,884 square feet; building dimensions 24ft x 32ft totaling 768 square feet;



WHEREAS, in December 1973, the City (Grantor) issued a quitclaim deed to Bethel Conference of Churches (Grantee) for the above-mentioned property at a lease rate of one dollar per year for the term of the deed;

WHEREAS, the agreement provides that if the Grantee fails to continue to use the premises for a necessary public purpose, the premises shall revert to the Grantor in its entirety and with any improvements thereon at no charge to the Grantor;

WHEREAS, in 2022, because of a change in the use of the land, the Bethel Conference of Churches quitclaimed the property back to the City;

WHEREAS, prior to the transfer of property back to the City, a single-family home was moved to the property, and the home was believed to be donated by the Braund Corporation to support a religious center in the neighborhood;

WHEREAS, as part of the 2022 conveyance of the property and in accordance with the original lease, the building, which constitutes an improvement, was also conveyed to the City;

WHEREAS, since the transfer of the property, the building has been vacant with the exception of a few trespassers;

WHEREAS, the Public Works Department has struggled to maintain security of the building due to its old age and state of disrepair, avoid the property from becoming an attractive nuisance, and allow the space to be utilized for an alternative use, so it is in the best interest of the City to demolish the structure;

WHEREAS, the notice of intent to dispose of city owned property, included a notice of opportunity for bid submission to purchase the building as is;

BE IT ENACTED BY THE CITY COUNCIL OF THE CITY OF BETHEL, ALASKA, the City Council authorizes Administration to dispose of the 24'x 32' building located at 105 Ptarmigan by means of demolition.

SECTION 1. Classification. This is a non-codified ordinance and shall not become a part of the Bethel Municipal Code.

SECTION 2. Authorization and Terms of Disposal.

Legal Description: A parcel of land located on Plat #87-6 Block 3 Tract E which is a replat of a plat of Turnkey III Housing Development, Bethel, Alaska located in Sections 5 and 8 of Township 8 North R.7IW. S.M., located at 105 Ptarmigan; lot dimensions 66.81ft x 162.39ft x 105.44ft x 141.38ft totaling 12,884 square feet; Building dimensions 24ft x 32ft totaling 768 square feet.

Description of the City's Interest Being Disposed of: 24ft x 32ft totaling 768 square feet building.

Method of Disposal: Pursuant to Bethel Municipal Code 04.08.030 (A) Property No Longer Necessary for Municipal Purposes. The building will be demolished by City personnel.

Value of the City's Interest: The estimated value of the building is thought to be less than the cost to repair the building to a point of usability.

SECTION 3. Effective Date. This ordinance shall become effective immediately upon enactment by the City Council.

Introduced by: Acting City Manager Strickler
Introduction Date: August 13, 2024
Public Hearing Date: August 27, 2024
Action:
Vote:

**ENACTED THIS ____ DAY OF _____ 2024, BY A VOTE OF ____ IN FAVOR
AND ____ OPPOSED.**

Mark Springer, Mayor

ATTEST:

Kevin Morgan, Acting City Clerk



AFTER RECORDING MAIL TO:

Name: City of Bethel
 Address: P.O. Box 1388
Bethel, AK 99559

QUIT CLAIM DEED

THE GRANTOR, Bethel Conference of Churches, whose address is P.O. Box 1348
Bethel, AK 99559 for and in consideration
 of Ten Dollars and Good and Valuable Consideration and other valuable consideration, in hand
 paid, conveys and quit claims to City of Bethel, whose
 address is P.O. Box 1388, the following
 described real estate, situated in the Recording District of Bethel,
Fourth Judicial District, State of Alaska:

A tract of land lying entirely within Sec. 8,
 T8N, R21W, Seward Meridian, Alaska; and
 further described as Block 3, Tract E, Book 20,
 Page 82

together with all after acquired title of the Grantor(s) therein.

Dated: February 15, 2022.

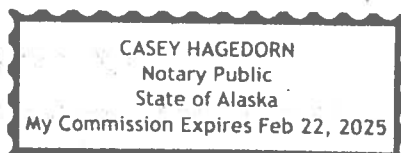
Lorin L. Bradbury
Lorin L. Bradbury, Treasurer

Bruce Clayton
Bruce Clayton, Secretary

STATE OF Alaska)
Fourth Judicial District) ss.

THIS IS TO CERTIFY that on this 15th day of February, 2022, before me
 the undersigned Notary Public, personally appeared Lorin Bradbury & Bruce Clayton known
 to me and to me known to be the individual(s) described in and who executed the
 foregoing instrument and he/she/they acknowledged to me that he/she/they signed the
 same freely and voluntarily for the uses and purposes therein mentioned.

WITNESS my hand and official seal.



Notary Public in and for Alaska
 My commission expires 22 Feb 2025

STATUTORY QUITCLAIM DEED
(WITH POSSIBILITY OF REVERTER)

The Grantor, CITY OF BETHEL, ALASKA, an Alaska Municipal Corporation, for and in consideration of One Dollar (\$1.00) and other valuable consideration, conveys and quitclaims to BETHEL CONFERENCE OF CHURCHES, an Alaska non-profit corporation, of Bethel, Alaska, all interest which it has in the real estate located in the Bethel Recording District, Fourth Judicial District, State of Alaska, and described as follows:

A tract of land lying entirely within Sec. 8, T8N, R71W, Seward Meridian, Alaska; and further described as: Block 3, Tract E. (3)

SUBJECT to all reservations, restrictions, easements and encumbrances of record.

AND FURTHER SUBJECT to the Grantee in accepting this Deed agrees not to use the subject demised premises or any portion thereof or improvements thereon for or in conjunction with revenue raising projects; and if the Grantee fails to use the demised premises before January 1, 1976, or if the Grantee fails to continue use of the demised premises subsequent to that date, the demised premises shall revert to the Grantor in its entirety and with any improvements thereon at no charge to the Grantor. This reverter shall be effective immediately in the event of Grantee's violation of any one of the foregoing restrictions.

TOGETHER WITH, ALL AND SINGULAR, the tenements, hereditaments and appurtenances thereunto belonging or in anywise appertaining.

DATED: 12-11, 1973.

GRANTOR:

CITY OF BETHEL

By: [Signature]

Name

Title

GRANTEE:

BETHEL CONFERENCE OF CHURCHES

By: [Signature]

Name

Title

S.C.C. - Treas.

STATE OF ALASKA)
) ss.
FOURTH JUDICIAL DISTRICT)

THIS IS TO CERTIFY that on this 11th day of December 1973, before me, the undersigned, a Notary Public in and for the State of Alaska, duly commissioned and sworn, personally appeared John M. Miller, known to me and to me known to be the manager, of the above corporation, CITY OF BETHEL, and he acknowledged that he signed the same freely and voluntarily for the uses and purposes therein stated.

WITNESS my hand and official seal on the day and year in this certificate first above written.

John M. Miller
Notary Public in and for Alaska
My commission expires: March 7, 1976

STATE OF ALASKA)
) ss.
FOURTH JUDICIAL DISTRICT)

THIS IS TO CERTIFY that on this 11th day of December 1973, before me, the undersigned, a Notary Public in and for the State of Alaska, duly commissioned and sworn, personally appeared Sammy Chai, known to me and to me known to be the manager, of the above corporation, BETHEL CONFERENCE OF CHURCHES, and he acknowledged that he signed the same freely and voluntarily for the uses and purposes therein stated.

WITNESS my hand and official seal on the day and year in this certificate first above written.

Sammy Chai
Notary Public in and for Alaska
My commission expires: March 7, 1976

73-000646
5

RECORDED-FILED
BETHEL RECORDING
DISTRICT

DEC 13 / 10 07 AM '73

REQUESTED BY Bethel Conference of Churches

ADDRESS Bethel, Alaska

149480

CITY OF BETHEL

NOTICE OF INTENT TO DISPOSE OF CITY PROPERTY-BID OPPORTUNITY BUILDING ONLY

BIDS DUE 3:00p AUGUST 26, 2024

NOTICE OF DISPOSAL BY DEMOLITION IF NO BIDS ARE SUBMITTED

(BMC 4.08.030—4.08.050)



Property—Location, Legal Description, Method of Disposal & Value:

The City of Bethel owns a parcel of land located on Plat #87-6 Block 3 Tract E which is a replat of a plat of Turnkey III Housing Development, Bethel, Alaska, located in Sections 5 and 8 of Township 8 North R.71W. S.M.; lot dimensions 66.81ft x 162.39ft x 105.44ft x 141.38ft totaling 12,884 square feet; building dimensions 24ft x 32ft totaling 768 square feet.



In 2022, the Bethel Conference of Churches transferred the above-described property back to the City, though a reverted land lease which included improvements to the property, a single-family housing unit totaling 768 square feet. The City estimates the building needs hundreds of thousands of dollars in repairs for the space to be usable, an amount that exceeds the estimated value of the building.

BIDS TO PURCHASE BUILDING DUE 3:00p AUGUST 26, 2024

Interested parties may submit a bid to the City of Bethel to purchase the building as is. The building must be removed from the site by September 13, 2024. Sealed bids may be dropped off at City Hall, or mailed to P.O. BOX 1388, Bethel AK, 99559, attention City Manager.

The bids must be in an enclosed sealed envelope. Include within the envelope the dollar amount the bidder wishes to pay for the building and the contact information for the bidder. The outside of the envelope shall include "SEALED BID, 105 PTARMIGAN BUILDING" and the contact name, phone number and email address of the bidder.

Bids shall be received by August 26, 2024, at 3:00p. A public bid opening will be held August 26, 2024 at 3:15p, City Hall, 300 Chief Eddie Hoffman Highway.

DISPOSAL BY DEMOLITION

If no bids are received by this date and time, the City intends to demolish the building.

Date, Time, Place and Manner of Proposed Disposal

The Council will consider the adoption of an Ordinances authorizing this disposal on August 27, 2024, at 6:30 p.m. in the Bethel City Council Chambers, located at 300 Chief Eddie Hoffman Highway in Bethel, Alaska. A public hearing will be held for public comment on the adoption of each of the land disposal authorizations.















Introduced by: Acting City Manager Strickler
Date: August 13, 2024
Public Hearing: August 27, 2024
Action:
Vote:

CITY OF BETHEL, ALASKA

Ordinance 24-09

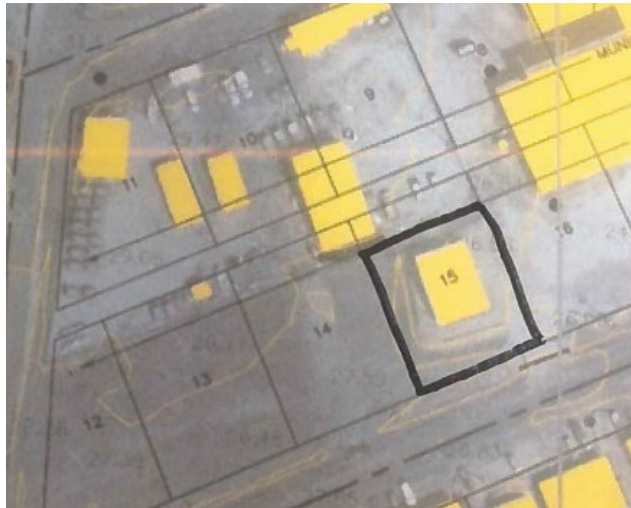
AN ORDINANCE AUTHORIZING THE DISPOSAL OF MUNICIPAL LAND THROUGH A LAND LEASE TO THE YUKON KUSKOKWIM HEALTH CORPORATION IN ACCORDANCE WITH BETHEL MUNICIPAL CODE 4.08.030, DISPOSAL TO ENTITY PROVIDING NECESSARY PUBLIC SERVICE

WHEREAS, in accordance with BMC 4.08.030 the City Council may dispose any interest in real property which is no longer necessary for municipal purposes;

WHEREAS, the City of Bethel owns the land located at 370 Fourth Avenue, legal description of Lot 15, Block 7, Bethel Townsite, designated as municipal Reserve on Official townsite plat, United states Survey 3230-A and 3230-B;

WHEREAS, the land is zones Public Lands and Institutes;

WHEREAS, the City also owns the warehouse building, measuring approximately 2,000 square feet located on the land;



WHEREAS, in 2015, through Ordinance 15-11, the Bethel City Council authorized the disposal of the land and building through ten-year lease agreement in accordance with BMC 4.08.030 (B), accepting less than current assessed or fair market value to an entity providing a necessary public service;

Introduced by: Acting City Manager Strickler
Date: August 13, 2024
Public Hearing: August 27, 2024
Action:
Vote:

WHEREAS, as part of the 2015 lease, YKHC made improvements to the warehouse by installing plumbing and heating to the building, improvements that will remain permanent fixture to the building;

WHEREAS, to qualify for the less than fair market value lease rate, YKHC's Office of Environmental Health and Engineering will continue to provide water plant operator training for the region, further, the warehouse acts as the storage location for critical parts and emergency response equipment for water/sewer systems throughout the YK Delta;

WHEREAS, if YKHC ceases to perform the services outlined, the property shall revert back to the City;

NOW, THEREFORE BE IT ORDAINED, the City Council hereby authorizes the disposal of property by lease agreement, a warehouse building and property, located at Lot 15, Block 7, Bethel Town site, designated as Municipal Reserve on official townsite plat, United States Survey 3230-A and 3230-B.

SECTION 1. CLASSIFICATION. This ordinance is of a general nature and shall not become a part of the Bethel Municipal Code.

SECTION 2. AUTHORIZATION. Pursuant to Bethel Municipal Code 04.08.030 (B):
B. *Disposal to Entity Providing Necessary Public Service.* The city council may, by ordinance, provide for the disposal of an interest in real property to a municipal, borough, state, or federal or other appropriate entity providing a necessary public service without seeking bids and for less than the current assessed value or current appraised value of that interest in real property. All disposals made pursuant to this subsection for less than the current assessed value or current appraised value shall include a condition requiring that the interest of the city being disposed of shall revert to the city in the event the real property disposed of is not being used to provide the necessary public service justifying the original disposal.

SECTION 3. EFFECTIVE DATE. This Ordinance shall become effective upon the passage by the Bethel City Council.

BE IT ENACTED BY THE CITY COUNCIL OF THE CITY OF BETHEL ALASKA, THIS 27 DAY OF AUGUST, BY A VOTE OF ___ IN FAVOR AND ___ OPPOSED.

Introduced by: Acting City Manager Strickler
Date: August 13, 2024
Public Hearing: August 27, 2024
Action:
Vote:

Mark Springer, Mayor

ATTEST:

Kevin Morgan,
Acting City Clerk

COMMERCIAL LEASE BETWEEN CITY OF BETHEL & YKHC

This LEASE is made on September 1, 2024 by and between the City of Bethel (“Lessor” or “City”), whose address is PO Box 1388, Bethel, Alaska 99559, and Yukon Kuskokwim Health Corporation, a tribal health organization (“Lessee”), whose address is PO Box 528, Bethel, Alaska 99559 (collectively “the Parties”).

ARTICLE 1 LEASED PREMISES, TERM, AND RENEWAL

- 1.01 Leased Premises/Improvements Owned by City. Lessor, for and in consideration of the rents, covenants and conditions hereinafter specified to be paid, performed and observed by Lessee, hereby leases to Lessee and Lessee hereby leases from Lessor, a building, a photo of which is attached hereto as Attachment A, which is located on the following land owned by the City of Bethel: Lot 15, Block 7, BETHEL TOWNSITE, designated as Municipal Reserve on official townsite plat, United States Survey 3230-A and 3230-B, a Warehouse Building measuring approximately 2,000 square feet with a street address of 370 Fourth Avenue. (herein called the “Leased Premises”). The Warehouse is situated on and is part of the Leased Premises and is and shall remain throughout the term of this Lease the property of the City.
- 1.02 Lease Term and Renewal.
- A. Term. This Lease shall be and continue in full force and effect for a term of ten (10) years commencing on July 1, 2024 and terminating on June 30, 2034 unless earlier terminated in accordance with the terms of this Lease.
- B. Renewal. The Lease may be renewed annually consistent with the Bethel Municipal Code for a maximum of five (5) renewals provided Lessee provides Lessor with written notice of its intent to renew at least One Hundred Eighty (180) days prior to the expiration of the Lease term.

ARTICLE 2 RENT

- 2.01 Rent. Effective July 1, 2024 Lessee shall pay to Lessor, without deduction and without notice or demand, net of all real property taxes, assessments, rates and other charges required to be paid by Lessee under this Lease with respect to the Leased Premises \$470 per month on or before the first day of each month during the Lease Term. Lessor reserves the right to increase the rent annually. Lessor shall give Lessee a minimum of thirty (30) days’ advance written notice prior to any rent increase.

Rent shall be adjusted annually on July 1, 2024, to reflect a 3 percent increase as follows:

July 1, 2025 \$484
July 1, 2026 \$499
July 1, 2027 \$513

July 1, 2028 \$528
July 1, 2029 \$545
July 1, 2030 \$561
July 1, 2031 \$578
July 1, 2032 \$595
July 1, 2033 \$613
July 1, 2034 \$632

- 2.02. Consideration for Reduced Rent. Lessee, in exchange for rent at below fair market value, agrees to: (1) allow City employees to attend the water plant operator training as space allows; and (2) share spare parts when appropriate.

ARTICLE 3 LIABILITY, INSURANCE, AND INDEMNIFICATION

- 3.01 Liability. Lessee agrees to hold harmless Lessor against all liability, cost and expense (including without limitation, any fines, clean-up costs, judgments, litigation costs, and attorneys' fees) incurred by or levied against Lessor as a result of Lessee's breach of this Lease.
- 3.02 Liability Insurance.
- A. During the entire Lease Term, and during any holdover thereafter, whether or not authorized by Lessor, Lessee shall keep in full force and effect, a policy or policies of general liability and property damage insurance with respect to the Leased Premises and the operations of Lessee on or about the Leased Premises in which the limit of bodily injury, death, and property damage liability shall be not less than ONE MILLION DOLLARS per occurrence and not less than TWO MILLION DOLLARS in the aggregate; provided, however, that no such limit shall in any way limit Lessee's liability or be construed as a representation of sufficiency to fully protect Lessee or Lessor. The policy or policies purchased pursuant to this paragraph shall name the Lessee as an insured and the Lessor as an additional insured with respect to the Leased Premises and the business operated by Lessee on the Leased Premises. A copy of each policy shall be provided to Lessor within three (3) days of the date this Lease is entered into.
- B. Policy Provisions. Each policy of comprehensive general liability described above shall:
1. Provide that the liability of the insurer thereunder shall not be affected by, and that the insurer shall not claim, any right of setoff; counterclaim, apportionment, proration, or contribution by reason of any other insurance obtained by or for Lessor, for any person claiming by, through or under Lessor.
 2. Contain no provision relieving the insurer from liability for loss occurring while the hazard to the building and other improvements

is increased, whether or not within the knowledge of control of; or because of any breach of warranty or condition or any other act or neglect by Lessor, or any person claiming by, through or under Lessor.

3. Provide that such policy may not be canceled, whether or not requested by Lessee, unless the insurer first gives not less than thirty (30) days prior written notice thereof to Lessor.
4. Contain a waiver by the insurer of any right to subrogation to any right of Lessor or Lessee against either of them or against any person claiming by either of them.

3.03 Indemnification.

- A. Lessee shall indemnify, defend and hold Lessor harmless from and against any and all claims arising from (1) Lessee's use of the Leased Premises, or from the conduct of Lessee's operations, or from any activity, work or things done, permitted or suffered by Lessee in or about the Leased Premises; (2) any breach or default in the performance of any obligation on Lessee's part to be performed under the terms of this Lease; (3) any negligence of Lessee on or in connection with the Leased Premises, or of any of Lessee's agents, contractors, customers or employees, or of any person claiming by, through or under Lessee; and (4) any accident on or in connection with the Leased Premises, or any fire thereon, or any nuisance made or suffered thereon when and to the extent such claim arises from the negligence of Lessee.
- B. Lessee, upon notice from Lessor, shall defend any of the above-described claims at Lessee's expense. However, this section does not require Lessee to indemnify, defend and hold harmless Lessor from and against any portion of a claim to the extent that portion of the claim is caused by Lessor's sole negligence, or the sole negligence of Lessor's agents, contractors or employees arising from Lessor's activities on the Leased Premises. Lessor shall indemnify, defend, and hold harmless Lessee from and against any portion of a claim to the extent that portion of the claim is caused by Lessor's negligence, or the negligence of Lessor's agents, contractors or employees arising from Lessor's activities on the Leased Premises.
- C. Lessee acknowledges that before entering into this Lease it has fully inspected or been provided with an opportunity to fully inspect the Leased Premises and all documents in the possession of Lessor relating to the condition of the Leased Premises, and to test or examine all conditions of or on the Leased Premises. Lessee further acknowledges that, at the time this Lease is entered into and on the basis of the foregoing inspection or opportunity to inspect, Lessee is as knowledgeable about the physical condition of the Leased Premises as Lessor, and on that basis, assumes all risks relating to the condition of the Leased Premises, except risks relating to environmental pollution not caused by Lessee.

ARTICLE 4 LESSOR'S COVENANTS

- 4.01 Quiet Enjoyment. Upon timely payment by Lessee of all rent and other payments required to be paid by Lessee under this Lease, and upon full and faithful observance and performance by Lessee of all of its covenants contained in this Lease, and so long as such observance and performance continues, Lessee shall peaceably hold and enjoy the Leased Premises during the Lease Term without hindrance or interruption by Lessor or anyone lawfully claiming by, through, or under it.
- 4.02 Hazardous and Toxic Materials. Lessor warrants that it is not aware of any hazardous or toxic materials on the land at this time.
- 4.03 Grade and Drainage. Lessee shall not alter the grade or drainage of the adjacent properties such that drainage will flow over or through the Leased Premises of the Lessee.

ARTICLE 5 LESSEE'S COVENANTS

- 5.01 Observance of Laws.
- A. Lessee, at all times during the Lease Term, at its own expense, and with all due diligence shall observe and comply with all laws, ordinances, rules and regulations which are now in effect or may later be adopted by any governmental agency, and which may be applicable to the Leased Premises or any improvement on it or any use of it, and shall promptly furnish such evidence of compliance with such laws, ordinances, rules and regulations as Lessor may request from time to time.
 - B. In furtherance, and not in limitation, Lessee must, at its own expense, comply with all laws, ordinances, regulations and administrative agency or court orders relating to health, safety, noise, environmental protection, waste disposal, hazardous or toxic materials, and water and air quality. In the event any discharge, leakage, spillage, emission or pollution of any type occurs upon or from the Leased Premises during the Lease Term or any holdover thereafter, Lessee, at its own expense, must clean and restore the Leased Premises to the satisfaction of the Lessor and any governmental body or court having jurisdiction over the matter. However, Lessee shall not be responsible for the clean-up or restoration of the Leased Premises resulting from any discharge, leakage, spillage, emission or pollution to the Leased Premises from surrounding or adjacent premises unless Lessee's negligent conduct caused in whole or in part such discharge, leakage, spillage, emission, or pollution, in which case Lessee shall be responsible for the portion of such discharge, leakage, spillage, emission or pollution which was caused by Lessee.
- 5.02 Repair and Maintenance. Lessee shall, at Lessee's expense and without notice from Lessor, at all times during the Lease Term, keep all improvements now or hereafter built on the Leased Premises, especially those improvements constructed thereon which are exposed to the view of the public (including but not limited to exterior building walls,

windows, doors, fences, signs, landscaping, and yard areas) in good order, condition, maintenance, operability, and repair and of a neat, clean and pleasing appearance to Lessor.

- 5.03 Improvements Required by Law. Lessee, at Lessee's own expense, during the Lease Term and subject to the requirements of this Lease, shall make, build, maintain and repair all fences, sewers, drains, roads, road widening, driveways, sidewalks, water, underground electric and telecommunications lines, curbs, gutters and other installations which may be required by law to be made, built, maintained, or repaired upon, and in connection with, or for use of the Leased Premises or any part of it, and regardless of whether the same were erected by Lessor or in existence at the inception of this Lease. In case any such installations required by law shall be made, built, maintained or repaired by Lessor after giving the required notice provided for in paragraph 5.04, and if Lessee does not complete the required work within the timeframe provided for in the notice, Lessee shall reimburse Lessor for the actual reasonable costs to cover Lessor's overhead, upon presentation of a bill therefore, as additional rent.
- 5.04 Inspection and Repair by Lessor. Lessee shall repair, maintain and make good all conditions required under the provisions of this Lease to be repaired or maintained within five (5) working days from the date of written notice from Lessor with regard to removal of trash or debris, landscape or yard maintenance, snow removal or cleaning, or parking lot lighting replacement and repair, and thirty (30) days from the date of written notice from Lessor with regard to all other matters. If Lessee refuses or neglects to repair or maintain the Leased Premises as required under the terms of this Lease to the reasonable satisfaction of the Lessor after written demand, then Lessor, without prejudice to any other right or remedy it has under this Lease or otherwise, may perform such maintenance work or make such repairs without liability to Lessee for any loss or damage that may accrue to Lessee's property or Lessee's business by reason of the work or repairs. Upon completion of any such repair or maintenance, and no later than ten (10) days after presentation of a bill therefore, Lessee shall pay as additional rent Lessor's actual costs for making such repairs or performing such maintenance. However, Lessee shall not be responsible for the replacement or repair of any streetlights that may illuminate the Premises.
- 5.05 Waste and Wrongful Use. Lessee shall not commit or suffer any waste of the Leased Premises or any unlawful, unsafe, improper, or offensive use thereof or any public or private nuisance thereon.
- 5.06 Costs and Expenses of Lessor. Lessee shall forthwith pay to Lessor all costs and expenses, including reasonable attorney's fees, which are (1) paid or incurred by Lessor but are required to be paid by Lessee under any provision of this Lease; (2) paid or incurred by Lessor in enforcing any covenant of Lessee contained in this Lease, in protecting itself against or remedying any breach thereof, in recovering possession of the Leased Premises or any part thereof, or in collecting or causing to be paid any delinquent rents, taxes, assessments, or rates. The term "costs and expenses" as used in this Lease shall include but not be limited to all of Lessor's out-of-pocket expenditures attributable to the matter involved. Except as otherwise expressly provided herein, all costs and

expenses of Lessor shall be payable by Lessee to Lessor forthwith after mailing or personal delivery of statements therefore to Lessee. Such obligations and interest shall constitute additional rents.

- 5.07 Surrender of Leased Premises. Upon the expiration or termination (including termination resulting from Lessee's breach) of this Lease, Lessee, without further notice, shall deliver to Lessor, possession of the Leased Premises and return it to the City in reasonably the same condition as when received, or as amended by approved additions. Lessor shall have the right to re-enter the Leased Premises and remove therefrom Lessee or any other person, form or corporation claiming by, through or under Lessee, and to obtain damages for trespass from Lessee, including but not limited to the actual costs of removal of improvements.
- 5.08 Holdover. If Lessee remains in possession of the Leased Premises after expiration of the Lease Term without the execution of a new lease or of an extension of this Lease, and in such a manner as to create a valid holdover tenancy, and if no notice of termination has been delivered by Lessor to Lessee, Lessee shall be deemed to occupy the Leased Premises only as a Lessee at will from month-to-month, upon and subject to all of the provisions of this Lease which may be applicable to a month-to-month tenancy, including but not limited to, the provisions of this Lease.
- 5.09 Use and Restrictions. Lessee shall continuously operate a facility available which provides a necessary public service, specifically providing water plan operator training; storing critical spare parts and emergency response equipment for water and sewer in the YK Delta; and other services clearly related to these specified uses. If the Leased Premises cease to be used for these purposes for a period exceeding ninety (90) days, the leasehold interest shall revert back to Lessor and terminate in accordance with this Lease.
- 5.10 Liens. Lessee shall keep the Leased Premises free from any attachment, execution lien, charge, or other encumbrance arising out of any work performed or obligations incurred by Lessor, and shall defend, indemnify and hold Lessor harmless against all losses, costs, and expenses, including reasonable attorney's fees, paid or incurred by Lessor in connection therewith.
- 5.11 Utility Services. Lessor shall arrange for its own utility services and bear all costs for utilities.
- 5.12 Setback. Lessee shall observe all setback lines applicable to the Leased Premises and shall not construct or maintain any building or other structure between any street boundary of the Leased Premises and any setback along such boundary, except for fences or walls approved by Lessor.
- 5.13 Snow Removal. Lessee shall be responsible for snow removal on the Leased land.
- 5.14 Grade and Drainage Improvements, Additions and Alterations. Lessee shall not make alterations to the grade or drainage of the Leased Premises without the written approval of the Lessor.

- 5.15 Underground Conditions and Water Drainage. Lessee has made, or prior to the construction of any improvements on the Leased Premises will make, its own soil tests of the Leased Premises. This Lease is made subject to and without any liability on the part of the Lessor, its agents or employees because of or resulting from any fill or any subsurface or soil condition on the Leased Premises. Lessee shall not drain or discharge water from the Leased Premises onto adjoining land. The Leased Premises shall be graded and drained to cause the discharge of all water on the Leased Premises at a location or locations approved by Lessor, or into an established drainage easement, if any, on the Leased Premises.
- 5.16 Discrimination Prohibited. Lessee will not discriminate in allowing access to and use of the Leased Premises on the grounds of race, color, religion, national origin, ancestry, marital status, disability, gender, sex, sexual orientation or other legally protected status.

ARTICLE 6 ASSIGNMENTS AND MORTGAGES

- 6.01 Lessor's Consent Required. Lessee shall not voluntarily or by operation of law assign, transfer, mortgage, sublet, or otherwise transfer or encumber all or any part of Lessee's interest in this Lease or in the Leased Premises without Lessor's prior written consent. Lessor's consent shall not be unreasonably withheld. Any attempted assignment, transfer, mortgage, encumbrance or subletting without such consent shall be void and shall constitute a breach of this Lease.

ARTICLE 7 TERMINATION, DEFAULT AND DEFEASANCE

- 7.01 Event of Default: Each of the following events shall be a default by Lessee and a breach of this Lease:
- A. Failure to Continuously Operate a Facility for the General Public and for a Necessary Public Service. Failure to continuously operate a facility that is available to the general public or specific members of the general public, or to provide a necessary public service. To be available to the general public does not require that all members of the general public be admitted, only that there be no discrimination in admission based on race, gender, sexual orientation, age or sex. Additionally, "continuously operate" shall be defined as open and operating regularly scheduled days and hours with no more than ninety (90) calendar days closure during any calendar year. A "necessary public service" has the meaning provided in Bethel Municipal Code 4.08.060.
 - B. Failure to Perform Covenants. Abandonment or surrender of the Leased Premises or of the leasehold estate, or failure or refusal to pay when due any installment of rent or any other sum required by this Lease to be paid by Lessee or to perform as required or conditioned by any other covenant or condition of this Lease.
 - C. Appointment of Receiver. The appointment of a receiver or trustee to take possession of the Leased Premises or improvements or of the Lessee's interest in

the leasehold estate or of Lessee's operation on the Leased Premises for any reason, including but not limited to, assignment of benefit of creditors, but not including receivership pursuant to administration of the estate of any deceased or incompetent Lessee.

7.02 Notice and Right to Cure.

- A. Notices. As a precondition to pursuing any remedy for an alleged default by Lessee, Lessor shall, before pursuing any remedy, give notice of default to Lessee.
- B. Method of Giving Notice: Lessor shall give notice of default by either personal service, first class mail, or email.
- C. Lessee's Right to Cure Default(s): If the alleged default is nonpayment of rent, Lessee shall have thirty (30) days after the notice is given to cure the default. For the cure of any other default, Lessee shall promptly and diligently cure the default and shall have thirty (30) days after notice is given to complete the cure.

7.03 Non-Waiver. Acceptance by Lessor of any rents shall not be deemed to be a waiver by it of any breach by Lessee of any of its covenants contained in this Lease or of the right of Lessor to re-enter the Leased Premises or to declare forfeiture for any such breach. Waiver by Lessor of any breach by Lessee shall not be deemed to be a waiver of the right of Lessor to declare forfeiture for any other breach or of any other covenant.

7.04 Right of Lessor to Protect Against Default. If Lessee fails to observe or perform any of its covenants contained herein, Lessor, at any time thereafter and with seven (7) days notice, or in the case of a situation deemed by Lessor to constitute an emergency, without notice, shall have the right but not the obligation to observe or perform such covenant for the account and at the expense of Lessee, and shall not be liable to Lessee or anyone claiming by, through, or under it for any loss or damage by reason thereof to the occupancy, business, or property of any of them. All costs and expenses paid or incurred by Lessor in observing or performing such covenant shall constitute additional rents, which Lessee shall forthwith pay to Lessor upon statements therefor.

7.05 Lessor's Remedies. If any default by Lessee shall continue uncured, following notice of default as required by this Lease, for the period applicable to the default, Lessor has the following remedies in addition to all other rights and remedies provided by law or equity or other provisions of this Lease, to which Lessor may resort cumulatively or in the alternative. The election of one remedy for any one default shall not foreclose an election of any other remedy for another default or for the same default at a later time.

- A. Termination in the Event of Default. Lessor may, at Lessor's election, terminate this Lease in the event of default by giving Lessee notice of termination. On the giving of the notice, all Lessee's rights in the Leased Premises shall terminate. Promptly after notice of termination, Lessee shall surrender and vacate the Leased Premises and all improvements, and Lessor may re-enter and take possession of the Leased Premises and all remaining improvements, except that the building currently located on the Leased Premises shall remain the property of Lessee.

Termination under this paragraph shall not relieve Lessee from the payment of any sum then due to Lessor or from any claim for damages previously accrued or accruing against Lessee, or any other relief available to Lessor.

- B. Recovery of Rent. Lessor shall be entitled, at Lessor's election, to each installment of rent or to any combination of installments for any period before termination, plus interest at the rate of one and a half (1.5%) percent from the due date of each installment.
 - C. Lessee's Personal Property. Lessor may, if Lessee fails to remove personal property or any new improvements within the time allowed above, use Lessee's personal property, Lessee's trade fixtures on the Leased Premises, or any of such property without liability for use or damage, or store them at the sole risk and cost to Lessee.
 - D. Damages. Lessor shall also be entitled, at Lessor's election, to damages in the following sums: (1) all amounts that would have fallen due as rent between the time of termination and the time the Leased premises are relet; (2) the amount, if any, by which the rent under this Lease exceeds the rent under any subsequent Lease upon reletting calculated over the Lease Term; and (3) all administrative, marketing, maintenance, repair, cleaning and similar costs incurred by Lessor.
- 7.06 Application of Sums Collected by Lessor. Lessor shall apply all proceeds of reletting as follows: first, to the payment of reasonable expenses (including attorney's fees and broker's commissions or both) paid or incurred by or on behalf of Lessor. Second, in recovering possession, placing the Leased Premises and improvements in good condition, and preparing or altering the Leased Premises or improvements for reletting. Third, to the reasonable expenses of securing new lessees. Fourth, to the fulfillment of Lessee's covenants to the end of the Lease term; and finally, to Lessor's uses and purposes.
- 7.07 Costs. In the event Lessee shall be in default in the performance of any of its obligations under this Lease, and Lessor takes any action to enforce this Lease, including, but not limited to, court action, Lessee shall pay Lessor all the expenses incurred by Lessor in taking such action including full and reasonable attorney's fees.

ARTICLE 8 EMINENT DOMAIN

- 8.01 Permanent Taking.
- A. In the event of a taking by an entity of competent jurisdiction of all or materially all of the Leased Premises, or the determination of the Lessor that all or materially all of the Leased Premises is necessary for a public purpose, this Lease shall terminate on the earlier of vesting of title in, or the taking of possession by the condemner, or the written determination of the Lessor.
 - B. If less than materially all of the Leased Premises are taken or if the Lessor determines that it needs less than materially all of the Leased Premises for a

public purpose (herein called a “partial taking”), this Lease shall continue in effect except as to the portion so taken or condemned, but the rent to be paid by Lessee shall thereafter be reduced by a percentage equal to the proportion that the number of square feet in the Leased Premises so taken bears to the number of square feet of Leased Premises before the partial taking.

- 8.02 Disposition of Proceeds. Lessor is entitled to all proceeds of condemnation except those proceeds specifically allocated for Lessee's improvements.
- 8.03 Temporary Taking. If the whole or any part of the Leased Premises or of Lessee's interest under this Lease is taken by any competent authority for its temporary use or occupancy, this Lease shall not terminate by reason thereof and Lessee shall continue to pay all rental payments and other charges payable by Lessee hereunder and to perform all other terms, covenants, and conditions contained herein, except to the extent Lessee is prevented from so doing by the terms of the order of the taking authority. In the event of a temporary taking, Lessee shall be entitled to receive the entire amount of the award and shall be obligated, at its sole expense, to restore the Leased Premises as nearly as may be reasonably possible to the condition in which they existed immediately prior to such taking; provided, however, that if the period of temporary use or occupancy extends beyond the expiration of the Lease Term, the award shall be apportioned between Lessor and Lessee as of said date of expiration, after Lessor shall have received the entire portion of the award attributable to physical damage to the Leased Premises and any improvements thereon and to the restoration thereof to the condition existing immediately prior to the taking or condemnation.

ARTICLE 9 GENERAL PROVISIONS

- 9.01 Termination of Prior Lease. The lease agreement dated July 16, 2015 between Lessor and Lessee for the same Leased Premises is terminated upon execution of this Lease. As partial consideration for entering into this Lease, Lessor and Lessee waive all claims and causes of action against the other arising out of the July 16, 2015, agreement, except any claims and causes of action arising out of failure to comply with the requirement to pay rents due.
- 9.02 Lessor's Right to Entry, Inspection and Repair. Lessor may enter and inspect the Premises, at any time during regular business hours, with or without the presence of Lessee or its authorized representative, after giving twenty-four (24) hours advance notice to Lessee of such inspection. To protect the confidentiality of Lessee's clients, Lessor shall take every step possible to not enter without the presence and consent of Lessee except in an emergency or upon agreement by Lessee, such agreement not to be unreasonably withheld or refused. In the event of an emergency, Lessor may enter and inspect the Leased Premises on reasonable notice to Lessee (including no notice if the circumstances warrant) and make such repairs or institute such measures, on the account and at the expense of Lessee, as may be necessary to avert or terminate the emergency. An emergency is any action, event or condition, either extant or imminent, that threatens significant damage to property or injury to persons on or near the Leased Premises, and

includes, but is not limited to, flood, fire, explosion, uncontrolled dangerous discharge or release of water or fluids, or the unauthorized or illegal placement of hazardous or toxic materials on Leased Premises. The provisions of this paragraph apply to Lessor solely in its capacity as Lessor hereunder and not in any other capacity.

- 9.03 Notices. All notices, requests, demands and other communications hereunder shall be deemed given only if in writing signed by an authorized representative of the sender and delivered by facsimile, email (with a hard copy mailed first class) or mailed and addressed to the respective parties as follows:

To Lessor:

City Manager
P.O. Box 1388
Bethel, Alaska 99559

To Lessee:

Yukon Kuskokwim Health Corporation Attn: Legal
PO Box 528
Bethel AK 99559-0528

- 9.04 Covenants and Conditions. Every provision in this Lease which imposes an obligation upon Lessee or Lessor or invests an option, power, or right in Lessee or Lessor shall be deemed to be a covenant in favor of the other party, and the time of observance and performance by Lessee or Lessor of each such covenant shall be of the essence. Full and faithful observance and performance by Lessee and Lessor of each of its covenants contained in this Lease shall be a condition of this Lease.
- 9.05 Integration and Amendments. Except as otherwise expressly provided in this Lease, this Lease is a complete integration of every agreement and representation made by or on behalf of Lessor and Lessee with respect to the Leased Premises, and no implied covenant or prior oral or written agreement shall be held to vary the provisions of this Lease, any law or custom to the contrary notwithstanding. No amendment or other modification of the provisions of this Lease shall be effective unless incorporated in a written instrument duly executed and acknowledged by Lessor and Lessee.
- 9.06 Survival and Severability. If any provision of this Lease shall be deemed to be void or otherwise unenforceable by any court or other tribunal of competent jurisdiction, other than at the initiative or with the support of Lessor, within thirty (30) days of receipt of written notice of such holding, Lessor shall have the right and option, exercisable by written notice thereof to Lessee, to terminate this Lease effective as of the date of such written notice of exercise. It is understood and agreed that otherwise this Lease, except for such provision so held to be void or otherwise unenforceable, shall remain in full force and effect.
- 9.07 Binding Effect. This Lease shall be binding upon and shall inure to the benefit of Lessor and Lessee and their respective successors and assigns. The designations "Lessor" and "Lessee" include their respective successors and assigns and shall be so construed that

the use of the singular includes the plural number, and vice versa, and the use of any gender include the other genders. If at any time during the Lease Term Lessee is more than one person or entity, including persons who are partners and operate Lessee as a partnership, their liability thereunder shall be joint and several.

- 9.08 Lessor's Authority to Convey Fee Title. Lessor retains the absolute and unconditional right to convey fee title in the Leased Premises or an interest or estate therein, subject to this Lease and the interest of any Qualified Mortgagee.
- 9.09 Captions. The captions of the paragraphs are for convenience only, are not operative, and neither limit nor amplify in any way the provisions hereof.
- 9.10 Execution and Counterparts. This Lease may be executed in two or more counterparts, each of which shall be an original and all of which shall constitute one and the same instrument.
- 9.11 Governing Law/Construction. This Lease shall be construed and governed by the laws of the State of Alaska. This Lease was negotiated between the parties and shall not be strictly construed against either party. In the event that a question, dispute, or requirements for interpretation or construction shall arise with respect to this Lease, jurisdiction and venue shall lie exclusively with the Bethel Court in the Fourth Judicial District at Bethel, Alaska.
- 9.12 Waiver of Sovereign Immunity. Lessee expressly waives, relinquishes, and promises not to assert as a defense its sovereign immunity or any other form of immunity for the purpose of enforcing this Lease. Lessee's relinquishment and waiver herein is limited to the sole purpose set forth in the preceding sentence.
- 9.13 Authority to Execute Lease. The Parties represent that the person signing this Lease on its behalf has been duly authorized to do so.

IN WITNESS WHEREOF. Lessor and Lessee have duly executed and acknowledged this Lease.

CITY OF BETHEL

**YUKON-KUSKOKWIM HEALTH
CORPORATION**

By: _____
Lori Strickler
Acting City Manager

By: _____
Dan Winkelman
President and CEO

Date Signed: _____

Date Signed: _____

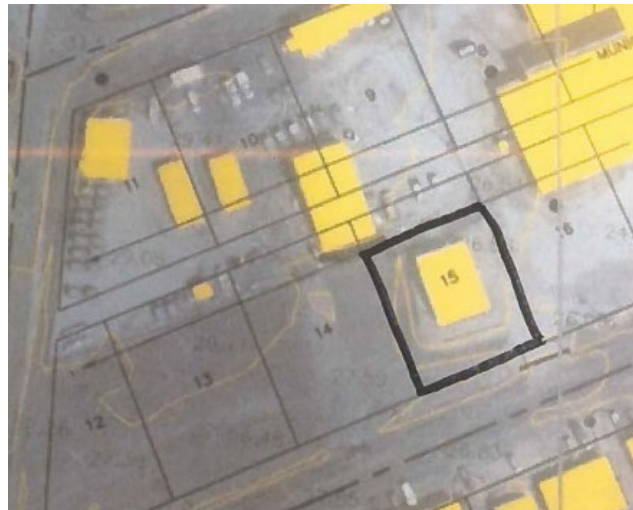
CITY OF BETHEL

NOTICE OF INTENT TO LEASE CITY OWNED REAL PROPERTY (BMC 4.08.030—4.08.050)



Property—Location, Legal Description, Method of Disposal & Value:

The City of Bethel owns the land and building located at 370 Fourth Avenue, legal description of Lot 15, Block 7, Bethel Townsite, designated as Municipal Reserve on official townsite plat, United States Survey 3230-A and 3230-B. The property is zoned Public Lands and Institutions and is 11,500 sq ft. The warehouse is 2,000 square feet.



The intended disposal will be by ten-year lease agreement at \$5,640 annual lease rate with 3% increases applied annually.

The Lease, if approved will be to the Yukon Kuskokwim Health Corporation.

The Lease will be for less than fair market value, and without seeking bids in accordance with BMC 04.08.030 (B), Disposal to Entity Providing Necessary Public Service. YKHC will use the space for water plant operator training for the region, further, the warehouse acts as the storage location for critical parts and emergency response equipment for water/sewer systems throughout the YK Delta.

The estimated assessment of the land being disposed of is based off a 2019 valuation date of Lot 1, Block 7, Bethel Townsite which is assessed at \$7,820 annually.

Date, Time, Place and Manner of Proposed Disposal

The Council will consider the adoption of an Ordinances authorizing this disposal on August 27, 2024, at 6:30 p.m. in the Bethel City Council Chambers, located at 300 Chief Eddie Hoffman Highway in Bethel, Alaska. A public hearing will be held for public comment on the adoption of each of the land disposal authorizations.

Introduced by: Acting City Manager Strickler
Introduction Date: August 27, 2024
Public Hearing: September 10, 2024
Action:
Vote:

CITY OF BETHEL, ALASKA

ORDINANCE #23-11-(h)

AN ORDINANCE BY THE BETHEL CITY COUNCIL AMENDING THE ADOPTION ANNUAL OPERATING BUDGET FOR FISCAL YEAR 2024, JULY 1, 2023-JUNE 30, 2024

WHEREAS, following the close out of the Fiscal Year (FY) 2024 operating year, covering the period July 1, 2023, through June 30, 2024, the City must ensure the budget is compliant with the Bethel Municipal Code (BMC) provisions;

WHEREAS, BMC 4.04.080, Budget Control states, supplemental appropriations in excess of \$12,500 within a department's line item must be approved by the City Council through ordinance;

BE IT ORDAINED by the City Council of Bethel, Alaska, as follows:

SECTION 1. Classification. This is a noncodified ordinance amending the City of Bethel Annual Operating Budget for Fiscal Year 2024.

SECTION 2. Amendment. The adopted Fiscal Year 2024 Annual Operating Budget is amended as follows:

Administration	Line-Item Description	Budgeted	End of Year Balance	Deficit/Transfer	Closing Balance
100-51-6153	Heating Fuel	\$25,000.00	\$36,689.97	\$11,689.97	0
100-51-6034	PERS	\$70,478.00	\$27,074.24	-\$11,689.97	\$31,713.79
Finance					
100-53-6335	Other Professional Fees	\$533,000.00	\$601,857.41	\$68,857.41	0
100-53-6310	Admin Outsourced Services	\$90,000.00	\$8,226.00	-\$68,857.41	\$12,916.59
Planning					
100-54-6320	Other Professional Fees	\$62,499.00	\$69,998.00	\$7,499.00	0
100-54-6330	Other Professional Fees	\$30,000.00	\$120.00	-\$7,499.00	\$22,380.25
IT					
100-55-6320	Other Professional Fees	\$100,000.00	\$112,328.13	\$12,328.13	0
100-55-6200	Minor Equipment	\$35,000.00	\$20,732.76	-\$12,328.13	\$1,939.11
100-55-6331	Hardware/Software Support	\$79,000.00	\$84,187.84	\$5,187.84	0
100-55-6100	Supplies	\$7,000.00	\$1,087.71	-\$5,187.84	\$724.45
Fire					
100-60-6010	FLSA Overtime	\$120,000.00	\$165,115.20	\$45,115.20	0
100-60-6000	Salaries	\$795,242.00	\$566,067.39	-\$45,115.20	\$184,059.41

Fire Cont.	Line-Item Description	Budgeted	End of Year Balance	Deficit/Transfer	Closing Balance
100-60-6011	Call Back Overtime	\$50,000.00	\$59,020.95	\$9,020.95	
100-60-6000	Salaries	\$795,242.00	\$184,059.41	-9,020.95	\$175,038.46
100-60-6022	Holiday Pay	\$15,000.00	\$31,061.52	\$16,061.52	0
100-60-6000	Salaries	\$795,242.00	\$175,038.46	-\$16,061.52	\$158,976.94
100-60-6150	Gasoline/Diesel/Oil	\$16,400.00	\$22,553.70	\$6,153.70	\$0
100-60-6200	Minor Equipment	\$22,000.00	\$15,607.23	-\$6,153.70	\$239.07
100-60-6153	Heating Fuel	\$27,500.00	\$36,931.45	\$9,431.45	0
100-60-6103	Wearing Apparel	\$15,700.00	\$5,935.30	-\$9,431.45	\$333.25
Police					
100-61-6010	Overtime	\$266,208.00	\$493,454.81	\$227,246.81	0
100-61-6000	Salaries	\$2,140,283.00	\$1,921,436.85	-\$218,846.15	0
100-61-6023	Leave Cashout	\$125,285.00	\$49,370.27	-\$8,400.66	\$67,514.07
100-61-6022	Holiday Pay	\$30,000.00	\$108,549.27	\$78,549.27	0
100-61-6040	Employee Group Health	\$709,441.00	\$316,948.74	-\$78,549.27	\$235,528.71
100-61-6034	PERS	\$529,428.00	\$546,392.61	\$16,964.61	0
100-61-6040	Employee Group Health	\$709,441.00	\$235,528.71	-16,964.61	\$210,329.00
100-61-6103	Employee Wearing Apparel	\$25,000.00	\$35,334.24	\$10,334.24	0
100-61-6230	Vehicle Maint/Repair	\$20,600.00	\$10,111.43	-\$10,334.24	\$222.81
100-61-6150	Gasoline/Diesel/Oil	\$36,000.00	\$68,692.34	\$32,692.34	0
100-61-6040	Employee Group Health	\$709,441.00	\$210,329.00	-\$32,692.34	\$177,636.66
100-61-6170	Telephone	\$17,000.00	\$33,274.99	\$16,274.99	0
100-61-6200	Minor Equipment	\$27,000.00	\$13,957.60	\$13,042.40	0
100-61-6100	Supplies	\$30,000.00	\$25,123.45	-\$3,274.99	\$42.40
100-61-6335	Other Purchased Services	\$60,435.80	\$72,440.42	\$12,005.14	0
100-61-6041	Utility Benefit	\$127,224.00	\$79,527.90	-\$12,005.14	\$67,522.76
Public Works (PW) Admin					
100-65-6153	Heating Fuel	\$9,800.00	\$50,380.16	\$40,580.16	0
570-50-6153	Vh and E Heating Fuel	\$6,300.00	\$0.00	\$6,300.00	\$0.00
510-81-6153	Hauled Water Heating Fuel	\$154,800.00	\$29,593.02	\$17,140.08	\$125,206.98
510-85-6153	Hauled Sewer Heating Fuel	\$134,700.00	\$28,518.01	\$17,140.08	\$106,181.99
PW Streets & Roads					
100-66-6022	Holiday Pay	\$5,000.00	\$19,117.24	\$14,117.24	0
100-66-6000	Salaries	\$441,695.00	\$407,425.14	-\$14,117.24	\$393,307.90

Streets & Roads Cont.	Line-Item Description	Budgeted	End of Year Balance	Deficit/Transfer	Closing Balance
100-66-6150	Gasoline	\$70,000.00	\$124,770.17	\$54,770.17	0
100-66-6150	Streets/Roads Heating Fuel	\$96,796.00	\$32,170.89	-\$54,770.17	\$9,854.94
100-66-6231	Vehicle Parts and Tools	\$94,000.00	\$109,596.04	\$15,596.04	0
100-66-6230	Vehicle Maint/Repair	\$150,000.00	\$114,180.76	-\$15,596.04	\$20,223.20
PW Property Maint.					
100-70-6041	Utility Benefit	\$23,256.00	\$35,855.15	\$12,599.15	0
100-70-6000	Salaries	\$345,012.00	\$300,913.66	-\$12,599.15	\$31,499.19
100-70-6150	Gasoline/Diesel/Oil	\$15,000.00	\$23,081.94	\$8,081.94	0
100-70-6250	Carpentry Expenses	\$25,000.00	\$255.80	-\$8,081.94	\$16,662.26
Community Services					
100-72-6430	Community Action Grant	\$0.00	\$36,689.50	\$36,689.50	
100-39900	General Fund Undesignated Fund Balance		\$12,222,521.	-\$36,689.50	\$12,185,832.00
Community Service Patrol					
270-50-6010	Overtime	\$0.00	\$9,288.64	\$9,288.64	0
270-50-6034	PERS	\$32,580.00	\$20,952.75	-\$9,288.64	\$2,338.61
E-911					
410-50-6410	Rents and Leases	\$13,000.00	\$31,865.62	\$18,865.62	0
410-50-6040	Employee Group Benefits	\$27,971.00	\$1,837.22	-\$18,865.62	\$7,268.16
Utility Billing					
510-80-6335	Outsourced Services	\$0.00	\$53,595.92	\$53,595.92	0
510-80-6000	Salaries	\$113,801.00	\$37,970.60	-\$53,595.92	\$22,234.08
510-80-6531	Bank Charges	\$40,000.00	\$62,060.86	\$22,060.86	0
510-80-6506	Postage	\$15,000.00	\$4,813.39	-\$10,186.61	0
510-80-6200	Minor Equipment	\$4,000.00	0.	-\$4,000.00	\$0.00
510-80-6060	Travel and Training	\$4,500.00	0	-\$4,500.00	\$0.00
510-80-6100	Supplies	\$3,500.00	0	-\$3,500.00	\$125.75
Hauled Water					
510-81-6010	Overtime	\$150,000.00	\$270,856.48	\$120,856.48	0
510-81-6040	Employee Group Health Ben	\$161,468.00	\$30,755.14	-\$120,856.48	\$9,856.38
510-81-6030	Social Security Expense	\$19,344.00	\$35,209.81	\$15,865.81	0
510-81-6040	Employee Group Health Ben	\$161,468.00	\$9,856.38	-9,856.38	-\$6,009.43
510-81-6150	Gasoline/Diesel/Oil	\$110,000.00	\$154,186.43	\$44,186.43	0
510-81-6060	Training/Travel	\$45,000.00	0	-\$44,186.43	\$813.57
510-81-6231	Vehicle Parts and Tools	\$62,500.00	\$90,816.89	\$28,316.89	0
510-81-6240	Property Maint.	\$55,640.00	\$15,137.19	-\$15,000.00	\$137.19
510-81-6153	Hauled Water Heating Fuel	\$154,800.00	\$29,593.02	-\$13,316.89	\$111,890.09

Piped Sewer	Line-Item Description	Budgeted	End of Year Balance	Deficit/Transfer	Closing Balance
510-82-6153	Heating Fuel	\$48,400.00	\$61,099.37	\$12,699.37	0
510-81-6153	Hauled Water Heating Fuel	\$154,800.00	\$111,890.09	-\$12,699.37	\$99,190.72
Bethel Heights WTP					
510-83-6153	Heating Fuel	\$207,800.00	\$242,032.55	\$34,232.55	0
510-81-6153	Hauled Water Heating Fuel	\$154,800.00	\$99,190.72	-\$34,232.55	\$64,958.17
510-83-6160	Electricity	\$104,000.00	\$117,747.98	\$13,747.98	0
510-83-6335	Other Purchased Services	\$37,500.00	\$23,741.12	-\$13,747.98	\$10.90
City Sub Water Treatment Plant					
510-84-6010	Overtime	\$77,000.00	\$127,549.89	\$50,549.89	
510-84-6153	Heating Fuel	\$179,600.00	\$149,168.47	-\$30,000.00	\$431.53
510-84-6040	Employee Health Benefits	\$69,927.00	\$28,701.13	-\$20,549.89	\$20,675.98
510-84-6034	PERS	\$40,282.00	\$55,498.81	\$15,216.81	0
510-84-6040	Employee Health Benefits	\$69,927.00	\$20,675.98	-\$15,216.81	\$5,459.17
510-84-6160	Electricity	\$77,200.00	\$91,557.40	\$14,357.40	-4,357.40
510-84-6060	Travel and Training	\$10,000.00	0	-\$10,000.00	\$0.00
Hauled Sewer					
510-85-6022	Holiday Pay	\$7,000.00	\$19,650.38	\$12,650.38	0
510-85-6034	PERS	\$115,576.00	\$89,574.44	-\$12,650.38	\$13,351.18
510-85-6040	Employee Group Benefits	\$27,971.00	\$83,720.15	\$55,749.15	0
510-85-6060	Travel/Training	\$45,000.00	0	-\$45,000.00	\$0.00
510-85-6231	Vehicle Parts & Tool	\$120,000.00	\$22,734.45	-\$10,749.15	\$11,985.30
510-85-6150	Gasoline/Diesel/Oil	\$96,000.00	\$134,687.06	\$38,687.06	0
510-85-6230	Vehicle Maint/Repair	\$295,000.00	\$224,555.49	-\$38,687.06	\$31,757.45
510-85-6400	Insurance	\$86,600.00	\$104,823.96	\$18,223.96	0
510-85-6230	Vehicle Maint/Repair	\$295,000.00	\$31,757.45	-\$18,223.96	\$13,533.49
Piped Sewer					
510-86-6160	Electricity	\$94,900.00	\$107,688.88	\$12,788.88	0
510-86-6600	Bed Debt Expense	\$18,500.00	0	-\$12,788.88	\$5,711.12
510-86-6200	Minor Equipment	\$150,000.00	\$278,019.93	\$128,019.93	0
510-86-9699	Short Lived Assets	\$286,783.85	\$98,357.72	-\$128,019.93	\$60,406.20
510-86-6335	Other Purchased Services	\$20,000.00	\$34,096.33	\$14,096.33	0
510-86-6000	Salaries	\$138,124.00	\$58,416.59	-\$14,096.33	\$65,638.08
Sewer Lagoon					
510-87-6420	Interest Sewer Lagoon Bond	\$0.00	18,836.21	\$18,836.21	-\$5,328.19
510-87-6060	Travel and Training	\$3,000.00	0	-\$3,000.00	0

Sewer Lagoon Cont.	Line-Item Description	Budgeted	End of Year Balance	Deficit/Transfer	Closing Balance
510-87-6103	Wearing Apparel	\$3,000.00	0	-\$3,000.00	0
510-87-6332	Lab Tests	\$15,000.00	\$7,491.98	-\$7,508.02	0
Leased Properties					
530-55-6153	Heating Fuel Court Complex	\$80,000.00	\$103,551.15	\$23,551.15	0
530-39900	Enterprise Fund Balance		-377,363.00	-\$23,551.15	-\$400,914.00
530-55-6160	Electricity Court Complex	\$65,000.00	\$90,103.75	\$25,103.75	0
530-39900	Enterprise Fund Balance		-\$400,914.00	-\$25,103.75	\$426,018.00
530-55-6240	Property Maintenance	\$16,000.00	\$37,763.08	\$21,763.08	0
530-55-6241	ICR-Property Maintenance	\$166,919.00	\$121,508.42	-\$21,763.08	\$23,647.50
Transit System					
560-50-6000	Salaries	\$127,257.00	\$139,979.25	\$12,722.25	0
560-50-6040	Employee Health Benefits	\$63,570.00	\$45,189.91	-\$12,722.25	\$5,657.84
Vehicle & Equipment					
570-50-6150	Gasoline/Diesel/Oil	\$8,000.00	\$42,053.98	\$34,053.98	
570-50-6060	Travel and Training	\$10,000.00	\$0.00	-\$10,000.00	\$0.00
570-50-6200	Minor Equipment	\$25,000.00	\$7,779.33	-\$17,220.67	0
570-50-6339	Other Purchased Services	\$15,000.00	\$1,376.83	-\$6,833.31	\$6,789.86

SECTION 4. Effective Date. This ordinance shall become effective upon the passage by the Bethel City Council.

NOW THEREFORE BE IT ENACTED BY THE CITY COUNCIL OF THE CITY OF BETHEL, ALASKA, that the Fiscal Year 2024 operating budget is adopted for a period of one year, from July 1, 2023, through June 30, 2024.

ENACTED THIS 10th DAY OF SEPTEMBER 2024, BY A VOTE OF ___ IN FAVOR AND ___ OPPOSED.

Mark Springer, Mayor

ATTEST:

Kevin Morgan, Acting City Clerk

Introduced by: Acting City Manager Strickler
Introduction Date: August 27, 2024
Public Hearing: September 10, 2024
Action:
Vote:

CITY OF BETHEL, ALASKA

ORDINANCE #24-04 (b)

AN ORDINANCE BY THE BETHEL CITY COUNCIL AMENDING THE ADOPTION ANNUAL OPERATING BUDGET FOR FISCAL YEAR 2025, JULY 1, 2024-JUNE 30, 2025

BE IT ORDAINED by the City Council of Bethel, Alaska, as follows:

SECTION 1. Classification. This is a noncodified ordinance amending the City of Bethel Annual Operating Budget for Fiscal Year 2025.

SECTION 2. Amendment. The adopted Fiscal Year 2025 Annual Operating Budget is amended as follows:

COMMUNITY PARKS AND RECREATION DIRECTOR AMENDMENT

Whereas, in July of 2017, the City Council defunded the municipal Parks and Recreation Department, the Department was operated out of the Youth Center located at 519 Mission Drive with four full time staff members, and two part time staff;

Whereas, since the Department closed, other community agencies have modified their operational scope to fill the social and recreational gaps left with the closure of this department;

Whereas, additionally the YK Fitness Center opened in 2014 providing an element of recreational offerings but, the community still lacks planned regular indoor and outdoor social and recreational options for our residents;

Whereas, the facility is currently being managed by a contractor however, it has been the intent for the City to manage the property and programs since inception;

Whereas, in the 2023-2028 Operations and Maintenance Agreement, Section 9, G, provides a transition plan where the current operator would train City personnel and collaborative work toward a full city run facility;

Whereas, both companies that have managed the facility have done an excellent job at maintaining the facility and providing programs to the residences however, this contract service is expensive and the scope of the opportunities available are limited;

Whereas, the Bethel City Council wishes to begin the transition from a contractor run facility to a municipal run Community Parks and Recreation Department;

Whereas, the City closed the municipal Parks and Recreation Department in

Whereas, the Community Parks and Recreation Director would fall under the Title 3 Classification of M2, with a salary range between \$86,844 and \$130,768;

Whereas, the Alaska Municipal League Salary Survey included the following salary amounts for Parks and Recreation Director for similar Alaskan Communities:

City of Wasilla \$110,252-\$146,669
City of Kenai \$87,542-\$115,545
Kenia Peninsula Borough \$85,640-\$129,040
City of Valdez \$117,114-\$155,437
City of Soldotna \$97,094-\$135,886
City of Nome \$117,114

B-1 Parks and Recreation				
Line Item	Description	Approved Appropriations	Proposed Amendment	Proposed Total Appropriations
100-71-6000	Community Parks and Recreation Director	\$0	\$104,710	\$104,710
6031	Medicare	\$0	1,518	\$1,518
6032	Unemployment Insurance	\$0	1,863	\$1,863
6033	Worker's Comp	\$0	\$206	\$206
6034	PERS	\$0	\$23,036	\$23,063
6040	Employee Group Health Benefits	\$0	\$18,096	\$18,096
6041	Utility Benefit	\$0	\$4,560	\$4,560
FY25 Operating	Revenue over Expenditures	\$551,201	\$(154,016)	\$397,185
General Fund Change Summary:	The general fund revenue over expenditures will have a positive \$397,185 after this amendment.			

FIRE SUPPRESSION INSPECTION AND SERVICES AMENDMENT B-2

Whereas, historically administration has budgeted for the fire suppression and inspection services in the annual capital improvement budget;

Whereas, the line item was overlooked in the preparation of the FY 25 Capital Budget presentation to the City Council and therefor was not included in the adopted FY 25 Capital Budget;

Whereas, after a review of the expense, it has been determined, this is an annual operating expense and should have been included in the City's FY25 operating budget under property maintenance;

Whereas, City Shop, YK Fitness Center, Port, remote monitoring of the buildings \$3,960 annually;

Whereas, Citywide fire suppression inspections for the year will be \$18,293.22;

B-2 Property Maintenance				
Line Item	Description	Approved Appropriations	Proposed Amendment	Proposed Total Appropriations
100-70-6335	Other Purchased Services	\$15,000	\$22,300	\$37,300
FY25 Operating	Revenues over Expenditures	\$397,185	(\$22,300)	\$374,885
Change Summary:	The general fund revenue over expenditures will have a positive \$374,885 after this amendment.			

COMMUNITY ACTION GRANT DEDICATION B-3

Whereas, the City of Bethel has established a Community Action Grant (CAG) Program to allow community organizations and individuals to request financial support from the City for civic programs or events that contribute to the health, welfare and overall lives of the residents of Bethel, especially its most vulnerable populations;

Whereas, the Council has committed to budget an amount equal to 20% of the revenue generated from the alcohol tax to health, public safety, and social services that offset the effects of alcohol in the community;

Whereas, the Council adopted Resolutions 23-16 and 24-07:

- Places a hold on the distribution of funds for the Community Action Grant Program until the Third Quarter of 2024, Application Period Opens July 29-August 27, 2024.
- Waives the meeting requirements for the Community Action Grant Committee until September 2024 to coincide with the review of the 2024 Third Quarter Community Action Grant application review.
- Confirm the Council will appropriate the known unexpended revenue designated to the Community Action Grant Program from Fiscal Year 2024, in the Fiscal Year 2025 Budget.

- Confirm future appropriations for the fiscal year operating budget will include prior year revenue designated for the Community Action Grant Program (2025 revenue will be presented in the 2026 budget, and so on).

Whereas, at the end of the Fiscal Year 2024 (FY24) the revenue from the alcohol tax that is to be allocated to the Community Action Grant program totaled \$68,573;

Whereas, from that total revenue there were the following deductions:
 \$12,540 Authorized under Action Memorandum 23-17;
 \$31,700 Authorized under Budget Ordinance 23-11 (c);
 \$7,550.50 submission from a grantee for unused grant funds;

Whereas, this results in a total of \$31,883 remaining available for the FY25 budget appropriations.

Community Services B-3				
Line Item	Description	Approved Appropriations	Proposed Amendment	Proposed Total Appropriations
100-72-6430	Community Action Grant	\$86,000	(\$54,117)	\$31,883
FY25 Operating	Revenues over Expenditures	\$374,885	\$54,117	\$429,002
Change Summary:	The general fund revenue over expenditures will have a positive \$429,002 after this amendment.			

TRANSFER TO FLEET REPLACEMENT FUND B-4

Whereas, the [Bethel Municipal Code 4.04.075](#) requires the City to transfer an amount equal to 50 percent of the prior year ambulance fees collected to the fire department fleet replacement fund;

Whereas, following June 30, the end of the fiscal year, the City's Finance Team has a number of tasks associated to the close out of the year, to include waiting for an applying final payment on June invoices and sales tax remittances, this generally isn't wrapped up until mid-August;

Whereas, the Fiscal Year 2024 ambulance fees collected totaled \$150,093, fifty percent of which shall be allocated to the Fire Department's fleet replacement fund as presented;

B-4 Fire Department				
Line Item	Description	Approved Appropriations	Proposed Amendment	Proposed Total Appropriations
100-73-6647	Transfers Out to Fleet Replacement	80,000.00	(\$4,953)	\$75,047.00

	Fund			
Change Summary:	The general fund revenue over expenditures will have a positive \$433,955 after this amendment.			

LANDFILL CLOSURE AMENDMENT B-5

Whereas, in July, Department of Environmental Conservation (DEC) performed a landfill inspection at the City Landfill;

Whereas, it was brought to the City's attention during the inspection, the City should have updated the landfill closure study in 2024, as they are to be updated every five years and the last one was performed in 2019;

Whereas, as a temporary measure, DEC stated the City could compound the annual interest rates to determine the annual necessary set aside value for the closure for this year;

Whereas, following that value determination, an evaluation was performed on the annual operating budgets from 2019 to current to compare the allocation of closure costs to the value listed in the 2019 landfill closure study, the result of that evaluation equated to a significant shortfall in the necessary allocation:

Budget Shortfall Summary

	Budgeted	Actual	Difference
FY19 Budget	\$60,000	\$133,709	\$(73,709)
FY20 Budget	\$40,000	\$135,461	\$(95,461)
FY21 Budget	\$-	\$142,573	\$(142,573)
FY22 Budget	\$-	\$154,349	\$(154,349)
FY23 Budget	\$59,931	\$160,014	\$(100,083)
FY24 Budget	\$94,939	\$163,742	\$(68,803)
FY25 Budget	\$64,636	\$165,000	\$(100,364)
	\$319,506	\$1,054,848	\$(735,342)

Whereas, to account for the necessary set aside, the City must allocate the correct historic value for the enterprise fund, dedicating sums of money to the landfill closure costs;

Whereas, the FY25 Solid Waste Enterprise Fund had an operating revenue over expenses for services that totals \$51,768, requiring the additional funding to be pulled from the enterprise fund balance;

B-5 Solid Waste Enterprise Fund				
Line Item	Description	Approved	Proposed	Proposed Total

		Appropriations	Amendment	Appropriations
500	Landfill Closure Study	\$64,636	\$735,342	\$799,705
	Revenues over Expenditures	\$51,768	\$(51,768)	0
500-39900	Enterprise Fund Balance	\$2,172,976	\$(683,574)	\$1,489,402
Change Summary:	The enterprise fund estimated revenue over expenditures following this amendment will reflect a negative balance of \$683,574. This amount funds will be pulled from the enterprise undesignated fund balance resulting in \$1,489,402 remaining in the undesignated fund balance.			

WATER AND SEWER ENTERPRISE FUND PIPED SEWER GLYCOL AMENDMENT B-6

Whereas, some of the city's sewer lines are heated through glycol circulation which has increased in recent years with the expansion of the city's service lines;

Whereas, it was realized until after the Fiscal Year Operating budget was adopted that our glycol surplus supply has been depleted;

Whereas, to ensure the city has glycol on hand in the case of a major leak or an accident damaging our piped system, the utility would like to make a bulk purchase from a local vendor;

B-6 Wate and Sewer Enterprise Fund				
Line Item	Description	Approved Appropriations	Proposed Amendment	Proposed Total Appropriations
510-86-6100	Supplies	\$3,000	\$29,000	\$32,000
	Revenues over Expenditures	\$37,474	\$(29,000)	\$8,474
Change Summary:	The enterprise fund estimated revenue over expenditures following this amendment will reflect a balance of \$8,474 in the operating budget revenue over expenditures.			

Summary of FY25 Operating Budget following expenditure adjustments:

General Fund

Adopted Excess General Fund (GF) Revenue over Expenditures:	\$396,653
Budget Amendment 24-04 (a) Revenue over Expenditures:	\$551,201
Budget Amendment 24-04 (b) Revenue over Expenditures:	\$433,955

Solid Waste Enterprise Fund

Adopted Excess Solid Waste Revenue over Expenditures:	\$51,768
Budget Amendment 24-04 (b) Revenue over Expenditures:	\$(683,574)

Water and Sewer Enterprise Fund

Adopted Excess Water and Sewer Fund Revenue over Expenditures:	\$197,474
Budget Amendment 24-04 (a) Revenue over Expenditures:	\$37,474
Budget Amendment 24-04 (b) Revenue over Expenditures:	\$8,474

SECTION 4. Effective Date. This ordinance shall become effective upon the passage by the Bethel City Council.

NOW THEREFORE BE IT ENACTED BY THE CITY COUNCIL OF THE CITY OF BETHEL, ALASKA, that the Fiscal Year 2025 operating budget is adopted for a period of one year, from July 1, 2024, through June 30, 2025.

ENACTED THIS 10th DAY OF SEPTEMBER 2024, BY A VOTE OF ___ IN FAVOR AND ___ OPPOSED.

ATTEST:

Mark Springer, Mayor

Kevin Morgan, Acting City Clerk



JOB DESCRIPTION

JOB TITLE:	Director Community Parks & Recreation	FLSA:	Exempt
DEPARTMENT:	Community Parks & Recreation	GRADE:	
REPORTS TO:	City Manager	DATE:	7/29/2024

SUMMARY:

The purpose of this position is to perform professional, administrative and supervisory work in developing, administering and implementing indoor and outdoor recreation programs and activities that meet the needs of town residents as well as maintaining all recreation facilities; all other related work as required. The Parks & Recreation Director is responsible for maintaining and improving the efficiency and effectiveness of all areas under their direction and control.

ESSENTIAL FUNCTIONS:

This class specification lists the major duties and requirements of the job and is not all-inclusive. Incumbent(s) may be expected to perform job-related duties other than those contained in this document and may be required to have specific job-related knowledge and skills.

- Administers, manages, and supervises the daily operation of the city's park and recreation program including recreation space, playground, indoor year-round YK Fitness and Community Center, and all recreational programs and scheduled use of all recreation properties.
- Plans, organizes, and directs all department programs, services and facilities. Develops organizational structures for all seasonal staff and volunteers.
- Recruits, interviews, selects, hires, trains, promotes, fires, and recommends salary and other personnel actions.
- Develops, prepares, and oversees the Community Park & Recreation Department capital and operating budgets. Directs the expenditures of same.
- Oversees the collection and accounting of user fees.
- Maintains all reports and records including revolving accounts and enterprise funds for programs, areas, facilities and services.
- Purchases necessary supplies in accordance with Bethel Municipal Code and state statutes. Performs strategic and long-range planning for department growth.
- Assesses the performance of the Community Park & Recreation Department in relation to established goals and changing needs of the community.
- Serves as the primary staff/ex officio member for the Community Park & Recreation Committee.
- Directs and arranges the maintenance of recreation land in conjunction with the Department of Public Works.
- Encourages and maintains cooperative planning and working relationships with local and community groups, including organized sports groups, and agencies, media, trades people, and other city departments.

- Analyzes training needs to ensure appropriate staff development and training.
- Promotes and supports the overall mission of the City by demonstrating courteous and cooperative behavior when interacting with public and staff; acts in a manner that promotes a harmonious and effective workplace environment.

QUALIFICATIONS:

To perform this job successfully, an individual must be able to perform each essential duty satisfactorily. The requirements listed below are representative of the knowledge, skill, and/or ability required.

Education and Experience:

Bachelor's degree in recreation, leisure studies, physical education, or a combination of three years education and experience related to recreation.

Required Certificates, Licenses, and Registrations:

Continued employment is contingent upon all required licenses and certificates being maintained in active status without suspension or revocation.

- Driver's License.
- Shall become certified in CPR and First Aid.
- Shall obtain an American Red Cross Lifeguard Certification within a year.

Required Knowledge and Skills

Required Knowledge:

- Working knowledge of principals and Practices of recreation programing.
- Thorough knowledge of recreation equipment, materials, tools and other resources.
- Principles and practices of program planning, development and evaluation.
- Administrative principles and practices, including goal setting, program development, implementation and evaluation, and the management of employees through multiple levels of supervision.
- Principles and practices of budget development and administration.
- Applicable laws, codes and regulations.
- Financial records management principles and practices.
- IT systems and applications related to the work.
- Correct business English, including spelling, grammar and punctuation.
- Training others in policies and procedures related to the work.
- Developing and implementing goals, objectives, policies, procedures and work standards.
- Performing professional-level human resources duties in a variety of assigned areas.
- Maintaining accurate records and files.
- Preparing clear and concise reports, correspondence and other written materials.
- Using initiative and independent judgment within established procedural guidelines.
- Using tact, discretion and prudence in working with those contacted in the course of the work.
- Performing effective oral presentations to large and small groups.
- Contributing effectively to the accomplishment of team or work unit goals, objectives and activities.
- Establishing and maintaining effective working relationships with a variety of individuals contacted in the course of the work.

PHYSICAL/MENTAL REQUIREMENTS:

The physical demands described herein are representative of those that must be met by an employee to successfully perform the essential functions of the job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

Mobility to work in an office setting, use standard office equipment and stamina to sit for extended periods of time; strength to lift and carry up to 10 pounds; vision to read printed materials and computer screens; and hearing and speech to communicate in person or over the telephone.

WORKING ENVIRONMENT:

Work is performed in an office setting.

Travel required to locations throughout the City; exposure to adverse environmental conditions.

City of Bethel_1438054_July_2024

NASPO - CPQ-616890

Planned Service Agreement



Johnson Controls Fire Protection LP
8323 N Eldridge Parkway
Houston TX77041
USA

Proposal Presented On:
05-31-2024



SERVICE SOLUTION

Customer #: 1438054
City Of Bethel
Date: 31-May-24
Proposal #: CPQ-616890
Term: 1-Jul-24 to 30-Jun-25
External Contract #: 80896509 R04-JAN-2024
Subscription ERP #:

Billing Customer:
City of Bethel
PO Box 1388
Accounts Payable
BETHEL, AK 99559-0388

Service Location:
Bethel Fire Department
320 Chief Eddie Hoffman Hwy.,PO Box 1388
BETHEL, AK 99559

Johnson Controls Fire Protection LP
Sales Representative:
Jeff Wood
8323 N Eldridge Parkway
Houston TX 77041
jeff.1.wood@jci.com

INVESTMENT SUMMARY
(Service Solution Valid for 30 Days)

SERVICE/PRODUCT DESCRIPTION	QUANTITY	FREQUENCY	INVESTMENT
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SYSTEM-FA-EDWARDS PROG

EDWARDS PROGRAMMABLE FIRE ALARM SYS Est. First Inspection: July

Main Fire Alarm Panel	1	Annual
Smoke Detector w/Heat & CO Conventional	11	Annual
Heat Detector Restorable	15	Annual
Pull Station	3	Annual

FIRE ALARM ESSENTIAL SERVICE OFFER Total: \$784.00

SYSTEM-EX-EXTINGUISHERS

EXTINGUISHERS/PORTABLES SYSTEM Est. First Inspection: July

Dry chem - stored pressure- refillable (ABC)	5	Annual
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EXTINGUISHER ESSENTIAL SERVICE Total: \$99.75



SERVICE SOLUTION

Customer #: 1438054
City Of Bethel
Date: 31-May-24
Proposal #: CPQ-616890
Term: 1-Jul-24 to 30-Jun-25
External Contract #: 80896455 R04-JAN-2024
Subscription ERP #:

Billing Customer:
City of Bethel
PO Box 1388
Accounts Payable
BETHEL, AK 99559-0388

Service Location:
Recycle Center
1270 Ridgecrest Dr,
Bethel, AK 99559

Johnson Controls Fire Protection LP
Sales Representative:
Jeff Wood
8323 N Eldridge Parkway
Houston TX 77041
jeff.1.wood@jci.com

INVESTMENT SUMMARY
(Service Solution Valid for 30 Days)

SERVICE/PRODUCT DESCRIPTION	QUANTITY	FREQUENCY	INVESTMENT
SYSTEM-EX-EXTINGUISHERS			
EXTINGUISHERS/PORTABLES SYSTEM Est. First Inspection: July			
Dry chem - stored pressure- refillable (ABC)	2	Annual	
EXTINGUISHER ESSENTIAL SERVICE Total:			\$99.75



SERVICE SOLUTION

Customer #: 1438054
City Of Bethel
Date: 31-May-24
Proposal #: CPQ-616890
Term: 1-Jul-24 to 30-Jun-25
External Contract #: 80896491 R04-JAN-2024
Subscription ERP #:

Billing Customer:
City of Bethel
PO Box 1388
Accounts Payable
BETHEL, AK 99559-0388

Service Location:
Teen Center Storage Shed
519 Mission Dr,
Bethel, AK 99559

Johnson Controls Fire Protection LP
Sales Representative:
Jeff Wood
8323 N Eldridge Parkway
Houston TX 77041
jeff.1.wood@jci.com

INVESTMENT SUMMARY
(Service Solution Valid for 30 Days)

SERVICE/PRODUCT DESCRIPTION	QUANTITY	FREQUENCY	INVESTMENT
SYSTEM-EX-EXTINGUISHERS			
EXTINGUISHERS/PORTABLES SYSTEM Est. First Inspection: July			
Dry chem - stored pressure- refillable (ABC)	1	Annual	
EXTINGUISHER ESSENTIAL SERVICE Total:			\$99.75



SERVICE SOLUTION

Customer #: 1438054
City Of Bethel
Date: 31-May-24
Proposal #: CPQ-616890
Term: 1-Jul-24 to 30-Jun-25
External Contract #: 80896485 R04-JAN-2024
Subscription ERP #:

Billing Customer:
City of Bethel
PO Box 1388
Accounts Payable
BETHEL, AK 99559-0388

Service Location:
City Center Generator Set
308 Chief Eddie Hoffman Way,
Bethel, AK 99559

Johnson Controls Fire Protection LP
Sales Representative:
Jeff Wood
8323 N Eldridge Parkway
Houston TX 77041
jeff.1.wood@jci.com

INVESTMENT SUMMARY
(Service Solution Valid for 30 Days)

SERVICE/PRODUCT DESCRIPTION	QUANTITY	FREQUENCY	INVESTMENT
SYSTEM-EX-EXTINGUISHERS			
EXTINGUISHERS/PORTABLES SYSTEM Est. First Inspection: July			
Dry chem - stored pressure- refillable (ABC)	1	Annual	
EXTINGUISHER ESSENTIAL SERVICE Total:			\$99.75



SERVICE SOLUTION

Customer #: 1438054
City Of Bethel
Date: 31-May-24
Proposal #: CPQ-616890
Term: 1-Jul-24 to 30-Jun-25
External Contract #: 80896458 R04-JAN-2024
Subscription ERP #:

Billing Customer:
City of Bethel
PO Box 1388
Accounts Payable
BETHEL, AK 99559-0388

Service Location:
(New) Utility Maintenance Tool
311 4th Ave,
Bethel, AK 99559

Johnson Controls Fire Protection LP
Sales Representative:
Jeff Wood
8323 N Eldridge Parkway
Houston TX 77041
jeff.1.wood@jci.com

INVESTMENT SUMMARY
(Service Solution Valid for 30 Days)

SERVICE/PRODUCT DESCRIPTION	QUANTITY	FREQUENCY	INVESTMENT
SYSTEM-EX-EXTINGUISHERS			
EXTINGUISHERS/PORTABLES SYSTEM Est. First Inspection: July			
Dry chem - stored pressure- refillable (ABC)	2	Annual	
EXTINGUISHER ESSENTIAL SERVICE Total:			\$99.75



SERVICE SOLUTION

Customer #: 1438054
City Of Bethel
Date: 31-May-24
Proposal #: CPQ-616890
Term: 1-Jul-24 to 30-Jun-25
External Contract #: 80896474 R04-JAN-2024
Subscription ERP #:

Billing Customer:
City of Bethel
PO Box 1388
Accounts Payable
BETHEL, AK 99559-0388

Service Location:
Sanding Shed Quonset Hut
Standard Oil Rd,
Bethel, AK 99559

Johnson Controls Fire Protection LP
Sales Representative:
Jeff Wood
8323 N Eldridge Parkway
Houston TX 77041
jeff.1.wood@jci.com

INVESTMENT SUMMARY
(Service Solution Valid for 30 Days)

SERVICE/PRODUCT DESCRIPTION	QUANTITY	FREQUENCY	INVESTMENT
SYSTEM-EX-EXTINGUISHERS			
EXTINGUISHERS/PORTABLES SYSTEM Est. First Inspection: July			
Dry chem - stored pressure- refillable (ABC)	6	Annual	
EXTINGUISHER ESSENTIAL SERVICE Total:			\$99.75



SERVICE SOLUTION

Customer #: 1438054
City Of Bethel
Date: 31-May-24
Proposal #: CPQ-616890
Term: 1-Jul-24 to 30-Jun-25
External Contract #: 80896464 R04-JAN-2024
Subscription ERP #:

Billing Customer:
City of Bethel
PO Box 1388
Accounts Payable
BETHEL, AK 99559-0388

Service Location:
ASHA/Bethel Heights Lift Station
133 Akakeek St,
Bethel, AK 99559

Johnson Controls Fire Protection LP
Sales Representative:
Jeff Wood
8323 N Eldridge Parkway
Houston TX 77041
jeff.1.wood@jci.com

INVESTMENT SUMMARY
(Service Solution Valid for 30 Days)

SERVICE/PRODUCT DESCRIPTION	QUANTITY	FREQUENCY	INVESTMENT
SYSTEM-EX-EXTINGUISHERS			
EXTINGUISHERS/PORTABLES SYSTEM Est. First Inspection: July			
Dry chem - stored pressure- refillable (ABC)	4	Annual	
EXTINGUISHER ESSENTIAL SERVICE Total:			\$99.75



SERVICE SOLUTION

Customer #: 1438054
City Of Bethel
Date: 31-May-24
Proposal #: CPQ-616890
Term: 1-Jul-24 to 30-Jun-25
External Contract #: 80896467 R04-JAN-2024
Subscription ERP #:

Billing Customer:
City of Bethel
PO Box 1388
Accounts Payable
BETHEL, AK 99559-0388

Service Location:
Highway Lift Station
State Hwy,
Bethel, AK 99559

Johnson Controls Fire Protection LP
Sales Representative:
Jeff Wood
8323 N Eldridge Parkway
Houston TX 77041
jeff.1.wood@jci.com

INVESTMENT SUMMARY
(Service Solution Valid for 30 Days)

SERVICE/PRODUCT DESCRIPTION	QUANTITY	FREQUENCY	INVESTMENT
SYSTEM-EX-EXTINGUISHERS			
EXTINGUISHERS/PORTABLES SYSTEM Est. First Inspection: July			
Dry chem - stored pressure- refillable (ABC)	2	Annual	
EXTINGUISHER ESSENTIAL SERVICE Total:			\$99.75



SERVICE SOLUTION

Customer #: 1438054
City Of Bethel
Date: 31-May-24
Proposal #: CPQ-616890
Term: 1-Jul-24 to 30-Jun-25
External Contract #: 80896456 R04-JAN-2024
Subscription ERP #:

Billing Customer:
City of Bethel
PO Box 1388
Accounts Payable
BETHEL, AK 99559-0388

Service Location:
(Old) Utility Maintenance Shop
1290 Ridgcrest Dr,
Bethel, AK 99559

Johnson Controls Fire Protection LP
Sales Representative:
Jeff Wood
8323 N Eldridge Parkway
Houston TX 77041
jeff.1.wood@jci.com

INVESTMENT SUMMARY
(Service Solution Valid for 30 Days)

SERVICE/PRODUCT DESCRIPTION	QUANTITY	FREQUENCY	INVESTMENT
SYSTEM-EX-EXTINGUISHERS			
EXTINGUISHERS/PORTABLES SYSTEM Est. First Inspection: July			
Dry chem - stored pressure- refillable (ABC)	2	Annual	
EXTINGUISHER ESSENTIAL SERVICE Total:			\$99.75



SERVICE SOLUTION

Customer #: 1438054
City Of Bethel
Date: 31-May-24
Proposal #: CPQ-616890
Term: 1-Jul-24 to 30-Jun-25
External Contract #: 80896473 R04-JAN-2024
Subscription ERP #:

Billing Customer:
City of Bethel
PO Box 1388
Accounts Payable
BETHEL, AK 99559-0388

Service Location:
Small Boat Harbor Building
N Harbor Rd,
Bethel, AK 99559

Johnson Controls Fire Protection LP
Sales Representative:
Jeff Wood
8323 N Eldridge Parkway
Houston TX 77041
jeff.1.wood@jci.com

INVESTMENT SUMMARY
(Service Solution Valid for 30 Days)

SERVICE/PRODUCT DESCRIPTION	QUANTITY	FREQUENCY	INVESTMENT
SYSTEM-EX-EXTINGUISHERS			
EXTINGUISHERS/PORTABLES SYSTEM Est. First Inspection: July			
Dry chem - stored pressure- refillable (ABC)	1	Annual	
EXTINGUISHER ESSENTIAL SERVICE Total:			\$99.75



SERVICE SOLUTION

Customer #: 1438054
City Of Bethel
Date: 31-May-24
Proposal #: CPQ-616890
Term: 1-Jul-24 to 30-Jun-25
External Contract #: 80896460 R04-JAN-2024
Subscription ERP #:

Billing Customer:
City of Bethel
PO Box 1388
Accounts Payable
BETHEL, AK 99559-0388

Service Location:
Main Lift Station Gen Set
832 Ridgecrest Dr,
Bethel, AK 99559

Johnson Controls Fire Protection LP
Sales Representative:
Jeff Wood
8323 N Eldridge Parkway
Houston TX 77041
jeff.1.wood@jci.com

INVESTMENT SUMMARY
(Service Solution Valid for 30 Days)

SERVICE/PRODUCT DESCRIPTION	QUANTITY	FREQUENCY	INVESTMENT
SYSTEM-EX-EXTINGUISHERS			
EXTINGUISHERS/PORTABLES SYSTEM Est. First Inspection: July			
Dry chem - stored pressure- refillable (ABC)	1	Annual	
EXTINGUISHER ESSENTIAL SERVICE Total:			\$99.75



SERVICE SOLUTION

Customer #: 1438054
City Of Bethel
Date: 31-May-24
Proposal #: CPQ-616890
Term: 1-Jul-24 to 30-Jun-25
External Contract #: 80896459 R04-JAN-2024
Subscription ERP #:

Billing Customer:
City of Bethel
PO Box 1388
Accounts Payable
BETHEL, AK 99559-0388

Service Location:
Main Lift Station
832 Ridgecrest Dr,
Bethel, AK 99559

Johnson Controls Fire Protection LP
Sales Representative:
Jeff Wood
8323 N Eldridge Parkway
Houston TX 77041
jeff.1.wood@jci.com

INVESTMENT SUMMARY
(Service Solution Valid for 30 Days)

SERVICE/PRODUCT DESCRIPTION	QUANTITY	FREQUENCY	INVESTMENT
SYSTEM-EX-EXTINGUISHERS			
EXTINGUISHERS/PORTABLES SYSTEM Est. First Inspection: July			
Dry chem - stored pressure- refillable (ABC)	1	Annual	
EXTINGUISHER ESSENTIAL SERVICE Total:			\$99.75



SERVICE SOLUTION

Customer #: 1438054
City Of Bethel
Date: 31-May-24
Proposal #: CPQ-616890
Term: 1-Jul-24 to 30-Jun-25
External Contract #: 80896461 R04-JAN-2024
Subscription ERP #:

Billing Customer:
City of Bethel
PO Box 1388
Accounts Payable
BETHEL, AK 99559-0388

Service Location:
Kilbuck Lift Station
5th Ave AT Main St,
Bethel, AK 99559

Johnson Controls Fire Protection LP
Sales Representative:
Jeff Wood
8323 N Eldridge Parkway
Houston TX 77041
jeff.1.wood@jci.com

INVESTMENT SUMMARY
(Service Solution Valid for 30 Days)

SERVICE/PRODUCT DESCRIPTION	QUANTITY	FREQUENCY	INVESTMENT
SYSTEM-EX-EXTINGUISHERS			
EXTINGUISHERS/PORTABLES SYSTEM Est. First Inspection: July			
Dry chem - stored pressure- refillable (ABC)	1	Annual	
EXTINGUISHER ESSENTIAL SERVICE Total:			\$99.75



SERVICE SOLUTION

Customer #: 1438054
City Of Bethel
Date: 31-May-24
Proposal #: CPQ-616890
Term: 1-Jul-24 to 30-Jun-25
External Contract #: 80896478 R04-JAN-2024
Subscription ERP #:

Billing Customer:
City of Bethel
PO Box 1388
Accounts Payable
BETHEL, AK 99559-0388

Service Location:
Bethel Heights Water Treatment Generator Set
900 Ridgecrest Dr,
Bethel, AK 99559

Johnson Controls Fire Protection LP
Sales Representative:
Jeff Wood
8323 N Eldridge Parkway
Houston TX 77041
jeff.1.wood@jci.com

INVESTMENT SUMMARY
(Service Solution Valid for 30 Days)

SERVICE/PRODUCT DESCRIPTION	QUANTITY	FREQUENCY	INVESTMENT
SYSTEM-EX-EXTINGUISHERS			
EXTINGUISHERS/PORTABLES SYSTEM Est. First Inspection: July			
Dry chem - stored pressure- refillable (ABC)	6	Annual	
EXTINGUISHER ESSENTIAL SERVICE Total:			\$99.75



SERVICE SOLUTION

Customer #: 1438054
City Of Bethel
Date: 31-May-24
Proposal #: CPQ-616890
Term: 1-Jul-24 to 30-Jun-25
External Contract #: 80896497 R04-JAN-2024
Subscription ERP #:

Billing Customer:
City of Bethel
PO Box 1388
Accounts Payable
BETHEL, AK 99559-0388

Service Location:
Transit Bus Center
370 4th Ave # A,
Bethel, AK 99559

Johnson Controls Fire Protection LP
Sales Representative:
Jeff Wood
8323 N Eldridge Parkway
Houston TX 77041
jeff.1.wood@jci.com

INVESTMENT SUMMARY
(Service Solution Valid for 30 Days)

SERVICE/PRODUCT DESCRIPTION	QUANTITY	FREQUENCY	INVESTMENT
SYSTEM-EX-EXTINGUISHERS			
EXTINGUISHERS/PORTABLES SYSTEM Est. First Inspection: July			
Dry chem - stored pressure- refillable (ABC)	5	Annual	
EXTINGUISHER ESSENTIAL SERVICE Total:			\$99.75



SERVICE SOLUTION

Customer #: 1438054
City Of Bethel
Date: 31-May-24
Proposal #: CPQ-616890
Term: 1-Jul-24 to 30-Jun-25
External Contract #: 80896501 R04-JAN-2024
Subscription ERP #:

Billing Customer:
City of Bethel
PO Box 1388
Accounts Payable
BETHEL, AK 99559-0388

Service Location:
Old Bus Barn
503 Chief Eddie Hoffman Way,
Bethel, AK 99559

Johnson Controls Fire Protection LP
Sales Representative:
Jeff Wood
8323 N Eldridge Parkway
Houston TX 77041
jeff.1.wood@jci.com

INVESTMENT SUMMARY
(Service Solution Valid for 30 Days)

SERVICE/PRODUCT DESCRIPTION	QUANTITY	FREQUENCY	INVESTMENT
SYSTEM-EX-EXTINGUISHERS			
EXTINGUISHERS/PORTABLES SYSTEM Est. First Inspection: July			
Dry chem - stored pressure- refillable (ABC)	4	Annual	
EXTINGUISHER ESSENTIAL SERVICE Total:			\$99.75



SERVICE SOLUTION

Customer #: 1438054
City Of Bethel
Date: 31-May-24
Proposal #: CPQ-616890
Term: 1-Jul-24 to 30-Jun-25
External Contract #: 80896498 R04-JAN-2024
Subscription ERP #:

Billing Customer:
City of Bethel
PO Box 1388
Accounts Payable
BETHEL, AK 99559-0388

Service Location:
PnR Tool Shed/ Park Lighting Building
326 Akiachak Ave,
Bethel, AK 99559

Johnson Controls Fire Protection LP
Sales Representative:
Jeff Wood
8323 N Eldridge Parkway
Houston TX 77041
jeff.1.wood@jci.com

INVESTMENT SUMMARY
(Service Solution Valid for 30 Days)

SERVICE/PRODUCT DESCRIPTION	QUANTITY	FREQUENCY	INVESTMENT
SYSTEM-EX-EXTINGUISHERS			
EXTINGUISHERS/PORTABLES SYSTEM Est. First Inspection: July			
Dry chem - stored pressure- refillable (ABC)	2	Annual	
EXTINGUISHER ESSENTIAL SERVICE Total:			\$99.75



SERVICE SOLUTION

Customer #: 1438054
City Of Bethel
Date: 31-May-24
Proposal #: CPQ-616890
Term: 1-Jul-24 to 30-Jun-25
External Contract #: 80896469 R04-JAN-2024
Subscription ERP #:

Billing Customer:
City of Bethel
PO Box 1388
Accounts Payable
BETHEL, AK 99559-0388

Service Location:
Port Office Equipment Storage (Slough)
1484 Chief Eddy Hoffman Hwy,
Bethel, AK 99559-9800

Johnson Controls Fire Protection LP
Sales Representative:
Jeff Wood
8323 N Eldridge Parkway
Houston TX 77041
jeff.1.wood@jci.com

INVESTMENT SUMMARY
(Service Solution Valid for 30 Days)

SERVICE/PRODUCT DESCRIPTION	QUANTITY	FREQUENCY	INVESTMENT
SYSTEM-EX-EXTINGUISHERS			
EXTINGUISHERS/PORTABLES SYSTEM Est. First Inspection: July			
Dry chem - stored pressure- refillable (ABC)	3	Annual	
EXTINGUISHER ESSENTIAL SERVICE Total:			\$99.75



SERVICE SOLUTION

Customer #: 1438054
City Of Bethel
Date: 31-May-24
Proposal #: CPQ-616890
Term: 1-Jul-24 to 30-Jun-25
External Contract #: 80896488 R04-JAN-2024
Subscription ERP #:

Billing Customer:
City of Bethel
PO Box 1388
Accounts Payable
BETHEL, AK 99559-0388

Service Location:
Police Department Shop
157 Salmonberry St,
Bethel, AK 99559

Johnson Controls Fire Protection LP
Sales Representative:
Jeff Wood
8323 N Eldridge Parkway
Houston TX 77041
jeff.1.wood@jci.com

INVESTMENT SUMMARY
(Service Solution Valid for 30 Days)

SERVICE/PRODUCT DESCRIPTION	QUANTITY	FREQUENCY	INVESTMENT
SYSTEM-EX-EXTINGUISHERS			
EXTINGUISHERS/PORTABLES SYSTEM Est. First Inspection: July			
Dry chem - stored pressure- refillable (ABC)	5	Annual	
EXTINGUISHER ESSENTIAL SERVICE Total:			\$99.75



SERVICE SOLUTION

Customer #: 1438054
City Of Bethel
Date: 31-May-24
Proposal #: CPQ-616890
Term: 1-Jul-24 to 30-Jun-25
External Contract #: 80896468 R04-JAN-2024
Subscription ERP #:

Billing Customer:
City of Bethel
PO Box 1388
Accounts Payable
BETHEL, AK 99559-0388

Service Location:
Port/AML Warehouse Building
1484 Chief Eddy Hoffman Hwy,
Bethel, AK 99559-9800

Johnson Controls Fire Protection LP
Sales Representative:
Jeff Wood
8323 N Eldridge Parkway
Houston TX 77041
jeff.1.wood@jci.com

INVESTMENT SUMMARY
(Service Solution Valid for 30 Days)

SERVICE/PRODUCT DESCRIPTION	QUANTITY	FREQUENCY	INVESTMENT
SYSTEM-EX-EXTINGUISHERS			
EXTINGUISHERS/PORTABLES SYSTEM Est. First Inspection: July			
Dry chem - stored pressure- refillable (ABC)	6	Annual	
EXTINGUISHER ESSENTIAL SERVICE Total:			\$99.75



SERVICE SOLUTION

Customer #: 1438054
City Of Bethel
Date: 31-May-24
Proposal #: CPQ-616890
Term: 1-Jul-24 to 30-Jun-25
External Contract #: 80896457 R04-JAN-2024
Subscription ERP #:

Billing Customer:
City of Bethel
PO Box 1388
Accounts Payable
BETHEL, AK 99559-0388

Service Location:
(New) Utility Maintenance Shop
311 4th Ave,
Bethel, AK 99559

Johnson Controls Fire Protection LP
Sales Representative:
Jeff Wood
8323 N Eldridge Parkway
Houston TX 77041
jeff.1.wood@jci.com

INVESTMENT SUMMARY
(Service Solution Valid for 30 Days)

SERVICE/PRODUCT DESCRIPTION	QUANTITY	FREQUENCY	INVESTMENT
SYSTEM-EX-EXTINGUISHERS			
EXTINGUISHERS/PORTABLES SYSTEM Est. First Inspection: July			
Dry chem - stored pressure- refillable (ABC)	2	Annual	
EXTINGUISHER ESSENTIAL SERVICE Total:			\$99.75



SERVICE SOLUTION

Customer #: 1438054
City Of Bethel
Date: 31-May-24
Proposal #: CPQ-616890
Term: 1-Jul-24 to 30-Jun-25
External Contract #: 80896483 R04-JAN-2024
Subscription ERP #:

Billing Customer:
City of Bethel
PO Box 1388
Accounts Payable
BETHEL, AK 99559-0388

Service Location:
Green Building Water Junction
900 Ridgcrest Dr,
Bethel, AK 99559

Johnson Controls Fire Protection LP
Sales Representative:
Jeff Wood
8323 N Eldridge Parkway
Houston TX 77041
jeff.1.wood@jci.com

INVESTMENT SUMMARY
(Service Solution Valid for 30 Days)

SERVICE/PRODUCT DESCRIPTION	QUANTITY	FREQUENCY	INVESTMENT
SYSTEM-EX-EXTINGUISHERS			
EXTINGUISHERS/PORTABLES SYSTEM Est. First Inspection: July			
Dry chem - stored pressure- refillable (ABC)	1	Annual	
EXTINGUISHER ESSENTIAL SERVICE Total:			\$99.75
SYSTEM-SP-WET SPRINKLER			
WET SPRINKLER SYSTEM Est. First Inspection: July			
Wet System Test & Inspect (Includes Tamper, Flow, Gate Valve, Fire Dept Connection Plastic Caps, Valve Trim & Main Drain Valve)	1	Annual	
SPRINKLER ESSENTIAL SERVICE OFFER Total:			\$189.97



SERVICE SOLUTION

Customer #: 1438054
City Of Bethel
Date: 31-May-24
Proposal #: CPQ-616890
Term: 1-Jul-24 to 30-Jun-25
External Contract #: 80905319 R04-JAN-2024
Subscription ERP #:

Billing Customer:
City of Bethel
PO Box 1388
Accounts Payable
BETHEL, AK 99559-0388

Service Location:
Pool Aquatic / Fitness Center
267 Akiachak Ave,
Bethel, AK 99559

Johnson Controls Fire Protection LP
Sales Representative:
Jeff Wood
8323 N Eldridge Parkway
Houston TX 77041
jeff.1.wood@jci.com

INVESTMENT SUMMARY
(Service Solution Valid for 30 Days)

SERVICE/PRODUCT DESCRIPTION	QUANTITY	FREQUENCY	INVESTMENT
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SYSTEM-SP-WET SPRINKLER

WET SPRINKLER SYSTEM Est. First Inspection: July

Wet System Test & Inspect (Includes Tamper, Flow, Gate Valve, Fire Dept Connection Plastic Caps, Valve Trim & Main Drain Valve)	1	Annual
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SPRINKLER ESSENTIAL SERVICE OFFER Total: \$189.97

SYSTEM-FA-SIMPLEX 4100ES

SIMPLEX 4100ES FIRE ALARM PANEL Est. First Inspection: July

Main Fire Alarm Panel	1	Annual
Annunciator	1	Annual
Smoke Sensor Addressable	1	Annual
Heat Detector Restorable	1	Annual
Duct Detector Conventional	2	Annual
Pull Station	3	Annual
Audio-Visual Unit Addressable	26	Annual
Waterflow Test	1	Annual
Tamper Switch	2	Annual



SERVICE SOLUTION

Customer #: 1438054
City Of Bethel
Date: 31-May-24
Proposal #: CPQ-616890
Term: 1-Jul-24 to 30-Jun-25
External Contract #: 80896454 R04-JAN-2024
Subscription ERP #:

Billing Customer:
City of Bethel
PO Box 1388
Accounts Payable
BETHEL, AK 99559-0388

Service Location:
Landfill - Dump
1300 Ridgecrest Dr,
Bethel, AK 99559

Johnson Controls Fire Protection LP
Sales Representative:
Jeff Wood
8323 N Eldridge Parkway
Houston TX 77041
jeff.1.wood@jci.com

INVESTMENT SUMMARY
(Service Solution Valid for 30 Days)

SERVICE/PRODUCT DESCRIPTION	QUANTITY	FREQUENCY	INVESTMENT
SYSTEM-EX-EXTINGUISHERS			
EXTINGUISHERS/PORTABLES SYSTEM Est. First Inspection: July			
Dry chem - stored pressure- refillable (ABC)	1	Annual	
EXTINGUISHER ESSENTIAL SERVICE Total:			\$99.75



SERVICE SOLUTION

Customer #: 1438054
City Of Bethel
Date: 31-May-24
Proposal #: CPQ-616890
Term: 1-Jul-24 to 30-Jun-25
External Contract #: 80896453 R04-JAN-2024
Subscription ERP #:

Billing Customer:
City of Bethel
PO Box 1388
Accounts Payable
BETHEL, AK 99559-0388

Service Location:
PW Fuel Depot Pump Building
1155 Ridgecrest Dr,
Bethel, AK 99559

Johnson Controls Fire Protection LP
Sales Representative:
Jeff Wood
8323 N Eldridge Parkway
Houston TX 77041
jeff.1.wood@jci.com

INVESTMENT SUMMARY
(Service Solution Valid for 30 Days)

SERVICE/PRODUCT DESCRIPTION	QUANTITY	FREQUENCY	INVESTMENT
SYSTEM-EX-EXTINGUISHERS			
EXTINGUISHERS/PORTABLES SYSTEM Est. First Inspection: July			
Dry chem - stored pressure- refillable (ABC)	1	Annual	
EXTINGUISHER ESSENTIAL SERVICE Total:			\$99.75



SERVICE SOLUTION

Customer #: 1438054
City Of Bethel
Date: 31-May-24
Proposal #: CPQ-616890
Term: 1-Jul-24 to 30-Jun-25
External Contract #: 80896450 R04-JAN-2024
Subscription ERP #:

Billing Customer:
City of Bethel
PO Box 1388
Accounts Payable
BETHEL, AK 99559-0388

Service Location:
Public Works Generator Set
1155 Ridgecrest Dr,
Bethel, AK 99559

Johnson Controls Fire Protection LP
Sales Representative:
Jeff Wood
8323 N Eldridge Parkway
Houston TX 77041
jeff.1.wood@jci.com

INVESTMENT SUMMARY
(Service Solution Valid for 30 Days)

SERVICE/PRODUCT DESCRIPTION	QUANTITY	FREQUENCY	INVESTMENT
SYSTEM-EX-EXTINGUISHERS			
EXTINGUISHERS/PORTABLES SYSTEM Est. First Inspection: July			
Dry chem - stored pressure- refillable (ABC)	1	Annual	
EXTINGUISHER ESSENTIAL SERVICE Total:			\$99.75



SERVICE SOLUTION

Customer #: 1438054
City Of Bethel
Date: 31-May-24
Proposal #: CPQ-616890
Term: 1-Jul-24 to 30-Jun-25
External Contract #: 80896508 R04-JAN-2024
Subscription ERP #:

Billing Customer:
City of Bethel
PO Box 1388
Accounts Payable
BETHEL, AK 99559-0388

Service Location:
City Hall
300 Chief Eddie Hoffman Way,
Bethel, AK 99559

Johnson Controls Fire Protection LP
Sales Representative:
Jeff Wood
8323 N Eldridge Parkway
Houston TX 77041
jeff.1.wood@jci.com

INVESTMENT SUMMARY
(Service Solution Valid for 30 Days)

SERVICE/PRODUCT DESCRIPTION	QUANTITY	FREQUENCY	INVESTMENT
SYSTEM-EX-EXTINGUISHERS			
EXTINGUISHERS/PORTABLES SYSTEM Est. First Inspection: July			
Dry chem - stored pressure- refillable (ABC)	6	Annual	
EXTINGUISHER ESSENTIAL SERVICE Total:			\$99.75



SERVICE SOLUTION

Customer #: 1438054
City Of Bethel
Date: 31-May-24
Proposal #: CPQ-616890
Term: 1-Jul-24 to 30-Jun-25
External Contract #: 80896504 R04-JAN-2024
Subscription ERP #:

Billing Customer:
City of Bethel
PO Box 1388
Accounts Payable
BETHEL, AK 99559-0388

Service Location:
City Sub Water Treatment
235 Akiak Dr,
Bethel, AK 99559

Johnson Controls Fire Protection LP
Sales Representative:
Jeff Wood
8323 N Eldridge Parkway
Houston TX 77041
jeff.1.wood@jci.com

INVESTMENT SUMMARY
(Service Solution Valid for 30 Days)

SERVICE/PRODUCT DESCRIPTION	QUANTITY	FREQUENCY	INVESTMENT
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SYSTEM-SP-WET SPRINKLER

WET SPRINKLER SYSTEM Est. First Inspection: July

Wet System Test & Inspect (Includes Tamper, Flow, Gate Valve, Fire Dept Connection Plastic Caps, Valve Trim & Main Drain Valve)	1	Annual
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SPRINKLER ESSENTIAL SERVICE OFFER Total: \$328.97

SYSTEM-EX-EXTINGUISHERS

EXTINGUISHERS/PORTABLES SYSTEM Est. First Inspection: July

Dry chem - stored pressure- refillable (ABC)	5	Annual
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EXTINGUISHER ESSENTIAL SERVICE Total: \$99.75

SYSTEM-SP-BACKFLOW

BACKFLOW SYSTEM Est. First Inspection: July

Backflow Preventer-Fire	1	Annual
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SERVICE SOLUTION

Customer #: 1438054
City Of Bethel
Date: 31-May-24
Proposal #: CPQ-616890
Term: 1-Jul-24 to 30-Jun-25
External Contract #: 80896503 R04-JAN-2024
Subscription ERP #:

Billing Customer:
City of Bethel
PO Box 1388
Accounts Payable
BETHEL, AK 99559-0388

Service Location:
Senior Center Shop
127 Atsaq St,
Bethel, AK 99559

Johnson Controls Fire Protection LP
Sales Representative:
Jeff Wood
8323 N Eldridge Parkway
Houston TX 77041
jeff.1.wood@jci.com

INVESTMENT SUMMARY
(Service Solution Valid for 30 Days)

SERVICE/PRODUCT DESCRIPTION	QUANTITY	FREQUENCY	INVESTMENT
SYSTEM-EX-EXTINGUISHERS			
EXTINGUISHERS/PORTABLES SYSTEM Est. First Inspection: July			
Dry chem - stored pressure- refillable (ABC)	3	Annual	
EXTINGUISHER ESSENTIAL SERVICE Total:			\$99.75



SERVICE SOLUTION

Customer #: 1438054
City Of Bethel
Date: 31-May-24
Proposal #: CPQ-616890
Term: 1-Jul-24 to 30-Jun-25
External Contract #: 80896486 R04-JAN-2024
Subscription ERP #:

Billing Customer:
City of Bethel
PO Box 1388
Accounts Payable
BETHEL, AK 99559-0388

Service Location:
Police Department
157 Salmonberry St,
Bethel, AK 99559

Johnson Controls Fire Protection LP
Sales Representative:
Jeff Wood
8323 N Eldridge Parkway
Houston TX 77041
jeff.1.wood@jci.com

INVESTMENT SUMMARY
(Service Solution Valid for 30 Days)

SERVICE/PRODUCT DESCRIPTION	QUANTITY	FREQUENCY	INVESTMENT
SYSTEM-SP-WET SPRINKLER			
WET SPRINKLER SYSTEM	Est. First Inspection: July		
Wet System Test & Inspect (Includes Tamper, Flow, Gate Valve, Fire Dept Connection Plastic Caps, Valve Trim & Main Drain Valve)	1	Annual	
SPRINKLER ESSENTIAL SERVICE OFFER Total:			\$1,112.00
SYSTEM-SP-PREACTION			
PREACTION SYSTEM	Est. First Inspection: July		
Preaction System Test & Inspect (Includes Tamper, Pressure Switch, Low Air, Gate Valve, Valve Trim, Main Drain Valve, Fire Dept. Plastic Caps Trip Test)	1	Annual	
SPRINKLER ESSENTIAL SERVICE OFFER Total:			\$732.07
SYSTEM-FA-MVS OTHER PROG			
MULTI-VENDOR OTHER PROGRAMMABLE	Est. First Inspection: July		



SERVICE SOLUTION

Customer #: 1438054
City Of Bethel
Date: 31-May-24
Proposal #: CPQ-616890
Term: 1-Jul-24 to 30-Jun-25
External Contract #: 80896480 R04-JAN-2024
Subscription ERP #:

Billing Customer:
City of Bethel
PO Box 1388
Accounts Payable
BETHEL, AK 99559-0388

Service Location:
Courthouse
204 Eddie Hoffman Hwy,
Bethel, AK 99559

Johnson Controls Fire Protection LP
Sales Representative:
Jeff Wood
8323 N Eldridge Parkway
Houston TX 77041
jeff.1.wood@jci.com

INVESTMENT SUMMARY
(Service Solution Valid for 30 Days)

SERVICE/PRODUCT DESCRIPTION	QUANTITY	FREQUENCY	INVESTMENT
SYSTEM-EX-EXTINGUISHERS			
EXTINGUISHERS/PORTABLES SYSTEM Est. First Inspection: July			
Dry chem - stored pressure- refillable (ABC)	24	Annual	
EXTINGUISHER ESSENTIAL SERVICE Total:			\$159.60
SYSTEM-SP-DRY SPRINKLER			
DRY SPRINKLER SYSTEM Est. First Inspection: July			
Dry System Test & Inspect(Includes Tamper, Pressure Switch, Low Air, Gate Valve, Valve Trim, Main Drain Valve, Fire Dept. Plastic Caps, Full Trip Test)	1	Annual	
SPRINKLER ESSENTIAL SERVICE OFFER Total:			\$834.00
SYSTEM-SP-WET SPRINKLER			
WET SPRINKLER SYSTEM Est. First Inspection: July			
Wet System Test & Inspect (Includes Tamper, Flow, Gate Valve, Fire Dept	1	Annual	



SERVICE SOLUTION

Customer #: 1438054
City Of Bethel
Date: 31-May-24
Proposal #: CPQ-616890
Term: 1-Jul-24 to 30-Jun-25
External Contract #: 80896494 R04-JAN-2024
Subscription ERP #:

Billing Customer:
City of Bethel
PO Box 1388
Accounts Payable
BETHEL, AK 99559-0388

Service Location:
Dog Pound
1225 Ridgecrest Dr,
Bethel, AK 99559

Johnson Controls Fire Protection LP
Sales Representative:
Jeff Wood
8323 N Eldridge Parkway
Houston TX 77041
jeff.1.wood@jci.com

INVESTMENT SUMMARY
(Service Solution Valid for 30 Days)

SERVICE/PRODUCT DESCRIPTION	QUANTITY	FREQUENCY	INVESTMENT
SYSTEM-EX-EXTINGUISHERS			
EXTINGUISHERS/PORTABLES SYSTEM Est. First Inspection: July			
Dry chem - stored pressure- refillable (ABC)	2	Annual	
EXTINGUISHER ESSENTIAL SERVICE Total:			\$99.75



SERVICE SOLUTION

Customer #: 1438054
City Of Bethel
Date: 31-May-24
Proposal #: CPQ-616890
Term: 1-Jul-24 to 30-Jun-25
External Contract #: 80896489 R04-JAN-2024
Subscription ERP #:

Billing Customer:
City of Bethel
PO Box 1388
Accounts Payable
BETHEL, AK 99559-0388

Service Location:
Teen Center
519 Mission Dr,
Bethel, AK 99559

Johnson Controls Fire Protection LP
Sales Representative:
Jeff Wood
8323 N Eldridge Parkway
Houston TX 77041
jeff.1.wood@jci.com

INVESTMENT SUMMARY
(Service Solution Valid for 30 Days)

SERVICE/PRODUCT DESCRIPTION	QUANTITY	FREQUENCY	INVESTMENT
SYSTEM-FA-MVS OTHER PROG			
MULTI-VENDOR OTHER PROGRAMMABLE	Est. First Inspection: July		
Main Fire Alarm Panel	1	Annual	
Pull Station	3	Annual	

FIRE ALARM ESSENTIAL SERVICE OFFER Total: \$95.20

SYSTEM-EX-EXTINGUISHERS

EXTINGUISHERS/PORTABLES SYSTEM	Est. First Inspection: July		
Dry chem - stored pressure- refillable (ABC)	5	Annual	

EXTINGUISHER ESSENTIAL SERVICE Total: \$99.75



SERVICE SOLUTION

Customer #: 1438054
City Of Bethel
Date: 31-May-24
Proposal #: CPQ-616890
Term: 1-Jul-24 to 30-Jun-25
External Contract #: 80896477 R04-JAN-2024
Subscription ERP #:

Billing Customer:
City of Bethel
PO Box 1388
Accounts Payable
BETHEL, AK 99559-0388

Service Location:
Bethel Heights Water Treatment
900 Ridgecrest Dr,
Bethel, AK 99559

Johnson Controls Fire Protection LP
Sales Representative:
Jeff Wood
8323 N Eldridge Parkway
Houston TX 77041
jeff.1.wood@jci.com

INVESTMENT SUMMARY
(Service Solution Valid for 30 Days)

SERVICE/PRODUCT DESCRIPTION	QUANTITY	FREQUENCY	INVESTMENT
SYSTEM-EX-EXTINGUISHERS			
EXTINGUISHERS/PORTABLES SYSTEM Est. First Inspection: July			
Dry chem - stored pressure- refillable (ABC)	6	Annual	
EXTINGUISHER ESSENTIAL SERVICE Total:			\$99.75



SERVICE SOLUTION

Customer #: 1438054
City Of Bethel
Date: 31-May-24
Proposal #: CPQ-616890
Term: 1-Jul-24 to 30-Jun-25
External Contract #: 80896446 R04-JAN-2024
Subscription ERP #:

Billing Customer:
City of Bethel
PO Box 1388
Accounts Payable
BETHEL, AK 99559-0388

Service Location:
City of Bethel-City Shop
1155 Ridgcrest Drive,
BETHEL, AK 99559-0000

Johnson Controls Fire Protection LP
Sales Representative:
Jeff Wood
8323 N Eldridge Parkway
Houston TX 77041
jeff.1.wood@jci.com

INVESTMENT SUMMARY
(Service Solution Valid for 30 Days)

SERVICE/PRODUCT DESCRIPTION	QUANTITY	FREQUENCY	INVESTMENT
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SYSTEM-EX-EXTINGUISHERS

EXTINGUISHERS/PORTABLES SYSTEM Est. First Inspection: July

Dry chem - stored pressure- refillable (ABC)	23	Annual	
EXTINGUISHER ESSENTIAL SERVICE Total:			\$152.95

SYSTEM-SP-DRY SPRINKLER

DRY SPRINKLER SYSTEM Est. First Inspection: July

Dry System Test & Inspect(Includes Tamper, Pressure Switch, Low Air, Gate Valve, Valve Trim, Main Drain Valve, Fire Dept. Plastic Caps, Full Trip Test)	1	Annual	
Dry Pipe System Annual Test (Includes Tamper, Pressure Switch, Low Air, Gate Valve, Fire Dept Connection, Hydraulic Nameplate Verification, Partial Trip Test)	1	Annual	
SPRINKLER ESSENTIAL SERVICE OFFER Total:			\$838.63

SYSTEM-FA-SIMPLEX 4007ES



SERVICE SOLUTION

SIMPLEX 4007ES FIRE ALARM PANEL		Est. First Inspection: July	
Main Fire Alarm Panel	1	Annual	
Smoke Detector w/Heat & CO Conventional	1	Annual	
Heat Detector Restorable	1	Annual	
Duct Detector Conventional	2	Annual	
Pull Station	15	Annual	
Monitor IAM/ZAM/Relay	1	Annual	
Waterflow Test	1	Annual	
Tamper Switch	1	Annual	
FIRE ALARM ESSENTIAL SERVICE OFFER Total:			\$409.92



SERVICE SOLUTION

Customer #: 1438054
City Of Bethel
Date: 31-May-24
Proposal #: CPQ-616890
Term: 1-Jul-24 to 30-Jun-25
External Contract #: 80905315 R04-JAN-2024
Subscription ERP #:

Billing Customer:
City of Bethel
PO Box 1388
Accounts Payable
BETHEL, AK 99559-0388

Service Location:
Bethel Port Building
919 Front St,
Bethel, AK 99559

Johnson Controls Fire Protection LP
Sales Representative:
Jeff Wood
8323 N Eldridge Parkway
Houston TX 77041
jeff.1.wood@jci.com

INVESTMENT SUMMARY
(Service Solution Valid for 30 Days)

SERVICE/PRODUCT DESCRIPTION	QUANTITY	FREQUENCY	INVESTMENT
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SYSTEM-FA-SIMPLEX 4007ES

SIMPLEX 4007ES FIRE ALARM PANEL Est. First Inspection: July

Main Fire Alarm Panel	1	Annual
Smoke Detector Conventional	3	Annual
Heat Detector Restorable	2	Annual
Pull Station	2	Annual
Audio-Visual Unit Addressable	14	Annual

FIRE ALARM ESSENTIAL SERVICE OFFER Total: \$197.68

SYSTEM-EX-EXTINGUISHERS

EXTINGUISHERS/PORTABLES SYSTEM Est. First Inspection: July

Dry chem - stored pressure- refillable (ABC)	3	Annual
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EXTINGUISHER ESSENTIAL SERVICE Total: \$99.75

Subtotal Contract Value (less tax): \$18,293.22
Total Estimated Tax: \$1,097.60
Total Contract Value with Estimated Tax : \$19,390.82



SERVICE SOLUTION

To the extent applicable, Johnson Controls has included an estimate for all state and local sales tax for this quote. The actual sales tax due will be calculated and billed upon issuance of an invoice, unless a valid exemption and/or resale certificate is received by Johnson Controls.

SERVICE SOLUTION

SUMMARY OF SERVICES

The summary of services is intended to cover the following locations:

Location	Fire Alarm	Sprinkler	Fire Extinguishers	Location Total
Bethel Fire Department	\$784.00	\$0.00	\$99.75	\$883.75
Recycle Center	\$0.00	\$0.00	\$99.75	\$99.75
Teen Center Storage Shed	\$0.00	\$0.00	\$99.75	\$99.75
City Center Generator Set	\$0.00	\$0.00	\$99.75	\$99.75
(New) Utility Maintenance Tool	\$0.00	\$0.00	\$99.75	\$99.75
Sanding Shed Quonset Hut	\$0.00	\$0.00	\$99.75	\$99.75
ASHA/Bethel Heights Lift Station	\$0.00	\$0.00	\$99.75	\$99.75
Highway Lift Station	\$0.00	\$0.00	\$99.75	\$99.75
(Old) Utility Maintenance Shop	\$0.00	\$0.00	\$99.75	\$99.75
Small Boat Harbor Building	\$0.00	\$0.00	\$99.75	\$99.75
Main Lift Station Gen Set	\$0.00	\$0.00	\$99.75	\$99.75
Main Lift Station	\$0.00	\$0.00	\$99.75	\$99.75
Kilbuck Lift Station	\$0.00	\$0.00	\$99.75	\$99.75
Bethel Heights Water Treatment Generator Set	\$0.00	\$0.00	\$99.75	\$99.75
Transit Bus Center	\$0.00	\$0.00	\$99.75	\$99.75
Old Bus Barn	\$0.00	\$0.00	\$99.75	\$99.75
PnR Tool Shed/ Park Lighting Building	\$0.00	\$0.00	\$99.75	\$99.75
Port Office Equipment Storage (Slough)	\$0.00	\$0.00	\$99.75	\$99.75
Police Department Shop	\$0.00	\$0.00	\$99.75	\$99.75

SERVICE SOLUTION

Port/AML Warehouse Building	\$0.00	\$0.00	\$99.75	\$99.75
(New) Utility Maintenance Shop	\$0.00	\$0.00	\$99.75	\$99.75
Green Building Water Junction	\$0.00	\$189.97	\$99.75	\$289.72
Pool Aquatic / Fitness Center	\$395.92	\$328.97	\$99.75	\$824.64
Landfill - Dump	\$0.00	\$0.00	\$99.75	\$99.75
PW Fuel Depot Pump Building	\$0.00	\$0.00	\$99.75	\$99.75
Public Works Generator Set	\$0.00	\$0.00	\$99.75	\$99.75
City Hall	\$0.00	\$0.00	\$99.75	\$99.75
City Sub Water Treatment	\$0.00	\$606.97	\$99.75	\$706.72
Senior Center Shop	\$0.00	\$0.00	\$99.75	\$99.75
Police Department	\$2,688.00	\$2,956.07	\$99.75	\$5,743.82
Courthouse	\$3,536.40	\$1,561.44	\$159.60	\$5,257.44
Dog Pound	\$0.00	\$0.00	\$99.75	\$99.75
Teen Center	\$95.20	\$0.00	\$99.75	\$194.95
Bethel Heights Water Treatment	\$0.00	\$0.00	\$99.75	\$99.75
City of Bethel-City Shop	\$409.92	\$838.63	\$152.95	\$1,401.50
Bethel Port Building	\$197.68	\$0.00	\$99.75	\$297.43
Offering Total	\$8,107.12	\$6,482.05	\$3,704.05	\$18,293.22

FIRE ALARM ESSENTIAL SERVICE OFFER

SYSTEM-FA-EDWARDS PROG
SYSTEM-FA-SIMPLEX 4100ES
SYSTEM-FA-MVS OTHER PROG
SYSTEM-FA-SIMPLEX 4007ES

TEST AND INSPECTION:

Inspections and diagnostic tests for the accessible peripheral devices listed and currently connected to the facility fire alarm system.

SERVICE SOLUTION

Tests will be scheduled in advance. Unless otherwise specified herein, batteries installed within wireless initiating and notification peripheral devices are not covered under this agreement. Replacement of such batteries will be at an additional cost.

DOCUMENTATION:

Accessible components and devices logged for:

- Location of each device tested, including system address or zone location
- Test results and applicable voltage readings
- Any discrepancies found noted Inspection documentation provided to Customer's representative. NOTE: Certain additional services may be required by the Authority Having Jurisdiction. AHJ or internal organizational requirements may be more restrictive than state/provincial requirements. Building owners and managers should make themselves aware of applicable codes and references in order to ensure that contracted services are in compliance with these requirements.

EXTINGUISHER ESSENTIAL SERVICE

SYSTEM-EX-EXTINGUISHERS

TEST AND INSPECTION OVERVIEW: Inspections and diagnostic tests for the accessible portable fire extinguishers listed. Any recharges, hydrostatic testing, service parts and labor will be performed at the time of inspection and billed in addition to this agreement.

DOCUMENTATION:

Any discrepancies found will be noted.

Inspection documentation shall be provided to Customer. NOTE: Certain additional services may be required by the Authority Having Jurisdiction. AHJ or internal organizational requirements may be more restrictive than state/provincial requirements. Building owners and managers should make themselves aware of applicable codes and references in order to ensure that contracted Services fulfill requirements.

SPRINKLER ESSENTIAL SERVICE OFFER

SYSTEM-SP-WET SPRINKLER

SYSTEM-SP-PREACTION

SYSTEM-SP-DRY SPRINKLER

SYSTEM-SP-FIRE PUMP

SYSTEM-SP-BACKFLOW

TEST AND INSPECTION:

Inspections and diagnostic tests for the accessible fire sprinkler devices listed and currently connected to fire sprinkler system. Tests will be scheduled in advance.

DOCUMENTATION:

Accessible components and devices logged for: Test results Any discrepancies found noted Inspection documentation provided to Customer. NOTE: Certain additional services may be required by the Authority Having Jurisdiction. AHJ or internal organizational requirements may be more restrictive than state/provincial requirements. Building owners and managers should make themselves aware of applicable codes and references in order to ensure that contracted Services fulfill requirements.

Control valve - with tamper switch

SYSTEM-SP-WET SPRINKLER

SERVICE SOLUTION

Each control valve is operated in its full range to ensure correct functioning annually. Drain test is conducted after opening

Fire Pump < 750 - Electric

SYSTEM-SP-FIRE PUMP

Annual fire pump test includes: an inspection of the pump equipment (pump, driver, controller, piping, valves, etc.); installing calibrated test gauges (suction & discharge); flowing water thru the test header (header requires the use of a flow device); water is flowed at three critical points: churn (no flow), rated (100%), and peak (150%), the following readings are taken at each point, discharge pressure, suction pressure, RPM's, volts and amps*; the net pressure is calculated (discharge - suction = net);

*Volts and amp readings will be recorded only when displayed on the exterior of the controller.

Customer Portal (Basic)

SYSTEM-FA-EDWARDS PROG
SYSTEM-EX-EXTINGUISHERS
SYSTEM-SP-WET SPRINKLER
SYSTEM-FA-SIMPLEX 4100ES
SYSTEM-SP-PREACTION
SYSTEM-FA-MVS OTHER PROG
SYSTEM-SP-DRY SPRINKLER
SYSTEM-SP-FIRE PUMP
SYSTEM-FA-SIMPLEX 4007ES
SYSTEM-SP-BACKFLOW

Basic Customer Portal functionality will be provided.



SERVICE SOLUTION

Items cited on this quote are products and services on the Johnson Controls Fire Protection LP **NASPO** Contract# **99SWC-NV23-16270** (the "Cooperative Agreement").

PAYMENT FREQUENCY: BAMA In BAMA

Initials

PAYMENT TERMS: Net 30

For applicable taxes, please see Section 3 of the Terms & Conditions

PAYMENT AMOUNT: \$18,293.22 - Proposal #: CPQ-616890

PAYMENT SUMMARY:

Year	PSA Charges
1	\$18,293.22

CUSTOMER ACCEPTANCE: In accepting this Agreement, Customer agrees to the Terms and Conditions as stated in the Cooperative Agreement referenced above, along with all Terms and Conditions provided in attached documents. It is understood that these terms and conditions shall prevail over any variation in terms and conditions on any purchase order or other document that the Customer may issue. Any changes in the services requested by the Customer after the execution of this Agreement shall be paid for by said Customer and such changes shall be authorized in writing

ATTENTION IS DIRECTED TO THE LIMITATION OF LIABILITY, WARRANTY, INDEMNITY AND OTHER CONDITIONS CONTAINED IN THIS AGREEMENT.

NASPO FA-MON City of Bethel_1438054_July_2024

Planned Service Agreement



Johnson Controls Fire Protection LP
8323 N Eldridge Parkway
Houston TX77041
USA

Proposal Presented On:
05-16-2024



SERVICE SOLUTION

Customer Pricing Type : Local

Monitoring Account Type: Fire Alarm

Number of Additional Building Partitions: 0

Total Initiating Devices: 0

Primary Communication: Phone lines
(POTS)

Secondary Communication:

Per Point : No

ALARM & DETECTION- MONITORING Total: \$660.00



SERVICE SOLUTION

Customer #: 1438054
City Of Bethel
Date: 16-May-24
Proposal #: CPQ-617968
Term: 1-Jul-24 to 31-Oct-25
External Contract #: 80896449 R04-JAN-2024
Subscription ERP #:

Billing Customer:
City of Bethel
PO Box 1388
Accounts Payable
BETHEL, AK 99559-0388

Service Location:
City of Bethel-City Shop
1155 Ridgecrest Drive,
BETHEL, AK 99559-0000

Johnson Controls Fire Protection LP
Sales Representative:
Jeff Wood
8323 N Eldridge Parkway
Houston TX 77041
jeff.1.wood@jci.com

INVESTMENT SUMMARY
(Service Solution Valid for 30 Days)

SERVICE/PRODUCT DESCRIPTION	QUANTITY	FREQUENCY	INVESTMENT
SYSTEM-FA-MVS OTHER PROG			
MULTI-VENDOR OTHER PROGRAMMABLE			
Customer Pricing Type : Local			
Monitoring Account Type: Fire Alarm			
Number of Additional Building Partitions: 0			
Total Initiating Devices: 0			
Primary Communication: Phone lines (POTS)			
Secondary Communication:			
Per Point : No			
ALARM & DETECTION- MONITORING	Total:		\$660.00
SYSTEM-FA-MVS OTHER PROG			



SERVICE SOLUTION

MULTI-VENDOR OTHER
PROGRAMMABLE

Customer Pricing Type : Local

Monitoring Account Type: Fire Alarm

Number of Additional Building Partitions: 0

Total Initiating Devices: 0

Primary Communication: Phone lines
(POTS)

Secondary Communication:

Per Point : No

ALARM & DETECTION- MONITORING Total:	\$660.00
Subtotal Contract Value (less tax):	\$3,520.00
Total Estimated Tax:	\$211.20
Total Contract Value with Estimated Tax :	\$3,731.20

To the extent applicable, Johnson Controls has included an estimate for all state and local sales tax for this quote. The actual sales tax due will be calculated and billed upon issuance of an invoice, unless a valid exemption and/or resale certificate is received by Johnson Controls.



SERVICE SOLUTION

SUMMARY OF SERVICES

The summary of services is intended to cover the following locations:

Location	Monitoring	Location Total
Bethel Port Building	\$1,320.00	\$1,320.00
City of Bethel-City Shop	\$1,320.00	\$1,320.00
Offering Total	\$2,640.00	\$2,640.00

ALARM & DETECTION- MONITORING

SYSTEM-FA-MVS OTHER PROG

Alarm signal initiated by a fire alarm control panel. Central Station will endeavor to notify the fire department and Customer when an alarm or trouble signal is received. This service includes 1- 800 toll-free signal transmission, 24-hour auto dialer test, and notification of Customer-provided Emergency Call List.



SERVICE SOLUTION

Items cited on this quote are products and services on the Johnson Controls Fire Protection LP **NASPO** Contract# **99SWC-NV23-16270** (the "Cooperative Agreement").

PAYMENT FREQUENCY: Annual In Advance

Initials

PAYMENT TERMS: Net 30

For applicable taxes, please see Section 3 of the Terms & Conditions

PAYMENT AMOUNT: \$2,640.00 - **Proposal #:** CPQ-617968

PAYMENT SUMMARY:

Year	Term	PSA Charges
1	07/01/2024 - 06/30/2025	\$2,640.00
2	07/01/2025 - 10/31/2025	\$880.00

CUSTOMER ACCEPTANCE: In accepting this Agreement, Customer agrees to the Terms and Conditions as stated in the Cooperative Agreement referenced above, along with all Terms and Conditions provided in attached documents. It is understood that these terms and conditions shall prevail over any variation in terms and conditions on any purchase order or other document that the Customer may issue. Any changes in the services requested by the Customer after the execution of this Agreement shall be paid for by said Customer and such changes shall be authorized in writing

ATTENTION IS DIRECTED TO THE LIMITATION OF LIABILITY, WARRANTY, INDEMNITY AND OTHER CONDITIONS CONTAINED IN THIS AGREEMENT.

NASPO FA-MON City of Bethel_1438054_July_2024NASPO - CPQ-618529

Planned Service Agreement



Johnson Controls Fire Protection LP
8323 N Eldridge Parkway
Houston TX77041
USA

Proposal Presented On:
05-16-2024



SERVICE SOLUTION

Customer Pricing Type : Local

Monitoring Account Type: Fire Alarm

Number of Additional Building Partitions: 0

Total Initiating Devices: 0

Primary Communication: Phone lines
(POTS)

Secondary Communication:

Per Point : No

ALARM & DETECTION- MONITORING Total: \$660.00

Subtotal Contract Value (less tax): \$1,760.00

Total Estimated Tax: \$105.60

Total Contract Value with Estimated Tax : \$1,865.60

To the extent applicable, Johnson Controls has included an estimate for all state and local sales tax for this quote. The actual sales tax due will be calculated and billed upon issuance of an invoice, unless a valid exemption and/or resale certificate is received by Johnson Controls.



SERVICE SOLUTION

SUMMARY OF SERVICES

The summary of services is intended to cover the following locations:

Location	Address	City	State	Zip	Monitoring
Pool Aquatic / Fitness Center	267 Akiachak Ave,	Bethel	AK	99559	\$1,320.00
Offering Total					\$1,320.00

ALARM & DETECTION- MONITORING

SYSTEM-FA-MVS OTHER PROG

Alarm signal initiated by a fire alarm control panel. Central Station will endeavor to notify the fire department and Customer when an alarm or trouble signal is received. This service includes 1- 800 toll-free signal transmission, 24-hour auto dialer test, and notification of Customer-provided Emergency Call List.



SERVICE SOLUTION

Items cited on this quote are products and services on the Johnson Controls Fire Protection LP **NASPO** Contract# **99SWC-NV23-16270** (the "Cooperative Agreement").

PAYMENT FREQUENCY: Annual In Advance

Initials

PAYMENT TERMS: Net 30

For applicable taxes, please see Section 3 of the Terms & Conditions

PAYMENT AMOUNT: \$1,320.00 - **Proposal #:** CPQ-618529

PAYMENT SUMMARY:

Year	Term	PSA Charges
1	07/01/2024 - 06/30/2025	\$1,320.00
2	07/01/2025 - 10/31/2025	\$440.00

CUSTOMER ACCEPTANCE: In accepting this Agreement, Customer agrees to the Terms and Conditions as stated in the Cooperative Agreement referenced above, along with all Terms and Conditions provided in attached documents. It is understood that these terms and conditions shall prevail over any variation in terms and conditions on any purchase order or other document that the Customer may issue. Any changes in the services requested by the Customer after the execution of this Agreement shall be paid for by said Customer and such changes shall be authorized in writing

ATTENTION IS DIRECTED TO THE LIMITATION OF LIABILITY, WARRANTY, INDEMNITY AND OTHER CONDITIONS CONTAINED IN THIS AGREEMENT.

Report Criteria:

Actual Amounts
All Accounts
Summarize Payroll Detail
Print Period Totals
Print Grand Totals
Page and Total by Fund
All Segments Tested for Total Breaks
[Report].Account Number = "100404330"

Date	Journal	Reference Number	Payee or Description	Account Number	Debit Amount	Credit Amount	Balance			
TAX - ALCOHOL USE			07/01/2023 (00/23) Balance	100-40-4330			.00			
07/31/2023	BTC	2	BTC - Billings - 15% Alcohol tax			27,583.62-				
			07/31/2023 (07/23) Period Totals and Balance		.00 *	27,583.62- *	27,583.62-			
08/31/2023	BTC	2	BTC - Billings - 15% Alcohol tax			30,997.85-				
			08/31/2023 (08/23) Period Totals and Balance		.00 *	30,997.85- *	58,581.47-			
10/31/2023	BTC	2	BTC - Billings - 15% Alcohol tax			59,624.99-				
			09/30/2023 (09/23) Period Totals and Balance		.00 *	59,624.99- *	118,206.46-			
10/31/2023	BTC	2	BTC - Billings - 15% Alcohol tax			9,732.02-				
			10/31/2023 (10/23) Period Totals and Balance		.00 *	9,732.02- *	127,938.48-			
11/30/2023	BTC	2	BTC - Billings - 15% Alcohol tax			34,568.13-				
			11/30/2023 (11/23) Period Totals and Balance		.00 *	34,568.13- *	162,506.61-			
12/31/2023	BTC	2	BTC - Billings - 15% Alcohol tax			31,440.30-				
			12/31/2023 (12/23) Period Totals and Balance		.00 *	31,440.30- *	193,946.91-			
01/31/2024	BTC	2	BTC - Billings - 15% Alcohol tax			26,886.82-				
			01/31/2024 (01/24) Period Totals and Balance		.00 *	26,886.82- *	220,833.73-			
02/29/2024	BTC	2	BTC - Billings - 15% Alcohol tax			27,851.14-				
			02/29/2024 (02/24) Period Totals and Balance		.00 *	27,851.14- *	248,684.87-			
03/31/2024	BTC	2	BTC - Billings - 15% Alcohol tax			30,267.21-				
03/31/2024	BTC	64	BTC - Billing Adjustments - 15% Alcohol tax		.20					
			03/31/2024 (03/24) Period Totals and Balance		.20 *	30,267.21- *	278,951.88-			
04/30/2024	BTC	2	BTC - Billings - 15% Alcohol tax			32,769.27-				
			04/30/2024 (04/24) Period Totals and Balance		.00 *	32,769.27- *	311,721.15-			
05/31/2024	BTC	2	BTC - Billings - 15% Alcohol tax			267.61-				
			05/31/2024 (05/24) Period Totals and Balance		.00 *	267.61- *	311,988.76-			
06/30/2024	BTC	2	BTC - Billings - 15% Alcohol tax			30,875.75-				
			06/30/2024 (06/24) Period Totals and Balance		.00 *	30,875.75- *	342,864.51-			
YTD Encumbrance		.00	YTD Actual	-342,864.51	Total	-342,864.51	YTD Budget	-430,000.00	Unearned	87,135.49

Number of Transactions: 13 Number of Accounts: 1

Total GENERAL FUND:

Number of Transactions: 13 Number of Accounts: 1

Grand Totals:

Debit	Credit	Proof
.20	342,864.71-	342,864.51-
Debit	Credit	Proof
.20	342,864.71-	342,864.51-



P.O. BOX 3209
BETHEL, AK 99559

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800 - 528-0191
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[CITY OF BETHEL
Quote
545- 6417]

INVOICE
NUMBER 15501
INVOICE
DATE
CUSTOMER
NUMBER

8/12/24

			TOTAL
24 Barrels	1212.75		
PF86100X TRIAFROST PBX 60% NRD			
	29,106.00		
	TAX X		

By W.

29,106.00

Introduced by: Acting City Manager Strickler
Introduction Date: August 27, 2024
Public Hearing: September 10, 2024
Action:
Vote:

CITY OF BETHEL, ALASKA

ORDINANCE #24-05 (b)

AN ORDINANCE BY THE BETHEL CITY COUNCIL AMENDING THE CAPITAL IMPROVEMENT, BUDGET FOR FISCAL YEAR 2025, JULY 1, 2024-JUNE 30, 2025

WHEREAS, the City Council adopted the FY25 Capital Budget on June 11, 2024, through Ordinance 24-05;

WHEREAS, following an evaluation of prior year capital budgets and current projects, Administration presents an update to the City's capital project distributions reappropriating unused funds to other capital projects, and/or returning funds to the appropriate undesignated fund balance;

FIRE DEPARTMENT LADDER TRUCK LEASE

WHEREAS, in 2018 the City of Bethel entered into an Equipment Lease Agreement for the purchase of a 2017 Pierce Ascendant 107 Stock Ladder Truck, a fire truck for the City's Fire Department;

WHEREAS, the Ladder Truck had a total acquisition value of \$879,000, the City's payment of the lease is:

Amount Financed: \$811,000.00

AMORTIZATION SCHEDULE

Payment Number	Payment Date	Payment Amount	Interest Portion	Principal Portion	Purchase Option Price
1	8/1/2018	\$71,217.61	\$10,122.23	\$61,095.38	Not Available
2	8/1/2019	\$71,217.61	\$30,355.76	\$40,861.85	Not Available
3	8/1/2020	\$71,217.61	\$28,701.69	\$42,515.92	\$693,187.92
4	8/1/2021	\$71,217.61	\$26,980.67	\$44,236.94	\$647,181.50
5	8/1/2022	\$71,217.61	\$25,189.98	\$46,027.63	\$599,312.76
6	8/1/2023	\$71,217.61	\$23,326.80	\$47,890.81	\$549,506.32
7	8/1/2024	\$71,217.61	\$21,388.21	\$49,829.40	\$497,683.74
8	8/1/2025	\$71,217.61	\$19,371.14	\$51,846.47	\$443,763.41
9	8/1/2026	\$71,217.61	\$17,272.42	\$53,945.19	\$387,660.42
10	8/1/2027	\$71,217.61	\$15,088.75	\$56,128.86	\$329,286.40
11	8/1/2028	\$71,217.61	\$12,816.68	\$58,400.93	\$268,549.43
12	8/1/2029	\$71,217.61	\$10,452.64	\$60,764.97	\$205,353.86
13	8/1/2030	\$71,217.61	\$7,992.90	\$63,224.71	\$139,600.16
14	8/1/2031	\$71,217.61	\$5,433.60	\$65,784.01	\$71,184.79
15	8/1/2032	\$71,217.61	\$2,770.70	\$68,446.91	\$0.00

POLICE DEPARTMENT BODY CAMERAS

WHEREAS, the Fiscal Year 2025 Capital Budget included \$104,000 to purchase new body cameras, and systems for the Police Department;

WHEREAS, the City was successful in obtaining a micro grant funding for this project from the Bureau of Justice Assistance (BJA) in the amount of \$93,000;

WHEREAS, there is a 10% match for the BJA grant which is below the capital budget threshold, therefore the \$104,000 allocated in the FY25 Capital Budget can be placed back into the City's undesignated fund balance.

POLICE DEPARTMENT PUBLIC SAFETY TOWER

WHEREAS, the City has been developing a construction project for a public safety communications tower;

WHEREAS, during the Fiscal Year 2024 Capital Budget review, the Administration proposed an allocation of 1,200,000 for the construction of the tower which was formally adopted by the Council through Ordinance 23-03;

WHEREAS, following the capital budget adoption, the City obtained a grant from the State of Alaska, Department of Commerce, Community, and Economic Development for \$500,000 to build the public safety communications tower and reduced the City's funding for the tower down by \$500,000 to \$700,000;

WHEREAS, the tower is expected to be completed in the fall of 2024, with an estimated cost to be less than \$700,000, \$500,000 of the total project costs will be covered by the grant, therefore the City's contribution requirement is only about \$200,000, allowing for an additional reduction of the City's capital budget appropriation by \$500,000.

STREETS AND ROADS AND PORT EQUIPMENT LEASE PAYMENTS

WHEREAS, Financing for New Caterpillar D8 Tractor & Two New Cat 160 AWD Road Graders was initiated by Administration in April 2023;

WHEREAS, the Caterpillar D8 Track Type Tractor had a total acquisition value of \$1,441,651, the City's payment of the lease is:

Amount Financed: \$783,869.00

AMORTIZATION SCHEDULE

Payment Number	Payment Date	Payment Amount	Interest Portion	Principal Portion	Purchase Option Price
1	8/1/2024	\$185,356.89	\$55,045.97	\$130,310.92	Not Available
2	8/1/2025	\$185,356.89	\$34,272.58	\$151,084.31	\$509,059.41
3	8/1/2026	\$185,356.89	\$26,349.72	\$159,007.17	\$346,864.72
4	8/1/2027	\$185,356.89	\$18,011.39	\$167,345.50	\$177,290.17
5	8/1/2028	\$185,356.89	\$9,235.79	\$176,121.10	\$0.00
Grand Totals		\$926,784.45	\$142,915.45	\$783,869.00	

WHEREAS, the two new CAT 160 AWD Road Grader had a total acquisition value of \$946,468, each, the City's payment of the lease is the following for each piece of equipment:

Amount Financed: \$399,818.00

AMORTIZATION SCHEDULE

Payment Number	Payment Date	Payment Amount	Interest Portion	Principal Portion	Purchase Option Price
1	8/1/2024	\$150,308.36	\$28,618.89	\$121,689.47	Not Available
2	8/1/2025	\$150,308.36	\$14,863.19	\$135,445.17	\$143,492.46
3	8/1/2026	\$150,308.36	\$7,625.00	\$142,683.36	\$0.00
Grand Totals		\$450,925.08	\$51,107.08	\$399,818.00	

STREETS AND ROADS PTARMIGAN ROAD CULVERT AMENDMENT

WHEREAS, the City is needing to find a replacement solution to the two culvert locations on Ptarmigan Street;

WHEREAS, erosion, flooding events, and culvert material decay have compromised the reliability of the current system;

WHEREAS, the replacement of these culverts are more complicated than many other culverts located within the community;

WHEREAS, Ptarmigan Creek is an anadromous water body according to the Alaska Department of Fish and Game, anadromous means ascending rivers from the sea for breeding;

WHEREAS, because of this uniqueness, the City must take precautions to protect the continuous flow of this Creek, and the habitat it supports;

WHEREAS, the plan for replacement of the two culverts consists of:

1. Hydrology & Hydraulics Survey;
2. Geotechnical Exploration and Analysis;
3. Initial Design (25%)-producing plans and cost estimates for two alternatives at each site.
4. Final Design (65% and 100%)
5. Permitting
6. Bidding (Goal-January 2025)
7. Construction

WHEREAS, there are two options that will be evaluated at the 25% design, it is anticipated the higher of the two options, box culverts, to have a total construction cost of about \$2 Million, if a less expensive design option is determined to be appropriate the remaining funds will be placed back into the undesignated fund balance.

PROPERTY MAINTENANCE AIR CONDITIONING UNITS POLICE DEPARTMENT AND CITY HALL

WHEREAS, the Police Department is in need of an air conditioning unit to protect the Department's servers, and the Bethel City Hall, City Council Chamber's units are no longer functioning, with the parts for repairs unavailable;

WHEREAS, the City received a quote for the installation of new air conditioning units at both locations which totaled \$55,811, from Long Building Technologies, currently in contract with the City until December 31, 2026, for air-conditioning units.

PROPERTY MAINTENANCE COURTHOUSE BURNER REPLACEMENT

WHEREAS, the boiler for the Nora Guinn Courthouse, a facility owned by the City, is old, and components within the boiler are becoming obsolete making maintenance for the units difficult;

WHEREAS, one of the components of the boiler that has functional deficiencies is the burner, which is used to ignite the boiler and provide adequate heat for the facility;

WHEREAS, the City received a quote for the burner replacement which totaled \$29,899 from Long Building Technologies, currently in contract with the City until February 28, 2028, for HVAC Systems;

WHEREAS, the City believes that with this single component replacement will provide reasonable continuous operational life of the facilities current boiler, a full boiler replacement for the facility would cost approximately \$600,000.

WATER & SEWER ENTERPRISE FUND-SEWER LAGOON STUDY

WHEREAS, the FY 2024 Capital Budget appropriated \$56,101 for a Sewer Lagoon Study but the appropriations were applied to an operating line item 510-87-6320, as opposed to a capital line item;

WHEREAS, operating appropriations do not roll over at the end of the fiscal year, they go back into the undesignated fund balance, capital budget appropriations roll over at the end of the fiscal year to the next fiscal year to support the extended timelines sometimes necessary to complete many capital projects;

WHEREAS, at the end of the FY24 line item 510-87-6320, Sewer Lagoon Study had a remining balance of \$30,371.98, administration would like to reappropriate those funds to a capital budget line item to help support the continued project.

BE IT ORDAINED by the City Council of Bethel, Alaska, as follows:

SECTION 1. Classification. This is a noncodified ordinance amending the City of Bethel Capital Improvement Budget for Fiscal Year 2025.

SECTION 2. Appropriations. That money shall be appropriated from the following associated City Funds for capital expenditures, amounts being returned to the fund are stricken, new appropriations are in red and underlined:

General Fund – Prior Year Capital Expenditures Carryover					
Project Description	FY23 Carryovers to FY24	FY24 Budget <i>FY24 Budget Amendments</i>	Roll Over Year to Date for start of FY 25	FY25 Budget <i>FY25 Budget Amendments</i>	Proposed Project Amount/Amendment Items Stricken will be returned to fund balance
Finance Department					
Kiosk Annual Fees	\$20,000		\$20,000		\$20,000

100-53-9693					
Planning Department					
Comprehensive Plan 100-54-9694	\$68,626		\$26,770.60		\$26,770.60
Road Ownership Determination 100-54-9695	\$40,000		\$40,000		\$40,000
Wetlands Delineation 100-54-6890		\$46,604	\$35,516.43		\$35,516.43
Hydraulic Modeling 100-54-6890		\$49,239			
IT Department					
Server Room Air Conditioner 100-55-9694	\$10,000		\$8,062.59		\$8,062.59
Air Conditioner for Services 100-55-9696	\$6,794		\$6,794.00		\$6,794.00
Connectivity Services 100-55-6890	\$100,000				Closed
Vehicle	\$60,000				Closed
Mobil APSIN		\$100,000	\$40,256.22		\$40,256.22
SIKLU Redundancy		\$100,000			
Employee VPN		\$50,000			
Fire Department					
Capital Expenditures General 100-60-6890	\$197,191		\$817,379.71		\$781,479.71
Jacket and Gear 100-60-6890		\$35,900			\$35,900
Training Facility	\$252,624	\$352,624			
<u>Current Amendment</u> <u>Ladder Truck Lease 100-60-6891 (Eighth payment)</u>				<u>\$71,218.00</u>	<u>\$71,218.00</u>
Police Department					
100-61-6891					
Capital Expenditures General 100-61-6891			\$2,216,986.97		\$3,156.97
Vehicle	\$56,500		(13,830.00)		Closed
Ford Explorer	\$65,000				Closed
Animal Control Center 23-11 (g) 24-05 (a)	\$800,000	\$400,000 \$300,000		\$1,000,000	\$2,500,000
Vesta 911 Upgrade 23-03 (a)		\$436,928			Closed
Property Lease	\$26,400				Closed
Public Safety Tower 23-03 (c)		\$1,200,000 (\$500,000) =\$700,000		\$700,000 <u>(roll over)</u>	\$700,000 \$500,000 =\$200,000
<u>Current Amendment</u>					
Vehicle		\$65,000			Done
2024 Ford Expedition *2				\$154,068	\$154,068
Body Camera's				\$104,000	\$104,000
IT Upgrades				\$109,901	\$109,901
Animal Control Center				\$1,000,000	\$1,000,000
Police Department Notes: The \$2,216,986.97 is the amount remaining at the end of FY24. This amount includes the \$1.5 M for the Animal Control Center, the \$700,000 for the tower, and the miscoded \$13,830 cost for the new vehicle equipment which totals \$2,213,830, the \$3,156.97 can be returned to the general fund.					

Public Works General Fund					
Streets and Roads					
Capital Equipment 100-66-6892			\$157,872.57		\$57,872.57
Bethel Cemetery 100-66-6892		\$100,000			\$100,000
STIP Match 100-66-9703	\$1,095,004		\$1,095,004		\$1,095,004
Caterpillar Attachment 100-66-9705			\$285,518.43		\$285,518.43
Bus Barn Improvements (\$500,000 approved in FY22)	\$110,416		\$42,812.44		\$42,812.44
Culverts	\$100,000				Done
Guard Rails and Posts	\$100,000				Done
Simon Retention Pond	\$350,000	300,000			Done
Road Improvements		\$600,000			Done
AWD Grader Down Payment		\$100,000			Done
AHFC Cul-de-sac		\$200,000			Done
D8 Bulldozer		\$400,000			Done
Dust Control		\$100,000			Done
<i>Fencing V&E Shop 23-03 (b)</i>		\$192,000			
<i>Jetter for Culverts 23-03 (a)</i>	<i>\$118,138</i>	<i>\$36,032</i>			<i>\$36,032</i>
2024 F-250 *2				\$131,790	\$131,790
Dust Control				\$500,000	\$500,000
Excavator Undercarriage				\$55,600	\$55,600
Streetlights ASHA Courts				\$110,000	\$110,000
<i>Current Amendment Ptarmigan Culverts</i>					<i>\$2,000,000</i>
<i>Current Amendment Lease Payment for Grader 100-66-6892 (first of three payments)</i>					<i>\$150,309</i>
<i>Current Amendment Lease Payment for Caterpillar 100-66-6892 (first of four payment)</i>					<i>\$185,357</i>
Property Maintenance					
Capital Expenditures 100-70-6890			\$162,127.56		\$62,127.56
Rehabilitation of Parks	\$100,000				\$100,000
Boardwalk Lighting Project 100-70-6242			\$93,339.21	\$250,000	\$343,339.21
City Hall Improvements 100-70-9697			\$436,236.00		\$436,236.00
Fire Suppression/Inspection 100-70-6596 23-03 (e)	\$7,313	\$60,000	\$65,827		\$65,872.00
2 ¾ Ton Pick UP Trucks 100-70-9696	(26,428)		(\$26,428.00)		(26,428.00)
<i>Current Amendment Undesignated Fund Balance Reduction to cover overages in 100-70-9696</i>					<i>(\$26,428.00)</i>
<i>Scissor Lift 23-03 (a)</i>	18,138				
<i>John Deere 5 Series 23-03 (a)</i>	\$100,000				
<i>Current Amendment Air Conditioning Units for City Hall and Police Department 100-70-6890</i>					<i>\$55,811.00</i>

Grant Match General Fund					
15% Match Prof. Housing				\$450,000	\$450,000

General Fund Impact Summary	Approved Previously and Remaining	Approved Previously and Returning to Undesignated Fund Balance	Required for Suggested Amendment	Difference Between Returned and Requested
	\$7,065,504.65	\$2,164,277.08	\$2,489,123.00	-\$324,845.92

Enterprise and Other Funds Prior Year Capital Expenditures Rollover					
	Carryovers to FY24	FY24 Budget	Carryover to FY 25	FY25 Budget	Amendment
YK Fitness Center					
Repairs Original Budget was \$1,032,939 in FY22.	\$693,085		(\$142,581.42)		
JASC Computer Mainframe		\$20,000		\$20,000	\$20,000
Water and Sewer					
Hauled Water					
Capital Expenditures 510-81-6890			\$619,171.80		
Kenworth Truck 510-81-6890	\$300,000				\$300,000
Water Truck/Freight 510-81-6890		\$320,000			\$320,000
Fleet Management Software/Tablets 510-81-9695	\$75,000				\$75,000
Radio Base Station Upgrade 510-81-9696	\$9,500		\$6,853.10		\$6,853.10
Piped Water					
Piped Water Capital USDA Match 510-82-9691	(9,362)				(\$23,789.00)
<i>Current Amendment Undesignated Fund Balance Reduction to cover overages in 510-82-9691</i>					(\$23,789.00)
Hauled Sewer					
Sewer Trucks 510-85-9691			\$299,733.48		
Kenworth Truck 510-85-9691	\$300,000				Closed
Short Lived Assets 510-85-9699	\$185,825				\$185,825
Fleet Management Software/Tablets 510-85-9693	\$75,000		\$75,000		\$75,000
Caterpillar Angle Broom	\$10,482				Closed
Radio Base Station Upgrade 510-85-9696	\$9,500		\$6,833.10		\$6,833.10
Short Lived Assets	\$182,825				\$182,825
Short Lived Assets 23-03 (c) <i>This was a duplicative but unfunded appropriation.</i>		\$182,825	\$182,825		\$182,825
Sewer Trucks (x2)		\$620,000	\$620,000		\$620,000

510-85-6890					
Piped Sewer					
Piped Sewer Capital 510-86-6890			\$49,522.68		\$49,522.68
SCADA System	\$57,137				\$57,137
Herman Nelson Heater 510-86-9693	\$68,000		\$68,000		\$68,000
Short Lived Assets <i>Administration presented a FY24 operating budget amending reducing this line item down to \$60,406.20 in August 2024.</i>	\$182,825				\$60,406.20
Short Lived Assets 23-03 (c) <i>This was a duplicative but unfunded appropriation.</i>		\$182,825			\$182,825
Sewer Lagoon					
Terramac RT9-t4 Marooka 510-87-9692	\$299,465		\$12,498.06		\$12,498.06
<i>Amendment Lagoon Study 23-03 (e) 510-87-6320 Operating B 510-87-9692 Capital Budget</i>		\$56,101	\$30,371.98 Operating Budget		\$30,371
Lift Station Project				\$190,000	\$190,000
Bethel Heights Water Treatment Plant					
<i>Site Improvements Capital 510-83-9773</i>			\$13,182.06		\$13,182.06
City Sub Water Treatment Plant					
Capital Expenditures 510-84-6890			\$118,254.09		\$84,645.91
City Sub WTP SCADA System	\$96,500				\$96,500
Solid Waste					
Refuse Truck	\$285,850		\$285,850.00		\$285,850
Landfill-Hammel DK Shredder 500-71-9695			(\$18,994.39)		(\$18,994.39)
<i>Amendment Undesignated Fund Balance Reduction to cover overages in 500-71-9695</i>					(\$18,994.39)
Municipal Dock					
Capital Expenditures 510-50-6890			\$79,864.75		\$49,864.75
Road Watering Truck 520-50-6890	200,000	(\$6,189)			
Ford F-250 X2 520-50-6890	120,000	(\$19,967)			
CAT TL1255 520-50-6890	\$271,452	0			Done
Hydro Seeder	\$30,000	\$30,000			\$30,000
Floats 520-55-6890	\$1,000,000	\$1,000,000			\$1,000,000
AWD Grader Down Payment		\$100,000			Done
Port Wall Emergency Repairs				\$89,335	\$89,335
<i>Current Amendment Lease Payment for Grader 520-50-6890 (first of three payments)</i>					\$150,309

Braund/ Nora Guinn Complex					
Generator Repair 530-55-9694 Funded Prior to FY23 \$575,000	\$552,661		\$477,384.49		\$477,384.49
Fire Suppression Funded Prior to FY23 530-55-9694 \$300,000	\$241,685				
Upgrade Hydronic System				\$150,000	\$150,000
<i>Current Amendment Courthouse Burner Replacement</i>					<i>\$30,000</i>
Bethel Transit System					
Capital Expenditures 560-50-6890			\$286,968.98		\$100,968.98
New Bus 560-50-6890	\$86,000				\$86,000
Community Support Grant Match		\$165,073			Closed
New Bus		\$100,000			\$100,000
New Bus X 2 & Building Upgrades (Grant Match)				\$213,392	\$213,392
ARPA Grant Expenses					
Chemical Storage Building 510-85-6891 23-11 (g)	\$1,500,000 ARPA Funds	\$750,000 City Funds		\$265,000 City Funds	\$2,515,000
Filter Rehabilitation ARPA Grant 23-03 (d) ARPA		\$500,000 \$100,000 ARPA Funds			Done
Filter Rehabilitation ARPA Grant		\$500,000 ARPA Funds			Done

Enterprise Fund Impact Summary	Approved Previously and Remaining	Approved Previously and Returning to Undesignated Fund Balance	Required for Suggested Amendment	Difference Between Returned and Requested
YK Fitness Center				
Water and Sewer	\$1,305,191	\$727,875.01	\$23,789.00	+\$70,086.01
Solid Waste	0	\$285,850.00	\$18,994.39	+266,855.61
Municipal Dock	\$1,089,335.00	\$79,864.75	\$150,309.00	-\$70,444.25
Leased Properties (Court House)	\$150,000	\$477,384.49	\$30,000	+\$447,384.49
Transit System	\$213,392.00	\$286,968.98	0	+\$286,968.98
ARPA Grant Match	\$265,000	0	0	0

SECTION 3. Effective Date. This ordinance shall become effective upon the passage by the Bethel City Council.

NOW THEREFORE BE IT ENACTED BY THE CITY COUNCIL OF THE CITY OF BETHEL, ALASKA, that the Fiscal Year 2025 Capital Improvement Budget is amended.

ENACTED THIS 10 DAY OF SEPTEMBER 2024, BY A VOTE OF _ IN FAVOR AND _ OPPOSED.

Mark Springer, Mayor

ATTEST:

Kevin Morgan, Acting City Clerk

MASTER EQUIPMENT LEASE PURCHASE AGREEMENT

LESSEE: City of Bethel

This Master Equipment Lease Purchase Agreement, including all exhibits and schedules hereto whether currently in existence or hereafter executed (the "Agreement"), dated as of 4/10/2018, and entered into between Community First National Bank 215 S. Seth Child Rd, Manhattan, KS 66502 ("Lessor"), and City of Bethel, PO Box 1388, Bethel, AK 99559 a body corporate and politic duly organized and existing under the laws of the State of Alaska ("Lessee");

RECITALS

WHEREAS, Lessee desires to lease from Lessor certain equipment described in the schedules to this Agreement, substantially in the form of Exhibit A hereto, that are executed from time to time by the parties hereto (such schedules are hereby incorporated herein and are hereinafter collectively referred to as the "Schedules", and the items of equipment leased to Lessee hereunder, together with all substitutions, proceeds, replacement parts, repairs, additions, attachments, accessories and replacements thereto, thereof or therefore, are hereinafter collectively referred to as the "Equipment") subject to the terms and conditions of and for the purposes set forth in this Agreement.

WHEREAS, the relationship between the parties shall be a continuing one and items of equipment may be added to or deleted from the Equipment from time to time by execution of additional Schedules by the parties hereto and as otherwise provided herein.

WHEREAS, Lessee is authorized under the constitution and laws of the State to enter into this Agreement for the purposes set forth herein.

NOW, THEREFORE, for and in consideration of the premises hereinafter contained, the parties hereby agree as follows:

ARTICLE I. REPRESENTATIONS, WARRANTIES AND COVENANTS OF LESSEE

Section 1.01. Lessee represents, covenants and warrants, for the benefit of Lessor and its assignees, as follows:

- (a) Lessee is a public body, corporate and politic, duly organized and existing under the Constitution and laws of the State.
- (b) Lessee will do or cause to be done all things necessary to preserve and keep in full force and affect its existence as a body corporate and politic.
- (c) Lessee is a political subdivision of the State within the meaning of Section 103(a) of the Code or a constituted authority authorized to issue obligations on behalf of a state or local governmental unit within the meaning of the regulations promulgated pursuant to said Section of the Code.
- (d) Lessee has full power and authority under the Constitution and laws of the State to enter into this Agreement and the transactions contemplated hereby, and to perform all of its obligations hereunder.
- (e) Lessee has duly authorized the execution and delivery of this Agreement by proper action by its governing body at a meeting duly called, regularly convened and attended throughout by the requisite majority of the members thereof, or by other appropriate official approval, and all requirements have been met and procedures have occurred in order to ensure the enforceability of this Agreement.
- (f) Lessee has complied or will comply with such public bidding requirements as may be applicable to this Agreement and the acquisition by Lessee of the Equipment.
- (g) During the Lease Term, the Equipment will be used by Lessee only for the purpose of performing one or more essential governmental or proprietary functions of Lessee consistent with the permissible scope of Lessee's authority and will not be used in a trade or business of any person or entity other than Lessee.
- (h) During the Lease Term, Lessee will annually provide Lessor with current financial statements, budgets, proof of appropriation for the ensuing fiscal year and such other financial information relating to the ability of Lessee to continue this Agreement as may be reasonably requested by Lessor.
- (i) The Equipment will have a useful life in the hands of Lessee that is substantially in excess of the Original Term and all Renewal Terms.
- (j) The Equipment is, and during the Lease Term will remain personal property and when subjected to use by the Lessee, will not be or become fixtures.
- (k) The Equipment is essential to the function of the Lessee and the services provided to its citizens, and will be used throughout the period that this Agreement is in force for the purpose of performing one or more governmental or proprietary functions consistent with the permissible scope of its authority.
- (l) During the term of this Agreement, Lessee will not dispose of or sell any part of the Equipment.
- (m) Lessee has not terminated a lease, rental agreement, installment purchase contract, or any other such agreement in the past five (5) years as a result of insufficient funds being appropriated for payments due under such an agreement.
- (n) This Agreement constitutes the legal, valid and binding obligation of Lessee enforceable in accordance with its terms, except to the extent limited by applicable bankruptcy, insolvency, reorganization or other laws affecting creditors' rights generally.
- (o) No event or condition that constitutes, or with the giving of notice or the lapse of time or both would constitute, an Event of Default exists at the date hereof.
- (p) Lessee has, in accordance with the requirements of law, fully budgeted and appropriated sufficient funds for the current fiscal year to make the Rental Payments scheduled to come due during the current fiscal year and to meet its other obligations under this Agreement for the current fiscal year, and such funds have not been expended for other purposes.
- (q) There is no action, suit, proceeding, inquiry or investigation, at law or in equity, before or by any court, public board or body, pending or threatened against or affecting Lessee, nor to the best knowledge of Lessee is there any basis therefore, wherein an unfavorable decision, ruling or finding would materially adversely affect the transactions contemplated by this Agreement or any other document, agreement or certificate which is used or contemplated for use in the consummation of the transactions contemplated by this Agreement or materially adversely affect the financial condition or properties of Lessee.
- (r) All authorizations, consents and approvals of governmental bodies or agencies required in connection with the execution and delivery by Lessee of this Agreement or in connection with the carrying out by Lessee of its obligations hereunder have been obtained.
- (s) The entering into and performance of this Agreement or any other document or agreement contemplated hereby to which Lessee is or is to be a party will not violate any judgment, order, law or regulation applicable to Lessee or result in any breach of, or constitute a default under, or result in the creation of any lien, charge, security interest or other encumbrance on any assets of Lessee or the Equipment pursuant to any indenture, mortgage, deed of trust, bank loan or credit agreement or other instrument to which Lessee is a party or by which it or its assets may be bound, except as herein provided.

ARTICLE II. DEFINITIONS

Section 2.01. The following terms will have the meanings indicated below unless the context clearly requires otherwise:

"Agreement" means this Master Equipment Lease Purchase Agreement, including the Schedules and any other schedule, exhibit or escrow agreement made a part hereof by the parties hereto, whether currently in existence or hereafter executed, as the same may be supplemented or amended from time to time in accordance with the terms hereof.

"Code" means the Internal Revenue Code of 1986, as amended, and the United States Treasury Regulations in effect thereunder.

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"Commencement Date" means, with respect to any Schedule, the date when the Lease Term of this Agreement with respect to that Schedule and Lessee's obligation to pay rent under that Schedule commence, which date will be the earlier of (i) the date of the Agreement, or (ii) the date on which sufficient moneys to purchase the Equipment are deposited for that purpose with an Escrow Agent.

"Equipment" means the property described in the Schedules and all replacements, substitutions, repairs, restorations, modifications, attachments, accessions, additions and improvements thereof or thereto. Whenever reference is made in this Agreement to Equipment listed in a Schedule, that reference shall be deemed to include all replacements, repairs, restorations, modifications and improvements of or to that Equipment.

"Event of Default" means, with respect to any Lease, an Event of Default described in Section 10.01.

"Escrow Agreement" means, with respect to a given Schedule, an escrow agreement in form and substance satisfactory to Lessor, between Lessee, Lessor and an escrow agent relating to the acquisition fund created thereunder.

"Lease" means, at any time, (i) if none of Lessor's interest in, to and under any Schedule has been assigned pursuant to Section 9.01, or if all of Lessor's interest in, to and under this Agreement and all Schedules have been assigned to the same assignee without any reassignment, this Agreement, or (ii) if Lessor's interest in, to and under any Schedule or Schedules has been assigned or reassigned pursuant to Section 9.01, all Schedules that have the same Lessor and this Agreement as it relates to those Schedules and the Equipment listed therein, which shall constitute a separate single lease relating to that Equipment.

"Lease Term" means, with respect to any Lease, the Original Term and all Renewal Terms of that Lease.

"Lessee" means the entity which is described in the first paragraph of this Agreement, its successors and assigns.

"Lessor" means, with respect to each Schedule and the Lease of which that Schedule is a part, (i) if Lessor's interest in, to and under that Schedule has not been assigned pursuant to Section 9.01, the entity described as such in the first paragraph of this Agreement or its successor, or (ii) if Lessor's interest in, to and under that Schedule has been assigned pursuant to Section 9.01, the assignee thereof or its successor.

"Net Proceeds" means the amount remaining from the gross proceeds of any insurance claim or condemnation award after deducting all expenses (including attorneys' fees) incurred in the collection of such claim or award.

"Original Term" means, with respect to any Lease, the period from the first Commencement Date for any Schedule under that Lease until the end of the fiscal year of Lessee in effect at that Commencement Date.

"Purchase Option Price" means, with respect to the Equipment listed on any Schedule, the amount set forth in that Schedule as the Purchase Option Price for that Equipment.

"Renewal Terms" means, with respect to any Lease, the automatic renewal terms of that Lease, as provided for in Article III of this Agreement, each having a duration of one year and a term co-extensive with the Lessee's fiscal year except the last of such automatic renewal terms which shall end on the due date of the last Rental Payment set forth in the Schedule.

"Rental Payments" means the basic rental payments payable by Lessee pursuant to Section 4.02.

"State" means the state in which Lessee is located.

"Vendor" means the manufacturer of the Equipment as well as the agents or dealers of the manufacturer from whom Lessor purchased or is purchasing the Equipment.

ARTICLE III. LEASE TERM

Section 3.01. Lease of Equipment. Lessor hereby demises, leases and lets to Lessee, and Lessee rents, leases and hires from Lessor, the Equipment listed in each Schedule in accordance with this Agreement and that Schedule for the Lease Term for the Lease of which that Schedule is a part. The Lease Term for each Lease may be continued at the end of the Original Term or any Renewal Term for an additional Renewal Term; provided, however, that at the end of the Original Term and at the end of each Renewal Term, Lessee shall be deemed to have continued that Lease for the next Renewal Term unless Lessee shall have terminated that Lease pursuant to Section 4.05 or Section 5.04. The terms and conditions during any Renewal Term shall be the same as the terms and conditions during the Original Term, except that the Rental Payments shall be as provided in the Schedules. Lessor hereby covenants to provide Lessee during the Lease Term with quiet use and enjoyment of the Equipment, and Lessee shall during the Lease Term peaceably and quietly have and hold and enjoy the Equipment, without suit, trouble or hindrance from Lessor, except as expressly set forth in this Agreement.

Section 3.02. Continuation of Lease Term. Lessee currently intends, subject to Section 4.05, to continue the Lease Term for each Lease through the Original Term and all of the Renewal Terms and to pay the Rental Payments hereunder. Lessee reasonably believes that legally available funds in an amount sufficient to make all Rental Payments during the Lease Term for each Lease can be obtained. The responsible financial officer of Lessee shall do all things lawfully within his or her power to obtain and maintain funds from which the Rental Payments may be made, including making provision for the Rental Payments to the extent necessary in each proposed annual budget submitted for approval in accordance with applicable procedures of Lessee and to exhaust all available reviews and appeals in the event such portion of the budget is not approved. Notwithstanding the foregoing, the decision whether or not to budget or appropriate funds or to extend a Lease for any Renewal Term is solely within the discretion of the then current governing body of Lessee.

Section 3.03. Return of Equipment on Termination. Upon expiration or earlier termination of any Schedule under any provision of this Agreement at a time when Lessee does not exercise its option to purchase the Equipment described in that Schedule under the provisions of this Agreement, Lessee shall deliver, at Lessee's expense, the Equipment described in that Schedule to Lessor in the same condition as existed at the Commencement Date, ordinary wear and tear expected, packaged or otherwise prepared in a manner suitable by shipment by truck or rail common carrier at a location specified by Lessor.

Section 3.04. Conditions to Lessor's Performance under Schedules. As a prerequisite to the performance by Lessor of any of its obligations pursuant to the execution and delivery of any Schedule, Lessee shall deliver to Lessor the following:

- (a) A Lessee Resolution executed by the Clerk or Secretary or other comparable officer of Lessee, in substantially the form attached hereto as Exhibit B, completed to the satisfaction of Lessor;
- (b) An Opinion of Counsel to Lessee in substantially the form attached hereto as Exhibit C respecting such Schedule and otherwise satisfactory to Lessor;
- (c) All documents, including financing statements, affidavits, notices and similar instruments, in form satisfactory to Lessor, which Lessor deems necessary or appropriate at that time;
- (d) Such other items, if any, as are set forth in such Schedule or are reasonably required by Lessor.

This Agreement is not a commitment by Lessor to enter into any Schedule not currently in existence, and nothing in this Agreement shall be construed to impose any obligation upon Lessor to enter into any proposed Schedule, it being understood that whether Lessor enters into any proposed Schedule shall be a decision solely within Lessor's discretion.

Lessee will cooperate with Lessor in Lessor's review of any proposed Schedule. Without limiting the foregoing, Lessee will provide Lessor with any documentation or information Lessor may request in connection with Lessor's review of any proposed Schedule. Such documentation may include, without limitation, documentation concerning the Equipment and its contemplated use and location and documentation or information concerning the financial status of Lessee and other matters related to Lessee.

ARTICLE IV. RENTAL PAYMENTS

Section 4.01. Rental Payments to Constitute a Current Expense of Lessee. Lessor and Lessee understand and intend that the obligation of Lessee to pay Rental Payments hereunder shall constitute a current expense of Lessee and shall not in any way be construed to be a debt of Lessee in contravention of any applicable constitutional or statutory limitations or requirements concerning the creation of indebtedness by Lessee, nor shall anything contained herein constitute a pledge of the general tax revenues, funds or monies of Lessee.

Section 4.02. Payment of Rental Payments. Lessee shall pay Rental Payments, from any and all legally available funds, in lawful money of the United States of America, exclusively to Lessor or, in the event of assignment by Lessor, to its assignee, in the amounts and on the dates set forth in each Schedule. Rental Payments shall be in consideration for Lessee's use of the Equipment during the applicable year in which such payments are due. The

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Rental Payments will be payable without notice or demand at the office of Lessor (or such other place as Lessor may from time to time designate in writing). If any Rental Payment or other sum payable under any Schedule is not paid when due, Lessee shall pay to Lessor accrued interest on such delinquent amount from the date due thereof until paid at the lesser of 18% or the maximum rate allowed by law. In the event that it is determined that any of the interest components of Rental Payments may not be excluded from gross income for purposes of federal income taxation, Lessee agrees to pay to Lessor promptly after any such determination and on the date of each Rental Payment thereafter an additional amount determined by Lessor to compensate Lessor for the loss of such excludability (including without limitation, compensation relating to interest expense, penalties or additions to tax), which determination shall be conclusive absent manifest error.

Section 4.03. Interest and Principal Components. A portion of each Rental Payment is paid as, and represents payment of, interest, and the balance of each Rental Payment is paid as, and represents payment of, principal. Each Schedule will set forth the interest component and the principal component of each Rental Payment during the Lease Term.

Section 4.04. Rental Payments to be Unconditional. The obligations of Lessee to make payment of the Rental Payments required under this Article IV and other sections hereof, and to perform and observe the covenants and agreements contained herein, shall be absolute and unconditional in all events, except as expressly provided under this Agreement. Notwithstanding any dispute between Lessee and Lessor, any Vendor or any other dispute between Lessee and Lessor, any Vendor or any other person, Lessee shall make all payments of Rental Payments when due and shall not withhold any Rental Payments pending final resolution of such dispute, nor shall Lessee assert any right of set-off or counterclaim against its obligation to make such payments required under this Agreement. Lessee's obligation to make Rental Payments during the Original Term or the then-current Renewal Term for each Schedule shall not be abated through accident or unforeseen circumstances.

Section 4.05. Non appropriation. Lessee is obligated only to pay such Rental Payments under this Agreement (and any additional amounts due hereunder, if applicable) as may lawfully be made from funds budgeted and appropriated for that purpose during Lessee's then current fiscal year. Should Lessee fail to budget, appropriate or otherwise make available funds to pay Rental Payments under a Lease following the then current Original Term or Renewal Term, that Lease shall be deemed terminated at the end of the then current Original Term or Renewal Term. Lessee agrees to deliver written notice to Lessor of such termination at least 60 days prior to the end of the then current Original Term or Renewal Term, but failure to give such written notice shall not extend the term beyond such Original Term or Renewal Term.

ARTICLE V. TITLE TO EQUIPMENT; SECURITY INTEREST; OPTION TO PURCHASE

Section 5.01. Title to the Equipment. Upon acceptance of the Equipment by Lessee, title to the Equipment and any and all additions, repairs, replacements or modifications shall vest in Lessee, subject to the rights of Lessor under this Agreement; provided that title to the Equipment that is subject to any Lease shall thereafter immediately and without any action by Lessee vest in Lessor, and Lessee shall immediately surrender possession of that Equipment to Lessor, upon (a) any termination of that Lease other than termination pursuant to Section 5.04, or (b) the occurrence of an Event of Default with respect to that Lease. It is the intent of the parties hereto that any transfer of title to Lessor pursuant to this Section shall occur automatically without the necessity of any bill of sale, certificate of title or other instrument of conveyance. Lessee shall, nevertheless, execute and deliver any such instruments as Lessor may request to evidence such transfer.

Section 5.02. Security Interest. To secure the payment of all Lessee's obligations under this Agreement, Lessee grants to Lessor a security interest constituting a first lien on (i) the Equipment and on all additions, attachments, accessions, that are considered to be an integral part of the equipment, and substitutions thereto, and on any proceeds there from, and (ii) the acquisition fund established under any Escrow Agreement entered into in connection therewith. Lessee agrees to execute such additional documents, in form satisfactory to Lessor, which Lessor deems necessary or appropriate to establish and maintain its security interest in the Equipment. Lessee hereby authorizes the filing of financing statements under the Uniform Commercial Code in connection with the security interest granted hereunder.

Section 5.03. Personal Property. Lessor and Lessee agree that the Equipment is and will remain personal property and will not be deemed to be affixed to or a part of the real estate on which it may be situated, notwithstanding that the Equipment or any part thereof may be or hereafter become in any manner physically affixed or attached to real estate or any building thereon. Upon the request of Lessor, Lessee will, at Lessee's expense, furnish a waiver of any interest in the Equipment from any party having an interest in any such real estate or building.

Section 5.04. Option to Purchase. Lessee shall have the option to purchase Lessor's interest in all (but not less than all) of the Equipment described in any Schedule, upon giving written notice to Lessor at least 60 (but not more than 180) days before the date of purchase, at the following times and upon the following terms:

- (a) On the date of the last Rental Payment set forth in that Schedule (assuming this Agreement is renewed at the end of the Original Term and each Renewal Term), if the Agreement is still in effect on such day, upon payment in full to Lessor of the Rental Payments and all other amounts then due under that Schedule plus One Dollar;
- (b) On the last day of the Original Term or any Renewal Term then in effect, upon payment in full to Lessor of the Rental Payments and all other amounts then due under that Schedule plus the then applicable Purchase Option Price set forth in that Schedule; or
- (c) In the event of substantial damage to or destruction or condemnation of substantially all of the Equipment listed in that Schedule on the day specified in Lessee's written notice to Lessor of its exercise of the purchase option upon payment in full to Lessor of the Rental Payments and all other amounts then due under that Schedule, including, without limitation, interest accrued to the date of payment, plus the then applicable Purchase Option Price set forth in that Schedule.

ARTICLE VI. DELIVERY, MAINTENANCE; MODIFICATION; TAXES; INSURANCE AND OTHER CHARGES

Section 6.01. Delivery, Installation and Acceptance of Equipment. Lessee shall order the Equipment, cause the Equipment to be delivered and installed at the locations specified in the Schedules and pay any and all delivery and installation costs in connection therewith. When the Equipment listed in any Schedule has been delivered and installed, Lessee shall immediately accept such Equipment and evidence said acceptance by executing and delivering to Lessor an Acceptance Certificate in the form attached hereto as Exhibit D.

Section 6.02. Location; Inspection. Once installed, no item of the Equipment will be moved from the location specified for it in the Schedule on which that item is listed without Lessor's consent, which consent shall not be unreasonably withheld. Lessor shall have the right at all reasonable times during regular business hours to enter into and upon the property of Lessee for the purpose of inspecting the Equipment.

Section 6.03. Maintenance of Equipment by Lessee. Lessee agrees that at all times during the Lease Term Lessee will, at Lessee's own cost and expense, maintain, preserve and keep the Equipment in good repair, working order and condition, and that Lessee will from time to time make or cause to be made all necessary and proper repairs, replacements and renewals. Lessor shall have no responsibility in any of these matters, or for the making of improvements or additions to the Equipment. Lessee shall not make material modifications to the Equipment without the prior consent of Lessor.

Section 6.04. Liens, Taxes, Other Governmental Charges and Utility Charges. Lessee shall keep the Equipment free of all liens, charges and encumbrances except those created by this Agreement. The parties to this Agreement contemplate that the Equipment will be used for a governmental or proprietary purpose of Lessee and, therefore, that the Equipment will be exempt from all taxes presently assessed and levied with respect to personal property. In the event that the use, possession or acquisition of the Equipment is found to be subject to taxation in any form (except for income taxes of Lessor), Lessee will pay, as the same respectively come due, all taxes and governmental charges of any kind whatsoever that may at any time be lawfully assessed or levied against or with respect to the Equipment and any equipment or other property acquired by Lessee in substitution for, as a renewal or replacement of, or a modification, improvement or addition to the Equipment, as well as all gas, water, steam, electricity, heat, power, telephone, utility and other charges incurred in the operation, maintenance, use, occupancy and upkeep of the Equipment; provided that, with respect to any governmental charges that may lawfully be paid in installments over a period of years, Lessee shall be obligated to pay only such installments as have accrued during the Lease Term. Lessee will take no action that will cause the interest portion of any Rental payment to become includable in gross income of the recipient for purposes of federal income taxation under the Code, and Lessee will take, and will cause its officers, employees and agents to take, all affirmative action legally within its power to prevent such interest from being includable in gross income for purposes of federal income taxation under the Code. Lessee acknowledges that Lessor's yield with respect to this Agreement is dependent upon the interest component of each Rental Payment being

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excluded from Lessor's income pursuant to the Code.

Section 6.05. Provisions Regarding Insurance. At its own expense, Lessee shall maintain (a) casualty insurance insuring the Equipment against loss or damage by fire and all other risks covered by the standard extended coverage endorsement then in use in the State, and any other risks reasonably required by Lessor, in an amount at least equal to the replacement cost of the Equipment, (b) liability insurance that protects Lessor from liability in all events in form and amount satisfactory to Lessor and (c) workers' compensation coverage as required by the laws of the State; provided that, with Lessor's prior written consent, Lessee may self-insure against the risks described in clauses (a) and (b); provided further that, if Lessor provides such consent Lessee shall provide to Lessor information with respect to such self-insurance program as Lessor may request from time to time. All insurance proceeds from casualty losses shall be payable as hereinafter provided. Lessee shall furnish to Lessor certificates evidencing such coverage throughout the Lease Term. All such casualty and liability insurance shall be with insurers that are acceptable to Lessor, shall name Lessor as a loss payee and an additional insured, respectively, and shall contain a provision to the effect that such insurance shall not be canceled or modified materially without first giving written notice thereof to Lessor at least 30 days in advance of such cancellation or modification. All such casualty insurance shall contain a provision making any losses payable to Lessee and Lessor as their respective interests may appear.

Section 6.06. Advances. In the event Lessee shall fail to maintain the full insurance coverage required by this Agreement or shall fail to keep the Equipment in good repair and operating condition, Lessor may (but shall be under no obligation to) purchase the required insurance and pay the premiums on the same or may make such repairs or replacements as are necessary and provide for payment thereof; and all amounts so advanced therefore by Lessor shall constitute additional rent for the then-current Original Term or Renewal Term, and Lessee covenants and agrees to pay such amounts so advanced by Lessor with interest thereon from the date advanced until paid at the rate of 18% per annum or the maximum interest rate permitted by law, whichever is less.

ARTICLE VII. DAMAGE, DESTRUCTION AND CONDEMNATION: USE OF NET PROCEEDS

Section 7.01. Risk of Loss. Lessee is responsible for the entire risk of loss of or damage or destruction to the Equipment. No such loss, damage or destruction shall relieve Lessee of any obligation under this Agreement or any Lease.

Section 7.02. Damage, Destruction and Condemnation. If (a) the Equipment listed on any Schedule or any portion thereof is destroyed, in whole or in part, or is damaged by fire or other casualty or (b) title to, or the temporary use of, the Equipment or any part thereof shall be taken under the exercise of the power of eminent domain by any governmental body or by any person, firm or corporation acting pursuant to governmental authority, Lessee and Lessor will cause the Net Proceeds of any insurance claim or condemnation award to be applied to the prompt replacement, repair, restoration, modification or improvement of that Equipment, unless Lessee shall have exercised its option to purchase that Equipment pursuant to Section 5.04. Any balance of the Net Proceeds remaining after such work has been completed shall be paid to Lessee.

Section 7.03. Insufficiency of Net Proceeds. If the Net Proceeds are insufficient to pay in full the cost of any replacement, repair, restoration, modification or improvement referred to in Section 7.02, Lessee shall either complete such replacement, repair, restoration, modification or improvement and pay any costs thereof in excess of the amount of the Net Proceeds, unless Lessee, pursuant to Section 5.04, purchases Lessor's interest in the Equipment destroyed, damaged or taken and any other Equipment listed in the same Schedule. The amount of the Net Proceeds, if any, remaining after completing such repair, restoration, modification or improvement or after purchasing Lessor's interest in the Equipment shall be retained by Lessee. If Lessee shall make any payments pursuant to this Section, Lessee shall not be entitled to any reimbursement therefore from Lessor nor shall Lessee be entitled to any diminution of the amounts payable under Article IV.

ARTICLE VIII. DISCLAIMER OF WARRANTIES; VENDOR'S WARRANTIES; USE OF THE EQUIPMENT

Section 8.01. Disclaimer of Warranties. LESSEE HAS SELECTED THE EQUIPMENT AND THE VENDORS. LESSOR MAKES NO WARRANTY OR REPRESENTATION, EITHER EXPRESS OR IMPLIED, AS TO THE VALUE, DESIGN, CONDITION, MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE OR FITNESS FOR USE OF THE EQUIPMENT, OR WARRANTY OR REPRESENTATION WITH RESPECT THERETO. In no event shall Lessor be liable for an incidental, indirect, special or consequential damage in connection with or arising out of this Agreement or the existence, furnishing, functioning or Lessee's use of any item or products or service provided for in this Agreement.

Section 8.02. Vendor's Warranties. Lessor hereby irrevocably appoints Lessee its agent and attorney-in-fact during the Lease Term, so long as Lessee shall not be in default hereunder, to assert from time to time whatever claims and rights, including warranties of the Equipment, which Lessor may have against the Vendor of the Equipment. Lessee's sole remedy for the breach of such warranty, indemnification or representation shall be against the Vendor of the Equipment, and not against Lessor, nor shall such matter have any effect, whatsoever on the rights and obligations of Lessor with respect to this Agreement, including the right to receive full and timely payments hereunder. Lessee expressly acknowledges that Lessor makes, and has made no representation or warranties whatsoever as to the existence or availability of such warranties of the Vendor of the Equipment.

Section 8.03. Use of the Equipment. Lessee will not install, use, operate or maintain the Equipment improperly, carelessly, in violation of any applicable law or in a manner contrary to that contemplated by this Agreement. Lessee shall provide all permits and licenses, if any, necessary for the installation and operation of the Equipment. In addition, Lessee agrees to comply in all respects (including, without limitation, with respect to the use, maintenance and operation of each item of the Equipment) with all laws of the jurisdictions in which its operations involving any item of Equipment may extend and any legislative, executive, administrative or judicial body exercising any power or jurisdiction over the items of the Equipment; provided, however, that Lessee may contest in good faith the validity or application of any such law or rule in any reasonable manner which does not, in the opinion of Lessor, adversely affect the title of Lessor in and to any of the items of the Equipment or its interest or rights under this Agreement.

Section 8.04. Essential Nature of the Equipment. Lessee confirms and affirms that the Equipment is essential to the function of Lessee and the services provided to its citizens, that there is an immediate need for the Equipment which is not temporary or expected to diminish in the foreseeable future, and that Lessee will use substantially all the Equipment for the purpose of performing one or more governmental or proprietary functions consistent with the permissible scope of its authority.

ARTICLE IX. ASSIGNMENT, SUBLEASING, INDEMNIFICATION, MORTGAGING AND SELLING

Section 9.01. Assignment by Lessor. Lessor's interest in, to, and under this Agreement; any Lease and the Equipment may be assigned and reassigned in whole or in part to one or more assignees by Lessor at any time subsequent to its execution. Lessee hereby agrees to maintain a written record of each such assignment in form necessary to comply with Section 149(a) of the Code. No such assignment shall be binding on Lessee until it has received written notice from Lessor of the assignment disclosing the name and address of the assignee. Lessee agrees to execute all documents, including chattel mortgages or financing statements that may be reasonably requested by Lessor or any assignee to protect its interests in the Equipment and in this Agreement. Lessee shall not have the right to and shall not assert against any assignee any claim, counterclaim, defense, set-off or other right Lessee may from time to time have against Lessor.

Section 9.02. Assignment and Subleasing by Lessee. None of Lessee's interest in, to and under this Agreement and in the Equipment may be sold, assigned, subleased, pledged or otherwise encumbered by Lessee without the prior written consent of Lessor.

Section 9.03. Release and Indemnification Covenants. To the extent permitted by law, Lessee shall indemnify, protect, hold harmless, save and keep harmless Lessor from and against any and all liabilities, obligations, losses, claims and damages whatsoever, regardless of cause thereof, and all expenses in connection therewith (including, without limitation, counsel fees and expenses, penalties connected therewith imposed on interest received) arising out of or as (a) result of the entering into of this Agreement, (b) the ownership of any item of the Equipment, (c) the manufacture, ordering, acquisition, use, operation, condition, purchase, delivery, rejection, storage or return of any item of the Equipment, (d) or any accident in connection with the operation, use, condition, possession, storage or return of any item of the Equipment resulting in damage to property or injury to or death to any person, and/or (e) the breach of any covenant herein or any material misrepresentation contained herein. The indemnification arising under this paragraph shall continue in full force and effect notwithstanding the full payment of all obligations under this Agreement or the termination of the Lease Term for any reason.

ARTICLE X. EVENTS OF DEFAULT AND REMEDIES

Section 10.01. Events of Default Defined. Subject to the provisions of Section 4.05, any of the following events shall constitute an "Event of Default" under any Lease:

- (a) Failure by Lessee to pay any Rental Payment or other payment required to be paid under that Lease at the time specified in that Lease;
- (b) Failure by Lessee to observe and perform any covenant, condition or agreement on its part to be observed or performed under that Lease, other than as referred to in subparagraph (a) above, for a period of 30 days after written notice specifying such failure and requesting that it be remedied is given to Lessee by Lessor, unless Lessor shall agree in writing to an extension of such time prior to its expiration; provided that, if the failure stated in the notice cannot be corrected within the applicable period, Lessor will not unreasonably withhold its consent to an extension of such time if corrective action is instituted by Lessee within the applicable period and diligently pursued until the default is corrected;
- (c) Any statement, representation or warranty made by Lessee in or pursuant to that Lease or its execution, delivery or performance shall prove to have been false, incorrect, misleading or breached in any material respect on the date when made;
- (d) Any provision of that Lease shall at any time for any reason cease to be valid and binding on Lessee, or shall be declared to be null and void, or the validity or enforceability thereof shall be contested by Lessee or any governmental agency or authority if the loss of such provision would materially adversely affect the rights or security of Lessor, or Lessee shall deny that it has any further liability or obligation under that Lease.
- (e) Lessee shall (i) apply for or consent to the appointment of a receiver, trustee, custodian or liquidator of Lessee, or of all or a substantial part of the assets of Lessee, (ii) be unable, fail or admit in writing its inability generally to pay its debts as they become due, (iii) make a general assignment for the benefit of creditors, (iv) have an order for relief entered against it under applicable federal bankruptcy law, or (v) file a voluntary petition in bankruptcy or a petition or an answer seeking reorganization or an arrangement with creditors or taking advantage of any insolvency law or any answer admitting the material allegations of a petition filed against Lessee in any bankruptcy, reorganization or insolvency proceeding; or
- (f) An order, judgment or decree shall be entered by any court of competent jurisdiction, approving a petition or appointing a receiver, trustee, custodian or liquidator of Lessee or of all or a substantial part of the assets of Lessee, in each case without its application, approval or consent, and such order, judgment or decree shall continue unstayed and in effect for any period of 30 consecutive days.

Section 10.02. Remedies on Default. Whenever any Event of Default under any Lease exists, Lessor shall have the right, at its sole option without any further demand or notice, to take one or any combination of the following remedial steps:

- (a) By written notice to Lessee, declare all Rental Payments and other amounts payable by Lessee under that Lease to the end of the then current Original Term or Renewal Term to be due;
- (b) With or without terminating that Lease, Lessor may, upon 5 days written notice to Lessee, enter the premises where any Equipment that is subject to that Lease is located and retake possession of that Equipment or require Lessee at Lessee's expense to promptly return any or all of the Equipment to the possession of Lessor at such place within the United States as Lessor shall specify, and sell or lease the Equipment or, for the account of Lessee, sublease the Equipment, continuing to hold Lessee liable for the difference between (i) the Rental Payments and other amounts payable by Lessee under that Lease plus the then-applicable Purchase Option Price for that Equipment and (ii) the net proceeds of any such sale, leasing or subleasing (after deducting all expenses of Lessor in exercising its remedies under this Agreement, including without limitation all expenses of taking possession, storing, reconditioning and selling or leasing the Equipment and all brokerage, auctioneers' and attorneys' fees) provided that the amount of Lessee's liability under this subparagraph (b) shall not exceed the Rental Payments and other amounts otherwise due under that Lease plus the remaining Rental Payments and other amounts payable by Lessee under that Lease to the end of the then current Original Term or Renewal Term; and
- (c) Lessor may take whatever action at law or in equity may appear necessary or desirable to enforce its rights under that Lease or as the owner of any or all of the Equipment that is subject to that Lease.

In addition, whenever an Event of Default exists with respect to any Rental Payment required by a particular Schedule or with respect to any other payment, covenant, condition, agreement, statement, representation or warranty set forth in that Schedule or applicable to that Schedule or the Equipment listed therein, Lessor shall have the right, at its sole option without any further demand or notice, to take one or any combination of the following remedial steps:

- (d) By written notice to Lessee, Lessor may declare all Rental Payments payable by Lessee pursuant to that Schedule and other amounts payable by Lessee under this Agreement to the end of the then current Original Term or Renewal Term to be due;
- (e) With or without terminating that Schedule, Lessor may, upon 5 days written notice to Lessee, enter the premises where the Equipment listed in that Schedule is located and retake possession of that Equipment or require Lessee at Lessee's expense to promptly return any or all of that Equipment to the possession of Lessor at such place within the United States as Lessor shall specify, and sell or lease that Equipment or, for the account of Lessee, sublease that Equipment, continuing to hold Lessee liable for the difference between (i) the Rental Payments payable by Lessee pursuant to that Schedule and other amounts related to that Schedule or the Equipment listed therein that are payable by Lessee hereunder plus the then applicable Purchase Option Price for that Equipment, and (ii) the net proceeds of any such sale, leasing or subleasing (after deducting all expenses of Lessor in exercising its remedies under this Agreement, including without limitation all expenses of taking possession, storing, reconditioning and selling or leasing such Equipment and all brokerage, auctioneers' and attorneys' fees) provided that the amount of Lessee's liability under this subparagraph (e) shall not exceed the Rental Payments and other amounts otherwise due under that Schedule plus the remaining Rental Payments and other amounts payable by Lessee under that Schedule to the end of the then current Original Term or Renewal Term; and
- (f) Lessor may take whatever action at law or in equity may appear necessary or desirable to enforce its rights under that Schedule, this Agreement with respect to that Schedule and the Equipment listed therein.

In addition to the remedies specified above, Lessor may charge interest on all amounts due to it at the rate of 10% per annum or the maximum amount permitted by law, whichever is less. The exercise of any such remedies respecting any such Event of Default shall not relieve Lessee of any other liabilities under any other Schedules, this Agreement related to any other Schedule or the Equipment listed therein.

Section 10.03. No Remedy Exclusive. No remedy conferred upon or reserved to Lessor by this Article is intended to be exclusive and every such remedy shall be cumulative and shall be in addition to every other remedy given under this lease. No delay or omission to exercise any right or power accruing upon any default shall impair any such right or power or shall be construed to be a waiver thereof but any such right and power may be exercised from time to time and as often as may be deemed expedient by Lessor or its assignee.

Section 10.04. Agreement to Pay Attorneys' Fees and Expenses. If Lessee should default under any of the provisions hereof and Lessor should employ attorneys or incur other expenses for the collection of moneys or for the enforcement of performance or observance of any obligation or agreement on the part of Lessee contained in this Agreement, Lessee agrees, to the extent it is permitted by law to do so, that it will, if assessed by a court of competent jurisdiction, pay to Lessor the reasonable fees of those attorneys and other reasonable expenses so incurred by Lessor.

Section 10.05. Application of Moneys. Any net proceeds from the exercise of any remedy hereunder (after deducting all expenses of Lessor in exercising such remedies including without limitation all expenses of taking possession, storing, reconditioning and selling or leasing Equipment and all brokerage, auctioneer's or attorney's fees) shall be applied as follows:

- (a) If such remedy is exercised solely with respect to a single Schedule, Equipment listed in that Schedule or rights under the Agreement related to that Schedule, then to amounts due pursuant to that Schedule and other amounts related to that Schedule or that Equipment.
- (b) If such remedy is exercised with respect to more than one Schedule, Equipment listed in more than one Schedule or rights under the Agreement related to more than one Schedule, then to amounts due pursuant to those Schedules pro rata.

ARTICLE XI. MISCELLANEOUS

Section 11.01. Notices. All notices, certificates or other communications hereunder shall be sufficiently given and shall be deemed given when delivered or mailed by registered mail, postage prepaid, to the parties at their respective places of business.

Section 11.02. Binding Effect; Entire Agreement; Amendments and Modifications. This Agreement shall inure to the benefit of and shall be binding upon Lessor and Lessee and their respective successors and assigns. The terms of this Agreement shall not be waived, altered, modified, supplemented or amended in any manner whatsoever except by written instrument signed by the Lessor and the Lessee; nor shall any such amendment that affects the rights of Lessor's assignee be effective without such assignee's consent. In the event any provision of this Agreement shall be held invalid or unenforceable by any court of competent jurisdiction, such holding shall not invalidate or render unenforceable any other provision hereof.

Section 11.03. Applicable Law. This Agreement shall be governed by and construed in accordance with the laws of the State.

Section 11.04. Severability. In the event any provision of this Agreement shall be held invalid or unenforceable by any court of competent jurisdiction, such holding shall not invalidate or render unenforceable any other provision hereof.

Section 11.05. Amendments, Changes and Modifications. This Agreement may be amended, added to, changed or modified by written agreement duly executed by Lessor and Lessee.

Section 11.06. Execution in Counterparts; Chattel Paper. This Agreement, including in writing each Schedule, may be executed in several counterparts, each of which shall be an original and all of which shall constitute but one and the same instrument; except (1) to the extent that various Schedules and this Agreement as it relates thereto constitutes separate Leases as provided in this Agreement and (2) that Lessor's interest in, to and under any Schedule and the Agreement as it relates to that Schedule, and the Equipment listed in that Schedule may be sold or pledged only by delivering possession of the original counterpart of that Schedule marked "Counterpart No. 1," which Counterpart No. 1 shall constitute chattel paper for purposes of the Uniform Commercial Code.

Section 11.07. Usury. The parties hereto agree that the charges in this Agreement and any Lease shall not be a violation of usury or other law. Any such excess charge shall be applied in such order as to conform this Agreement and such Lease to such applicable law.

Section 11.08. Jury Trial Waiver. To the extent permitted by law, lessee agrees to waive its right to a trial by jury.

Section 11.09. Facsimile Documentation. Lessee agrees that a facsimile copy of this Agreement or any Lease with facsimile signatures may be treated as an original and will be admissible as evidence of this Agreement or such Lease.

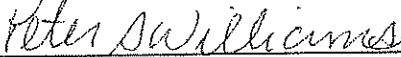
Section 11.10. Captions. The captions or headings in this Agreement are for convenience only and in no way define, limit or describe the scope or intent of any provisions or sections of this Agreement.

Lessor and Lessee have caused this Agreement to be executed in their names by their duly authorized representatives listed below.

Lease No. BETAK2018-03PB

LESSEE:

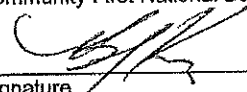
City of Bethel



Peter A. Williams, City Manager

LESSOR:

Community First National Bank



Signature

BLAKE KAUS, VP

Name and Title

EXHIBIT A

SCHEDULE OF EQUIPMENT NO. 01, Dated 4/10/2018

Counterpart No. 1,

LESSOR'S INTEREST IN, TO AND UNDER THIS SCHEDULE AND THE AGREEMENT AS IT RELATES TO THIS SCHEDULE MAY BE SOLD OR PLEDGED ONLY BY DELIVERING POSSESSION OF COUNTERPART NO. 1 OF THIS SCHEDULE, WHICH COUNTERPART NO. 1 SHALL CONSTITUTE CHATTEL PAPER FOR PURPOSES OF THE UNIFORM COMMERCIAL CODE.

Re: Master Equipment Lease Purchase Agreement, dated as of 4/10/2018, between Community First National Bank, as Lessor, and City of Bethel, as Lessee.

1. **Defined Terms.** All terms used herein have the meanings ascribed to them in the above referenced Master Equipment Lease Purchase Agreement (the "Master Equipment Lease").
2. **Equipment.** The Equipment included under this Schedule of Equipment is comprised of the items described in the Equipment Description attached hereto as **Attachment 1**, together with all replacements, substitutions, repairs, restorations, modifications, attachments, accessions, additions and improvements thereof or thereto.
3. **Payment Schedule.** The Rental Payments and Purchase Option Prices under this Schedule of Equipment are set forth in the Payment Schedule attached as **Attachment 2** hereto.
4. **Representations, Warranties and Covenants.** Lessee hereby represents, warrants, and covenants that its representations, warranties and covenants set forth in the Agreement are true and correct as though made on the date of commencement of Rental Payments on this Schedule.
5. **The Master Equipment Lease.** This Schedule is hereby made as part of the Master Equipment Lease and Lessor and Lessee hereby ratify and confirm the Master Equipment Lease. The terms and provisions of the Master Equipment Lease (other than to the extent that they relate solely to other Schedules or Equipment listed on other Schedules) are hereby incorporated by reference and made a part hereof.

Lease Number: BETAK2018-03PB

LESSEE:

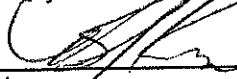
City of Bethel



Peter A. Williams, City Manager

LESSOR:

Community First National Bank



Signature

BLAKE KAUS, VP

Name and Title

ATTACHMENT 1 EQUIPMENT DESCRIPTION

RE: Schedule of Equipment No. 01, dated 4/10/2018, to Master Equipment Lease Purchase Agreement, dated as of 4/10/2018, between Community First National Bank, as Lessor, and City of Bethel, as Lessee.

Lease Number: BETAK2018-03PB

One (1) 2017 Pierce Ascendant 107' Stock Ladder Truck

VIN#4P1BCAFF1HA017906

With a total acquisition cost of \$879,000.00; together with all additions, accessions and replacements thereto, Lessee hereby certifies the description of the personal property set forth above constitutes an accurate description of the "Equipment", as defined in the attached Master Equipment Lease Purchase Agreement and the Equipment is located on the premise of the Lessee unless otherwise noted by the Lessee.

Physical location where equipment will be stored after delivery: City of Bethel, Fire DEPARTMENT
320 Chief Eddie Hoffman Highway
Bethel, AK 99559

LESSEE:

City of Bethel

Peter A. Williams
Peter A. Williams, City Manager

ATTACHMENT 2 PAYMENT SCHEDULE

RE: Schedule of Equipment No. 01, dated 4/10/2018, to Master Equipment Lease Purchase Agreement, dated as of 4/10/2018, between Community First National Bank, as Lessor, and City of Bethel, as Lessee.

Lease Number: BETAK2018-03PB

Amount Financed: \$811,000.00

AMORTIZATION SCHEDULE

Payment Number	Payment Date	Payment Amount	Interest Portion	Principal Portion	Purchase Option Price
1	8/1/2018	\$71,217.61	\$10,122.23	\$61,095.38	Not Available
2	8/1/2019	\$71,217.61	\$30,355.76	\$40,861.85	Not Available
3	8/1/2020	\$71,217.61	\$28,701.69	\$42,515.92	\$693,187.92
4	8/1/2021	\$71,217.61	\$26,980.67	\$44,236.94	\$647,181.50
5	8/1/2022	\$71,217.61	\$25,189.98	\$46,027.63	\$599,312.76
6	8/1/2023	\$71,217.61	\$23,326.80	\$47,890.81	\$549,506.32
7	8/1/2024	\$71,217.61	\$21,388.21	\$49,829.40	\$497,683.74
8	8/1/2025	\$71,217.61	\$19,371.14	\$51,846.47	\$443,763.41
9	8/1/2026	\$71,217.61	\$17,272.42	\$53,945.19	\$387,660.42
10	8/1/2027	\$71,217.61	\$15,088.75	\$56,128.86	\$329,286.40
11	8/1/2028	\$71,217.61	\$12,816.68	\$58,400.93	\$268,549.43
12	8/1/2029	\$71,217.61	\$10,452.64	\$60,764.97	\$205,353.86
13	8/1/2030	\$71,217.61	\$7,992.90	\$63,224.71	\$139,600.16
14	8/1/2031	\$71,217.61	\$5,433.60	\$65,784.01	\$71,184.79
15	8/1/2032	\$71,217.61	\$2,770.70	\$68,446.91	\$0.00

LESSEE:

City of Bethel



Peter A. Williams, City Manager

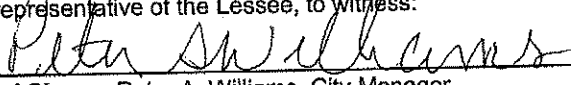
EXHIBIT B

LESSEE RESOLUTION

Re: **Schedule of Equipment No. 01, dated 4/10/2018, to Master Equipment Lease Purchase Agreement, dated as of 4/10/2018, between Community First National Bank, as Lessor, and City of Bethel, as Lessee.**

I, the undersigned, the duly appointed, qualified and acting **City Clerk** of the above captioned Lessee do hereby certify this date MARCH 27, 2018, as follows:

- (1) Lessee did, at a meeting of the governing body of the Lessee held on March 13, 2018, by motion duly made, seconded and carried, in accordance with all requirements of law, approve and authorize the execution and delivery of the above referenced Schedule of Equipment No. 01 (the "Schedule") on its behalf by the following named representative of the Lessee, to wit:

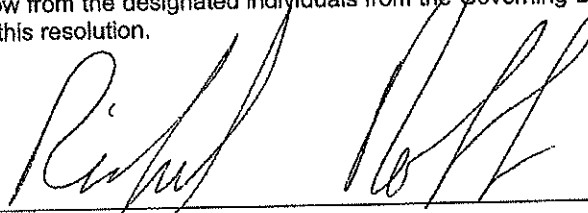

Authorized Signer: Peter A. Williams, City Manager

- (2) The above named representative of the Lessee held at the time of such authorization and holds at the present time the office set forth above.
- (3) The meeting of the governing body of the Lessee at which the Schedule was approved and authorized to be executed was duly called, regularly convened and attended throughout by the requisite majority of the members thereof or by other appropriate official approval and that the action approving the Schedule and authorizing the execution thereof has not been altered or rescinded.
- (4) No event or condition that constitutes, or with the giving of notice or the lapse of time or both would constitute, an Event of Default (as such term is defined in the above referenced Master Equipment Lease Purchase Agreement) exists at the date hereof.
- (5) All insurance required in accordance with the above referenced Master Equipment Lease Purchase Agreement is currently maintained by the Lessee.
- (6) Lessee has, in accordance with the requirements of law, fully budgeted and appropriated sufficient funds for the current budget year to make the Rental Payments scheduled to come due during the Original Term and to meet its other obligations for the Original Term (as such terms are defined in the above referenced Master Equipment Lease Purchase Agreement) and such funds have not been expended for other purposes.
- (7) The fiscal year of Lessee is from July 1 to June 30.

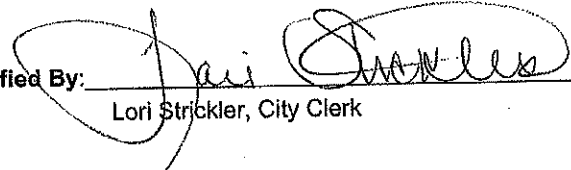
The signatures below from the designated individuals from the Governing Body of the Lessee evidence the adoption by the Governing Body of this resolution.

City of Bethel

Attested By:


Richard Robb, Mayor

Certified By:


Lori Strickler, City Clerk



City of Bethel
Legal Department
PO Box 1388
Bethel AK 99559
(907) 543-1385 / (907) 543-2936 (fax)
www.cityofbethel.org

March 30, 2018

Community First National Bank
215 S. Seth Child Road
Manhattan, KS 66502

Re: Lessee: City of Bethel

Ladies and Gentlemen:

As legal counsel to City of Bethel (the "Lessee"), I have examined (a) an executed counterpart of a certain Master Equipment Lease Purchase Agreement, dated as of 4/10/2018, and Exhibits thereto by and between Community First National Bank (the "Lessor") and Lessee, Schedule of Equipment No. 01, dated 4/10/2018, (collectively, the "Agreement") by and between Lessor and Lessee, which, among other things, provides for the lease with option to purchase by the Lessee of certain property listed in the Schedule (the "Equipment"); (b) an executed counterpart of the ordinances or resolutions of Lessee which, among other things, authorizes Lessee to execute the Agreement and (c) such other opinions, documents and matters of law as I have deemed necessary in connection with the following opinions.

Based on the foregoing, I am of the following opinions:

- (1) Lessee's true and correct name is City of Bethel.
- (2) Lessee is a public body corporate and politic, duly organized and existing under the laws of the State, and has a substantial amount of the following sovereign powers: (a) the power to tax, (b) the power of eminent domain, and (c) police power;
- (3) Lessee has the requisite power and authority to lease the Equipment with an option to purchase and to execute and deliver the Agreement and to perform its obligations under the Agreement;
- (4) The Agreement and the other documents either attached thereto or required therein have been duly authorized, approved and executed by and on behalf of Lessee and the Agreement and other documents either attached thereto or required therein are the valid and binding obligations of Lessee enforceable in accordance with their terms;
- (5) The authorization, approval and execution of the Agreement and all other proceedings of Lessee relating to the transactions contemplated thereby have been performed in accordance with all open meeting laws, public bidding laws and all other applicable state or federal laws; and
- (6) There is no proceeding pending or threatened in any court or before any governmental authority or arbitration board or tribunal that, if adversely determined, would adversely affect the transactions contemplated by the Agreement or the security interest of Lessor or its

- assigns, as the case may be, in the Equipment.
- (7) The signatures of the officers which appear on the Agreement are true and genuine; I know said officers and know them to hold the offices set forth below their names.
 - (8) No further approval, consent or withholding of objection is required from any federal, state or local governmental authority with respect to the entering into or performance by the Lessee of the Lease and the transaction contemplated thereby.
 - (9) The Equipment leased pursuant to the Agreement constitutes personal property and when subjected to use by Lessee will not be or become fixtures under applicable law.
 - (10) The Lessee is a political subdivision within the meaning of Section 103 of the Internal Revenue Code of 1986 as amended and the related regulations and rulings.
 - (11) The leasing of the Equipment pursuant to the Agreement is exempt from all sales and use taxes against either the Lessor or the Lessee during the term of the Lease pursuant to the Agreement and the Equipment will be exempt from all state and local personal property or other ad valorem taxes.

All capitalized terms herein shall have the same meanings as in the foregoing Agreement unless otherwise provided herein. Lessor, its successors and assigns, and any counsel rendering an opinion on the tax-exempt status of the interest components of the Rental Payments are entitled to rely on this opinion.

Best Regards,



Patty Burley
City Attorney

BANK QUALIFIED CERTIFICATE

RE: Schedule of Equipment No. 01, dated 4/10/2018, to Master Equipment Lease Purchase Agreement, dated as of 4/10/2018, between Community First National Bank, as Lessor, and City of Bethel, as Lessee.

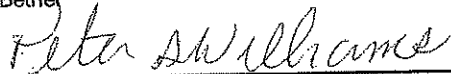
Whereas, Lessee hereby represents it is a "Bank Qualified" Issuer for the calendar year in which the above referenced Schedule is executed by making the following designations with respect to Section 265 of the Internal Revenue Code. (A "Bank Qualified Issuer" is an issuer that issues less than \$10,000,000 dollars of tax-exempt obligations during the calendar year).

Now, therefor, Lessee hereby designates the above referenced Schedule as follows:

1. **Designation as Qualified Tax-Exempt Obligation.** Pursuant to Section 265(b)(3)(B)(i) of the Internal Revenue Code of 1986 as amended (the "Code"), the Lessee hereby specifically designates the above referenced Schedule as a "qualified tax-exempt obligation" for purposes of Section 265(b)(3) of the Code. In compliance with Section 265(b)(3)(D) of the Code, the Lessee hereby represents that the Lessee will not designate more than \$10,000,000 of obligations issued by the Lessee in the calendar year during which the above referenced Schedule is executed and delivered as such "qualified tax-exempt obligations".
2. **Issuance Limitation.** In compliance with the requirements of Section 265(b)(3)(C) of the Code, the Lessee hereby represents that the Lessee (including all subordinate entities of the Lessee within the meaning of Section 265(b)(3)(E) of the Code) reasonably anticipates not to issue in the calendar year during which the above referenced Schedule is executed and delivered, obligations bearing interest exempt from federal income taxation under Section 103 of the Code (other than "private activity bonds" as defined in Section 141 of the Code) in an amount greater than \$10,000,000.

LESSEE:

City of Bethel



Peter A. Williams, City Manager

INSURANCE COVERAGE REQUIREMENTS

Lessee: City of Bethel

Please mark one of the following:

(✓) Pursuant to Section 6.05 of the Agreement, you have agreed to provide us evidence of insurance covering the property in the Agreement. A Certificate of Insurance naming all insured parties and coverage must be provided to us as soon as possible, but no later than the date on which delivery of equipment occurs.

() Pursuant to Section 6.05 of the Agreement, we are self-insured for all risk, physical damage, and public liability and will provide proof of such self-insurance in letter form, together with a copy of the statute authorizing this form of insurance. Coverage must be provided to us as soon as possible, but no later than the date on which delivery of equipment occurs.

Equipment to be insured: **One (1) 2017 Pierce Ascendant 107' Stock Ladder Truck; VIN# 4P1BCAFF1HA017906**

Policy should be issued and mailed to: Community First National Bank and/or Its Assigns
215 S. Seth Child Road
Manhattan, KS 66502

INSURANCE REQUIREMENTS:

1. LIABILITY

- ✓ \$1,000,000.00 Aggregate Bodily Injury
- ✓ \$1,000,000.00 Combined Single Limit per Occurrence
- ✓ Community First National Bank and/or Its Assigns MUST be listed as additional insured and loss payee.

2. PHYSICAL DAMAGE

- ✓ All risk coverage to guarantee proceeds sufficient to cover the replacement cost of the equipment.
- ✓ Community First National Bank and/or Its Assigns MUST be listed as additional insured and loss payee.

3. ENDORSEMENT

- ✓ Lessor will receive at least thirty (30) days written notice from Insurer prior to alteration, cancellation or reduction of insurance coverage.
- ✓ Deductibles should be listed on the Certificate of Coverage

**THE CERTIFICATE SHOULD BE
EMAILED TO cindyturner@clpusa.net
OR FAXED TO: 888.777.7875**

Insurance Company Name: <u>Alaska Public Entity Insurance (APEI)</u>		
Agents Name: <u>Barbara Thurston</u>		
Address: <u>2233 JORDAN AVE</u>		
City: <u>Tuneau</u>	State: <u>AK</u>	Zip: <u>99801</u>
Phone: <u>(907) 523-9400</u>	Fax: <u>(907) 586-2608</u>	Email: <u>bthurston@akpei.com</u>

LESSEE:

City of Bethel

Peter A. Williams
Peter A. Williams, City Manager

INVOICE INSTRUCTIONS

RE: Schedule of Equipment No. 01, dated 4/10/2018, to Master Equipment Lease Purchase Agreement, dated as of 4/10/2018, between Community First National Bank, as Lessor, and City of Bethel, as Lessee.

Lease Number: BETAK2018-03PB

Equipment Description: One (1) 2017 Pierce Ascendant 107' Stock Ladder Truck

Please provide contact information for billing and invoicing purposes.

City of Bethel
Person/Department: FIRE DEPARTMENT; Attn Fire Chief
P.O. Box/Street: PO Box 1388
City, State, Zip: Bethel AK 99559
Telephone Number: (907) 543-2131
Email Address: bhowell@cityofbethel.org

NOTICE OF ASSIGNMENT

March 23, 2018

City of Bethel
PO Box 1388
Bethel, AK 99559

RE: Schedule of Equipment No. 01, dated 4/10/2018, to Master Equipment Lease Purchase Agreement, dated as of 4/10/2018, between Community First National Bank, as Lessor, and City of Bethel, as Lessee.

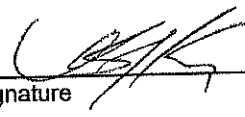
Please be advised that Community First National Bank has assigned all its right, title and interest in, to and under the above referenced Master Equipment Lease Purchase Agreement (the "Agreement"), the Equipment leased thereunder and the right to receive Rental Payments thereunder to the following assignee:

PINNACLE PUBLIC FINANCE, INC
8377 E. HARTFORD DR, SUITE 115
SCOTTSDALE, AZ 85255

Community First National Bank will be the servicing this lease and all Rental Payments and payment of the Purchase Option Price due under the Agreement will be made to:

Community First National Bank
215 S. Seth Child Road
Manhattan, KS 66502

Community First National Bank

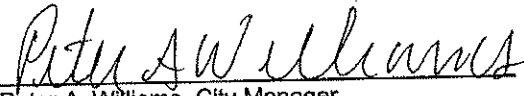

Signature

BLAKE KAUS, VP

Name and Title

ACKNOWLEDGED AND ACCEPTED:

City of Bethel


Peter A. Williams, City Manager

*Lessor may at a future date desire to assign this lease agreement. At this time, a specific Assignee is undetermined. At such time Lessor determines a need to assign this lease; Lessee will be provided with a completed copy of this page for their records and be made aware of any changes in where to send the rental payments going forward. This assignment option is outlined in Article IX of the Master Equipment Lease Purchase Agreement.

Information Return for Tax-Exempt Governmental Obligations

► Under Internal Revenue Code section 149(e)

► See separate instructions.

Caution: If the issue price is under \$100,000, use Form 8038-GC.

OMB No. 1545-0720

Part I Reporting Authority		If Amended Return, check here ☐	
1 Issuer's name City of Bethel		2 Issuer's employer identification number (EIN) 92-6001644	
3a Name of person (other than issuer) with whom the IRS may communicate about this return (see instructions) Jim Chevisny		3b Telephone number of other person shown on 3a (907) 543-1385	
4 Number and street (or P.O. box if mail is not delivered to street address) PO Box 1388	Room/suite	5 Report number (For IRS Use Only) 3	
6 City, town, or post office, state, and ZIP code Bethel, AK 99559		7 Date of issue 4/10/2018	
8 Name of issue MASTER EQUIPMENT LEASE PURCHASE AGREEMENT		9 CUSIP number	
10a Name and title of officer or other employee of the issuer whom the IRS may call for more information (see instructions) Patty Burley, City Attorney		10b Telephone number of officer or other employee shown on 10a (907) 543-1385	

Part II Type of Issue (enter the issue price). See the instructions and attach schedule.	
11 Education	11
12 Health and hospital	12
13 Transportation	13
14 Public safety	14 811,000 00
15 Environment (including sewage bonds)	15
16 Housing	16
17 Utilities	17
18 Other. Describe ►	18
19 If obligations are TANs or RANs, check only box 19a ☐	
If obligations are BANs, check only box 19b ☐	
20 If obligations are in the form of a lease or installment sale, check box ☐	

Part III Description of Obligations. Complete for the entire issue for which this form is being filed.					
	(a) Final maturity date	(b) Issue price	(c) Stated redemption price at maturity	(d) Weighted average maturity	(e) Yield
21	8/1/2032	\$ 811,000.00	\$ N/A	15 years	4.0479 %

Part IV Uses of Proceeds of Bond Issue (including underwriters' discount)	
22 Proceeds used for accrued interest	22
23 Issue price of entire issue (enter amount from line 21, column (b))	23
24 Proceeds used for bond issuance costs (including underwriters' discount)	24
25 Proceeds used for credit enhancement	25
26 Proceeds allocated to reasonably required reserve or replacement fund	26
27 Proceeds used to currently refund prior issues	27
28 Proceeds used to advance refund prior issues	28
29 Total (add lines 24 through 28)	29
30 Nonrefunding proceeds of the issue (subtract line 29 from line 23 and enter amount here)	30

Part V Description of Refunded Bonds. Complete this part only for refunding bonds.	
31 Enter the remaining weighted average maturity of the bonds to be currently refunded	years
32 Enter the remaining weighted average maturity of the bonds to be advance refunded	years
33 Enter the last date on which the refunded bonds will be called (MM/DD/YYYY)	
34 Enter the date(s) the refunded bonds were issued ► (MM/DD/YYYY)	

For Paperwork Reduction Act Notice, see separate instructions.

Cat. No. 63773S

Form **8038-G** (Rev. 9-2011)

Part VI Miscellaneous

- 35** Enter the amount of the state volume cap allocated to the issue under section 141(b)(5) **35**
- 36a** Enter the amount of gross proceeds invested or to be invested in a guaranteed investment contract (GIC) (see instructions) **36a**
- b** Enter the final maturity date of the GIC **37**
- c** Enter the name of the GIC provider
- 37** Pooled financings: Enter the amount of the proceeds of this issue that are to be used to make loans to other governmental units
- 38a** If this issue is a loan made from the proceeds of another tax-exempt issue, check box ☐ and enter the following information:
- b** Enter the date of the master pool obligation
- c** Enter the EIN of the issuer of the master pool obligation
- d** Enter the name of the issuer of the master pool obligation
- 39** If the issuer has designated the issue under section 265(b)(3)(B)(i)(III) (small issuer exception), check box ☒
- 40** If the issuer has elected to pay a penalty in lieu of arbitrage rebate, check box ☐
- 41a** If the issuer has identified a hedge, check here ☐ and enter the following information:
- b** Name of hedge provider
- c** Type of hedge
- d** Term of hedge
- 42** If the issuer has superintegrated the hedge, check box ☐
- 43** If the issuer has established written procedures to ensure that all nonqualified bonds of this issue are remediated according to the requirements under the Code and Regulations (see instructions), check box ☐
- 44** If the issuer has established written procedures to monitor the requirements of section 148, check box ☐
- 45a** If some portion of the proceeds was used to reimburse expenditures, check here ☐ and enter the amount of reimbursement
- b** Enter the date the official intent was adopted

Signature and Consent

Under penalties of perjury, I declare that I have examined this return and accompanying schedules and statements, and to the best of my knowledge and belief, they are true, correct, and complete. I further declare that I consent to the IRS's disclosure of the Issuer's return information, as necessary to process this return, to the person that I have authorized above.

Peter A. Williams
Signature of issuer's authorized representative

Date

April 2, 2018

Peter A. Williams, City Manager

Type or print name and title

Paid Preparer Use Only

Print/Type preparer's name

Preparer's signature

Date

Check ☐ if self-employed

PTIN

Firm's name

Firm's EIN

Firm's address

Phone no.

Form **8038-G** (Rev. 9-2011)



215 S. Seth Child Road
Manhattan, KS 66502
Phone: 888.777.7850
Fax: 888.777.7875
www.clpusa.net

April 6, 2018

Pinnacle Public Finance, Inc.
8377 E. Hartford Dr. Suite 115
Scottsdale, AZ 85255

Re: Master Equipment Lease Purchase Agreement dated as of 4/10/2018 between City of Bethel, (Lessee) and Community First National Bank, (Lessor); Lease #BETAK2018-03PB

Dear Therese,

This letter should serve as notification that Community First National Bank/Community Leasing Partners will file the IRS Form 8038 for City of Bethel, Alaska, EIN #92-6001644 on 4/10/2018.

We will ensure the form is submitted no later than the required filing date deadline.

If you have any questions, please feel free to contact me at (785) 323-4220.

Respectfully,

Cindy

Cindy Turner
Assistant Vice President-Leasing Operation

Bethel, Alaska

Lessee Schedule

Totals:		\$1,068,264.15	\$257,264.15	\$811,000.00	Rate 4.0479%	
Pmt #	Payment Date	Payment Amount	Interest	Principal	Purchase Price	Outstanding Balance
	4/10/2018					\$811,000.00
1	8/1/2018	\$71,217.61	\$10,122.23	\$61,095.38	\$779,900.81	\$749,904.62
2	8/1/2019	\$71,217.61	\$30,355.76	\$40,861.85	\$737,404.48	\$709,042.77
3	8/1/2020	\$71,217.61	\$28,701.69	\$42,515.92	\$693,187.92	\$666,526.85
4	8/1/2021	\$71,217.61	\$26,980.67	\$44,236.94	\$647,181.50	\$622,289.91
5	8/1/2022	\$71,217.61	\$25,189.98	\$46,027.63	\$599,312.76	\$576,262.27
6	8/1/2023	\$71,217.61	\$23,326.80	\$47,890.81	\$549,506.32	\$528,371.46
7	8/1/2024	\$71,217.61	\$21,388.21	\$49,829.40	\$497,683.74	\$478,542.06
8	8/1/2025	\$71,217.61	\$19,371.14	\$51,846.47	\$443,763.41	\$426,695.59
9	8/1/2026	\$71,217.61	\$17,272.42	\$53,945.19	\$387,660.42	\$372,750.40
10	8/1/2027	\$71,217.61	\$15,088.75	\$56,128.86	\$329,286.40	\$316,621.54
11	8/1/2028	\$71,217.61	\$12,816.68	\$58,400.93	\$268,549.43	\$258,220.60
12	8/1/2029	\$71,217.61	\$10,452.64	\$60,764.97	\$205,353.86	\$197,455.63
13	8/1/2030	\$71,217.61	\$7,992.90	\$63,224.71	\$139,600.16	\$134,230.92
14	8/1/2031	\$71,217.61	\$5,433.60	\$65,784.01	\$71,184.79	\$68,446.91
15	8/1/2032	\$71,217.61	\$2,770.70	\$68,446.91	-\$0.00	-\$0.00

Investor Schedule (Fee of \$25,646.28 paid to CLP)

Totals:		\$1,068,264.15	\$231,617.87	\$836,646.28	Rate 3.5600%	
Pmt #	Payment Date	Payment Amount	Interest	Principal	Purchase Price	Outstanding Balance
	4/10/2018	-\$836,646.28				\$836,646.28
1	8/1/2018	\$71,217.61	\$9,183.59	\$62,034.02	\$779,900.81	\$774,612.26
2	8/1/2019	\$71,217.61	\$27,576.20	\$43,641.41	\$737,404.48	\$730,970.84
3	8/1/2020	\$71,217.61	\$26,022.56	\$45,195.05	\$693,187.92	\$685,775.79
4	8/1/2021	\$71,217.61	\$24,413.62	\$46,803.99	\$647,181.50	\$638,971.80
5	8/1/2022	\$71,217.61	\$22,747.40	\$48,470.21	\$599,312.76	\$590,501.59
6	8/1/2023	\$71,217.61	\$21,021.86	\$50,195.75	\$549,506.32	\$540,305.84
7	8/1/2024	\$71,217.61	\$19,234.89	\$51,982.72	\$497,683.74	\$488,323.11
8	8/1/2025	\$71,217.61	\$17,384.30	\$53,833.31	\$443,763.41	\$434,489.81
9	8/1/2026	\$71,217.61	\$15,467.84	\$55,749.77	\$387,660.42	\$378,740.03
10	8/1/2027	\$71,217.61	\$13,483.15	\$57,734.46	\$329,286.40	\$321,005.57
11	8/1/2028	\$71,217.61	\$11,427.80	\$59,789.81	\$268,549.43	\$261,215.76
12	8/1/2029	\$71,217.61	\$9,299.28	\$61,918.33	\$205,353.86	\$199,297.43
13	8/1/2030	\$71,217.61	\$7,094.99	\$64,122.62	\$139,600.16	\$135,174.81
14	8/1/2031	\$71,217.61	\$4,812.22	\$66,405.39	\$71,184.79	\$68,769.42
15	8/1/2032	\$71,217.61	\$2,448.19	\$68,769.42	(\$0.00)	\$0.00

CLP Fee: \$25,646.28



Hughes Fire Equipment, Inc.
910 Shelley Street
Springfield, OR 97477

P - (541) 747-0072
F - (541) 747-0073

BILL TO:

CITY OF BETHEL
PO BOX 1388
BETHEL, AK 99559

Invoice
171688

CUSTOMER NO.
29275

SHIP TO:

CITY OF BETHEL
PO BOX 1388
BETHEL, AK 99559

PHONE: 907-543-2131

PAGE 1

DATE	SHIP VIA	F.O.B.	TERMS	ORDER TYPE
04/03/18	DELIVERED		Due 4/10/2018	
PURCHASE ORDER NUMBER	ORDER DATE	SALESPERSON	ORDERED BY	REVISION #
433526	04/03/18			171688

QUANTITY			ITEM NUMBER	DESCRIPTION	UNIT PRICE	AMOUNT
REQUIRED	SHIPPED	B/O				
1		@HT+	PIERCE	100% PREPAY FOR ONE (1) 2017 PIERCE ENFORCER 107' ASCENDANT AERIAL JOB 30856 VIN: 4P1BCAFF1HA017906	879,000.00	879,000.00

Product Total	Discount	Freight	Taxable Amount	Tax	Misc. Amt.	ORDER TOTAL
879,000.00	0.00		0.00	0.00		879,000.00

Terms and Conditions: Interest will be charged at the rate of 1 1/2% per month, or 18% annually on any unpaid balance. Customer agrees to pay reasonable attorney's fee and all other costs of collection after default. All orders received "As Ordered" and returned are subject to a 20% restocking fee. No returns are allowed without prior written approval from Hughes Fire Equipment. All shortages and discrepancies must be reported to Hughes Fire Equipment within 10 days of receipt of shipment. No cash refunds will be given.

Request for Taxpayer Identification Number and Certification

Give Form to the
requester. Do not
send to the IRS.

► Go to www.irs.gov/FormW9 for instructions and the latest information.

Print or type.
See Specific Instructions on page 3.

1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.

Hughes Fire Equipment, Inc.

2 Business name/disregarded entity name, if different from above

3 Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only one of the following seven boxes.

☐ Individual/sole proprietor or single-member LLC ☐ C Corporation ☒ S Corporation ☐ Partnership ☐ Trust/estate

☐ Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partnership) ►

Note: Check the appropriate box in the line above for the tax classification of the single-member owner. Do not check LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC is another LLC that is not disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC that is disregarded from the owner should check the appropriate box for the tax classification of its owner.

☐ Other (see instructions) ►

4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):

Exempt payee code (if any) _____

Exemption from FATCA reporting code (if any) _____

(Applies to accounts maintained outside the U.S.)

5 Address (number, street, and apt. or suite no.) See instructions.

910 Shelley Street

6 City, state, and ZIP code

Springfield, OR 97477

7 List account number(s) here (optional)

Requester's name and address (optional)

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

Note: If the account is in more than one name, see the instructions for line 1. Also see *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social security number

____ - ____ - ____

OR

Employer identification number

9 3 - 0 9 6 2 4 0 4

Part II Certification

Under penalties of perjury, I certify that:

- The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
- I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
- I am a U.S. citizen or other U.S. person (defined below); and
- The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

Sign
Here

Signature of
U.S. person ►

Date ► **2/15/18**

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to www.irs.gov/FormW9.

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.

- Form 1099-INT (interest earned or paid)

- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)
- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See *What Is backup withholding*, later.



CITY OF BETHEL
P.O. BOX 1388
BETHEL, ALASKA 99559
(907) 543-2905

WELLS FARGO BANK, N.A.
BETHEL BRANCH
BETHEL, ALASKA 99559
89-5/1252

222723

Check #: 222723

PAY

Sixty-Eight Thousand and 00/100 Dollars

DATE

AMOUNT

4/09/2018

68,000.00

TO THE
ORDER OF

NOT NEGOTIABLE AFTER 90 DAYS

HUGHES FIRE EQUIPMENT, INC
910 SHELLEY STREET
SPRINGFIELD OR 97477

AUTHORIZED SIGNATURES

⑈0222723⑈ ⑆125200057⑆ 0074503847⑈

ID Group 800-733-4277

LC-1

CITY OF BETHEL - Bethel, Alaska 99559

222723

VENDOR: 7779 HUGHES FIRE EQUIPMENT, INC

4/09/2018

Check No: 222723

INVOICE #	INV DATE	DESCRIPTION
04.01.018	4/01/2018	DOWN PAYMENT FOR LADDER TRUC

INV AMOUNT

68,000.00

TOTAL AMOUNT

68,000.00

CITY OF BETHEL - Bethel, Alaska 99559

222723

VENDOR: 7779 HUGHES FIRE EQUIPMENT, INC

4/09/2018

Check No: 222723

INVOICE #	INV DATE	DESCRIPTION
04.01.018	4/01/2018	DOWN PAYMENT FOR LADDER TRUC

INV AMOUNT

68,000.00

GL Number

10-60-669

TOTAL AMOUNT

68,000.00

PURCHASE AGREEMENT

This Purchase Agreement (together with all attachments referenced herein, (the "Agreement"), made and entered into by and between Hughes Fire Equipment Inc. ("Company"), and City of Bethel, an Alaska municipal corporation ("Customer") is effective as of the date specified in Section 3 hereof.

1. Definitions.

- a. "**Product**" means the fire apparatus and any associated equipment manufactured or furnished for the Customer by Company pursuant to the Specifications.
- b. "**Specifications**" means the general specifications, technical specifications, training, and testing requirements for the Product contained in the Company's Proposal for the Product prepared in response to the Public Procurement Authority's (PPA's) request for proposal managed by NPPGov.com
- c. "**Company Proposal**" means the proposal provided by Company attached as Exhibit C prepared in response to the PPA's request for proposal.
- d. "**Delivery**" means the date Company is prepared to make physical possession of the Product available to the Customer.
- e. "**Acceptance**" The Customer shall have the opportunity, as described in Section 8(b) below, to inspect the Product for substantial conformance with the material Specifications; unless Company receives a Notice of Defect within the time frame described in Section 8(b), the Product will be deemed to be in conformance with the Specifications and accepted by the Customer.

2. Purpose. This Agreement sets forth the terms and conditions of Company's sale of the Product to the Customer.

3. Term of Agreement. This Agreement will become effective on the date it is signed and approved by both Customer and Company ("Effective Date") and, unless earlier terminated pursuant to the terms of this Agreement, it will terminate upon the Customer's Acceptance of the Product and payment in full of the Purchase Price.

4. Purchase and Payment. The Customer agrees to purchase the Product specified on Exhibit A for the total purchase price of \$879,000.00 ("Purchase Price"). Prices are in U.S. funds.

5. Future Changes. Various state or federal regulatory agencies (e.g. NFPA, DOT, EPA) may require changes to the Specifications and/or the Product and in any such event any resulting cost increases incurred to comply therewith will be added to the Purchase Price to be paid by the Customer. To the extent practicable, Company will document and itemize any such price increases for the Customer.

6. Agreement Changes. The Customer may request that Company incorporate a change to the Products or the Specifications for the Products by delivering a change order to Company; provided, however, that any such change order must be in writing and include a description of the proposed change sufficient to permit Company to evaluate the feasibility of such change ("Change Order"). Within seven (7) business days of receipt of a Change Order, Company will inform the Customer in writing of the feasibility of the Change Order, the earliest possible implementation date for the Change Order, of any increase or decrease in the Purchase Price resulting from such Change Order, and of any effect on production scheduling or Delivery resulting from such Change Order. Company shall not be liable to the Customer for any delay in performance or Delivery arising from any such Change Order. A Change Order is only effective when counter-signed by Company's authorized representative.

7. Cancellation/Termination. In the event this Agreement is cancelled or terminated by a party before completion, Company may charge a cancellation fee. The following charge schedule based on costs incurred may be applied: (a) 10% of the Purchase Price after order is accepted and entered by Company; (b) 20% of the Purchase Price after completion of approval drawings, and; (c) 30% of the Purchase Price upon any material requisition. The cancellation fee will increase accordingly as costs are incurred as the order progresses through engineering and into manufacturing. Company endeavors to mitigate any such costs through the sale of such Product to another purchaser; however, Customer shall remain liable for the difference between the Purchase Price and, if applicable, the sale price obtained by Company upon sale of the Product to another purchaser, plus any costs incurred by Company to conduct any such sale.

8. Delivery, Inspection and Acceptance. (a) Delivery. The City of Bethel is responsible for transporting the unit from the Pierce facility in Appleton, Wisconsin to the Hughes Fire Equipment facility in Tacoma, WA. All expenses are the responsibility of the City of Bethel, AK. Risk of loss for the apparatus will transfer to the City of Bethel upon departure from the Pierce facility in Appleton, WI. Hughes Fire Equipment is responsible for transportation of the apparatus from Tacoma, WA to the port in Bethel, Alaska. (b) Inspection and Acceptance. Upon Delivery, Customer shall have fifteen (15) business days within which to inspect the

Product for substantial conformance to the material Specifications, and in the event of substantial non-conformance to the material

Specifications to furnish Company with written notice sufficient to permit Company to evaluate such non-conformance ("Notice of Defect"). Any Product not in substantial conformance to material Specifications shall be remedied by Company within thirty (30) business days from the Notice of Defect. In the event Company does not receive a Notice of Defect within fifteen (15) business days of Delivery, Product will be deemed to be in conformance with Specifications and accepted by Customer.

9. Notice. Any required or permitted notices hereunder must be given in writing at the address of each party set forth below, or to such other address as either party may substitute by written notice to the other in the manner contemplated herein, by one of the following methods: hand delivery; or certified mail, return receipt requested, postage prepaid; or nationally-recognized private express courier:

Company

Hughes Fire Equipment Inc.
910 Shelley Street
Springfield, Oregon 97477

Customer

City of Bethel, Attn: Legal Department
P.O. Box 1388
Bethel, Alaska 99559

10. Standard Warranty. Any applicable manufacturer warranties are attached hereto as Exhibit B and made a part hereof. Any additional warranties must be expressly approved in writing by Company's authorized representative.

a. Disclaimer. OTHER THAN AS EXPRESSLY SET FORTH IN THIS AGREEMENT, NEITHER COMPANY, ITS PARENT COMPANY, AFFILIATES, SUBSIDIARIES, LICENSORS OR SUPPLIERS, THEIR RESPECTIVE OFFICERS, DIRECTORS, EMPLOYEES, SHAREHOLDERS, AGENTS OR REPRESENTATIVES, MAKE ANY EXPRESS OR IMPLIED WARRANTIES WITH RESPECT TO THE PRODUCTS PROVIDED HEREUNDER OR OTHERWISE REGARDING THIS AGREEMENT, WHETHER ORAL OR WRITTEN, EXPRESS, IMPLIED OR STATUTORY. WITHOUT LIMITING THE FOREGOING, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY, THE IMPLIED WARRANTY AGAINST INFRINGEMENT, AND THE IMPLIED WARRANTY OR CONDITION OF FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED AND DISCLAIMED. STATEMENTS MADE BY SALES REPRESENTATIVES OR IN PROMOTIONAL MATERIALS DO NOT CONSTITUTE WARRANTIES.

b. Exclusions of Incidental and Consequential Damages. In no event shall Company be liable for consequential, incidental or punitive damages incurred by Customer or any third party in connection with any matter arising out of or relating to this Agreement, or the breach thereof, regardless of whether such damages arise out of breach of warranty, tort, contract, strict liability, statutory liability, indemnity, whether resulting from non-delivery or from Company's own negligence, or otherwise.

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

12. Default. The occurrence of one or more of the following shall constitute a default under this Agreement: (a) the Customer fails to pay when due any amounts under this Agreement or to perform any of its obligations under this Agreement; (b) Company fails to perform any of its obligations under this Agreement; (c) either party becomes insolvent or become subject to a bankruptcy or insolvency proceedings; (d) any representation made by either party to induce the other to enter into this Agreement is false in any material respect; (e) the Customer dissolves, merges, consolidates or transfers a substantial portion of its property to another entity; or (f) the Customer is in default or has breached any other contract or agreement with Company.

13. Manufacturer's Statement of Origin. It is agreed that the manufacturer's statement of origin ("MSO") for the Product covered by this Agreement shall remain in the possession of Company until the entire Purchase Price has been paid. If more than one Product is covered by this Agreement, then the MSO for each individual Product shall remain in the possession of Company until the Purchase Price for that Product has been paid in full. In case of any default in payment, Company may take full possession

of the Product, and any payments that have been made shall be applied as payment for the use of the Product up to the date of taking possession.

14. Independent Contractors. The relationship of the parties established under this Agreement is that of independent contractors and neither party is a partner, employee, agent, or joint venture of or with the other.

15. Assignment. Neither party may assign its rights and obligations under this Agreement unless it has obtained the prior written approval of the other party.

16. Governing Law; Jurisdiction. Without regard to any conflict of law provisions, this Agreement is to be governed by and under the laws of the state of Alaska.

17. Facsimile Signatures. The delivery of signatures to this Agreement by facsimile transmission shall be binding as original signatures.

18. Entire Agreement. This Agreement shall be the exclusive agreement between the parties for the Product. Additional or different terms proposed by the Customer shall not be applicable, unless accepted in writing by Company's authorized representative. No change in, modification of, or revision of this Agreement shall be valid unless in writing and signed by Company's authorized representative.

19. Conflict. In the event of a conflict between the Customer Specifications and the Company Proposal, the Company Proposal shall control. In the event there is a conflict between the Company Proposal and this Agreement, the Company Proposal shall control.

Accepted and agreed to:

COMPANY: Hughes Fire Equipment Inc.

Name: [Signature]
Title: President
Date: April 2, 2018

CUSTOMER: City of Bethel

[Signature]
Name: Peter A. Williams
Title: City Manager
Date: April 2, 2018

EXHIBIT A

PURCHASE DETAIL FORM
Hughes Fire Equipment Inc.Date: April 2, 2018Customer Name: City of Bethel

Quantity	Chassis Type	Body Type	Price per Unit
One (1)	Pierce Enforcer	107' Ascendant Stock 30856 / AK766	\$905,156.00
Less	Payment Upon Completion at Factory Discount		(10,356.00)
Less	100% Prepayment by March 30, 2018		(5,910.00)
Less	Customer Drive-Out Discount (Appleton, WI to Tacoma, WA)		(9,890.00)
TOTAL			\$879,000.00

Warranty Period: Standard per Pierce Proposal 30856 / AK766.Training Requirements: Standard per Pierce Proposal 30856 / AK766.

Other Matters: A Customer Fire Equipment Allowance in the amount of \$3,000.00 will be provided to the customer. Hughes Fire Equipment will cover the airfare and hotel expense for one (1) customer representative to fly from Bethel, AK to Appleton, Wisconsin. Once this representative departs the factory, in Appleton, WI, with the apparatus, all expenses incurred to transport the unit to the HFE-Tacoma, WA facility are the responsibility of the City of Bethel, AK. Airfare for this representative to fly from Tacoma, WA to Bethel, AK will be provided by HFE. Additionally, one (1) Round trip airfare for the Fire Chief from Bethel, AK to Seattle, WA will be provided by Hughes Fire Equipment.

This contract is available for inter-local and other municipal corporations to utilize with the option of adding or deleting any manufacturer available options, including chassis models. Any addition or deletion may affect the unit price.

Payment Terms: 100% Prepayment will be due no later than March 30, 2018. If payment is not made at that time, \$16,266.00 or a portion thereof, will be added to the final invoice.

[NOTE: If deferred payment arrangements are required, the Customer must make such financial arrangements through a financial institution acceptable to Company.] All taxes, exsises and levies that Company may be required to pay or collect by reason of any present or future law or by any governmental authority based upon the sale, purchase, delivery, storage, processing, use, consumption, or transportation of the Product sold by Company to the Customer shall be for the account of the Customer and shall be added to the Purchase Price. All delivery prices or prices with freight allowance are based upon prevailing freight rates and, in the event of any increase or decrease in such rates, the prices on all unshipped Product will be increased or decreased accordingly. Delinquent payments shall be subject to a carrying charge of 1.5 percent per month or such lesser amount permitted by law. Company will not be required to accept payment other than as set forth in this Agreement. However, to avoid a late charge assessment in the event of a dispute caused by a substantial nonconformance with material Specifications (other than freight), the Customer may withhold up to five percent (5%) of the Purchase Price until such time that Company substantially remedies the nonconformance with material Specifications, but no longer than sixty (60) days after Delivery. If the disputed amount is the freight charge, the Customer may withhold only the amount of the freight charge until the dispute is settled, but no longer than sixty (60) days after Delivery. Company shall have and retain a purchase money security interest in all goods and products now or hereafter sold to the Customer by Company or any of its affiliated companies to secure payment of the Purchase Price for all such goods and products. In the event of nonpayment by the Customer of any debt, obligation or liability now or hereafter incurred or owing by the Customer to Company, Company shall have and may exercise all rights and remedies of a secured party under Article 9 of the Uniform Commercial Code (UCC) as adopted by the state of Oregon.

THIS PURCHASE DETAIL FORM IS EXPRESSLY SUBJECT TO THE PURCHASE AGREEMENT TERMS AND CONDITIONS DATED AS OF April 2, 2018 BETWEEN COMPANY AND City of Bethel WHICH TERMS AND CONDITIONS ARE HEREBY INCORPORATED IN, AND MADE PART OF, THIS PURCHASE DETAIL FORM AS THOUGH EACH PROVISION WERE SEPARATELY SET FORTH HEREIN, EXCEPT TO THE EXTENT OTHERWISE STATED OR SUPPLEMENTED BY COMPANY HEREIN.

Cindy Turner

From: Shelby Sebright <ssebright@hughesfire.com>
Sent: Wednesday, April 04, 2018 1:20 PM
To: Cindy Turner; Sheri Taylor; Andy Klein
Cc: Bill Howell
Subject: RE: Bethel, AK - Invoice, W9 and Purchasing Documents
Attachments: HFE W9 2018.pdf; 30856 requested copy of MSO.pdf

Cindy,

- As this contract was already executed, we are unable to make changes. We have told the customer that payment can be made on April 10. Please use this email as a confirmation that the payment due date was extended to April 10, 2018.
- The most recent W-9 form is attached.
- See attached copy of the front of the MSO from the manufacturer.

Thank you,

Shelby Sebright

Contract Administrator

Hughes Fire Equipment, Inc. www.hughesfire.com

910 Shelley St. | Springfield, OR 97477 | Phone: 541-747-0072 | Fax: 541-747-0073 | Email: ssebright@hughesfire.com

This message is intended solely for the use of the individual and entity to whom it is addressed, and may contain information that is privileged, confidential and exempt from disclosure under applicable state and federal laws. If you are not the addressee, or are not authorized to receive for the intended addressee, you are hereby notified that you may not use, copy, distribute or disclose to anyone any portion of this message or the information contained herein. If you have received this message in error, please immediately advise the sender by reply email and destroy the message.

From: Cindy Turner <cindyturner@clpusa.net>
Sent: Wednesday, April 04, 2018 10:31 AM
To: Shelby Sebright <ssebright@hughesfire.com>; Sheri Taylor <staylor@hughesfire.com>; Andy Klein <aklein@hughesfire.com>
Cc: Bill Howell <bhowell@cityofbethel.net>
Subject: RE: Bethel, AK - Invoice, W9 and Purchasing Documents

Shelby,

Can you let me know when I can expect the below list of items I still need for this transaction?

Thank you.

Regards,

Cindy Turner
Assistant Vice President-Leasing Operations
Community Leasing Partners
215 S. Seth Child Road
Manhattan, KS 66502
Division of Community First National Bank – Member FDIC

EXHIBIT B
WARRANTY

STANDARD PER PIERCE PROPOSAL 30856 / AK766.

EXHIBIT C
COMPANY PROPOSAL

STANDARD PER PIERCE PROPOSAL 30856 / AK766.

Bond No. 9281464

Fidelity and Deposit Company of Maryland
HOME OFFICE
3910 KESWICK ROAD BALTIMORE, MARYLAND 21211

PERFORMANCE AND PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS, THAT, Hughes Fire Equipment

910 Shelley Street, Springfield, OR 97477

Fidelity and Deposit Company of Maryland
(hereinafter called Principal), as Principal and 1299 Zurich Way, 5th Floor, Schaumburg, IL 60196-1056,
a corporation organized and existing under the laws of the State of MD with its principal office in the City of
Schaumburg, IL, (hereinafter called Surety) as Surety are held and firmly bound unto
City of Bethel

(hereinafter called the Owner) and to all persons who furnish labor or material directly to the Principal for use in
the prosecution of the work hereinafter named, in the just and full sum of Nine Hundred Five Thousand
One Hundred Fifty Six Dollars and 00/100 Dollars (\$905,156.00)

to the payment of which sum well and truly to be made, the said Principal and Surety bind themselves, and their
respective heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has entered into a certain written contract with the Owner, dated the 5th
day of April, 2018, for One (1) Pierce Enforcer Aerial Ascendant 107' Heavy Duty
Ladder

which contract is hereby referred to and made a part hereof as fully and to the same extent as if copied at length
herein.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the said Principal
shall fully indemnify the Owner from and against any failure on his/her part faithfully to perform the obligations
imposed upon him/her under the terms of said contract free and clear of all liens arising out of claims for labor
and material entering into the work, and if the said Principal shall pay all persons who shall have furnished labor
or material directly to the Principal for use in the prosecution of the aforesaid work, each of which said persons
shall have a direct right of action on this instrument in his/her own name and for his/her own benefit, subject,
however, to the Owner's priority, then this obligation to be void; otherwise to remain in full force and effect.

PROVIDED, HOWEVER, that no action, suit or proceeding shall be had or maintained against the Surety on
this instrument unless the same be brought or instituted and process served upon the Surety within two years
after completion of the work mentioned in said contract, whether such work be completed by the Principal,
Surety or Owner; but if there is any maintenance or warranty period provided in the contract for which said
Surety is liable, an action for such maintenance or warranty may be brought within two years from the expiration
of said maintenance or warranty period, but not afterwards.

BY ACCEPTANCE of this bond, it is hereby acknowledged that the attached Dual Obligee Rider becomes a
part of this bond.

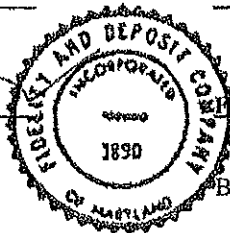
IN WITNESS WHEREOF the said Principal and Surety have signed and sealed this instrument this 5th
day of April, 2018, Hughes Fire Equipment

Dani Taylor

Witness:

Cathy Hutson

Witness: Cathy Hutson



Beth Hughes

Principal

Fidelity and Deposit Company of Maryland

Surety

By:

Sarah E. DeYoung
Sarah E. DeYoung Attorney-In-Fact

Fidelity and Deposit Company of Maryland

HOME OFFICE
3910 KESWICK ROAD BALTIMORE, MARYLAND 21211

DUAL OBLIGEE RIDER

To be attached to and form a part of bond #9281464 executed by
Fidelity and Deposit Company of Maryland, as Surety this 5th day of April, 2018
in the amount of Nine Hundred Five Thousand One Hundred Fifty Six Dollars and 00/100 (\$905,156.00) on
behalf of Hughes Fire Equipment, as Principal,
in favor of the City of Bethel as Obligee.

Whereas, upon the request of the Principal and Obligee, the attached bond is hereby amended to
add Pinnacle Public Finance Inc. AOIA; 8377 East Hartford Drive, Suite 115, Scottsdale, AZ 85255,
as additional Obligee.

The Surety shall not be liable under this bond to the Obligees, or either of them, unless the said
Obligees or either of them, shall make payments to the Principal or to the Surety, in case it
arranges for the completion of the contract upon default of the Principal, strictly in accordance
with the terms of said contract as to payments, and shall perform all the other obligations to be
performed under said contract at the time and in the manner therein set forth.

In no event shall the Surety be liable in the aggregate to both Obligees for more than the penalty
of its Performance Bond (or Performance and Payment Bond, as applicable herein), nor shall it
be liable except for a single payment for each single breach or default. At the Surety's election,
any payment due to either Obligee may be made by its check issued jointly to both.

All other terms and conditions of this bond are unchanged except as herein above modified.

Bond Number 9281464

Obligee: City of Bethel

**ZURICH AMERICAN INSURANCE COMPANY
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY
FIDELITY AND DEPOSIT COMPANY OF MARYLAND
POWER OF ATTORNEY**

KNOW ALL MEN BY THESE PRESENTS: That the ZURICH AMERICAN INSURANCE COMPANY, a corporation of the State of New York, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, a corporation of the State of Maryland, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND a corporation of the State of Maryland (herein collectively called the "Companies"), by Michael P. Bond, Vice President, in pursuance of authority granted by Article V, Section 8, of the By-Laws of said Companies, which are set forth on the reverse side hereof and are hereby certified to be in full force and effect on the date hereof, do hereby nominate, constitute, and appoint Sarah E. DeYoung, its true and lawful agent and Attorney-in-Fact, to make, execute, seal and deliver, for, and on its behalf as surety, and as its act and deed: any and all bonds and undertakings, and the execution of such bonds or undertakings in pursuance of these presents, shall be as binding upon said Companies, as fully and amply, to all intents and purposes, as if they had been duly executed and acknowledged by the regularly elected officers of the ZURICH AMERICAN INSURANCE COMPANY at its office in New York, New York, the regularly elected officers of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at its office in Owings Mills, Maryland, and the regularly elected officers of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at its office in Owings Mills, Maryland, in their own proper persons.

The said Vice President does hereby certify that the extract set forth on the reverse side hereof is a true copy of Article V, Section 8, of the By-Laws of said Companies, and is now in force.

IN WITNESS WHEREOF, the said Vice-President has hereunto subscribed his/her names and affixed the Corporate Seals of the said ZURICH AMERICAN INSURANCE COMPANY, COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and FIDELITY AND DEPOSIT COMPANY OF MARYLAND, this 24th day of April, A.D. 2017.

ATTEST:
ZURICH AMERICAN INSURANCE COMPANY
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY
FIDELITY AND DEPOSIT COMPANY OF MARYLAND

Michael P. Bond

By: Michael P. Bond
Vice President



Dawn E. Brown

By: Dawn E. Brown
Secretary

State of Maryland
County of Baltimore

On this 24th day of April, A.D. 2017, before the subscriber, a Notary Public of the State of Maryland, duly commissioned and qualified, Michael P. Bond, Vice President and Dawn E. Brown, Secretary of the Companies, to me personally known to be the individuals and officers described in and who executed the preceding instrument, and acknowledged the execution of same, and being by me duly sworn, depose and saith, that he/she is the said officer of the Company aforesaid, and that the seals affixed to the preceding instrument are the Corporate Seals of said Companies, and that the said Corporate Seals and the signature as such officer were duly affixed and subscribed to the said instrument by the authority and direction of the said Corporations.

IN TESTIMONY WHEREOF, I have herunto set my hand and affixed my Official Seal the day and year first above written.

Constance A. Dunn

Constance A. Dunn, Notary Public
My Commission Expires: July 9, 2019



EXTRACT FROM BY-LAWS OF THE COMPANIES

"Article V, Section 8, Attorneys-in-Fact. The Chief Executive Officer, the President, or any Executive Vice President or Vice President may, by written instrument under the attested corporate seal, appoint attorneys-in-fact with authority to execute bonds, policies, recognizances, stipulations, undertakings, or other like instruments on behalf of the Company, and may authorize any officer or any such attorney-in-fact to affix the corporate seal thereto; and may with or without cause modify or revoke any such appointment or authority at any time."

CERTIFICATE

I, the undersigned, Vice President of the ZURICH AMERICAN INSURANCE COMPANY, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND, do hereby certify that the foregoing Power of Attorney is still in full force and effect on the date of this certificate; and I do further certify that Article V, Section 8, of the By-Laws of the Companies is still in force.

This Power of Attorney and Certificate may be signed by facsimile under and by authority of the following resolution of the Board of Directors of the ZURICH AMERICAN INSURANCE COMPANY at a meeting duly called and held on the 15th day of December 1998.

RESOLVED: "That the signature of the President or a Vice President and the attesting signature of a Secretary or an Assistant Secretary and the Seal of the Company may be affixed by facsimile on any Power of Attorney...Any such Power or any certificate thereof bearing such facsimile signature and seal shall be valid and binding on the Company."

This Power of Attorney and Certificate may be signed by facsimile under and by authority of the following resolution of the Board of Directors of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at a meeting duly called and held on the 5th day of May, 1994, and the following resolution of the Board of Directors of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at a meeting duly called and held on the 10th day of May, 1990.

RESOLVED: "That the facsimile or mechanically reproduced seal of the company and facsimile or mechanically reproduced signature of any Vice-President, Secretary, or Assistant Secretary of the Company, whether made heretofore or hereafter, wherever appearing upon a certified copy of any power of attorney issued by the Company, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed the corporate seals of the said Companies, this 5th day of April, 2018.



Michael C. Fay, Vice President

TO REPORT A CLAIM WITH REGARD TO A SURETY BOND, PLEASE SUBMIT A COMPLETE DESCRIPTION OF THE CLAIM INCLUDING THE PRINCIPAL ON THE BOND, THE BOND NUMBER, AND YOUR CONTACT INFORMATION TO:

Zurich Surety Claims
1299 Zurich Way
Schaumburg, IL 60196-1056
www.zurichna.com/en/claims



GROUP HEALTH BENEFIT PLAN CONTRACT

for
CITY OF BETHEL
P.O. Box 1388
Bethel, AK 99559

(herein referred to as the Group)

Premera Blue Cross Blue Shield of Alaska, an independent licensee of the Blue Cross Blue Shield Association, agrees to provide the benefits described in this Contract for eligible employees of the Group and their eligible dependents who are enrolled for coverage under this Contract, provided that the Group is a large employer, as defined on the next page of the Contract, remains actively engaged in business and requirements are met that would otherwise provide grounds for termination as stated in "Contract Termination" in the benefit booklet or booklets. All benefits of this Contract are subject to the terms and conditions stated herein and any endorsements or riders included or issued thereafter.

The Group Health Benefit Plan delegates its authority to Premera Blue Cross Blue Shield of Alaska to administer the routine operation of the plan. As part of this function, Premera Blue Cross Blue Shield of Alaska must use its expertise and judgment to reasonably construe the terms of this coverage and apply the terms of the contract for making decisions in specific eligibility, benefits and claims situations.

This Contract is valid on the effective date indicated below only when signed by an officer of Premera Blue Cross Blue Shield of Alaska. Payment of the subscription charges indicates that the Group accepts this Contract.

Any existing group contract or agreement between the Group and Premera Blue Cross Blue Shield of Alaska that is being replaced by this Contract is terminated when this one becomes effective.

GROUP NUMBER 9002891
CONTRACT EFFECTIVE DATE July 1, 2024
CONTRACT ANNIVERSARY DATE July 1, 2025
SUBSCRIPTION CHARGE DUE DATE first of each month
STATE IN WHICH GROUP IS LOCATED Alaska

Title: City Clerk

7/28/2024

Date:

Jim Grazko
President
Premera Blue Cross Blue Shield of Alaska

Date: July 1, 2024

CONTRACT FORM NUMBER: 90028910724EA

HIGH DEDUCTIBLE HEALTH PLAN

If the Group includes a high deductible health plan, the high deductible health plan meets the requirements of a high deductible health plan for use in conjunction with a health savings account. Participation in a health savings account is not a requirement for enrollment or continued eligibility on this plan. Premera Blue Cross Blue Shield of Alaska is not an administrator, trustee or fiduciary of any health savings account which may be used in conjunction with this health plan.

STANDARD PROVISIONS

LARGE EMPLOYER

A large employer is an employer that employed an average of at least 51 common law employees on business days during the preceding calendar year and that employs at least 51 employees on the first day of the current Contract Term.

In the case of an employer that was not in existence throughout the preceding calendar year, the determination of whether the employer is a large employer will be based on the average number of employees that it is reasonably expected the employer will employ on business days in the current calendar year.

By entering into this Contract, the Group certifies that it meets the requirements under State and Federal law in order to purchase the health plan coverage as a large employer. If the Group no longer believes its plan to be a large employer, or if it is found not to be a large employer by a State or Federal agency, the Group must notify Premera Blue Cross as soon as practicable. The Group will indemnify, defend, and hold Premera Blue Cross harmless for any claims, damages, judgments and expenses (including attorney's fees) directly or indirectly based on or arising out of the Group's determination of its large employer status.

CONTRACT

The entire Contract between the Group and Premera Blue Cross Blue Shield of Alaska consists of all of the following:

- The Contract face page and "Standard Provisions"
- The attached benefit booklet(s)
- The Funding Arrangement Agreement (Exhibit A) between the Group and Premera Blue Cross Blue Shield of Alaska
- The Group's signed application which is kept on file with Premera Blue Cross Blue Shield of Alaska (a copy is available upon request), and
- All attachments, endorsements and riders included or issued hereafter.

No agent or representative of Premera Blue Cross Blue Shield of Alaska or any other entity is authorized to make any changes, additions or deletions to this Contract or to waive any provision of this Contract. Changes, alterations, additions or exclusions can only be done over the signature of an officer of Premera Blue Cross Blue Shield of Alaska.

No assignment of the Group's interest as a party to this Contract will be binding on Premera Blue Cross Blue Shield of Alaska.

If there is a language conflict between the Contract, benefit booklet or other document, the benefit booklet (as amended by any attachments, endorsements or riders) will govern.

NOTICE

Any notice Premera Blue Cross Blue Shield of Alaska is required to submit to the Group or subscriber will be considered to be delivered if mailed to the Group or subscriber at the most recent address appearing on Premera Blue Cross Blue Shield of Alaska records. Premera Blue Cross Blue Shield of Alaska will use the date of postmark in determining the date of the notification. If the Group is required to submit notice to Premera Blue Cross Blue Shield of Alaska, it will be considered delivered on the postmark date or if not postmarked, the date Premera Blue Cross Blue Shield of Alaska receives it.

CONTRACT TERM AND RENEWAL

The initial Contract Term begins on the Contract's effective date and continues to the contract anniversary date, unless terminated in accordance with the section entitled "Contract Termination." If not so terminated, the

Contract is kept in force during the initial Term by the Group's payment of required subscription charges when due.

After the initial Contract Term, this Contract will continue in force on a month-to-month basis by the Group's payment of required subscription charges when due, unless it is changed or terminated in accordance with the contract change and termination provisions stated elsewhere in this Contract.

FUNDING ARRANGEMENT AGREEMENT (EXHIBIT A)

The contract period, subscription charges and contract cancellation provisions are set forth in the Funding Arrangement Agreement (Exhibit A) between the Group and Premera Blue Cross Blue Shield of Alaska, which is attached to and made part of this Contract.

CONTRACT MODIFICATIONS

In addition to the modification provisions stated within the Funding Arrangement Agreement (Exhibit A), Premera Blue Cross Blue Shield of Alaska may modify the subscription charges, benefits, or any other provisions of this Contract by giving 45 days' advance written notice to the Group prior to the end of the contract term.

The Group may reject the modification by written notice delivered to Premera Blue Cross Blue Shield of Alaska at least 15 days before the modification is to take effect. Rejection of a modification will terminate the Contract on the last date for which subscription charges were paid. If notice is not given to Premera Blue Cross Blue Shield of Alaska by the Group by the required time, the Contract will be renewed as modified, provided all required subscription charges are paid when due.

Any contract modifications requested by the Group and agreed to by Premera Blue Cross Blue Shield of Alaska will become effective on the Group's contract effective date that coincides with or next follows the date of the request.

OUT-OF-AREA CARE

As a member of the Blue Cross Blue Shield Association ("BCBSA"), Premera Blue Cross Blue Shield of Alaska has arrangements with other Blue Cross and Blue Shield Licensees ("Host Blues") for members care outside Premera Blue Cross Blue Shield of Alaska service area. These arrangements are called "Inter-Plan Arrangements." Inter-Plan Arrangements follow the rules and process set by BCBSA. Member's receiving care through these Inter-Plan Arrangements does not change covered benefits, benefit levels, or any stated eligibility requirements of this plan.

The BlueCard® Program is the Inter-Plan Arrangement that applies to most claims from Host Blues' network providers. The Host Blue is responsible for such services as contracting and handling all interactions with its network providers. Premera Blue Cross Blue Shield of Alaska will remain responsible for Premera Blue Cross Blue Shield of Alaska's other duties under the Contract. Other Inter-Plan Arrangements apply to providers that are not in the Host Blues' networks (non-participating providers). This Out-Of-Area Care section explains how the plan pays both types of providers.

If this plan has a prescription drug benefit through Premera Blue Cross Blue Shield of Alaska, Premera Blue Cross Blue Shield of Alaska will process claims for the Prescription Drugs benefit directly, not through an Inter-Plan Arrangement.

BlueCard Program

Except for copays, Premera Blue Cross Blue Shield of Alaska will base the amount members must pay for claims from Host Blues' network providers on the lower of the provider's billed charge for the covered services or the allowable charge that the Host Blue made available to Premera Blue Cross Blue Shield of Alaska.

Host Blues determines the allowable charge for covered services, which are reflected in the terms of their network provider contracts. The allowable charge can be one of the following:

- An actual price. An actual price is a negotiated amount passed to Premera Blue Cross Blue Shield of Alaska without any other increases or decreases.
- An estimated price. An estimated price is a negotiated price that is reduced or increased to take into account certain payments negotiated with the provider and other claim- and non-claim-related transactions. Such transactions may include, but are not limited to, anti-fraud and abuse recoveries, provider refunds not applied on a claim-specific basis, retrospective settlements, and performance-related bonuses or incentives.

- An average price. An average price is a percentage of billed charges for the covered services representing the aggregate payments that the Host Blue negotiated with all of its Heritage providers or with its network providers in the same or similar class. It may also include the same types of claim- and non-claim-related transactions as an estimated price.

Host Blues using either an estimated price or an average price may increase or reduce such prices prospectively to reflect additional amounts or credits for claims already paid or expected to be paid to providers or refunds received or expected to be received from providers. However, the BlueCard Program requires that the Host Blue's allowable charge for a claim is final for that claim; no future price adjustment will change the pricing of past claims. Premera Blue Cross Blue Shield of Alaska takes into account the various pricing methods used by Host Blues in determining subscription charges for Premera Blue Cross Blue Shield of Alaska plans.

Clark County Providers

Services in Clark County, Washington are processed through BlueCard. However, some providers in Clark County do have contracts with Premera Blue Cross Blue Shield of Alaska. These providers will submit claims directly to Premera Blue Cross Blue Shield of Alaska, and benefits will be based on Premera Blue Cross Blue Shield of Alaska's allowed amount for the covered service or supply.

Value-Based Programs

Members might get covered services from providers that participate in a Host Blue's value-based program (VBP). Value-based programs focus on meeting standards for treatment outcomes, cost and quality, and for coordinating care when the member is seeing more than one provider. The Host Blue may pay VBP providers for meeting the above standards.

Premera Blue Cross Blue Shield of Alaska may include a factor in the subscription charges for your plan to cover charges by Host Blues for their VBP payments not included in specific claims.

Taxes, Surcharges, and Fees

In some cases, a law or regulation may require that a surcharge, tax or other fee be applied to claims under this plan. When this occurs, Premera Blue Cross Blue Shield of Alaska will include that surcharge, tax or fee as a claims cost in Premera Blue Cross Blue Shield of Alaska's subscription charge calculations.

Non-Participating Providers

When covered services are provided outside Premera Blue Cross Blue Shield of Alaska's service area by providers that do not have a contract with the Host Blue, the allowed amount will generally be based on either Premera Blue Cross Blue Shield of Alaska's allowed amount for these providers or the pricing requirements under applicable law. Members are responsible for the difference between the amount that the non-participating provider bills and this plan's payment for the covered services. See the **Definitions** section in the benefit booklet for details on "allowed amount."

Blue Cross Blue Shield Global Core Program

If members are outside the United States, the Commonwealth of Puerto Rico, and the U.S. Virgin Islands (the "BlueCard service area"), they may be able to take advantage of Blue Cross Blue Shield Global Core. Blue Cross Blue Shield Global Core is unlike the BlueCard Program in the BlueCard service area in certain ways. For instance, although Blue Cross Blue Shield Global Core helps members access a provider network, members will typically have to pay the provider and submit the claims themselves to get reimbursement for covered services. However, if members need hospital inpatient care, the service center can often direct them to hospitals that will not require them to pay in full at the time of service. In such cases, these hospitals will also submit the member's claims to Blue Cross Blue Shield Global Core.

RECORDS MAINTENANCE

The Group shall maintain such books and records supporting the activities required by this Contract, and submit such information to Premera Blue Cross Blue Shield of Alaska as may be required by Premera Blue Cross Blue Shield of Alaska and as may be necessary for compliance with the applicable provisions of state and federal laws and regulations. Such books and records shall be maintained in accordance with the general standards applicable to such book or record keeping, and such obligations shall not terminate upon termination of this Contract. Premera Blue Cross Blue Shield of Alaska has the right to request, inspect, or audit the Group's records at any reasonable time during regular business hours.

CONFIDENTIALITY OF MEMBER INFORMATION

No employee, producer, or other representative of Premera Blue Cross Blue Shield of Alaska will provide to the Group any protected personal information that is either implicitly or explicitly identifiable to a member without the express, written consent of the member or the member's legal representative. This protected personal information may include health information or personal data such as a member's address, telephone number or Social Security Number.

The Group will not ask nor direct any employee, producer, or other representative of Premera Blue Cross Blue Shield of Alaska to divulge a member's protected personal information unless the member's express, written permission has been obtained.

MEMBERSHIP ADMINISTRATION

The Group shall provide Premera Blue Cross Blue Shield of Alaska with an initial list of subscribers and their dependents and must update that information at least monthly. All eligibility updates must be provided in a file format that Premera Blue Cross Blue Shield of Alaska and the Group agree upon in advance. Any changes to the agreed file format must also be agreed upon in advance by Premera Blue Cross Blue Shield of Alaska and the Group. Eligibility information not provided to Premera Blue Cross Blue Shield of Alaska at least 7 business days before the Group's scheduled monthly billing date may not be reflected on that bill.

The membership change detail provided must include all the standard data listed in the Quick Reference Guide for Plan Administrators, which standards are hereby incorporated into this Contract by reference.

PAYMENT ADMINISTRATION

During the Contract Term, Premera Blue Cross Blue Shield of Alaska will bill the Group each month based upon the eligibility information provided as stated in "Membership Administration" above. The Group shall be liable for, and shall pay to Premera Blue Cross Blue Shield of Alaska on or before the first day of each month, an amount equal to the total of the monthly rate on behalf of the members named on the updated eligibility list.

All payments must include all the payment detail data listed in the Quick Reference Guide for Plan Administrators, which standards are hereby incorporated into this Contract by reference. Payment information not already reflected on Premera Blue Cross Blue Shield of Alaska's bill must include all the standard detail data in a file format that Premera Blue Cross Blue Shield of Alaska and the Group agree upon in advance. Any changes to the file format must also be agreed upon by Premera Blue Cross Blue Shield of Alaska and the Group in advance.

DELEGATION

The Group has the right to delegate some or all of its administrative duties under this Contract to a third party administrator. Notwithstanding such delegation, the Group shall remain responsible to provide Premera Blue Cross Blue Shield of Alaska with the required information. The Group must give Premera Blue Cross Blue Shield of Alaska contact information for its third party administrator and inform Premera Blue Cross Blue Shield of Alaska of the scope of that administrator's duties relative to this Contract. The Group agrees to be responsible for the cooperation of its third party administrator with the membership and payment administration requirements of this Contract and any other requirements of this Contract that the third party administrator will be performing on behalf of the Group.

RETROACTIVE CHANGES TO ENROLLMENT

Requests by the Group for retroactive changes to enrollment or termination shall be limited as follows:

Enrollment: Retroactive enrollment of otherwise eligible members, when allowed by law, shall be limited to the most recent of three dates:

- The date the member's coverage would have been validly in force; or
- The first day of the second full calendar month proceeding the date Premera Blue Cross Blue Shield of Alaska receives the request for retroactive enrollment; or
- If the plan is a qualified high deductible health plan, the first day of the current calendar year.

Termination: Retroactive termination of coverage for eligible enrollees shall be limited to the earlier of:

- The date the enrollee's coverage would have been terminated; or
- The first day of the second full calendar month preceding the date Premera Blue Cross Blue Shield of Alaska receives the request for retroactive termination.

Retroactive enrollments and terminations will be subject to an appropriate subscription charge adjustments.

The Group is solely responsible for ensuring enrollment information provided to Premera Blue Cross Blue Shield of Alaska by the Group or its delegates are accurate and in compliance with all federal and state requirements, including those under the Affordable Care Act. The Group will indemnify, defend and hold Premera Blue Cross Blue Shield of Alaska harmless for any claims, damages, judgments and expenses (including attorney's fees) based on or arising out of, directly or indirectly, any inaccurate or non-compliant eligibility information provided to Premera Blue Cross Blue Shield of Alaska by the Group or its delegates.

If the Group is subject to COBRA, Premera Blue Cross Blue Shield of Alaska has the right to make exceptions for COBRA enrollments and disenrollments as stated under the COBRA provisions of this Contract.

COMPLIANCE WITH LAW

The Group shall comply fully with all applicable state, federal, and local laws and regulations, including notice and disclosure requirements, in carrying out its responsibilities under the Contract. These include, but are not limited to, compliance with the Affordable Care Act (including any applicable requirements for distribution of any medical loss ratio rebates and actuarial value requirements), Internal Revenue Code, the Employee Retirement Income Security Act of 1974 (ERISA), the Consolidated Omnibus Budget Reconciliation Act of 1985 (COBRA), the Family and Medical Leave Act of 1993 (FMLA), the Health Insurance Portability and Accountability Act of 1996 (HIPAA), the Medicare, Medicaid, and SCHIP Extension Act of 2007 (MMSEA), laws and regulations governing the treatment and benefits of members covered by Medicare, and The No Surprise Act, enacted as part of the Consolidated Appropriations Act, 2021.

The Group agrees to provide notification required by HIPAA to all eligible employees before their enrollment.

The Group agrees to provide Premera Blue Cross Blue Shield of Alaska the following information required by the MMSEA:

- Employer Tax Identification Number (TIN/EIN);
- Social Security Numbers (SSNs) of all covered individuals (employees and dependents); and
- Medicare Health Insurance Claim Numbers (HICNs) for all Medicare entitled individuals.
- The Group also agrees to notify Premera Blue Cross Blue Shield of Alaska promptly if the Group experiences an increase in "total employee count", defined below, that would change the order of liability from Medicare primary to Medicare secondary according to the following guidelines:
 - Working Aged Medicare Beneficiaries*. For members that are also covered by Medicare based solely on their age, Medicare is the primary payer to the group health plan if the Group did not employ 20 or more "total employees" for each working day in each of 20 or more calendar weeks in either the current **or** preceding calendar year. For all other groups, Medicare pays secondary to the group health plan.
 - Disabled Medicare Beneficiaries*. For members that are also covered by Medicare based solely on disability other than End Stage Renal Disease, Medicare is the primary payer to the group health plan if the Group did not employ more than 100 employees on 50% or more of its working days in the preceding calendar year. For all other groups, Medicare pays secondary to the group health plan.

* When determining the "total employee count", include all full-time and part-time employees, as well as those employees on disability and subject to FICA taxes. Also, count leased employees if they would be counted as employees under §414(n)(2) of the Internal Revenue Code (IRC), and count employees employed by an "affiliated service group" under IRC §414(m) or by employers considered to be a "single employer" under IRC §52(a) or (b).

- The Group agrees to comply with the Medicare Prescription Improvement and Modernization Act of 2004 (MMA). MMA requires groups that provide prescription drug coverage to Medicare eligible individuals to provide Medicare Part D Creditable Coverage Notices, and report creditable coverage status to the Center for Medicare and Medicaid Services (CMS).
- If the Group has a grandfathered plan, the Group must maintain records that will document the terms and limitations of its grandfathered plans that existed on March 23, 2010. The Group must maintain this documentation for as long as the Group takes the position that the plan is grandfathered. The group must make its documentation available to Premera Blue Cross Blue Shield of Alaska, a member, or a state or Federal agency upon request. If the Group no longer believes its plan to be grandfathered, or if it's found not to be grandfathered by a State or Federal agency, the Group must notify Premera Blue Cross Blue Shield of Alaska as soon as practicable. The group will indemnify, defend, and hold Premera Blue Cross Blue Shield of Alaska

harmless for any claims, damages, judgments and expenses (including attorney's fees) based on or arising out of, directly or indirectly, the Group's determination of its grandfathered status.

- Premera Blue Cross Blue Shield of Alaska shall comply fully with all applicable state, federal and local laws and regulations that pertain to Premera Blue Cross Blue Shield of Alaska including carrying out its responsibilities under the Contract. This includes but is not limited to Premera Blue Cross Blue Shield of Alaska making available machine-readable files and cost-sharing information which the Group may access pursuant to the Transparency of in Coverage rules set forth in 26 CFR 54.9815-2715A1-2715A3, 29 CFR 2590.715-2715A1-2715A3, and 45 CFR 147.210-212, as applicable. Notwithstanding the above, Premera Blue Cross Blue Shield of Alaska will make available only the applicable data in its possession and only for those services provided to the Group under this Contract.

Premera Blue Cross Blue Shield of Alaska will not administer any benefit or service that is at risk of violating state or federal law or is illegal under state or federal law.

For delivery timeliness of notices to Premera Blue Cross Blue Shield of Alaska, see **Notice** earlier in this document.

MEMBER CONTACT INFORMATION

In order to place calls to the Group's members, Premera may receive member phone numbers provided by the Group or by a third party (such as a producer) on the Group's behalf. For Premera and its affiliates to contact the Group's members in accordance with telecommunication related laws and regulations, the Group confirms the following with respect to member phone numbers that the Group has or will provide to Premera: (1) The member provided his/her phone number to the Group on his or her health plan application, or otherwise provided or updated his/her phone number with the Group with the expectation that it will be provided to Premera in connection with obtaining health coverage; (2) the Group only obtains phone numbers directly from the member and not through a lookup service or other third party; and (3) the Group retains enrollment information and will furnish that information to Premera upon request in a timely manner.

INACCURATE AND UNAPPROVED DESCRIPTIVE MATERIALS

The Group will indemnify, defend and hold Premera Blue Cross Blue Shield of Alaska harmless for any claims, damages, judgments and expenses (including attorney's fees) based on or arising out of, directly or indirectly, descriptive materials written, created, designed or printed by the Group, or on the Group's behalf by any third party when such descriptive materials are used without prior approval by Premera Blue Cross Blue Shield of Alaska, and/or inaccurately reflect any of the terms, conditions, and/or provisions of this contract.

The term "descriptive materials" includes, without limitation, any type of circular, leaflet, booklet, summary, handbook, letter or form that describes in whole or in part any of the terms, conditions and/or provisions of this Contract.

COBRA

As directed by the Federal Consolidated Omnibus Budget Reconciliation Act of 1985, (referred to in this Contract as "COBRA"), most employers with 20 or more employees must offer members who meet COBRA's "qualified beneficiary" criteria an election to continue their group coverage. The Group is responsible to determine if it's required to comply with COBRA at the time of initial application and renewal of this Contract.

The Group must fulfill all the obligations and responsibilities regarding continued coverage that are assigned by COBRA to the employer, plan sponsor or administrator, and to the "group health plan." Premera Blue Cross Blue Shield of Alaska is not the COBRA plan administrator, and Premera Blue Cross Blue Shield of Alaska's actions pertaining to COBRA continued coverage won't be construed as relieving the Group of responsibility under COBRA. Nothing contained herein is intended to serve as legal advice. The Group should consult legal advisors as to the scope and applicability of COBRA.

The COBRA provisions outlined in the employee benefit booklet are a summarization of the requirements of the COBRA law. If there's a discrepancy between this summary and federal law, federal law will prevail.

When requested by the Group, Premera Blue Cross Blue Shield of Alaska will provide continued coverage under this Contract, but only to the extent that members are entitled to continue group coverage under the COBRA law, and only to the extent required by the COBRA law. In addition, all the requirements listed below must be met in order for the plan to provide COBRA coverage:

- The Group is subject to COBRA on the date of the qualifying event. If the Group was not subject to COBRA on the effective date of this Contract, the Group must notify Premera Blue Cross Blue Shield of Alaska as soon as

possible if it will become subject to COBRA on the next January 1. If the Group's workforce shrinks during the calendar year, the Group must also notify Premera Blue Cross Blue Shield of Alaska as soon as possible that it will no longer be subject to COBRA on the next January 1.

- The Group complies with all the requirements assigned by COBRA to the employer, plan sponsor, plan administrator or group health plan that pertain to that qualified beneficiary. This includes all of COBRA's notice requirements and the time limits set by COBRA for each. If the Group appoints a third party to perform COBRA notices or other administrative tasks, that party's failure to meet COBRA's standards will be deemed a failure of the Group.
- The qualified beneficiary elects and pays for COBRA within the time limits set by COBRA, and the application and required subscription charges are submitted to Premera Blue Cross Blue Shield of Alaska with the Group's next billing.
- The required subscription charges continue to be paid when due or within the 30-day COBRA grace period. The Group must submit qualified beneficiaries' subscription charges with its regular monthly subscription charge payment.
- This Contract remains in force. The Group acknowledges that even after this Contract is terminated, COBRA may require the Group to offer continuation unless the Group ceased to offer group health care coverage to any employee.

The Group will terminate the coverage for any qualified beneficiary who doesn't elect COBRA continuation.

INDEPENDENT CORPORATION

The Group hereby expressly acknowledges, on behalf of itself and all of its eligible employees and their eligible dependents, its understanding that the Contract constitutes a contract solely between the Group and Premera Blue Cross Blue Shield of Alaska. Premera Blue Cross Blue Shield of Alaska is an independent corporation operating under a license with the Blue Cross Blue Shield Association, an association of independent Blue Cross and Blue Shield Licensees (the "Association") permitting Premera Blue Cross Blue Shield of Alaska to use the Blue Cross and Blue Shield Service Marks in the State of Alaska. The Group expressly acknowledges that Premera Blue Cross Blue Shield of Alaska is not contracting as the agent of the Association and that the Association has no obligation under the Contract.

The Group further acknowledges and agrees that it has not entered into the Contract based upon representations by any person other than Premera Blue Cross Blue Shield of Alaska, and that no person, entity or organization other than Premera Blue Cross Blue Shield of Alaska shall be held accountable or liable to the Group for any of Premera Blue Cross Blue Shield of Alaska's obligations to the Group created under the Contract. This provision shall not create any additional obligations whatsoever on Premera Blue Cross Blue Shield of Alaska's part other than those obligations created under other provisions of the Contract.

RIGHTS OF ASSIGNMENT

Notwithstanding any other provision in this Contract, and subject to any limitations of state or federal law, in the event that Premera Blue Cross Blue Shield of Alaska merges or consolidates with another corporation or entity, or does business under another name or jointly with another entity, or transfers this Contract to another corporation or entity, this Contract shall remain in full force and effect in accordance with its terms, and bind the Group and the successor corporation or other entity. In such event, Premera Blue Cross Blue Shield of Alaska guarantees that all Premera Blue Cross Blue Shield of Alaska's obligations under this contract will be performed by the successor entity.

No assignment of the Group's interest hereunder may be made without Premera Blue Cross Blue Shield of Alaska prior written consent. Any assignment made without Premera Blue Cross Blue Shield of Alaska's prior written consent shall be void.

SEVERABILITY, CONSTRUCTION AND INTERPRETATION

This Contract and any questions concerning the validity, construction, interpretation, and enforcement of this Contract or the benefits provided herein shall be governed by the laws of the State of Alaska, except to the extent pre-empted by federal law.

Should any part, term or provision of this Contract be held by the courts to be illegal or in conflict with any law of the State of Alaska, the validity of the remaining portion shall not be affected.

TRADEMARK

Premera Blue Cross Blue Shield of Alaska reserves the right to, the control of, and the use of the words "Premera Blue Cross Blue Shield of Alaska", "Premera Blue Cross" and all symbols, trademarks and service marks existing or hereafter established. The Group shall not use such words, symbols, trademarks or service marks in advertising, promotional materials, materials supplied to members or otherwise without Premera Blue Cross Blue Shield of Alaska's prior written consent which shall not be unreasonably withheld.

EXHIBIT A
LARGE GROUP FULLY INSURED FUNDING ARRANGEMENT AGREEMENT
to the Group Health Benefit Plan Contract ("the Contract") between
PREMERA BLUE CROSS BLUE SHIELD OF ALASKA
AND
CITY OF BETHEL
Effective: July 1, 2024 through June 30, 2025

All participating employers and segmented employers that are members of the Group shall be treated as one entity for purposes of this Contract, including the establishment of Contractual Rates, billing, and calculation of late charges.

I. DEFINITIONS

In addition to the definitions in the "Definitions" section of the benefit booklet(s), the following definitions apply:

Contractual Rate

The term "Contractual Rate" means the monthly subscription charges set forth as such in Attachment A for the Contract Term.

Contractual Revenue

The term "Contractual Revenue" means the total of the Contractual Rate for each rate classification multiplied by the number of employees in each such classification for each month in the Contract Term. Contractual Revenue does not include Customization Fees, if such fees are charged for this Plan.

Contribution and Participation Requirements

The term "Contribution Requirement" means the percentage or dollar amount contribution the employer will make toward the cost of employee and/or dependent coverage. The term "Participation Requirement" means the minimum percentage or number of employees and/or dependents that must be enrolled under the Plan. The Contribution and Participation Requirements are set forth in the Attachment A.

Customization Fee

The term "Customization Fee" means the fee that applies if the Group requests either of the following:

1. A Plan benefit configuration that Premera Blue Cross Blue Shield of Alaska has determined to be nonstandard for the plan type.
2. An off-anniversary benefit change, regardless of whether the desired benefit is standard for the plan type. The Customization Fee for each off-anniversary change shall be \$5,000.

For purposes of Customization Fees, "benefits" include eligibility, termination, continuation and benefit payment provisions, benefit terms, limitations, and exclusions, funding arrangement changes, and any other standard provisions of the Plan. Fees are computed based on current administrative costs to implement and administer the benefit.

Customization Fees assessed on this Plan as of its effective date are set forth in Attachment A. Off-anniversary Customization Fees, if any, will be invoiced separately to the Group.

Due Date

The day of the month upon which subscription charge payments are due. The Due Date is shown on the face page of this Contract.

Grace Period

The term "Grace Period" means the period of time (see Attachment A) from the Due Date during which the Group may make the required payment and the Contract will not be terminated for nonpayment.

II. CONTRACTUAL RATES (MONTHLY SUBSCRIPTION CHARGES)

A. Contractual Rates

The monthly Contractual Rates for the Contract Term are set forth in Attachment A.

B. Adjustments to Contractual Rates

The Contractual Rates set forth in II.A. above will remain in effect until the end of the Contract Term, and during any extension thereof granted by Premera Blue Cross Blue Shield of Alaska, or until the Contract is terminated, if earlier. During the period for which this guarantee is effective, Premera Blue Cross Blue Shield of Alaska agrees to accept payment of these subscription charges as payment in full for the current level of benefits provided under this Contract. However, Premera Blue Cross Blue Shield of Alaska reserves the right to revise current subscription charges at any time during the Contract Term if any of the following occurs:

1. Should any federal, state or local authority mandate a change in benefits, eligibility or procedure or impose or change a tax or assessment on Premera Blue Cross Blue Shield of Alaska or the Plan during the Contract Term or any extension of the Contract Term, whether by statute, regulation, interpretation or otherwise, Premera Blue Cross Blue Shield of Alaska may increase the Contractual Rates set forth in Attachment A, as of the date specified in Premera Blue Cross Blue Shield of Alaska's notice to the Group or its agent.
2. Premera Blue Cross Blue Shield of Alaska may increase the Contractual Rates during the Contract Term by giving forty-five (45) days advance written notice to the Group or its agent, if Premera Blue Cross Blue Shield of Alaska determines that the basis upon which Premera Blue Cross Blue Shield of Alaska assumed the risk is materially changed for any reason. Examples of material changes that may require re-rating are:
 - a. A benefit change requested by the Group.
 - b. A fluctuation of ten (10) percent or more in the number of Members as set forth on the census information included in Attachment A which is herein incorporated by reference and made a part of this Contract.
 - c. A change in the amount of the employer's contribution on behalf of each Member.
 - d. Fraud or intentionally false or misleading medical or other information
 - e. A change in procedure agreed to by the Group and Premera Blue Cross Blue Shield of Alaska, including any change in Premera Blue Cross Blue Shield of Alaska's reporting requirements.
 - f. A change in the Group's health care plans and/or carriers from those set forth in Attachment A.
 - g. The addition of Members, with Premera Blue Cross Blue Shield of Alaska's prior approval, who live outside Alaska and Washington.
 - h. The addition of a dual, triple, or multiple-choice option or a change in the plan choices offered by a dual, triple or multiple-choice group.
 - i. A change in the third-party administrator, if any, used by the Group with respect to the benefits provided under this Contract. The Group will provide Premera Blue Cross Blue Shield of Alaska no less than one hundred and twenty (120) days' advance written notice of any such change.

Any such revision to current subscription charges will take effect on the date specified in the notice. For delivery timeliness, see "Notice" in "Standard Provisions."

3. Premera Blue Cross Blue Shield of Alaska may adjust the Contractual Rates during the Contract Term by giving forty-five (45) days advance written notice to the Group or its agent, if the Group agrees with Premera Blue Cross Blue Shield of Alaska that the Contractual Rates are based in whole or in part upon a mistake that materially impacts such rates.

III. PAYMENTS

A. Monthly Payments

No benefits are payable for expenses incurred on any date for which subscription charges are not paid. The Group is liable for all subscription charges covering any period of time that this Contract remains in force.

During the Contract Term, Premera Blue Cross Blue Shield of Alaska will bill the Group based upon the previous month's eligibility. The Group shall provide Premera Blue Cross Blue Shield of Alaska with updated eligibility information. The Group shall be liable for, and shall pay to Premera Blue Cross Blue Shield of Alaska an amount equal to the total of the monthly Contractual Rates set forth in Attachment A on behalf of the Members included on the updated eligibility list.

B. Late Payments

A Grace Period (see Attachment A) after the Due Date shall be allowed to the Group for payment of the monthly Contractual Rates. If Premera Blue Cross Blue Shield of Alaska does not receive payment by the end of the Grace Period, the Contract may automatically terminate on the Due Date. No benefits will be paid for otherwise eligible expenses incurred on any day for which payment has not been made. If a partial payment has been received, Premera Blue Cross Blue Shield of Alaska may return the payment or provide benefits for those Members for whom payment has been made. Acceptance by Premera Blue Cross Blue Shield of Alaska of late or partial payment shall not be construed as a waiver of Premera Blue Cross Blue Shield of Alaska's right to demand timely payment or to terminate this Contract for nonpayment if a subsequent payment is late.

C. Late Charges

Premera Blue Cross Blue Shield of Alaska reserves the right to invoke the provision below for all groups covered by this Fully Insured funding arrangement. Premera Blue Cross Blue Shield of Alaska will notify all such groups 45 days in advance of the date that Premera Blue Cross Blue Shield of Alaska will begin invoking this provision. Premera Blue Cross Blue Shield of Alaska will then charge late charges on payments that are not received within any Grace Period that falls on or after the date stated in the notice.

If Premera Blue Cross Blue Shield of Alaska does not receive a payment by the end of the Grace Period, the Group will pay Premera Blue Cross Blue Shield of Alaska a daily late charge. This late charge is calculated from the Due Date, rather than from the end of the Grace Period. The late charge is based on the average prime rate posted by Premera Blue Cross Blue Shield of Alaska's designated bank during the Contract Term, plus two (2) percent on the amount of the late payment for the number of days late. Late charges will not be assessed against any partial payment that Premera Blue Cross Blue Shield of Alaska retains. Late charges are in addition to Contractual Revenue and they are calculated and billed at the end of the Contract Term or upon termination of the Contract, if earlier.

D. Customization Fees

Customization Fees for custom benefits that take effect on the effective date shown on the Face Page of this Contract are due and payable prior to that effective date. Customization Fees for off-anniversary benefit changes are due and payable prior to the effective date of the change.

IV. CONTRIBUTION AND PARTICIPATION REQUIREMENTS

- A. The Group must pay at least the minimum percentage of the Contractual Rate for employees that is shown in Attachment A. At least the minimum percentage of eligible employees that is shown in Attachment A must be enrolled.
- B. When a percentage of the Contractual Rate is shown in Attachment A, the Group must pay at least the minimum percentage of the Contractual Rate for dependents, if any is shown in Attachment A. At least the minimum percentage of the eligible dependents, if any is shown in Attachment A, must be enrolled.
- C. If the Group has Members who are continuing this plan's coverage as directed by COBRA, they do not count toward the participation minimums.
- D. For purposes of this Section IV, eligible Members are individuals who satisfy the Contract's eligibility requirements, except for any contribution requirement.

Premera Blue Cross Blue Shield of Alaska reserves the right to terminate this Contract if the Group fails to maintain the contribution and participation requirements stated in the Attachment A or any eligibility requirement stated in the Group Contract.

V. ACCOUNTING

A. Accounting

No annual or final accountings will be performed. Except for refunds required by law, Premera Blue Cross Blue Shield of Alaska will absorb any gains and losses.

B. Reporting

Within one hundred twenty (120) days of the end of the Contract Term, Premera Blue Cross Blue Shield of Alaska shall provide information to the Group for preparing Form 5500's when such forms are required by law. The Group shall be solely responsible for insuring timely filing of the Form 5500's.

VI. CONTRACT TERMINATION

This Contract can be terminated as described in "Contract Termination" in the "When Will My Coverage End?" section of the benefit booklet.

VII. OTHER PROVISIONS

A. Credit Worthiness

Evidence of credit worthiness, which is satisfactory to Premera Blue Cross Blue Shield of Alaska, may be required at any time during the Contract Term as Premera Blue Cross Blue Shield of Alaska deems necessary.

Alaska Political Subdivision

NON-GRANDFATHERED RATES FROM JULY 1, 2024 TO JUNE 30, 2025



CITY OF BETHEL - APS 9002891

NGF MEDICAL PLAN OPTIONS	EMPLOYEE ONLY	EMPLOYEE + SPOUSE	EMPLOYEE, SPOUSE + CHILD	EMPLOYEE + CHILD(REN)	PLAN SELECTION
HS \$0/20%/\$1,000/\$25 VH RX \$20/\$40/\$80 Mail \$50/\$100/\$200	\$1,639.71	\$3,767.33	\$5,241.83	\$3,114.25	
HS \$100/20%/\$1,000/\$25 VH RX \$20/\$40/\$80 Mail \$50/\$100/\$200	\$1,623.65	\$3,730.46	\$5,190.53	\$3,083.77	
HS \$250/20%/\$2,000/\$25 VH RX \$20/\$40/\$80 Mail \$50/\$100/\$200	\$1,573.90	\$3,616.17	\$5,031.53	\$2,989.32	
HS \$500/20%/\$2,250/\$35 VH RX \$20/\$40/\$80 Mail \$50/\$100/\$200	\$1,511.33	\$3,472.39	\$4,831.46	\$2,870.47	
HS \$1,000/20%/\$3,000/\$25 VH RX \$20/\$40/\$80 Mail \$50/\$100/\$200	\$1,487.27	\$3,417.09	\$4,754.53	\$2,824.75	
HS HSA \$1,600/20%/\$3,200 VH	\$1,267.99	\$2,913.25	\$4,053.54	\$2,408.25	
HS \$3,000/20%/\$5,000/\$35 VH RX \$20/\$40/\$80 Mail \$50/\$100/\$200	\$1,138.77	\$2,616.43	\$3,640.49	\$2,162.87	
HP \$1,000/20%/\$4,000/\$35 VH RX \$20/\$40/\$80 Mail \$50/\$100/\$200	\$1,429.15	\$3,283.58	\$4,568.75	\$2,714.37	
HP \$1,500/20%/\$4,000/\$35 VH RX \$20/\$40/\$80 Mail \$50/\$100/\$200	\$1,311.07	\$3,012.29	\$4,191.31	\$2,490.12	
HP \$3,000/20%/\$5,000/\$35 VH RX \$20/\$40/\$80 Mail \$50/\$100/\$200	\$1,098.46	\$2,523.80	\$3,511.60	\$2,086.32	
HP \$4,000/20%/\$6,000/\$40 VH Essentials Rx: \$15/\$30/\$50/30% Mail \$37.50/\$75/\$125/30%	\$1,044.36	\$2,399.53	\$3,338.70	\$1,983.59	
HP \$5,000/20%/\$7,150/\$40 VH Essentials Rx: \$15/\$30/\$50/30% Mail \$37.50/\$75/\$125/30%	\$990.44	\$2,275.57	\$3,166.22	\$1,881.10	XX

DENTAL OPTIONS	EMPLOYEE ONLY	EMPLOYEE + SPOUSE	EMPLOYEE, SPOUSE + CHILD	EMPLOYEE + CHILD(REN)	PLAN SELECTION
DENTAL A - \$1,500 ANNUAL MAXIMUM Preventive 100%, Basic 80%, Major 50%	\$49.25	\$107.00	\$149.17	\$91.42	
DENTAL B - \$2,000 ANNUAL MAXIMUM Preventive 100%, Basic 80%, Major 50%, Ortho \$1,000 lifetime maximum benefit at 50%	\$58.96	\$120.19	\$164.90	\$103.68	XX
DENTAL C - \$3,000 ANNUAL MAXIMUM Preventive 100%, Basic 80%, Major 50%, Ortho \$2,000 lifetime maximum benefit at 50%	\$65.29	\$133.10	\$182.61	\$114.82	

Rates are subject to change based on Department of Insurance approval 054450 (02-01-2024)

X
City of Bethel



July 17, 2024

Mr. Bill Arnold
City of Bethel
P.O. Box 1388
Bethel, Alaska 99559

**Subject: DOWL Term Contract
Fee Proposal for Planning and Engineering Services
Task Order 68 – Ptarmigan Street Culvert Crossings**

Dear Mr. Arnold:

DOWL is pleased to present a scope of work and fee proposal for the following task order:

Task Order 68 – Ptarmigan Street Culvert Crossing

It is our understanding that the City of Bethel (City) seeks to replace the culverts (at two locations) that convey Ptarmigan Creek under Ptarmigan Street after flooding events compromised the road embankment and culvert structures in May 2024. We understand that this task requires an expedient solution to maintain connectivity of residents located to the west of the culverts to the rest of Bethel.

Since Ptarmigan Creek is an anadromous water body according to the Alaska Department of Fish and Game (ADF&G) anadromous waters catalog (AWC Code: 335-10-16600-2621-3020), we will work with ADF&G to accommodate anadromous fish passage where practicable.

SCOPE OF SERVICES

We propose the following task structure to complete the Ptarmigan Street Culvert Crossing.

Task 1 – Site Visit – Survey & H&H

DOWL Hydrology & Hydraulics (H&H) staff will conduct a call with City staff prior to the site visit to understand the scale of the problem and to understand the hydraulic conditions of Ptarmigan Creek over the break-up period.

DOWL will conduct a survey of two existing structures to create a topographic map of the area that includes the bathymetry surrounding the existing culverts under Ptarmigan Street that conveys Browns Slough and adjacent drainages. The survey will also assess the existing outlet condition to confirm past DOWL observations.

Survey points will be located at slope breaks and around stream features. Maximum spacing of point data at a given cross-section shall be 10 feet outside the channel and five feet inside the channel with points taken more often, if needed, to define channel and bank shapes.

DOWL will conduct a Hydrology & Hydraulics site visit to Bethel to collect data to confirm the initial design.

Deliverables:

- Topographical map of existing ground and outlet structures
- H&H site visit memo

Task 2 – Geotechnical Exploration and Analysis

A geotechnical investigation will consist of desktop research and drilling test borings at the each of the culvert sites on Ptarmigan Road. The geotechnical effort will begin with a desktop study of available geotechnical and geological information from the State of Alaska and City of Bethel.

A geotechnical investigation will be performed consisting of drilling at least two borings at each culvert location, with borings located on either side (near the shoulder) of Ptarmigan Street. The investigation will use a rubber track-mounted GeoProbe drill rig fitted with hollow-stem auger and direct push technology. Samples will be obtained at the surface, and depths of 2.5, 5, 7.5, and 10 feet and at 5-foot intervals thereafter using American Society for Testing and Materials (ASTM) standard penetration test equipment and procedures, a modified sampler, or applicable means. The test holes will be logged by a DOWL geologist/engineer.

Samples will be returned to Anchorage and submitted to Alaska Testlab. Testing will likely consist of moisture content and mechanical analyses to classify the soils and the results will be used to develop geotechnical recommendations regarding soil properties, foundation or embedded structure options, and earthwork and construction considerations.

The findings of the field visit and the geotechnical analysis will be documented in the geotechnical investigation report to enable the development of the alternatives analysis. DOWL will prepare review packages at least two weeks prior to the anticipated review date.

Deliverable:

- Geotechnical investigation
- Geotechnical analysis and report

Assumptions:

- Geotechnical field investigation schedule will be based on driller availability. If possible, shared mobilization will be prioritized to reduce mobilization costs.
- Traffic control is not required for drilling on the shoulder of the Ptarmigan Street.
- The client will assist with legal entry and access onto the site.
- Backfilling the test borings with cuttings to the ground surface areas before leaving the site will be sufficient.
- Standby fees may be invoiced in addition to the proposed lump sum fee. Standby would only be charged for delays caused by weather or circumstances beyond our control.

Task 3 – Initial Design (25%)

DOWL believes we have enough data and information from our previous H&H studies to initiate an initial design. DOWL will provide the City with two alternatives and the estimated costs to make an informed decision at the 25% design level.

Deliverable:

- Draft Design Memo
- Draft 25% plans and a preliminary cost estimate for two alternatives at each site

Task 4 – Final Design (65%and 100%)

Based on the preferred alternative chosen by the City, DOWL will refine the H&H calculations to progress the design of the structure.

DOWL will produce plans, specifications, and a preliminary cost estimate for the chosen alternative at the 65 and 100% design stages. Each design stage will have a check in with the City to get feedback on the design relating to maintainability.

As the culverts are either upstream of, or in, a FEMA Special Flood Hazard Area (SFHA), DOWL will assess the culverts for a ‘no-rise’ scenario and compile the no-rise certification to submitted to the City’s floodplain administrator.

Deliverables:

- Design Memo
- Draft 65% plans, specifications, and a preliminary cost estimate for the chosen alternative for each site
- Final (100%) plans, specifications, and a preliminary cost estimate for the chosen alternative for each site

Task 5 – Permitting

DOWL will work with permitting agencies throughout design to expedite the permitting process.

DOWL will assemble an ADF&G Title 16 Fish Habitat Permit application package for the east and west crossings of a tributary of Brown’s Slough (AWC# 335-10-16600-2621-3020) on Ptarmigan Street. DOWL believes the work for the two culvert replacements will qualify for a U.S. Army Corps of Engineers Nationwide Permit #3 for maintenance activities to comply with Section 404 of the Clean Water Act with no pre-construction notification required. For stream diversions or pumping, DOWL will obtain an ADNR Temporary Water Use Authorization for construction activities.

Deliverable:

- *Alaska Department of Fish & Game Title 16 Fish Habitat Permit application package*
- *Department of Natural Resources Temporary Water Use Authorization application*
- *U.S. Army Corps of Engineers Nationwide Permit #3 Maintenance authorization*

Task 6 – Bidding Support

DOWL believes that if the City pre-purchases the culvert prior to bidding, procurement time and cost can be reduced.

The DOWL team will convert the planning level design drawings from the H&H study into a design package with plans, specifications, and an engineer’s estimate. We will develop construction contract documents using EJCDC standardized contracts and forms and work with the City to facilitate a competitive bid process. We will distribute documents to plan-holders lists and agencies; communicate with interested parties on questions and addenda; and review bids for conformance making a recommendation to the City for award.

Deliverable:

- *Design package, contract document, bid scoring, and recommendations to the City*

Task 7 – Construction Administration- To be added by amendment

DOWL will assist the City with bidding support, submittal review, requests for information (RFI) from the contractor, and any addenda required for the contract.

DOWL will provide an engineer to visit the site on two occasions to act as the client representative for the City for each culvert. The site visits will occur at the groundbreaking to confirm the plan with the contractor and set expectations, the second visit will occur before the completion of the project to confirm the project was constructed to the bid plan and specifications. Each of these site visits will be coordinated with the contractor and the City and will be accompanied by a site visit report.

Deliverable:

- DOWL will provide the City with a site visit report within one week of completing the site visit.

Assumptions

- River conditions allow for the safe assessment of geomorphic and hydraulic conditions.
- A Conditional Letter of Map Revision (issued by FEMA) is not required for this project
- Concrete headwall are not required. If required, Structural Engineering fees will be charged on a Time and Materials basis.
- City of Bethel will pay application fees
- Construction contractor will complete permitting and application fee for ROW and lane closure during construction
- Construction Administration Site visits (2 per culvert) can be completed in one day
- The City will provide a vehicle to the construction administrator while in Bethel
- Any expenses incurred due to travel disruption (stand by) to and from Bethel will be charged on a Time and Materials basis.

SCHEDULE

We understand that the City would like to move forward on this project immediately once funding is secured. We propose the following timeline to complete the work.

Site Visit/Survey & HH	June-September 2024
Geotech Exploration/Analysis	July-September 2024
Initial Design.....	August-October 2024
Final Design.....	October-November 2024
Permitting.....	November 2024-May 2025
Bidding Support.....	November 2024-January 2025

FEE PROPOSAL

We propose to complete the above-described services for a fee of \$221,320. The fee will be distributed on a time and materials basis as shown in the table below.

Table 1: Proposed Fee

Task	Proposed Fee
Task 1- Site Visit – Survey & H&H (Time and Materials)	\$37,400
Task 2- Geotechnical Exploration and Analysis (Time and Materials)	\$31,420
Task 3- Initial Design (Time and Materials)	\$30,480
Task 4- Final Design (Time and Materials)	\$79,260
Task 5- Permitting (Time and Materials)	\$19,520
Task 6- Bidding Support (Time and Materials)	\$23,240
Total	\$221,320

This Task Order is proposed as Time and Materials because of the possibility to reduce costs with shared mobilizations. We also recognize the design may unfold differently, because of the advance procurement requirement to get proposed culvert on site.

One monthly statement will be provided showing the total fees invoiced for each of these tasks. Payment will be expected within 30 days.

Services performed by DOWL under this agreement will be conducted in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions. No other representation, express or implied, and no warranty or guarantee is included or intended in this agreement, or in any report, opinion, document, or otherwise.

We trust this provided adequate information for evaluating our proposal. We look forward to working with you on this project and will be happy to answer any additional questions you may have.

Sincerely,



Chase A. Nelson, P.E.
LLC Member/Project Manager

Using the City of Bethel-DOWL Engineering Services Term Contract Standard Conditions, DOWL is authorized to begin work on Task Order 68 – Ptarmigan Street Culvert Crossing.

City of Bethel Authorized Representative

Date

Attachment: Detailed Estimate

DOWL
ESTIMATE FOR PROFESSIONAL SERVICES

PROJECT: TO68 – Ptarmigan Street Culvert Crossings

CLIENT: City of Bethel

WO# 50270.68
DATE: 17-Jul-24
PREPARED BY: AWA
REVIEWED BY: CAN

PROJECT SUMMARY																	
Task 1- Site Visit // Survey & H&H																TOTAL =	\$37,400.00
Task 2 - Geotechnical Exploration and Analysis																TOTAL =	\$31,420.00
Task 3- Initial Design																TOTAL =	\$30,480.00
Task 4- Final Design																TOTAL =	\$79,260.00
Task 5- Permitting																TOTAL =	\$19,520.00
Task 6- Bidding Support																TOTAL =	\$23,240.00
TOTAL ESTIMATED FEES FOR PROFESSIONAL SERVICES																TOTAL =	\$221,320.00

Labor Category	Project Manager	Assistant Project Manager	H&H Senior Engineer	H&H Project Engineer	H&H Engineer Asst.	PM	Senior Tech	Engineer VI	Sr. Geotechnical Engineer	Geologist	GIS	Environmental Specalist	Environmental Specalist	Environmental Specialist	Environmental Specialist	Expenses	Sub-consultants	TOTALS
	Nelson	Ackerman	Melocik	MacLeod	Brailey	W.Stoll	M. Davis	KAN	JEH	MWB	TJ	J. Grabel	E. Anderson	A. Morrill	S. Sterling			
Hourly Rate	\$215.00	\$190.00	\$225.00	\$180.00	\$140.00	\$230.00	\$140.00	\$220.00	\$220.00	\$160.00	\$120.00	\$165.00	\$130.00	\$170.00	\$120.00	10% Markup	6% Markup	
Task 1- Site Visit // Survey & H&H																		
Project Management	2	4				2												8
Travel and mobilization				12	12			12								\$ 6,270.00		36
Computations							6											6
Utility Locates								4										4
ROW Research		1		1														2
Boundary Survey								4										4
Culvert Survey								26										26
Drafting							12											12
Reporting							2											2
Survey Control Sheet						4												4
QC/Review		2				2												4
																		0
H&H Site Visit				26	26													52
H&H Site Visit Memo				8														8
Coordination with City		1		2	2													5
Subtotal - Hours	2	8	0	49	40	8	20	46	0	0	0	0	0	0	0			173
Subtotal - Costs	\$430.00	\$1,520.00	\$0.00	\$8,820.00	\$5,600.00	\$1,840.00	\$2,800.00	\$10,120.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$6,270.00	\$0.00	\$37,400.00
Task 2 - Geotechnical Exploration and Analysis																		
Management, Budgeting, Schedule								2	1	2								5
Safety Planning										2								2
Utility Locates										8								8
Mobilization/Demobilization										8								8
Travel										8								8
Test Hole Logging										48								48
Laboratory Testing/Coordination									2	4								6
Thermally Equilibrated Temp. Measurement Trip										14								14
Geotechnical Draft Report Preparation									20	30	4							54
Q/C Peer Review								2	4									6
Geotechnical Final Report Preparation									4	4	1							9
Q/C Peer Review								2	4									6
Geotechnical Assistance During Design									6									6
Subtotal - Hours	0	0	0	0	0	0	0	6	41	128	5	0	0	0	0			180
Subtotal - Costs	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,320.00	\$9,020.00	\$20,480.00	\$600.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$31,420.00
Task 3- Initial Design																		
Management, Budgeting, Schedule	2	2	4															8
Hydrology and Deisgn Calcs				32	18													50
Cover Sheet/Drawing Setup, Vicinity Map			8		8													16
Legend, General Notes, and Quantities					16													16
Stream Plan & Profile					32													32
Roadway Plan & Profile					16													16
Cost Estimate				8	2													10
QC/Review	1		2	6	2													11
CoB and Stakeholder Coordination	1	1		2	2													6
Design Review Meeting/Minutes	2	3		2	2													9
Review Comment Responses			4	4	4													12
Subtotal - Hours	6	6	18	54	102	0	0	0	0	0	0	0	0	0	0			186
Subtotal - Costs	\$1,290.00	\$1,140.00	\$4,050.00	\$9,720.00	\$14,280.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$30,480.00
Task 4- Final Design																		
Management, Budgeting, Schedule	2	2		4														8
Cover Sheet/Drawing Setup, Vicinity Map				2	12													14
Legend, General Notes, and Quantities					8													8
Demolition Plan				2	8													10
Civil Site Plan				2	24													26
Stream Plan & Profile				2	24													26
Roadway Plan & Profile				2	24													26
Stream Details and Typical Sections				2	24													26
Roadway Details and Typical Sections				2	24													26
Stream Diversion Design				2	24													26
Roadway Diversion Design				2	24													26
Erosion and Sediment Control Plan and Details				2	24													26
Revegetation Plan, Sections and Details				2	24													26
Specifications				32	8													40
Cost Estimate				24	8													32
Quantity of fill below OHW					2													2
QC/Review	2		12	12														26
CoB and Stakeholder Coordination				8	8													16
Design Review Meeting/Minutes	2	3		4	4													13
Review Comment Responses				8	8													16
Permit Coordination				8	4													12
Design Calculations				16	8													24
No Rise Certification				40	8													48
Subtotal - Hours	6	5	12	178	302	0	0	0	0	0	0	0	0	0	0			503
Subtotal - Costs	\$1,290.00	\$950.00	\$2,700.00	\$32,040.00	\$42,280.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$79,260.00
Task 5- Permitting																		
Project Management		2												6				8
Title 16 Permit Application												8	35		4			47
Temporary Water Use Authorization												8	30		4			42
USACE NWP #3												8	25		4			37
QA/QC														6				6
Subtotal - Hours	0	2	0	0	0	0	0	0	0	0	0	24	90	12	12			140
Subtotal - Costs	\$0.00	\$380.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$3,960.00	\$11,700.00	\$2,040.00	\$1,440.00	\$0.00	\$0.00	\$19,520.00
Task 6- Bidding Support																		
Project Management	24																	24
Fully Compiled Bid Documents		16		8		8												32
Addenda		8	4	8														20
Responses to Bidders		8	4	8														20
Recommendation to Award		8		4														12
Quality Control				8														8
																		0
Subtotal - Hours	24	40	16	28	0	8	0	0	0	0	0	0	0	0	0			116
Subtotal - Costs	\$5,160.00	\$7,600.00	\$3,600.00	\$5,040.00	\$0.00	\$1,840.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$23,240.00

Bethel AC Equipment

Date:	1/9/2024
Proposal #:	ARS23-00677
Expiration:	30 days from above date
Account Manager:	Ryan Skiff
Contact Number:	907-550-2127

Thank you for the opportunity to submit a proposal. LONG Building Technologies Inc. ("LONG") is committed to being the industry leader in providing a single resource for your building solutions.

We are pleased to offer this detailed Scope of Work for your project.

A. SCOPE OF WORK

- Provide and install mini-split system at the Police Station and the City Hall

B. GENERAL INCLUSIONS:

Police Station

- Demo existing mini split system
- Equipment and shipping
- Provide and Install 2 ton mini-split system with 2 evaporator heads
- Re-install to existing condensate drain
- Run new line sets
- Provide and install new wired thermostat
- Start-up
- Backhaul, reclaim and recycle old units
- Travel, per diem, housing for 2 techs

City Hall

- Demo existing mini split system
- Equipment and shipping
- Provide and install new 3 ton mini split system with 2 evaporator heads
- Provide and run new line set
- Re-install to existing condensate drain
- Provide and install new wired thermostat
- Start-up
- Backhaul, reclaim and recycle old units
- Travel, per diem, housing for 2 techs

C. GENERAL EXCLUSIONS:

- Repair or replacement of existing defective controls or field devices. Pricing available upon request
- Electrical, replacing breaker and wiring new power wire and comm wire from outdoor unit to new indoor units
- Cutting, patching and painting
- Engineering
- All costs of taxes, bonds and permits
- Hazardous material identification, abatement or removal.

TEL

D. PRICE OF WORK

Labor, travel, per diem, hotel, vehicle, warranty:..... \$36,069.00
Equipment, freight, and warranty:.....\$19,742.00
Price Total.....\$55,811.00

Your Building Technology Partner

I hereby certify that I am authorized to bind
LONG Building Technologies, Inc.

Accepted by

I hereby certify that I am authorized

Ryan Skiff

LONG Building Technologies, Inc.

935 Gambell Street
Anchorage, AK 99501

Note: All data and information contained herein and provided by LONG Building Technologies is considered confidential and proprietary. The data and information contained herein may not be reproduced, published or distributed to, or for, any third parties without the express prior written consent of LONG Building Technologies.

Authorized Signature

Printed Name

Notwithstanding, any inconsistent or additional terms that may be embodied in your purchase order/contract, LONG will accept your order subject only to the terms of the written contract between us under which your order is placed. If no such contract exists, LONG Building Technologies will accept your order only on the express written condition that you assent to the terms and conditions contained above and on the pages attached hereto; and acceptance and receipt of the goods shipped hereunder shall constitute assent to such terms and conditions.

This Proposal is subject to change based on unknown items that may occur as result of COVID-19 such as material delays, labor shortages, jobsite disruptions or governmental intervention. Manufactures and production facilities are feeling the impacts of decreasing international imports, health and safety concerns and economic impacts to their business. As a result, manufacturing production may be impacted. Lead times and production may be extended without warning and pricing may be affected. Projects with critical completion schedules should be coordinated with your LONG salesperson.

Terms and Conditions:

By accepting this proposal, Purchaser agrees to be bound by the following Terms and Conditions:

1. **Scope of Work.** Unless otherwise noted, this proposal is based upon the use of straight time labor only. Plastering, patching and painting are excluded. Purchaser agrees to provide LONG Building Technologies, Inc. ("LONG") with required field utilities (electricity, toilets, drinking water, project hoist, elevator service, etc.) without charge. LONG agrees to keep the job site clean of debris arising out of its own operations. Purchaser shall not back charge LONG for any costs or expenses without LONG's written consent.

2. **Invoicing & Payments.** LONG may invoice Purchaser monthly for all materials delivered to the job site or to an off-site storage facility and for all work performed on-site and off-site. Purchaser shall pay LONG in United States currency (USD) amounts invoiced within thirty (30) days of the invoice date. Waivers of lien will be furnished upon request, as the work progresses, and to the extent payments are received. Invoices more than 30 days from the invoice date shall be subject to finance charges at 1.5% per month or the maximum rate applicable for the State in which the work was performed.
3. **Material Shortages.** If the materials or equipment included in this proposal become temporarily unavailable, the deadline for the performance of the work shall be extended by the length of the temporary unavailability. If the materials or equipment become permanently unavailable, LONG shall (a) be excused from furnishing the unavailable materials or equipment, and (b) be reimbursed for the price difference between the unavailable materials or equipment and a reasonably available substitute.
4. **Taxes.** The price of this proposal does not include duties, sales, use, excise, or other taxes, unless required by federal, state or local law. Purchaser shall pay, in addition to the proposed price, all taxes not legally required to be paid by LONG or, alternatively, shall provide LONG with acceptable tax exemption certificates. LONG shall provide Purchaser with tax payment certificates upon request and after completion and acceptance of work.
5. **Delays.** LONG shall not be liable for any delay in the performance of the work resulting from or attributed to acts or circumstances beyond LONG's control, including, but not limited to, acts of God, fire, riots, labor disputes, condition of the premises, acts or omissions of the Purchaser, Owner, or other Contractors or delays caused by suppliers or subcontractors of LONG.
6. **Compliance with Laws.** LONG shall comply with all applicable federal, state and local laws and regulations and shall obtain all temporary licenses and permits required for the execution of the work. Licenses and permits of a permanent nature shall be procured and paid for by the Purchaser.
7. **Disputes.** All disputes involving more than \$15,000 shall be resolved by arbitration in accordance with the rules of the American Arbitration Association. The prevailing party shall recover all reasonable legal costs and attorney's fees incurred as a result. Nothing here shall limit any rights under construction lien laws.
8. **Insurance.** Insurance coverage in excess of LONG's standard limits may be furnished if required; however, Purchaser will be billed for any additional premium charged to LONG. LONG will neither give Purchaser credit for insurance afforded to it by others, nor pay other insurance premiums.
9. **Indemnity.** The Parties hereto agree to indemnify each other from any and all liabilities, claims, expenses, losses or damages, including attorneys' fees, which may arise in connection with the execution of the work herein specified and which are caused, in whole or in part, by the negligent act or omission of the Indemnifying Party.
10. **Occupational Safety and Health.** The Parties hereto agree to notify each other in writing immediately upon becoming aware of an inspection under, or any alleged violation of, the Occupational Safety and Health Act relating in any way to the project site.
11. **Entire Agreement.** This proposal, upon acceptance, shall constitute the entire agreement between the parties and supersedes any prior representations or understandings, written or oral.
12. **Changes.** No change or modification of any of the terms and conditions stated herein shall be binding upon LONG unless accepted by LONG in writing.
13. **Limitations of Liability.** Neither party's (including additional insured's) total cumulative liability hereunder for any claim or cause of action of any kind, regardless of whether such claim may be based on contract, warranty, tort (including negligence), strict liability, or any other legal or equitable principle, shall exceed the amount of the party's primary general liability policy limits. Notwithstanding any provision of any contract document to

the contrary, neither party shall waive subrogation, or be liable to the other party or any of its affiliates, employees or subcontractors for punitive, special, exemplary, incidental or consequential damages, damages for loss of profits, loss of use or loss of revenue, or losses associated with cost of capital in connection with or arising out of this agreement, regardless of whether such claim may be based on contract, warranty, tort (including negligence), strict liability, or any other legal or equitable principle, or for any condition that is beyond the reasonable control, and without the intentional misconduct or negligence, of that party. Such conditions include, but are not limited to: acts of God; acts of government entities; strikes; labor disputes; fire; explosions or other casualties; thefts; vandalism; riots or war; acts of terrorism; or unavailability of labor, parts, materials or supplies.

14. **Warranty.** LONG warrants that the materials and equipment furnished by LONG will be of good quality and new; that the work will be free from defects not inherent in the quality required or permitted; and that the work will conform to the requirements of this agreement. LONG warrants that the work shall be free from defects in material and workmanship arising from normal usage for a period of one (1) year from the final invoice date and that its services will be free from defects in workmanship, design and material for one (1) year from the final invoice date. Upon written notice from the Purchaser, LONG shall, at its option, repair or replace the defective work or re-perform defective services. These warranties shall not extend to any work or services that have been abused, altered, misused or repaired by the Purchaser or third parties without the supervision of and prior written approval of LONG, or if LONG's serial numbers or warranty date decals have been removed or altered. The Purchaser must promptly report any failure of the equipment to LONG in writing. All replaced equipment becomes LONG's property.
15. **Asbestos-Containing Materials.** LONG is not licensed, nor will it undertake direct obligations relating to the identification, abatement, cleanup, control, removal, and/or disposal of asbestos-containing materials ("ACM"). Consistent with applicable laws, Purchaser shall supply LONG with any information in its possession relating to the presence of ACM at any of its facilities where LONG may perform work or provide services that may result in the disturbance of ACM. Often, LONG asks for certification that no ACM is present in facilities constructed prior to 1982. Purchaser shall provide such certification for buildings it owns, or aid LONG in obtaining such certification from facility owners for buildings it does not own. If either Purchaser or LONG becomes aware of or suspects the presence of ACM that may be disturbed by LONG performing work or providing services, it shall immediately stop the work or services in the identified area(s) and immediately notify the other party in writing. The Purchaser shall be responsible at its sole expense for addressing the potential for or the presence of ACM in conformance with all applicable laws, and prior to LONG resuming work or providing services in the identified area(s), will provide a written certification to LONG that the identified area(s) are free from ACM.
16. **Other Hazards.** Purchaser shall supply LONG with any information in its possession relating to the presence of Other Hazards, including but not limited to Structural Hazards, Hazardous Materials, Environmental Hazards, and Dangerous Substances in or near areas where LONG will be required to perform work or provide services. If either Purchaser or LONG becomes aware of or suspects the presence of Other Hazards that may interfere with LONG performing work or providing services, it shall immediately stop the work or services in the identified area(s) and immediately notify the other party in writing. Purchaser shall be responsible at its sole expense for the identification, abatement, cleanup, control, removal, and/or disposal of Other Hazards from areas LONG is required to perform work or provide services, and prior to LONG resuming work or providing services in the identified area(s), will provide a written certification to LONG that the identified area(s) are free from Other Hazards. LONG's obligations under this agreement expressly exclude any work or service of any nature associated or connected with the identification, abatement, clean up, control, removal, or disposal of Other Hazards including but not limited to asbestos, toxic waste, molds, lead, heavy metals, pesticides, pathogens, radon, x-rays or polychlorinated biphenyls ("PCBs"), discovered in or near areas where LONG will be required to perform work or provide services. Any language or provision of the agreement contained elsewhere that may authorize or empower the Purchaser to change, modify, or alter the Scope of Work to be performed by LONG shall not operate to compel LONG to perform any work relating to AsbestosContaining Materials or Other Hazards.

17. This Proposal is subject to change based on unknown items that may occur as result of COVID-19 such as material delays, labor shortages, jobsite disruptions or governmental intervention. Manufactures and production facilities are feeling the impacts of decreasing international imports, health and safety concerns and economic impacts to their business. As a result, manufacturing production may be impacted. Lead times and production may be extended without warning and pricing may be affected. Projects with critical completion schedules should be coordinated with your LONG salesperson



Long live your building!

PROPOSAL

Date: 7/18/2024
Proposal #: UF3959
Expiration: 30 days from above date
Account Executive: Ryan Skiff
Contact Number: 907-550-2127

Project:

Burner Replacement

204 Eddie Hoffman Hwy Bethel, AK 99559

A. SCOPE OF WORK –

Provide and install new Beckett burner

1. Pricing

Total: \$29,899.00

2. INCLUSIONS:

- Travel, housing, and per diem
- Demo existing Webster Burner and dispose of at designated area appointed by the City.
- Provide and install 1 each CF2300 Beckett burner
- Provide and install Burnham factory mounting plates
- Wire existing safties
- Wire burner controls
- Re-install fuel line
- Brush down and tune boiler
- Start Up

3. EXCLUSIONS:

- Mechanical and electrical engineering
- Brushing down flue pipe
- Vehicle will need a truck to pick up burner
- All equipment not included in the inclusions
- Controls of any other equipment not included above
- Temporary heat (the system will be down for a week)
- Sprinkler work
- Troubleshooting, repair and replacement of existing equipment unless included
- All costs of bonds
- Code Upgrades
- Hazardous material identification, abatement or removal
- All else not included in the inclusions

Note: All data and information contained herein and provided by LONG Building Technologies is considered confidential and proprietary. The data and information contained herein may not be reproduced, published or distributed to, or for, any third parties without the express prior written consent of LONG Building Technologies.

Accepted for:	Submitted by: LONG Building Technologies
Accepted by:	Submitted by: <i>Ryan Skiff</i>
Title:	Title: Sales Executive
Signature:	Signature: <i>Ryan Skiff</i>
Date:	Date: 7/18/2024

Terms and Conditions:

By accepting this proposal, Purchaser agrees to be bound by the following Terms and Conditions:

- Scope of Work.** Unless otherwise noted, this proposal is based upon the use of straight time labor only. Plastering, patching and painting are excluded. Purchaser agrees to provide LONG Building Technologies, Inc. ("LONG") with required field utilities (electricity, toilets, drinking water, project hoist, elevator service, etc.) without charge. LONG agrees to keep the job site clean of debris arising out of its own operations. Purchaser shall not back charge LONG for any costs or expenses without LONG's written consent.
- Invoicing & Payments.** LONG may invoice Purchaser monthly for all materials delivered to the job site or to an off-site storage facility and for all work performed on-site and off-site. Purchaser shall pay LONG in United States currency (USD) amounts invoiced within thirty (30) days of the invoice date. Waivers of lien will be furnished upon request, as the work progresses, and to the extent payments are received. Invoices more than 30 days from the invoice date shall be subject to finance charges at 1.5% per month or the maximum rate applicable for the State in which the work was performed.
- Material Shortages.** If the materials or equipment included in this proposal become temporarily unavailable, the deadline for the performance of the work shall be extended by the length of the temporary unavailability. If the materials or equipment become permanently unavailable, LONG shall (a) be excused from furnishing the unavailable materials or equipment, and (b) be reimbursed for the price difference between the unavailable materials or equipment and a reasonably available substitute.
- Taxes.** The price of this proposal does not include duties, sales, use, excise, or other taxes, unless required by federal, state or local law. Purchaser shall pay, in addition to the proposed price, all taxes not legally required to be paid by LONG or, alternatively, shall provide LONG with acceptable tax exemption certificates. LONG shall provide Purchaser with tax payment certificates upon request and after completion and acceptance of work.
- Delays.** LONG shall not be liable for any delay in the performance of the work resulting from or attributed to acts or circumstances beyond LONG's control, including, but not limited to, acts of God, fire, riots, labor disputes, condition of the premises, acts or omissions of the Purchaser, Owner, or other Contractors or delays caused by suppliers or subcontractors of LONG.
- Compliance with Laws.** LONG shall comply with all applicable federal, state and local laws and regulations and shall obtain all temporary licenses and permits required for the execution of the work. Licenses and permits of a permanent nature shall be procured and paid for by the Purchaser.
- Disputes.** All disputes involving more than \$15,000 shall be resolved by arbitration in accordance with the rules of the American Arbitration Association. The prevailing party shall recover all reasonable legal costs and attorney's fees incurred as a result. Nothing here shall limit any rights under construction lien laws.
- Insurance.** Insurance coverage in excess of LONG's standard limits may be furnished if required; however, Purchaser will be billed for any additional premium charged to LONG. LONG will neither give Purchaser credit for insurance afforded to it by others, nor pay other insurance premiums.
- Indemnity.** The Parties hereto agree to indemnify each other from any and all liabilities, claims, expenses, losses or damages, including attorneys' fees, which may arise in connection with the execution of the work herein specified and which are caused, in whole or in part, by the negligent act or omission of the Indemnifying Party.
- Occupational Safety and Health.** The Parties hereto agree to notify each other in writing immediately upon becoming aware of an inspection under, or any alleged violation of, the Occupational Safety and Health Act relating in any way to the project site.
- Entire Agreement.** This proposal, upon acceptance, shall constitute the entire agreement between the parties and supersedes any prior representations or understandings, written or oral.
- Changes.** No change or modification of any of the terms and conditions stated herein shall be binding upon LONG unless accepted by LONG in writing.

LONG BUILDING TECHNOLOGIES

935 GAMBELL STREET, ANCHORAGE, AK 99501 | P: 907.561.3044 | F: 907.561.4225

13. **Limitations of Liability.** Neither party's (including additional insured's) total cumulative liability hereunder for any claim or cause of action of any kind, regardless of whether such claim may be based on contract, warranty, tort (including negligence), strict liability, or any other legal or equitable principle, shall exceed the amount of the party's primary general liability policy limits. Notwithstanding any provision of any contract document to the contrary, neither party shall waive subrogation, or be liable to the other party or any of its affiliates, employees or subcontractors for punitive, special, exemplary, incidental or consequential damages, damages for loss of profits, loss of use or loss of revenue, or losses associated with cost of capital in connection with or arising out of this agreement, regardless of whether such claim may be based on contract, warranty, tort (including negligence), strict liability, or any other legal or equitable principle, or for any condition that is beyond the reasonable control, and without the intentional misconduct or negligence, of that party. Such conditions include, but are not limited to: acts of God; acts of government entities; strikes; labor disputes; fire; explosions or other casualties; thefts; vandalism; riots or war; acts of terrorism; or unavailability of labor, parts, materials or supplies.
14. **Warranty.** LONG warrants that the materials and equipment furnished by LONG will be of good quality and new; that the work will be free from defects not inherent in the quality required or permitted; and that the work will conform to the requirements of this agreement. LONG warrants that the work shall be free from defects in material and workmanship arising from normal usage for a period of one (1) year from the final invoice date and that its services will be free from defects in workmanship, design and material for one (1) year from the final invoice date. Upon written notice from the Purchaser, LONG shall, at its option, repair or replace the defective work or re-perform defective services. These warranties shall not extend to any work or services that have been abused, altered, misused or repaired by the Purchaser or third parties without the supervision of and prior written approval of LONG, or if LONG's serial numbers or warranty date decals have been removed or altered. The Purchaser must promptly report any failure of the equipment to LONG in writing. All replaced equipment becomes LONG's property.
15. **Asbestos-Containing Materials.** LONG is not licensed, nor will it undertake direct obligations relating to the identification, abatement, cleanup, control, removal, and/or disposal of asbestos-containing materials ("ACM"). Consistent with applicable laws, Purchaser shall supply LONG with any information in its possession relating to the presence of ACM at any of its facilities where LONG may perform work or provide services that may result in the disturbance of ACM. Often, LONG asks for certification that no ACM is present in facilities constructed prior to 1982. Purchaser shall provide such certification for buildings it owns, or aid LONG in obtaining such certification from facility owners for buildings it does not own. If either Purchaser or LONG becomes aware of or suspects the presence of ACM that may be disturbed by LONG performing work or providing services, it shall immediately stop the work or services in the identified area(s) and immediately notify the other party in writing. The Purchaser shall be responsible at its sole expense for addressing the potential for or the presence of ACM in conformance with all applicable laws, and prior to LONG resuming work or providing services in the identified area(s), will provide a written certification to LONG that the identified area(s) are free from ACM.
16. **Other Hazards.** Purchaser shall supply LONG with any information in its possession relating to the presence of Other Hazards, including but not limited to Structural Hazards, Hazardous Materials, Environmental Hazards, and Dangerous Substances in or near areas where LONG will be required to perform work or provide services. If either Purchaser or LONG becomes aware of or suspects the presence of Other Hazards that may interfere with LONG performing work or providing services, it shall immediately stop the work or services in the identified area(s) and immediately notify the other party in writing. Purchaser shall be responsible at its sole expense for the identification, abatement, cleanup, control, removal, and/or disposal of Other Hazards from areas LONG is required to perform work or provide services, and prior to LONG resuming work or providing services in the identified area(s), will provide a written certification to LONG that the identified area(s) are free from Other Hazards. LONG's obligations under this agreement expressly exclude any work or service of any nature associated or connected with the identification, abatement, clean up, control, removal, or disposal of Other Hazards including but not limited to asbestos, toxic waste, molds, lead, heavy metals, pesticides, pathogens, radon, x-rays or polychlorinated biphenyls ("PCBs"), discovered in or near areas where LONG will be required to perform work or provide services. Any language or provision of the agreement contained elsewhere that may authorize or empower the Purchaser to change, modify, or alter the Scope of Work to be performed by LONG shall not operate to compel LONG to perform any work relating to Asbestos-Containing Materials or Other Hazards.

City of Bethel Action Memorandum

Action memorandum No.	24-24		
Date action introduced:	8/27/2024	Introduced by:	Lori Strickler, Acting City Manager
Date action taken:		Approved	Denied
Confirmed by:			

Action Title: Direct Administration to negotiate and execute a contract for the construction of a new Animal Control Facility.

Attachment(s): Request for Bid Dog Pound Facility

Amount of fiscal impact	Source of Funding	Account information
2,500,000 (less engineering fees)	Animal Control Facility Capital Budget	Capital Budget

Summary Statement

The Administration seeks authorization to engage in contract discussions and negotiations with UIC Construction LLC, for the construction of the Animal Control Facility.

The City Council allocated:

\$800,000 in the FY2023 Capital Budget

\$400,000 in FY 2024 Capital Budget

\$300,000 in the FY 2024 Capital Budget through Ordinance 23-11 (g) budget amendment.

\$1,000,000 Pledged in the FY25 Capital Budget

Total allocation for the Animal Control Center is \$1,500,000 with a \$1 Million Dollar Pledge from the Council if additional funding is not secured.

DOWL, the City's Engineering contractor, prepared the architectural, mechanical, electrical and structural design along with drafting of the request for bid document at the request of the City for the Animal Control Center. The Request for Bid was presented as a Design Bid Build, which simply means since the design work was completed in advance (by DOWL), the contractors bidding on the construction of the project would only need to build the already designed facility.

The City released the Request for proposal with a due date of April 26th, 2024, and a construction deadline of November 30, 2024. The lowest bid for the project was UIC at \$2.338M. The bid was considered to be responsive, and they met the minimum qualifications. In accordance with the Bethel Municipal Code, a bid protest period was issued and a notice of intent to negotiate on May 3, 2024. No appeals to the decision to negotiate were presented by other parties.

Since the low bid was \$1,047,349 over the capital budget amount approved by the City went back to the low bidder to identify opportunities to cut costs through value engineering options. This process brought the construction costs down from 2.338M to \$2,011,425, still over the amount available so the City ended the contract negotiations with UIC.

The low bidder's quote has expired however, UIC has indicated they are still interested in progressing with the build. To engage the contractor to determine if the contractor is first, able to perform the work, but also provide updated quotes for the new construction timeline, Administration seeks to initiate a contract negotiation in response to their winning proposal to see if a contract can be negotiated.

**CITY OF BETHEL
BETHEL, ALASKA**



REQUEST FOR BIDS

Dog Pound Facility

Deadline for Questions/ Protests: Wednesday, April 16, 2024, at 12:00 pm

Opening/ Due Date: Friday, April 26, 2024, at 12:00 pm

Opening Time: 12:00 pm

Opening Place: City of Bethel – City Hall
300 Chief Eddie Hoffman Highway
Bethel, Alaska 99559

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00 11 13	Advertisement For Bids
00 21 13	Instruction to Bidders
00 41 13	Bid Form
00 43 13	Bid Bond (EJCDC C-430, 2013 edition)
00 52 13	Agreement Between Owner and Contractor for Construction Contract (EJCDC C-520, 2013 edition)
00 61 13.13	Performance Bond (EJCDC C-610, 2013 edition)
00 61 13.16	Payment Bond (EJCDC C-615, 2013 edition)
00 72 13	Standard General Conditions of the Construction Contract (EJCDC C-700, 2013 edition)
00 80 00	Supplementary Conditions (EC-800)

DIVISION 01 GENERAL REQUIREMENTS

01 00 00	General Requirements
01 00 01	Method of Measurement and Basis of Payment

DIVISION 05 METALS

05 40 00	Cold-Formed Metal Framing
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DIVISION 06 WOOD, PLASTICS, AND COMPOSITES

06 10 00	Rough Carpentry
06 10 53	Miscellaneous Rough Carpentry
06 17 53	Shop-Fabricated Wood Trusses and Joists
06 18 00	Glue-Laminated Construction
06 20 00	Finish Carpentry
06 74 00	Composite Gratings
06 83 16	Fiberglass Reinforced Paneling

DIVISION 07 THERMAL AND MOISTURE PROTECTION

07 21 19	Foamed-In-Place Insulation
07 26 00	Vapor Retarders
07 41 13	Metal Roof Panels
07 42 13	Insulated Metal Wall Panels
07 92 00	Joint Sealants

DIVISION 08 OPENINGS

08 11 13	Hollow Metal Doors and Frames
08 30 06	Interior Sliding Doors
08 54 13	Fiberglass Windows
08 80 00	Glazing

DIVISION 09 FINISHES

09 21 16	Gypsum Board Assemblies
09 51 00	Acoustical Ceilings
09 67 00	Fluid-Applied Flooring
09 91 13	Exterior Painting
09 91 23	Interior Painting

DIVISION 10 SPECIALTIES

10 28 00	Toilet, Bath, and Laundry Accessories
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DIVISION 12 FURNISHINGS

12 31 00	Manufactured Metal Casework
12 32 00	Manufactured Wood Casework
12 36 00	Countertops

DIVISION 22 PLUMBING

22 05 00	Common Work Results for Plumbing
22 05 29	Hangers and Supports for Plumbing Piping and Equipment
22 11 00	Facility Water Distribution
22 13 00	Facility Sanitary Sewerage
22 30 00	Plumbing Equipment
22 40 00	Plumbing Fixtures

DIVISION 23 HEATING, VENTILATING, AND AIR CONDITIONING (HVAC)

23 05 00	Common Work Results for Mechanical
23 05 29	Hangers and Supports for HVAC Piping and Equipment
23 05 93	Testing, Adjusting, and Balancing for HVAC
23 10 00	Fuel-oil System
23 20 00	HVAC Piping and Pumps
23 31 00	HVAC Ducts and Casings
23 33 00	Air Duct Accessories
23 37 00	Air Outlets and Inlets
23 52 23	Cast Iron Boilers & Accessories
23 73 00	Indoor Central-Station Air-Handling Units

DIVISION 26 ELECTRICAL

26 00 00	Electrical Work, General
26 05 19	Wire and Cables
26 05 26	Grounding
26 05 33	Electrical Raceway Systems
26 24 16	Panelboards
26 27 26	Wiring Devices
26 28 16	Switches and Circuit Breakers
26 36 05	Heavy-Duty Safety Switches
26 50 00	Lighting

DIVISION 31 EARTH WORK

31 20 00 Earth Moving
31 62 16 Helical Anchors

DIVISION 32 EXTERIOR IMPROVEMENTS

32 31 13 Chain Link Fences and Gates

DIVISION 33 UTILITIES

33 07 00 HDPE Insulated Pipe and Fittings

SIGNATURE AND VERIFICATION OF ANTI-COLLUSION**ENGINEERING DOCUMENTS**

Dog Pound Facility Drawings

SUPPLEMENTAL INFORMATION

Project Contract Forms

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ADVERTISEMENT FOR BIDS

CITY OF BETHEL
BETHEL, ALASKA

DOG POUND FACILITY

The City of Bethel (Owner) is seeking separate sealed Bids for construction of a new Dog Pound Facility (Project). Bids will be received by the Purchasing Agent at City Hall, located at 300 Chief Eddie Hoffman Highway (or PO Box 1388), Bethel, Alaska 99559, until 12:00 PM local time on Friday, April 26, 2024 at which time the Bids received will be publicly opened and read.

The Project includes construction of a wood framed, elevated structure for kennel and veterinary services.

Bids will be received for a single prime Contract. Bids shall be developed on a lump sum basis with a schedule of values following bidding as indicated in the Bid Form and Method of Measurement and Basis of Payment.

The Issuing Office for the Bidding Documents is:

City of Bethel
C/O Purchasing Agent
Bethel, Alaska 99559
Email: purchasingagent@cityofbethel.net

Prospective Bidders may examine the Bidding Documents at the Issuing Office on Monday through Friday between the hours of 8:00 AM and 5:00 PM and may obtain copies of the Bidding Documents from the Issuing Office.

The Issuing Office has established a Bidding Documents Website:

<https://www.cityofbethel.org/rfps>

Bidding Documents may be downloaded from the designated website. The designated website, and only the designated website, will be updated when necessary with addenda, lists of registered plan holders, and other information relevant to submitting a Bid for the Project.

Bidding Documents may also be examined at The Plans Room LLC (4831 Old Seward Highway, Suite 202, Anchorage, Alaska), The Association of General Contractors (8005 Schoon Street, Anchorage, Alaska), and AGC/The Plans Room (3750 Bonita Street, Fairbanks, Alaska) on Monday through Friday between the hours of 9:00 AM and 4:00 PM; and the office of the Engineer, DOWL (5015 Business Park Boulevard, Suite 4000, Anchorage, Alaska), on Monday through Friday between the hours of 8:00 AM and 5:00 PM.

Each bid must be submitted and sealed in an envelope addressed to City of Bethel C/O Purchasing Agent, Bethel, Alaska 99559 and plainly marked on the outside of the envelope as "Bid for City of Bethel, Dog Pound Facility" and the date and hour of the bid opening. In person bids will be accepted from 11:30 AM to 12:00 PM at the entrance to City Hall (at 300 Chief Eddie Hoffman Highway). Bids may also be mailed to PO Box 1388, Bethel, Alaska 99559, or emailed to the Purchasing Agent.

The prevailing wage rates of the State of Alaska Department of Labor and Safety for Laborers' & Mechanics Minimum Rates of Pay (Pamphlet 600) apply to this project and are hereby incorporated by reference as if fully set forth herein. The successful Bid shall comply with each provision thereof.

Each Bid will be reviewed by the Owner and Engineer for compliance and completeness. Bidders must be in good standing with the City of Bethel. The winning bid will be selected based on the lowest, responsive, qualified bid. Local Bids will receive a five percent (5%) preference in determining the lowest responsible and responsive bid.

The City of Bethel will not be liable for any costs incurred by any Bidder in response to this advertisement. The City of Bethel reserves the right to reject any or all bids without cause.

All questions should be submitted in writing to the Purchasing Agent at purchasingagent@cityofbethel.net

END OF ADVERTISEMENT FOR BIDS

SECTION 00 21 13
INSTRUCTIONS TO BIDDERS
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ARTICLE 1 – DEFINED TERMS

1.01 Terms used in these Instructions to Bidders have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below:

- A. *Issuing Office* – The office from which the Bidding Documents are to be issued and where the bidding procedures are to be administered.

City of Bethel
C/O Purchasing Agent
Bethel, Alaska 99559
purchasingagent@cityofbethel.net

- B. *Local Bidder* – A local bidder means a business that submits a bid with fixed offices or distribution points located within the boundaries of the City of Bethel and who has a current City of Bethel business license and who is at the time bidding in compliance with all requirements of the City of Bethel sales tax ordinance. A Bethel post office box number or residential address may not be used solely to establish status as a local bidder. The Owner reserves the final right to determine local bidder status.

ARTICLE 2 – BIDDING DOCUMENTS

- 2.01 Bidder shall obtain a complete set of Bidding Requirements and proposed Contract Documents (together, the Bidding Documents). See the Agreement for a list of the Contract Documents. It is Bidder's responsibility to determine that it is using a complete set of documents in the preparation of a Bid. Bidder assumes sole responsibility for errors or misinterpretations resulting from the use of incomplete documents, by Bidder itself or by its prospective Subcontractors and Suppliers.
- 2.02 Bidding Documents are made available for the sole purpose of obtaining Bids for completion of the Project and permission to download or distribution of the Bidding Documents does not confer a license or grant permission or authorization for any other use. Authorization to download documents, or other distribution, includes the right for plan holders to print documents solely for their use, and the use of their prospective Subcontractors and Suppliers, provided the plan holder pays all costs associated with printing or reproduction. Printed documents may not be re-sold under any circumstances.
- 2.03 Owner has established a Bidding Documents Website as indicated in the Advertisement or invitation to bid. Owner recommends that Bidder obtain a complete set of the Bidding Documents from such website. Bidders may rely that sets of Bidding Documents obtained from the Bidding Documents Website are complete, unless an omission is blatant.
- 2.04 Plan rooms (including construction information subscription services, and electronic and virtual plan rooms) may distribute the Bidding Documents or make them available for examination. Owner is not responsible for omissions in Bidding Documents or other documents obtained from plan rooms, or for a Bidder's failure to obtain Addenda from a plan room.

2.05 Electronic Documents

- A. When the Bidding Requirements indicate that electronic (digital) copies of the Bidding Documents are available, such documents will be made available to the Bidders as Electronic Documents in the manner specified.
 - 1. Bidding Documents will be provided in Adobe PDF (Portable Document Format) (.pdf) that is readable by Adobe Acrobat Reader Version 2017 or later. It is the intent of the Engineer and Owner that such Electronic Documents are to be exactly representative of the paper copies of the documents. However, because the Owner and Engineer cannot totally control the transmission and receipt of Electronic Documents nor the Contractor's means of reproduction of such documents, the Owner and Engineer cannot and do not guarantee that Electronic Documents and reproductions prepared from those versions are identical in every manner to the paper copies.
- B. Unless otherwise stated in the Bidding Documents, the Bidder may use and rely upon complete sets of Electronic Documents of the Bidding Documents, described in Paragraph 2.06.A above. However, Bidder assumes all risks associated with differences arising from transmission/receipt of Electronic Documents versions of Bidding Documents and reproductions prepared from those versions and, further, assumes all risks, costs, and responsibility associated with use of the Electronic Documents versions to derive information that is not explicitly contained in printed paper versions of the documents, and for Bidder's reliance upon such derived information.

ARTICLE 3 – QUALIFICATIONS OF BIDDERS

- 3.01 To demonstrate Bidder's qualifications to perform the Work, Bidder shall submit with its Bid (a) written evidence establishing its qualifications such as financial data, previous experience, and present commitments, and (b) the following additional information:
 - A. Evidence of Bidder's authority to do business in the state or jurisdiction of where the Project is located,
 - B. Alaska Contractor's License No.,
 - C. List of proposed Subcontractor(s),
 - D. List of proposed Supplier(s),
 - E. Required Bid security in the form of a Bid Bond (EJCDC No. C-430, 2013),
 - F. List of similar projects over the past five years in the Yukon-Kuskokwim Delta Region including location, size, owner contact name, and telephone, and
 - G. If Bidder is a Local Bidder, a signed letter stating status as a Local Bidder must be provided and the Bidder must show compliance with the definition of a local bidder as found in Article 1 of this section.
- 3.02 Bidders must be in good standing with the Owner. Good standing includes but is not limited to:
 - A. No outstanding debts, fees, payments, or taxes owed to the Owner.

- B. No outstanding claims between the Owner and Bidder, and
 - C. No previous history of default of duty, contract, or obligation to the Owner.
- 3.03 A Bidder's failure to submit required qualification information within the times indicated may disqualify Bidder from receiving an award of the Contract.
- 3.04 No requirement in this Article 3 to submit information will prejudice the right of Owner to seek additional pertinent information regarding Bidder's qualifications.
- 3.05 Bidder is advised to carefully review those portions of the Bid Form requiring Bidder's representations and certifications.

ARTICLE 4 – SITE AND OTHER AREAS; EXISTING SITE CONDITIONS; EXAMINATION OF SITE; OWNER'S SAFETY PROGRAM; OTHER WORK AT THE SITE

4.01 *Site and Other Areas*

- A. The Site is identified in the Bidding Documents. By definition, the Site includes rights-of-way, easements, and other lands furnished by Owner for the use of the Contractor. Any additional lands required for temporary construction facilities, construction equipment, or storage of materials and equipment, and any access needed for such additional lands, are to be obtained and paid for by the Contractor.
 - 1. The existing dog pound structure will be demolished in full by Owner prior to the start of the Project.

4.02 *Existing Site Conditions*

- A. Subsurface, Physical, and Hazardous Environmental Conditions
 - 1. The Supplementary Conditions identify:
 - a. No reports of explorations and tests of subsurface conditions at or adjacent to the Site are being included in the Bid Documents.
 - b. No contaminated sites or Hazardous Environmental Conditions have been identified at or adjacent to the Site.
 - 2. Bidder is responsible for any interpretation or conclusion Bidder draws from any Technical Data or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.
 - 3. If the Supplementary Conditions do not identify Technical Data, the default definition of Technical Data set forth in Article 1 of the General Conditions will apply.
- B. Adequacy of Data: Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to subsurface conditions, other physical conditions, and Underground Facilities, and possible changes in the Bidding Documents due to differing or unanticipated subsurface or physical conditions appear in Paragraphs 5.03, 5.04, and 5.05 of the General Conditions. Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to a Hazardous Environmental Condition at the Site, if any, and possible changes in

the Contract Documents due to any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work, appear in Paragraph 5.06 of the General Conditions.

4.03 Site Visit and Testing by Bidders

- A. Bidder shall conduct a voluntary Site visit during normal working hours and shall not disturb any ongoing operations at the Site.
- B. Bidder is not required to conduct any subsurface testing, or exhaustive investigations of Site conditions.
- C. On request, and to the extent Owner has control over the Site, and schedule permitting, the Owner will provide Bidder access to the Site to conduct such additional examinations, investigations, explorations, tests, and studies as Bidder deems necessary for preparing and submitting a successful Bid. Owner will not have any obligation to grant such access if doing so is not practical because of existing operations, security or safety concerns, or restraints on Owner's authority regarding the Site.
- D. Bidder shall comply with all applicable Laws and Regulations regarding excavation and location of utilities, obtain all permits, and comply with all terms and conditions established by Owner or by property owners or other entities controlling the Site with respect to schedule, access, existing operations, security, liability insurance, and applicable safety programs.
- E. Bidder shall fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies.

4.04 Owner's Safety Program

- A. Site visits and work at the Site may be governed by an Owner safety program. As the General Conditions indicate, if an Owner safety program exists, it will be noted in the Supplementary Conditions.

4.05 Other Work at the Site

- A. Reference is made to Article 8 of the Supplementary Conditions for the identification of the general nature of other work of which Owner is aware (if any) that is to be performed at the Site by Owner or others (such as utilities and other prime contractors) and relates to the Work contemplated by these Bidding Documents. If Owner is party to a written contract for such other work, then on request, Owner will provide to each Bidder access to examine such contracts (other than portions thereof related to price and other confidential matters), if any.

ARTICLE 5 – BIDDER'S REPRESENTATIONS

5.01 It is the responsibility of each Bidder before submitting a Bid to:

- A. Examine and carefully study the Bidding Documents, and any data and reference items identified in the Bidding Documents;

- B. Visit the Site, conduct a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfy itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work;
- C. Become familiar with and satisfy itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work;
- D. Carefully study all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings;
- E. Consider the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs;
- F. Agree, based on the information and observations referred to in the preceding paragraph, that at the time of submitting its Bid no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents;
- G. Become aware of the general nature of the work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents;
- H. Promptly give Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder discovers in the Bidding Documents and confirm that the written resolution thereof by Engineer is acceptable to Bidder;
- I. Determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work; and
- J. Agree that the submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

ARTICLE 6 – INTERPRETATIONS AND ADDENDA

- 6.01 Owner on its own initiative may issue Addenda to clarify, correct, supplement, or change the Bidding Documents.

- 6.02 Bidder shall submit all questions about the meaning or intent of the Bidding Documents to the Purchasing Agent in writing. Contact information and submittal procedures for such questions are as follows:

City of Bethel

C/O Purchasing Agent

Email: purchasingagent@cityofbethel.net

- 6.03 Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda delivered to all registered plan holders. Questions received less than seven days prior to the date for opening of Bids may not be answered.
- 6.04 Only responses set forth in an Addendum will be binding. Oral and other interpretations or clarifications will be without legal effect. Responses to questions are not part of the Contract Documents unless set forth in an Addendum that expressly modifies or supplements the Contract Documents.

ARTICLE 7 – BID SECURITY

- 7.01 A Bid must be accompanied by Bid security made payable to Owner in an amount of five percent (5%) of Bidder's maximum Bid price (determined by adding the base bid and all alternates) and in the form of a certified check, bank money order, or a Bid bond (on the form included in the Bidding Documents) issued by a surety meeting the requirements of Paragraphs 6.01 and 6.02 of the General Conditions.
- 7.02 The Bid security of the apparent Successful Bidder will be retained until Owner awards the contract to such Bidder, and such Bidder has executed the Contract Documents, furnished the required contract security, and met the other conditions of the Notice of Award, whereupon the Bid security will be released. If the Successful Bidder fails to execute and deliver the Contract Documents and furnish the required contract security within 15 days after the Notice of Award, Owner may consider Bidder to be in default, annul the Notice of Award, and the Bid security of that Bidder will be forfeited. Such forfeiture shall be Owner's exclusive remedy if Bidder defaults.
- 7.03 The Bid security of other Bidders that Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of seven days after the Effective Date of the Contract or 61 days after the Bid opening, whereupon Bid security furnished by such Bidders will be released.
- 7.04 Bid security of other Bidders that Owner believes do not have a reasonable chance of receiving the award will be released within seven days after the Bid opening.

ARTICLE 8 – CONTRACT TIMES

- 8.01 The number of days within which, or the dates by which, the Work is to be substantially completed and ready for final payment are set forth in the Agreement.

ARTICLE 9 – LIQUIDATED DAMAGES

- 9.01 Provisions for liquidated damages, if any, for failure to timely attain Substantial Completion or completion of the Work in readiness for final payment, are set forth in the Agreement.

ARTICLE 10 – SUBSTITUTE AND “OR-EQUAL” ITEMS

- 10.01 The Contract for the Work, if awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents, and those “or-equal” or substitute materials and equipment subsequently approved by Engineer prior to the submittal of Bids and identified by Addendum. No item of material or equipment will be considered by Engineer as an “or-equal” or substitute unless written request for approval has been submitted by Bidder and has been received by Engineer at least 15 days prior to the date for receipt of Bids in case of a proposed substitute and 5 days prior in the case of a proposed “or equal”. Each such request shall comply with the requirements of Paragraphs 7.04 and 7.05 of the General Conditions. The burden of proof of the merit of the proposed item is upon Bidder. Engineer’s decision of approval or disapproval of a proposed item will be final. If Engineer approves any such proposed item, such approval will be set forth in an Addendum issued to all prospective Bidders. Bidders shall not rely upon approvals made in any other manner. Substitutes and “or-equal” materials and equipment may be proposed by Contractor in accordance with Paragraph 7.04 and 7.05 of the General Conditions after the Effective Date of the Contract.
- 10.02 All prices that Bidder sets forth in its Bid shall be based on the presumption that the Contractor will furnish the materials and equipment specified or described in the Bidding Documents, as supplemented by Addenda. Any assumptions regarding the possibility of post-Bid approvals of “or-equal” or substitution requests are made at Bidder’s sole risk.

ARTICLE 11 – SUBCONTRACTORS, SUPPLIERS, AND OTHERS

- 11.01 The apparent Successful Bidder, and any other Bidder so requested, shall within five days after Bid opening, submit to Owner a list of the Subcontractors or Suppliers proposed for the Work.
- If requested by Owner, such list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, or other individual or entity. If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor, Supplier, individual, or entity, Owner may, before the Notice of Award is given, request apparent Successful Bidder to submit an acceptable substitute, in which case apparent Successful Bidder shall submit a substitute, Bidder’s Bid price will be increased (or decreased) by the difference in cost occasioned by such substitution, and Owner may consider such price adjustment in evaluating Bids and making the Contract award.
- 11.02 If apparent Successful Bidder declines to make any such substitution, Owner may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors, Suppliers, or other individuals or entities. Declining to make requested substitutions will constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor, Supplier, individual, or entity so listed and against which Owner or Engineer makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner and Engineer subject to subsequent revocation of such acceptance as provided in Paragraph 7.06 of the General Conditions.
- 11.03 Contractor shall not be required to employ any Subcontractor, Supplier, individual, or entity against whom Contractor has reasonable objection.

- 11.04 The Contractor shall not award work to Subcontractor(s) in excess of the limits stated in SC 7.06.

ARTICLE 12 – PREPARATION OF BID

- 12.01 The Bid Form is included with the Bidding Documents.
- A. All blanks on the Bid Form shall be completed in ink and the Bid Form signed in ink. Erasures or alterations shall be initialed in ink by the person signing the Bid Form. A Bid price shall be indicated for each section, Bid item, alternate, adjustment unit price item, and unit price item listed therein.
 - B. If the Bid Form expressly indicates that submitting pricing on a specific alternate item is optional, and Bidder elects to not furnish pricing for such optional alternate item, then Bidder may enter the words “No Bid” or “Not Applicable.”
- 12.02 A Bid by a corporation shall be executed in the corporate name by a corporate officer (whose title must appear under the signature), accompanied by evidence of authority to sign. The corporate address and state of incorporation shall be shown.
- 12.03 A Bid by a partnership shall be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The official address of the partnership shall be provided on the Bid Form.
- 12.04 A Bid by a limited liability company shall be executed in the name of the firm by a member or other authorized person and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm shall be shown.
- 12.05 A Bid by an individual shall show the Bidder’s name and official address.
- 12.06 A Bid by a joint venture shall be executed by an authorized representative of each joint venturer in the manner indicated on the Bid Form. The official address of the joint venture shall be shown.
- 12.07 All names shall be printed in ink below the signatures.
- 12.08 The Bid shall contain an acknowledgment of receipt of all Addenda, the numbers of which shall be filled in on the Bid Form.
- 12.09 Postal and e-mail addresses and telephone number for communications regarding the Bid shall be shown.
- 12.10 The Bid shall contain evidence of Bidder’s authority and qualification to do business in the state where the Project is located, or Bidder shall covenant in writing to obtain such authority and qualification prior to award of the Contract and attach such covenant to the Bid. Bidder’s state contractor license number, if any, shall also be shown on the Bid Form.

ARTICLE 13 – BASIS OF BID

13.01 *Lump Sum*

- A. Bidders shall submit a Bid on a lump sum basis for each item of Work listed in the bid price section of the Bid Form.

- B. The “Bid Price” (sometimes referred to as the extended price) for each lump sum Bid item will be the “Bid Lump Sum Price” offered by the Bidder. The total of all lump sum Bid items will be the sum of these “Bid Prices”; such total will be used by Owner for Bid comparison purposes. The final quantities and Contract Price will be determined in accordance with Paragraph 13.03 of the General Conditions.
 - C. Discrepancies between the multiplication of units of Work and lump sum prices will be resolved in favor of the lump sum prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.
- 13.02 Per the City of Bethel Municipal Code Chapter 4.20 Purchasing, local Bidders submitting a bid shall receive a five percent (5%) preference in determining the lowest responsible and responsive bid.

ARTICLE 14 – SUBMITTAL OF BID

- 14.01 With each copy of the Bidding Documents, a Bidder is furnished one separate unbound copy of the Bid Form, and, if required, the Bid Bond Form. The unbound copy of the Bid Form is to be completed and submitted with the Bid security and the other documents required to be submitted under the terms of Article 7 of the Bid Form.
- 14.02 A Bid shall be received no later than the date and time prescribed and at the place indicated in the Advertisement for Bid and shall be enclosed in a plainly marked package with the Project title (and, if applicable, the designated portion of the Project for which the Bid is submitted), the name and address of Bidder, and shall be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid shall be enclosed in a separate package plainly marked on the outside with the notation “BID ENCLOSED.” When using the mail or other delivery system, the Bidder is totally responsible for the mail or other delivery system delivering the Bid at the place and prior to the time indicated in the Advertisement for Bid. A mailed Bid shall be addressed to City of BethelC/O: Purchasing Agent, PO BOX 1388, Bethel, Alaska 99559.
- 14.03 Bids received after the date and time prescribed for the opening of bids, or not submitted at the correct location or in the designated manner, will not be accepted.

ARTICLE 15 – MODIFICATION AND WITHDRAWAL OF BID

- 15.01 A Bid may be withdrawn by an appropriate document duly executed in the same manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids. Upon receipt of such notice, the unopened Bid will be returned to the Bidder.
- 15.02 If a Bidder wishes to modify its Bid prior to Bid opening, Bidder must withdraw its initial Bid in the manner specified in Paragraph 16.01 and submit a new Bid prior to the date and time for the opening of Bids.
- 15.03 If within 24 hours after Bids are opened any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that

there was a material and substantial mistake in the preparation of its Bid, that Bidder may withdraw its Bid, and the Bid security will be returned.

ARTICLE 16 – OPENING OF BIDS

- 16.01 Bids will be opened at the time and place indicated in the advertisement or invitation to bid and, unless obviously non-responsive, read aloud publicly. An abstract of the amounts of the base Bids and major alternates, if any, will be made available to Bidders after the opening of Bids.

ARTICLE 17 – BIDS TO REMAIN SUBJECT TO ACCEPTANCE

- 17.01 All Bids will remain subject to acceptance for the period of time stated in the Bid Form, but Owner may, in its sole discretion, release any Bid and return the Bid security prior to the end of this period.

ARTICLE 18 – EVALUATION OF BIDS AND AWARD OF CONTRACT

- 18.01 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner will reject the Bid of any Bidder that Owner finds, after reasonable inquiry and evaluation, to not be responsible. If Bidder purports to add terms or conditions to its Bid, takes exception to any provision of the Bidding Documents, or attempts to alter the contents of the Contract Documents for purposes of the Bid, then the Owner will reject the Bid as nonresponsive; provided that Owner also reserves the right to waive all minor informalities not involving price, time, or changes in the Work.
- 18.02 If Owner awards the contract for the Work, such award shall be to the responsible Bidder submitting the lowest responsive Bid.
- 18.03 More than one Bid for the same Work from an individual or entity under the same or different names will not be considered. Reasonable grounds for believing that any Bidder has an interest in more than one Bid for the Work may be cause for disqualification of that Bidder and the rejection of all Bids in which that Bidder has an interest.
- 18.04 Evaluation of Bids
- A. In evaluating Bids, Owner will consider whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices, and other data, as may be requested in the Bid Form or prior to the Notice of Award.
 - B. For the determination of the apparent low Bidder when unit price bids are submitted, Bids will be compared on the basis of the total of the products of the estimated quantity of each item and unit price Bid for that item, together with any lump sum items.
- 18.05 In evaluating whether a Bidder is responsible, Owner will consider the qualifications of the Bidder and may consider the qualifications and experience of Subcontractors and Suppliers proposed for those portions of the Work for which the identity of Subcontractors and Suppliers must be submitted as provided in the Bidding Documents.
- 18.06 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders and any proposed

Subcontractors, Suppliers, individuals, or entities to perform the Work in accordance with the Contract Documents.

ARTICLE 19 – BONDS AND INSURANCE

- 19.01 Article 6 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth Owner's requirements as to performance and payment bonds and insurance. When the Successful Bidder delivers the Agreement (executed by Successful Bidder) to Owner, it shall be accompanied by required bonds and insurance documentation.

ARTICLE 20 – SIGNING OF AGREEMENT

- 20.01 When Owner issues a Notice of Award to the Successful Bidder, it shall be accompanied by the unexecuted counterparts of the Agreement along with the other Contract Documents as identified in the Agreement. Within 15 days thereafter, Successful Bidder shall execute and deliver the required number of counterparts of the Agreement (and any bonds and insurance documentation required to be delivered by the Contract Documents) to Owner. Within ten days thereafter, Owner shall deliver one fully executed counterpart of the Agreement to Successful Bidder, together with printed and electronic copies of the Contract Documents as stated in Paragraph 2.02 of the General Conditions.

ARTICLE 21 – CANCELLATION OF BID PROCESS

- 22.01 The City retains the right to cancel the bid process at any point.

ARTICLE 22 – WAGE RATE REQUIREMENTS

- 22.01 The prevailing wage rates of the State of Alaska apply to this contract as do any requirements of the State of Alaska associated with the use of these State prevailing wages.

ARTICLE 23 – BID PROTESTS

- 23.01 A Bidder may protest a bid result in writing to the Owner within (7) seven calendar days of the Bid opening. Any protests received after seven days will not be accepted. Oral protest will not be accepted.
- 23.02 In order for a protest to be granted, a Bidder must prove by preponderance of the evidence that their Bid was the lowest responsive, responsible Bid.

END OF INSTRUCTION TO BIDDERS

**SECTION 00 41 13
BID FORM****TABLE OF CONTENTS**

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ARTICLE 1 – BID RECIPIENT

1.01 This Bid is submitted to:

City of Bethel
C/O: Purchasing Agent
Bethel, Alaska 99559
Email: purchasingagent@cityofbethel.net

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 – BIDDER’S ACKNOWLEDGEMENTS

2.01 Bidder accepts all the terms and conditions of the Advertisement and Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

ARTICLE 3 – BIDDER’S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents that:

- A. Bidder has examined and carefully studied the Bidding Documents, and any data and reference items identified in the Bidding Documents, and hereby acknowledges receipt of the following Addenda:

<u>Addendum No.</u>	<u>Addendum Date</u>
_____	_____
_____	_____
_____	_____
_____	_____

- B. Bidder has visited the Site and become familiar with and satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
- C. Bidder is familiar with and has satisfied itself as to all federal, state and local Laws and Regulations that may affect cost, progress, and performance of the Work.
- D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.

- E. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and any Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs.
- F. Bidder agrees, based on the information and observations referred to in the preceding paragraph, that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.
- G. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
- H. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents and confirms that the written resolution thereof by Engineer is acceptable to Bidder.
- I. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work.
- J. Bidder will submit written evidence of its authority to do business in the State or other jurisdiction where the Project is located not later than the date of its execution of the 00 52 13 Agreement.
- K. The submission of this Bid constitutes an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, and that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

ARTICLE 4 – BIDDER'S CERTIFICATION

4.01 Bidder certifies that:

- A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;
- B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;
- C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and
- D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:
 - 1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process;

2. “fraudulent practice” means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
 3. “collusive practice” means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and
 4. “coercive practice” means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.
- E. Bidder has not been contacted by any City employee or City Council member for purposes of influencing the City’s bid decision.
 - F. If selected, Bidder will not engage in discriminating against any person because of race, national origin, color, age, creed, religion, sex, sexual orientation, gender identity, political affiliation, marital status, ancestry, disability, or status as a disabled veteran.
 - G. Bidder’s failure to certify to the statements in this section shall result in automatic rejection of the bid.
 - H. If Bidder is found to have been in violation of any of the statements in this section, City shall automatically reject the bid.
 - I. City may cancel a contract if, during the course of such contract, the City finds Bidder to be in violation of any of the sworn statements required by this section.

ARTICLE 5 – BASIS OF BID

- 5.01 Bidder will complete the Work in accordance with the Contract Documents as itemized in the following Bid Schedule:

Item No.	Description	Unit	Bid Amount
101	Mobilization and Demobilization	Lump Sum	\$
102	Construction Survey and Record Drawings	Lump Sum	\$
103	Installation of Dog Pound Facility	Lump Sum	\$
104	Startup/Commissioning of Mechanical Systems and O&M Manuals	Lump Sum	\$
TOTAL			\$

- 5.02 Bidder acknowledges that:

- A. Each Bid Lump Sum Price includes an amount considered by Bidder to be adequate to cover Contractor’s overhead and profit for each separately identified item.

- B. Bidder will comply with State of Alaska Wage Rates.
- C. If Bidder wishes to submit manufacturer's data for a product for preliminary approval, the bidder must submit the manufacturer's data no later than when questions are due. Preliminary approvals will be granted on a case-by-case basis and are not guaranteed. Preliminary approvals are not to take the place of the submittal review and approval process with the successful bidder.

ARTICLE 6 – TIME OF COMPLETION

- 6.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.
- 6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 7 – ATTACHMENTS TO THIS BID

- 7.01 The following documents are submitted with and made a condition of this Bid:
 - A. Required Bid Security.
 - B. List of Proposed Subcontractors.
 - C. List of Proposed Suppliers.
 - D. List of Project References.
 - E. Evidence of authority to do business in the state of the Project; or a written covenant to obtain such license within the time for acceptance of Bids.
 - F. Contractor's License No.: _____.
 - G. Required Bidder Qualification Statement with supporting data.
 - H. If a local Bidder signed letter stating status as a local Bidder, then show that the Bidder complies with the definition of a local bidder as found in Article 1, Instruction to Bidders.
 - I. Signed and completed Bid Schedule or submittal.
 - J. Signed and dated verification of anti-collusion.

ARTICLE 8 – DEFINED TERMS

- 8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 9 – BID SUBMITTALBIDDER: *[Indicate correct name of bidding entity]*

By:

[Signature] _____*[Printed name]* _____*(If Bidder is a corporation, a limited liability company, a partnership, or a joint venture, attach evidence of authority to sign.)*

Attest:

[Signature] _____*[Printed name]* _____

Title: _____

Submittal Date: _____

Address for giving notices:

Telephone Number: _____

Fax Number: _____

Contact Name and e-mail address: _____

Bidder's License No.: _____

(where applicable)

END OF BID FORM

SECTION 00 43 13 BID BOND (PENAL SUM FORM)

Any singular reference to Bidder, Surety, Owner or other party shall be considered plural where applicable.

BIDDER (*Name and Address*):

SURETY (*Name, and Address of Principal Place of Business*):

OWNER (*Name and Address*):

City of Bethel
PO Box 1388
Bethel, Alaska 99559

BID

Bid Due Date: Friday, April 26, 2024
Description (*Project Name— Include Location*): Dog Pound Facility, Bethel, Alaska

BOND

Bond Number:

Date:

Penal sum

\$

(Words)

(Figures)

Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.

BIDDER

SURETY

Bidder's Name and Corporate Seal (Seal)

Surety's Name and Corporate Seal (Seal)

By:

Signature

By:

Signature (Attach Power of Attorney)

Print Name

Print Name

Title

Title

Attest:

Signature

Attest:

Signature

Title

Title

Note: Addresses are to be used for giving any required notice.

Provide execution by any additional parties, such as joint venturers, if necessary.

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond shall be Owner's sole and exclusive remedy upon default of Bidder.
2. Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.
3. This obligation shall be null and void if:
 - 3.1 Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or
 - 3.2 All Bids are rejected by Owner, or
 - 3.3 Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).
4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.
5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions shall not in the aggregate exceed 120 days from the Bid due date without Surety's written consent.
6. No suit or action shall be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety and in no case later than one year after the Bid due date.
7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the Project is located.
8. Notices required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party concerned.
9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.
10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.
11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

SECTION 00 52 13

AGREEMENT

FOR CONSTRUCTION CONTRACT (STIPULATED PRICE)

THIS AGREEMENT is by and between City of Bethel, P.O. Box 1388, Bethel, AK 99559 ("Owner") and ("Contractor").

Owner and Contractor hereby agree as follows:

ARTICLE 1 – WORK

1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:

ARTICLE 2 – THE PROJECT

2.01 *The Project, of which the Work under the Contract Documents is a part, is generally described as follows: All materials, equipment, labor, and related services to construct **a wood framed, elevated structure for kennel and veterinary services.***

ARTICLE 3 – ENGINEER

3.01 The Project has been designed by **DOWL, 5015 Business Park Blvd, Suite 4000, Anchorage, Alaska, 99503.**

3.02 The Owner has retained **DOWL** ("Engineer") to act as Owner's representative, assume all duties and responsibilities, and have the rights and authority assigned to Engineer in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

ARTICLE 4 – CONTRACT TIMES

4.01 *Time of the Essence*

A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

4.02 Contract Times: Dates

A. The Work will be substantially completed on or before **November 30, 2024**, and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before **December 31, 2024**.

4.03 Liquidated Damages

A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial and other losses if the Work is not completed and Milestones not achieved within the times specified in Paragraph 4.02 above, plus any extensions thereof allowed in accordance with the Contract. The parties also recognize the delays, expense, and difficulties

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involved in proving in a legal or arbitration proceeding the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty):

1. Substantial Completion: Contractor shall pay Owner \$ 250 for each day that expires after the time (as duly adjusted pursuant to the Contract) specified in Paragraph 4.02.A above for Substantial Completion until the Work is substantially complete.
2. Completion of Remaining Work: After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Time (as duly adjusted pursuant to the Contract) for completion and readiness for final payment, Contractor shall pay Owner \$ 500 for each day that expires after such time until the Work is completed and ready for final payment.
3. Liquidated damages for failing to timely attain Substantial Completion and final completion are not additive and will not be imposed concurrently.
4. ~~Milestones: Contractor shall pay Owner \$ _____ for each day that expires after the time (as duly adjusted pursuant to the Contract) specified above for achievement of Milestone 1, until Milestone 1 is achieved.~~

~~B. Bonus: Contractor and Owner further recognize the Owner will realize financial and other benefits if the Work is completed prior to the time specified for Substantial Completion. Accordingly, Owner and Contractor agree that as a bonus for early completion, Owner shall pay Contractor \$ _____ for each day prior to the time specified in Paragraph 4.02 for Substantial Completion (as duly adjusted pursuant to the Contract) that the Work is substantially complete. The maximum value of the bonus shall be limited to \$ _____.~~

1.

ARTICLE 5 – CONTRACT PRICE

5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents the amounts that follow, subject to adjustment under the Contract:

- A. For all Work, at the prices stated in Contractor's Bid, attached hereto as an exhibit.

ARTICLE 6 – PAYMENT PROCEDURES

6.01 *Submittal and Processing of Payments*

- A. Contractor shall submit Applications for Payment in accordance with Article 15 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

6.02 *Progress Payments; Retainage*

- A. Owner shall make progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment on or about the **1st (first)** day of each month during performance of the Work as provided in Paragraph 6.02.A.1 below, provided that such Applications for Payment have been submitted in a timely manner and otherwise meet the requirements of the Contract. All such payments will be measured by the Schedule of Values established as provided in the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no Schedule of Values, as provided elsewhere in the Contract.

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1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Owner may withhold, including but not limited to liquidated damages, in accordance with the Contract
 - a. **Ninety (90)** percent of Work completed (with the balance being retainage), and
 - b. **Ninety (90)** percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).
 - B. Upon Substantial Completion of the entire Work to be provided under the Contract Documents, Owner shall pay an amount sufficient to increase total payments to Contractor to **Ninety-eight (98)** percent of the Work completed, less such amounts set off by Owner pursuant to Paragraph 15.01.E of the General Conditions, and less **Two Hundred (200)** percent of Engineer's estimate of the value of Work to be completed or corrected as shown on the punch list of items to be completed or corrected prior to final payment.
- 6.03 *Final Payment*
- A. Upon final completion and acceptance of the Work in accordance with Paragraph 15.06 of the General Conditions, Owner shall pay the remainder of the Contract Price as recommended by Engineer as provided in said Paragraph 15.06.

ARTICLE 7 – INTEREST

- 7.01 All amounts not paid when due shall bear interest at the rate of **Eight (8)** percent per annum.

ARTICLE 8 – CONTRACTOR'S REPRESENTATIONS

- 8.01 In order to induce Owner to enter into this Contract, Contractor makes the following representations:
- A. Contractor has examined and carefully studied the Contract Documents, and any data and reference items identified in the Contract Documents.
 - B. Contractor has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
 - C. Contractor is familiar with and is satisfied as to all Laws and Regulations that may affect cost, progress, and performance of the Work.
 - D. Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.
 - E. Contractor has considered the information known to Contractor itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Site-related reports and drawings identified in the Contract Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods,

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techniques, sequences, and procedures of construction to be employed by Contractor; and (3) Contractor's safety precautions and programs.

- F. Based on the information and observations referred to in the preceding paragraph, Contractor agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.
- G. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.
- H. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
- I. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
- J. Contractor's entry into this Contract constitutes an incontrovertible representation by Contractor that without exception all prices in the Agreement are premised upon performing and furnishing the Work required by the Contract Documents.

ARTICLE 9 – CONTRACT DOCUMENTS

9.01 *Contents*

- A. The Contract Documents consist of the following:
 - 1. This Agreement (EJCDC C-520 pages 1 to 7, inclusive).
 - 2. Performance bond (EJCDC C-610 pages 1 to 3, inclusive).
 - 3. Payment bond (EJCDC C-615 pages 1 to 3, inclusive).
 - 4. General Conditions (EJCDC C-700 pages 1 to 69, inclusive).
 - 5. Supplementary Conditions (EJCDC C-800 pages 1 to 4, inclusive).
 - 6. Specifications as listed in the table of contents of the Project Manual.
 - 7. Drawings (not attached but incorporated by reference) consisting of 45 sheets with each sheet bearing the following general title: Dog Pound Facility
 - 8. Addenda (numbers ___ to ___, inclusive).
 - 9. Exhibits to this Agreement (enumerated as follows):
 - a. Contractor's Bid (pages ___ to ___, inclusive).
 - 10. The following which may be delivered or issued on or after the Effective Date of the Contract and are not attached hereto:
 - a. Notice to Proceed.
 - b. Work Change Directives.
 - c. Change Orders.
 - d. Field Orders.

- B. The documents listed in Paragraph 9.01.A are attached to this Agreement (except as expressly noted otherwise above).
- C. There are no Contract Documents other than those listed above in this Article 9.
- D. The Contract Documents may only be amended, modified, or supplemented as provided in the General Conditions.

ARTICLE 10 – MISCELLANEOUS

10.01 *Terms*

- A. Terms used in this Agreement will have the meanings stated in the General Conditions and the Supplementary Conditions.

10.02 *Assignment of Contract*

- A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, money that may become due and money that is due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

10.03 *Successors and Assigns*

- A. Owner and Contractor each binds itself, its successors, assigns, and legal representatives to the other party hereto, its successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

10.04 *Severability*

- A. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Owner and Contractor, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

10.05 *Contractor's Certifications*

- A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 10.05:
 - 1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process or in the Contract execution;
 - 2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
 - 3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and

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4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

10.06 *Other Provisions*

- A. Owner stipulates that if the General Conditions that are made a part of this Contract are based on EJCDC® C-700, Standard General Conditions for the Construction Contract, published by the Engineers Joint Contract Documents Committee®, and if Owner is the party that has furnished said General Conditions, then Owner has plainly shown all modifications to the standard wording of such published document to the Contractor, through a process such as highlighting or "track changes" (redline/strikeout), or in the Supplementary Conditions.

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FOR CONSTRUCTION CONTRACT (STIPULATED PRICE)

IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement.

This Agreement will be effective on _____ (which is the Effective Date of the Contract).

OWNER:

CONTRACTOR:

City of Bethel

By: _____

By: _____

Title: _____

Title: _____

(If Contractor is a corporation, a partnership, or a joint venture, attaches evidence of authority to sign.)

Attest: _____

Attest: _____

Title: _____

Title: _____

Address for giving notices:

Address for giving notices:

License or
Registration
No.: _____

(where applicable)

SECTION 00 61 13.13
PERFORMANCE BOND

CONTRACTOR *(name and address):*

SURETY *(name and address of principal place of business):*

OWNER *(name and address):*

City of Bethel
P.O. Box 1388
Bethel, Alaska 99559

CONSTRUCTION CONTRACT

Effective Date of the Agreement:

Amount:

Description *(name and location):* Dog Pound Facility, Bethel, Alaska

BOND

Bond Number:

Date *(not earlier than the Effective Date of the Agreement of the Construction Contract):*

Amount:

Modifications to this Bond Form: ☐ None ☐ See Paragraph 16

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL

(seal)

Contractor's Name and Corporate Seal

By: _____
Signature

Print Name

Title

Attest: _____
Signature

Title

SURETY

(seal)

Surety's Name and Corporate Seal

By: _____
Signature *(attach power of attorney)*

Print Name

Title

Attest: _____
Signature

Title

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.
2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond shall arise after:
 - 3.1 The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice shall indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 shall be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default;
 - 3.2 The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and
 - 3.3 The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.
4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 shall not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.
5. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:
 - 5.1 Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;
 - 5.2 Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;
 - 5.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or
 - 5.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:
 - 5.4.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or
 - 5.4.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.
6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Paragraph 5.4, and the Owner refuses the payment or the Surety has denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.
7. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:
 - 7.1 the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;
 - 7.2 additional legal, design professional, and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and
 - 7.3 liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.

8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety's liability is limited to the amount of this Bond.
9. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.
10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.
11. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum periods of limitations available to sureties as a defense in the jurisdiction of the suit shall be applicable.
12. Notice to the Surety, the Owner, or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears.
13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.
14. Definitions
 - 14.1 Balance of the Contract Price: The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made including allowance for the Contractor for any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.
 - 14.2 Construction Contract: The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.
 - 14.3 Contractor Default: Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.
 - 14.4 Owner Default: Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.
 - 14.5 Contract Documents: All the documents that comprise the agreement between the Owner and Contractor.
15. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.
16. Modifications to this Bond are as follows:

SECTION 00 61 13.16
PAYMENT BOND

CONTRACTOR *(name and address):*

SURETY *(name and address of principal place of business):*

OWNER *(name and address):*

City of Bethel
P.O. Box 1388
Bethel, Alaska 99559

CONSTRUCTION CONTRACT

Effective Date of the Agreement:

Amount:

Description *(name and location):* Dog Pound Facility, Bethel, Alaska

BOND

Bond Number:

Date *(not earlier than the Effective Date of the Agreement of the Construction Contract):*

Amount:

Modifications to this Bond Form: ☐ None ☐ See Paragraph 18

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL

SURETY

Contractor's Name and Corporate Seal

Surety's Name and Corporate Seal

By: _____
Signature

By: _____
Signature *(attach power of attorney)*

Print Name

Print Name

Title

Title

Attest: _____
Signature

Attest: _____
Signature

Title

Title

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner to pay for labor, materials, and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.
2. If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies, and holds harmless the Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond shall arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, and tendered defense of such claims, demands, liens, or suits to the Contractor and the Surety.
4. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety's expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.
5. The Surety's obligations to a Claimant under this Bond shall arise after the following:
 - 5.1 Claimants who do not have a direct contract with the Contractor,
 - 5.1.1 have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
 - 5.1.2 have sent a Claim to the Surety (at the address described in Paragraph 13).
 - 5.2 Claimants who are employed by or have a direct contract with the Contractor have sent a Claim to the Surety (at the address described in Paragraph 13).
6. If a notice of non-payment required by Paragraph 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Paragraph 5.1.1.
7. When a Claimant has satisfied the conditions of Paragraph 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:
 - 7.1 Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and
 - 7.2 Pay or arrange for payment of any undisputed amounts.
 - 7.3 The Surety's failure to discharge its obligations under Paragraph 7.1 or 7.2 shall not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Paragraph 7.1 or 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.
8. The Surety's total obligation shall not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Paragraph 7.3, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.
9. Amounts owed by the Owner to the Contractor under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfy obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.
10. The Surety shall not be liable to the Owner, Claimants, or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to or give notice on behalf of Claimants, or otherwise have any obligations to Claimants under this Bond.
11. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.
12. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Paragraph 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

13. Notice and Claims to the Surety, the Owner, or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, shall be sufficient compliance as of the date received.
14. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.
15. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.
16. **Definitions**
 - 16.1 **Claim:** A written statement by the Claimant including at a minimum:
 1. The name of the Claimant;
 2. The name of the person for whom the labor was done, or materials or equipment furnished;
 3. A copy of the agreement or purchase order pursuant to which labor, materials, or equipment was furnished for use in the performance of the Construction Contract;
 4. A brief description of the labor, materials, or equipment furnished;
 5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
 6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;
 7. The total amount of previous payments received by the Claimant; and
 8. The total amount due and unpaid to the Claimant for labor, materials, or equipment furnished as of the date of the Claim.
 - 16.2 **Claimant:** An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials, or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond shall be to include without limitation in the terms of "labor, materials, or equipment" that part of the water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.
 - 16.3 **Construction Contract:** The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.
 - 16.4 **Owner Default:** Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.
 - 16.5 **Contract Documents:** All the documents that comprise the agreement between the Owner and Contractor.
17. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.
18. Modifications to this Bond are as follows:

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

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ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

- A. Wherever used in the Bidding Requirements or Contract Documents, a term printed with initial capital letters, including the term's singular and plural forms, will have the meaning indicated in the definitions below. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.
1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.
 2. *Agreement*—The written instrument, executed by Owner and Contractor, that sets forth the Contract Price and Contract Times, identifies the parties and the Engineer, and designates the specific items that are Contract Documents.
 3. *Application for Payment*—The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
 4. *Bid*—The offer of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
 5. *Bidder*—An individual or entity that submits a Bid to Owner.
 6. *Bidding Documents*—The Bidding Requirements, the proposed Contract Documents, and all Addenda.
 7. *Bidding Requirements*—The advertisement or invitation to bid, Instructions to Bidders, Bid Bond or other Bid security, if any, the Bid Form, and the Bid with any attachments.
 8. *Change Order*—A document which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, or other revision to the Contract, issued on or after the Effective Date of the Contract.
 9. *Change Proposal*—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment in Contract Price or Contract Times, or both; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Contract.
 10. *Claim*—(a) A demand or assertion by Owner directly to Contractor, duly submitted in compliance with the procedural requirements set forth herein: seeking an adjustment of Contract Price or Contract Times, or both; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; contesting Engineer's decision regarding a Change Proposal; seeking resolution of a contractual issue that Engineer has declined to address; or seeking other relief with respect to the terms of the Contract; or (b) a demand or assertion by Contractor directly to Owner, duly submitted in compliance with the procedural

requirements set forth herein, contesting Engineer's decision regarding a Change Proposal; or seeking resolution of a contractual issue that Engineer has declined to address. A demand for money or services by a third party is not a Claim.

11. *Constituent of Concern*—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to (a) the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§9601 et seq. ("CERCLA"); (b) the Hazardous Materials Transportation Act, 49 U.S.C. §§5501 et seq.; (c) the Resource Conservation and Recovery Act, 42 U.S.C. §6901 et seq. ("RCRA"); (d) the Toxic Substances Control Act, 15 U.S.C. §§2601 et seq.; (e) the Clean Water Act, 33 U.S.C. §§1251 et seq.; (f) the Clean Air Act, 42 U.S.C. §§7401 et seq.; or (g) any other federal, state, or local statute, law, rule, regulation, ordinance, resolution, code, order, or decree regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.
12. *Contract*—The entire and integrated written contract between the Owner and Contractor concerning the Work.
13. *Contract Documents*—Those items so designated in the Agreement, and which together comprise the Contract.
14. *Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents. .
15. *Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.
16. *Contractor*—The individual or entity with which Owner has contracted for performance of the Work.
17. *Cost of the Work*—See Paragraph 13.01 for definition.
18. *Drawings*—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.
19. *Effective Date of the Contract*—The date, indicated in the Agreement, on which the Contract becomes effective.
20. *Engineer*—The individual or entity named as such in the Agreement.
21. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.
22. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated in the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, does not establish a Hazardous Environmental Condition.
23. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

24. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.
25. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date or by a time prior to Substantial Completion of all the Work.
26. *Notice of Award*—The written notice by Owner to a Bidder of Owner's acceptance of the Bid.
27. *Notice to Proceed*—A written notice by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work.
28. *Owner*—The individual or entity with which Contractor has contracted regarding the Work, and which has agreed to pay Contractor for the performance of the Work, pursuant to the terms of the Contract.
29. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.
30. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.
31. *Project Manual*—The written documents prepared for, or made available for, procuring and constructing the Work, including but not limited to the Bidding Documents or other construction procurement documents, geotechnical and existing conditions information, the Agreement, bond forms, General Conditions, Supplementary Conditions, and Specifications. The contents of the Project Manual may be bound in one or more volumes.
32. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative or "RPR" includes any assistants or field staff of Resident Project Representative.
33. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.
34. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer's review of the submittals and the performance of related construction activities.
35. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.
36. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.

37. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands furnished by Owner which are designated for the use of Contractor.
38. *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.
39. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.
40. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms “substantially complete” and “substantially completed” as applied to all or part of the Work refer to Substantial Completion thereof.
41. *Successful Bidder*—The Bidder whose Bid the Owner accepts, and to which the Owner makes an award of contract, subject to stated conditions.
42. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.
43. *Supplier*—A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.
44. *Technical Data*—Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (a) subsurface conditions at the Site, or physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) or (b) Hazardous Environmental Conditions at the Site. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then the data contained in boring logs, recorded measurements of subsurface water levels, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical or environmental report prepared for the Project and made available to Contractor are hereby defined as Technical Data with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06.
45. *Underground Facilities*—All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including but not limited to those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, fiber optic transmissions, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.
46. *Unit Price Work*—Work to be paid for on the basis of unit prices.
47. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such

construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.

48. *Work Change Directive*—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work. **A Work Change Directive cannot change Contract Price or Contract Times without a subsequent Change Order.**

1.02 *Terminology*

- A. The words and terms discussed in the following paragraphs are not defined but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.
- B. *Intent of Certain Terms or Adjectives:*
1. The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Article 10 or any other provision of the Contract Documents.
- C. *Day:*
1. The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.
- D. *Defective:*
1. The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
 - a. does not conform to the Contract Documents; or
 - b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
 - c. has been damaged prior to Engineer’s recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 15.03 or 15.04).
- E. *Furnish, Install, Perform, Provide:*
1. The word “furnish,” when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.

2. The word “install,” when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.
 3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.
 4. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words “furnish,” “install,” “perform,” or “provide,” then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.
- F. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 – PRELIMINARY MATTERS

2.01 *Delivery of Bonds and Evidence of Insurance*

- A. *Bonds*: When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.
- B. *Evidence of Contractor’s Insurance*: When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each named insured and additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract), the certificates and other evidence of insurance required to be provided by Contractor in accordance with Article 6.
- C. *Evidence of Owner’s Insurance*: After receipt of the executed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each named insured and additional insured (as identified in the Supplementary Conditions or otherwise), the certificates and other evidence of insurance required to be provided by Owner under Article 6.
- D. **Contractor shall use forms EJCDC No. C-610 and C-615 (2013 ed.) for the Labor and Material Payment Bond and Performance Bond. Each bond shall be in the amount of 100 percent of the contract amount. City of Bethel shall be named as co-obligee or a separate Warranty Bond shall be provided to them upon completion of the work.**

2.02 *Copies of Documents*

- A. Owner shall furnish to Contractor **four (4)** printed copies of the Contract (including one fully executed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.
- B. Owner shall maintain and safeguard at least one original printed record version of the Contract, including Drawings and Specifications signed and sealed by Engineer and other design professionals. Owner shall make such original printed record version of the Contract available to Contractor for review. Owner may delegate the responsibilities under this provision to Engineer.

2.03 *Before Starting Construction*

- A. *Preliminary Schedules:* Within 10 days after the Effective Date of the Contract (or as otherwise specifically required by the Contract Documents), Contractor shall submit to Engineer for timely review:
1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract;
 2. a preliminary Schedule of Submittals; and
 3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.
 4. **Contractor shall submit a preliminary list of construction equipment with hourly rates, owned or rented by the Contractor and all Subcontractors that will be used in the performance of the Work. The equipment list will include information necessary to confirm the hourly rates per Paragraph 13.01.B.5.c of these General Conditions including: make, model, and year of manufacture as well as horse power, capacity or weight and accessories.**

2.04 *Preconstruction Conference; Designation of Authorized Representatives*

- A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.03.A, procedures for handling Shop Drawings, Samples, and other submittals, processing Applications for Payment, electronic or digital transmittals, and maintaining required records.
- B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit and receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.
- C. **A preconstruction conference will be held in Bethel and will be coordinated with the Contractor after bid opening.**

2.05 *Initial Acceptance of Schedules*

- ~~A. Prior to the first application for payment all schedules and documents identified in paragraph 2.03 shall be finalized and acceptable to Owner and Engineer. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer and Owner as provided below. Acceptance of these schedules and documents by either Engineer or Owner will neither impose on Engineer or Owner responsibility for sequencing, scheduling or progress of the Work and will not interfere with or relieve Contractor from Contractor's full responsibility therefore. At least 10 days before submission of the first Application for Payment a conference, attended by Contractor, Engineer, and others as appropriate, will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.03.A. Contractor shall have an additional 10 days to make corrections and~~

~~adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.~~

1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.
2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.
3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to the component parts of the Work.
4. **Contractor's Schedule of Equipment will be acceptable to Engineer as to form and substance if it provides the necessary information to reference the equipment and establish the hourly rates in accordance with paragraph 13.01.B.5.c.**

2.06 *Electronic Transmittals*

- A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may transmit, and shall accept, Project-related correspondence, text, data, documents, drawings, information, and graphics, including but not limited to Shop Drawings and other submittals, in electronic media or digital format, either directly, or through access to a secure Project website.
- B. If the Contract does not establish protocols for electronic or digital transmittals, then Owner, Engineer, and Contractor shall jointly develop such protocols.
- C. When transmitting items in electronic media or digital format, the transmitting party makes no representations as to long term compatibility, usability, or readability of the items resulting from the recipient's use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the items, or from those established in applicable transmittal protocols.

ARTICLE 3 – DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 *Intent*

- A. The Contract Documents are complementary; what is required by one is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete project (or part thereof) to be constructed in accordance with the Contract Documents.
- C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic or digital versions of the Contract Documents (including any printed copies derived from such electronic or digital versions) and the printed record version, the printed record version shall govern.
- D. The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.

- E. Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.

3.02 *Reference Standards*

A. Standards Specifications, Codes, Laws and Regulations

1. Reference in the Contract Documents to standard specifications, manuals, reference standards, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard specification, manual, reference standard, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Contract if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.
2. No provision of any such standard specification, manual, reference standard, or code, or any instruction of a Supplier, shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees, from those set forth in the part of the Contract Documents prepared by or for Engineer. No such provision or instruction shall be effective to assign to Owner, Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the part of the Contract Documents prepared by or for Engineer.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies:*

1. *Contractor's Verification of Figures and Field Measurements:* Before undertaking each part of the Work, Contractor shall carefully study the Contract Documents, and check and verify pertinent figures and dimensions therein, particularly with respect to applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy that Contractor discovers, or has actual knowledge of, and shall not proceed with any Work affected thereby until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract Documents issued pursuant to Paragraph 11.01.
2. *Contractor's Review of Contract Documents:* If, before or during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) actual field conditions, (c) any standard specification, manual, reference standard, or code, or (d) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 7.15) until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract Documents issued pursuant to Paragraph 11.01.
3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. *Resolving Discrepancies:*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the part of the Contract Documents prepared by or for Engineer shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between such provisions of the Contract Documents and:
 - a. the provisions of any standard specification, manual, reference standard, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference as a Contract Document); or
 - b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Requirements of the Contract Documents*

- A. During the performance of the Work and until final payment, Contractor and Owner shall submit to the Engineer all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Contract Documents, as soon as possible after such matters arise. Engineer will be the initial interpreter of the requirements of the Contract Documents, and judge of the acceptability of the Work thereunder.
- B. Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents. Engineer's written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.
- C. If a submitted matter in question concerns terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work under the Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly give written notice to Owner and Contractor that Engineer is unable to provide a decision or interpretation. If Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in Article 12.

3.05 *Reuse of Documents*

- A. Contractor and its Subcontractors and Suppliers shall not:
 1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media editions, or reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer; or
 2. have or acquire any title or ownership rights in any other Contract Documents, reuse any such Contract Documents for any purpose without Owner's express written consent, or violate any copyrights pertaining to such Contract Documents.

- B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

ARTICLE 4 – COMMENCEMENT AND PROGRESS OF THE WORK

4.01 *Commencement of Contract Times; Notice to Proceed*

- A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Contract or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Contract. In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Contract, whichever date is earlier.

4.02 *Starting the Work*

- A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to such date.

4.03 *Reference Points*

- A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.04 *Progress Schedule*

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.05 as it may be adjusted from time to time as provided below.
 - 1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.05) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times.
 - 2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 11.
- B. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, or during any appeal process, except as permitted by Paragraph 16.04, or as Owner and Contractor may otherwise agree in writing.

4.05 *Delays in Contractor's Progress*

- A. If Owner, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Times and Contract Price. Contractor's entitlement to an adjustment

of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.

- B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption, and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.
- C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:
 - 1. severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;
 - 2. abnormal weather conditions;
 - 3. acts or failures to act of utility owners (other than those performing other work at or adjacent to the Site by arrangement with the Owner, as contemplated in Article 8); and
 - 4. acts of war or terrorism.
- D. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5.
- E. Paragraph 8.03 governs delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.
- F. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor.
- G. Contractor must submit any Change Proposal seeking an adjustment in Contract Price or Contract Times under this paragraph within 30 days of the commencement of the delaying, disrupting, or interfering event.

ARTICLE 5 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

5.01 *Availability of Lands*

- A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work.

- B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which permanent improvements are to be made and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.
- C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment. **If it is necessary or desirable that the Contractor use land outside of the Owner's site, easement or right-of-way, the Contractor shall obtain consent from the property owner and tenant of the land. The Contractor shall not enter for material delivery, storage or occupy for any other purpose with men, tools, equipment, construction material, or with materials excavated from the site, any private property outside the designated limits of the construction site, easement boundaries, or right-of-way without written permission from the property owner and tenant.**

5.02 *Use of Site and Other Areas*

A. *Limitation on Use of Site and Other Areas:*

- 1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.
 - 2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.12, or otherwise; (b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or at law; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claim, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused directly or indirectly, in whole or in part by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.
- B. *Removal of Debris During Performance of the Work:* During the progress of the Work the Contractor shall keep the Site and other adjacent areas free from accumulations of waste

materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.

- C. *Cleaning*: Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site and adjacent areas all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.
- D. *Loading of Structures*: Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent structures or land to stresses or pressures that will endanger them.

5.03 *Subsurface and Physical Conditions*

- A. *Reports and Drawings*: The Supplementary Conditions identify:
 - 1. those reports known to Owner of explorations and tests of subsurface conditions at or adjacent to the Site;
 - 2. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities); and
 - 3. Technical Data contained in such reports and drawings.
- B. *Reliance by Contractor on Technical Data Authorized*: Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data (as defined in Article 1) contained in any geotechnical or environmental report prepared for the Project and made available to Contractor. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:
 - 1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or
 - 2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
 - 3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.
 - 4. **Contractor is required to visit the site and become familiar with and satisfied as to the general, local, and site conditions that may affect cost, progress, performance, and furnishing of the Work. This is to involve an alert, heads-up, eyes open, reasonable examination of the area and the conditions under which the Work is to be performed (See 5.04 D.2b)**

5.04 *Differing Subsurface or Physical Conditions*

- A. *Notice by Contractor:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed at the Site either:
1. is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate; or
 2. is of such a nature as to require a change in the Drawings or Specifications; or
 3. differs materially from that shown or indicated in the Contract Documents; or
 4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing about such condition **within 15 calendar days of discovery**. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

No Change Proposal or Claim for an adjustment in Contract Price or Contract Time (including Milestones) will be valid for differing subsurface or physical conditions if notice provisions of the Paragraph 5.04 are not followed.

- B. *Engineer's Review:* After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine the necessity of Owner's obtaining additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A above; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.
- C. *Owner's Statement to Contractor Regarding Site Condition:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.
- D. *Possible Price and Times Adjustments:*
1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, or both, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:
 - a. such condition must fall within any one or more of the categories described in Paragraph 5.04.A;

- b. with respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03; and,
 - c. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:
 - a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise; or
 - b. the existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or
 - c. Contractor failed to give the written notice as required by Paragraph 5.04.A.
3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, or both, then any such adjustment shall be set forth in a Change Order.
4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, or both, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.

5.05 *Underground Facilities*

- A. *Contractor's Responsibilities:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or adjacent to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:
 1. Owner and Engineer do not warrant or guarantee the accuracy or completeness of any such information or data provided by others; and
 2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:
 - a. reviewing and checking all information and data regarding existing Underground Facilities at the Site;
 - b. locating all Underground Facilities shown or indicated in the Contract Documents as being at the Site;
 - c. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and

- d. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.
 - e. **Before beginning any excavation, the Contractor shall contact the appropriate "one call" underground utility locate service and/or notify all owners of underground facilities (as applicable) and coordinate the Work with the owners of such underground facilities. The information shown or indicated in the Contract Documents with respect to existing underground facilities is based on information and data obtained from the owners of the facilities without field exploration and as such Owner and Engineer are not responsible for the accuracy or completeness of such information or data.**
- B. *Notice by Contractor:* If Contractor believes that an Underground Facility that is uncovered or revealed at the Site **is unusual and payment per the applicable unit price item Bid for encountering existing Underground Facilities isn't applicable** was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy, then Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer.
- C. *Engineer's Review:* Engineer will promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the Underground Facility in question; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and advise Owner in writing of Engineer's findings, conclusions, and recommendations. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.
- D. *Owner's Statement to Contractor Regarding Underground Facility:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question, addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.
- E. *Possible Price and Times Adjustments:*
- 1. Contractor shall **be paid at the unit price Bid for encountering Underground Facilities and will not** be entitled to **additional** equitable adjustment in the Contract Price or Contract Times, or both, **unless the Engineer's review determines that the existing facility is unusual and shouldn't be covered by the unit price and the** ~~to the extent that any existing Underground Facility at the Site that was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy, or any related~~ ~~causes~~ causing an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

- a. Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated the existence or actual location of the Underground Facility in question;
 - b. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03;
 - c. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times; and
 - d. Contractor gave the notice required in Paragraph 5.05.B.
2. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, or both, then any such adjustment shall be set forth in a Change Order.
 3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, or both, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.

5.06 Hazardous Environmental Conditions at Site

A. Reports and Drawings: The Supplementary Conditions identify:

1. those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and
2. Technical Data contained in such reports and drawings.

B. Reliance by Contractor on Technical Data Authorized: Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data (as defined in Article 1) contained in any geotechnical or environmental report prepared for the Project and made available to Contractor. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or
2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or
3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information.

C. Contractor shall not be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.

- D. Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.
- E. If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.
- F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.
- G. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, then within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off.
- H. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.
- I. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Contractor or by anyone for

whom Contractor is responsible. Nothing in this Paragraph 5.06.H shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

- J. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.J shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- K. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 6 – BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

- A. Contractor shall furnish a performance bond and a payment bond, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of all of Contractor's obligations under the Contract. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the Supplementary Conditions, or other specific provisions of the Contract. Contractor shall also furnish such other bonds as are required by the Supplementary Conditions or other specific provisions of the Contract.
- B. All bonds shall be in the form prescribed by the Contract except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (as amended and supplemented) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority shall show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.
- C. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds in the required amounts.
- D. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or its right to do business is terminated in any state or jurisdiction where any part of the Project is located, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such

notification, provide another bond and surety, both of which shall comply with the bond and surety requirements above.

- E. If Contractor has failed to obtain a required bond, Owner may exclude the Contractor from the Site and exercise Owner's termination rights under Article 16.
- F. Upon request, Owner shall provide a copy of the payment bond to any Subcontractor, Supplier, or other person or entity claiming to have furnished labor or materials used in the performance of the Work.

6.02 *Insurance—General Provisions*

- A. Owner and Contractor shall obtain and maintain insurance as required in this Article and in the Supplementary Conditions.
- B. All insurance required by the Contract to be purchased and maintained by Owner or Contractor shall be obtained from insurance companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue insurance policies for the required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.
- C. Contractor shall deliver to Owner, with copies to each named insured and additional insured (as identified in this Article, in the Supplementary Conditions, or elsewhere in the Contract), certificates of insurance establishing that Contractor has obtained and is maintaining the policies, coverages, and endorsements required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies and endorsements, and documentation of applicable self-insured retentions and deductibles. Contractor may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.
- D. Owner shall deliver to Contractor, with copies to each named insured and additional insured (as identified in this Article, the Supplementary Conditions, or elsewhere in the Contract), certificates of insurance establishing that Owner has obtained and is maintaining the policies, coverages, and endorsements required of Owner by the Contract (if any). Upon request by Contractor or any other insured, Owner shall also provide other evidence of such required insurance (if any), including but not limited to copies of policies and endorsements, and documentation of applicable self-insured retentions and deductibles. Owner may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.
- E. Failure of Owner or Contractor to demand such certificates or other evidence of the other party's full compliance with these insurance requirements, or failure of Owner or Contractor to identify a deficiency in compliance from the evidence provided, shall not be construed as a waiver of the other party's obligation to obtain and maintain such insurance.
- F. If either party does not purchase or maintain all of the insurance required of such party by the Contract, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage.

- G. If Contractor has failed to obtain and maintain required insurance, Owner may exclude the Contractor from the Site, impose an appropriate set-off against payment, and exercise Owner's termination rights under Article 16.
- H. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect to obtain equivalent insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and the Contract Price shall be adjusted accordingly.
- I. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests.
- J. The insurance and insurance limits required herein shall not be deemed as a limitation on Contractor's liability under the indemnities granted to Owner and other individuals and entities in the Contract.

6.03 Contractor's Insurance

- A. *Workers' Compensation:* Contractor shall purchase and maintain workers' compensation and employer's liability insurance for:
 - 1. claims under workers' compensation, disability benefits, and other similar employee benefit acts.
 - 2. United States Longshoreman and Harbor Workers' Compensation Act and Jones Act coverage (if applicable).
 - 3. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees (by stop-gap endorsement in monopolist worker's compensation states).
 - 4. Foreign voluntary worker compensation (if applicable).
- B. *Commercial General Liability—Claims Covered:* Contractor shall purchase and maintain commercial general liability insurance, covering all operations by or on behalf of Contractor, on an occurrence basis, against:
 - 1. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees.
 - 2. claims for damages insured by reasonably available personal injury liability coverage.
 - 3. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom.
- C. *Commercial General Liability—Form and Content:* Contractor's commercial liability policy shall be written on a 1996 (or later) ISO commercial general liability form (occurrence form) and include the following coverages and endorsements:
 - 1. Products and completed operations coverage:
 - a. Such insurance shall be maintained for three years after final payment.
 - b. Contractor shall furnish Owner and each other additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract) evidence of continuation of such insurance at final payment and three years thereafter.

2. Blanket contractual liability coverage, to the extent permitted by law, including but not limited to coverage of Contractor's contractual indemnity obligations in Paragraph 7.18.
 3. Broad form property damage coverage.
 4. Severability of interest.
 5. Underground, explosion, and collapse coverage.
 6. Personal injury coverage.
 7. Additional insured endorsements that include both ongoing operations and products and completed operations coverage through ISO Endorsements CG 20 10 10 01 and CG 20 37 10 01 (together); or CG 20 10 07 04 and CG 20 37 07 04 (together); or their equivalent.
 8. For design professional additional insureds, ISO Endorsement CG 20 32 07 04, "Additional Insured—Engineers, Architects or Surveyors Not Engaged by the Named Insured" or its equivalent.
- D. *Automobile liability:* Contractor shall purchase and maintain automobile liability insurance against claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance, or use of any motor vehicle. The automobile liability policy shall be written on an occurrence basis.
- E. *Umbrella or excess liability:* Contractor shall purchase and maintain umbrella or excess liability insurance written over the underlying employer's liability, commercial general liability, and automobile liability insurance described in the paragraphs above. Subject to industry-standard exclusions, the coverage afforded shall follow form as to each and every one of the underlying policies.
- F. *Contractor's pollution liability insurance:* Contractor shall purchase and maintain a policy covering third-party injury and property damage claims, including clean-up costs, as a result of pollution conditions arising from Contractor's operations and completed operations. This insurance shall be maintained for no less than three years after final completion.
- G. *Additional insureds:* The Contractor's commercial general liability, automobile liability, umbrella or excess, and pollution liability policies shall include and list as additional insureds Owner and Engineer, and any individuals or entities identified in the Supplementary Conditions; include coverage for the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of all such additional insureds; and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby (including as applicable those arising from both ongoing and completed operations) on a non-contributory basis. Contractor shall obtain all necessary endorsements to support these requirements.
- H. *Contractor's professional liability insurance:* If Contractor will provide or furnish professional services under this Contract, through a delegation of professional design services or otherwise, then Contractor shall be responsible for purchasing and maintaining applicable professional liability insurance. This insurance shall provide protection against claims arising out of performance of professional design or related services, and caused by a negligent error, omission, or act for which the insured party is legally liable. It shall be maintained throughout the duration of the Contract and for a minimum of two years after Substantial Completion. If such professional design services are performed by a Subcontractor, and not by Contractor itself,

then the requirements of this paragraph may be satisfied through the purchasing and maintenance of such insurance by such Subcontractor.

- I. *General provisions:* The policies of insurance required by this Paragraph 6.03 shall:
 1. include at least the specific coverages provided in this Article.
 2. be written for not less than the limits of liability provided in this Article and in the Supplementary Conditions, or required by Laws or Regulations, whichever is greater.
 3. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed, or renewal refused until at least 10 days prior written notice has been given to Contractor. Within three days of receipt of any such written notice, Contractor shall provide a copy of the notice to Owner, Engineer, and each other insured under the policy.
 4. remain in effect at least until final payment (and longer if expressly required in this Article) and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract Documents.
 5. be appropriate for the Work being performed and provide protection from claims that may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable.
- J. The coverage requirements for specific policies of insurance must be met by such policies, and not by reference to excess or umbrella insurance provided in other policies.

6.04 *Owner's Liability Insurance*

- A. In addition to the insurance required to be provided by Contractor under Paragraph 6.03, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.
- B. Owner's liability policies, if any, operate separately and independently from policies required to be provided by Contractor, and Contractor cannot rely upon Owner's liability policies for any of Contractor's obligations to the Owner, Engineer, or third parties.

6.05 *Property Insurance*

- A. *Builder's Risk:* Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the full insurable replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:
 1. include the Owner and Contractor as named insureds, and all Subcontractors, and any individuals or entities required by the Supplementary Conditions to be insured under such builder's risk policy, as insureds or named insureds. For purposes of the remainder of this Paragraph 6.05, Paragraphs 6.06 and 6.07, and any corresponding Supplementary Conditions, the parties required to be insured shall collectively be referred to as "insureds."

2. be written on a builder's risk "all risk" policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire; lightning; windstorm; riot; civil commotion; terrorism; vehicle impact; aircraft; smoke; theft; vandalism and malicious mischief; mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake; volcanic activity, and other earth movement; flood; collapse; explosion; debris removal; demolition occasioned by enforcement of Laws and Regulations; water damage (other than that caused by flood); and such other perils or causes of loss as may be specifically required by the Supplementary Conditions. If insurance against mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake; volcanic activity, and other earth movement; or flood, are not commercially available under builder's risk policies, by endorsement or otherwise, such insurance may be provided through other insurance policies acceptable to Owner and Contractor.
3. cover, as insured property, at least the following: (a) the Work and all materials, supplies, machinery, apparatus, equipment, fixtures, and other property of a similar nature that are to be incorporated into or used in the preparation, fabrication, construction, erection, or completion of the Work, including Owner-furnished or assigned property; (b) spare parts inventory required within the scope of the Contract; and (c) temporary works which are not intended to form part of the permanent constructed Work but which are intended to provide working access to the Site, or to the Work under construction, or which are intended to provide temporary support for the Work under construction, including scaffolding, form work, fences, shoring, falsework, and temporary structures.
4. cover expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects).
5. extend to cover damage or loss to insured property while in temporary storage at the Site or in a storage location outside the Site (but not including property stored at the premises of a manufacturer or Supplier).
6. extend to cover damage or loss to insured property while in transit.
7. allow for partial occupation or use of the Work by Owner, such that those portions of the Work that are not yet occupied or used by Owner shall remain covered by the builder's risk insurance.
8. allow for the waiver of the insurer's subrogation rights, as set forth below.
9. provide primary coverage for all losses and damages caused by the perils or causes of loss covered.
10. not include a co-insurance clause.
11. include an exception for ensuing losses from physical damage or loss with respect to any defective workmanship, design, or materials exclusions.
12. include performance/hot testing and start-up.
13. be maintained in effect, subject to the provisions herein regarding Substantial Completion and partial occupancy or use of the Work by Owner, until the Work is complete.

- B. *Notice of Cancellation or Change:* All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this Paragraph 6.05 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured.
- C. *Deductibles:* The purchaser of any required builder's risk or property insurance shall pay for costs not covered because of the application of a policy deductible.
- D. *Partial Occupancy or Use by Owner:* If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 15.04, then Owner (directly, if it is the purchaser of the builder's risk policy, or through Contractor) will provide notice of such occupancy or use to the builder's risk insurer. The builder's risk insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy; rather, those portions of the Work that are occupied or used by Owner may come off the builder's risk policy, while those portions of the Work not yet occupied or used by Owner shall remain covered by the builder's risk insurance.
- E. *Additional Insurance:* If Contractor elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.05, it may do so at Contractor's expense.
- F. *Insurance of Other Property:* If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, such as tools, construction equipment, or other personal property owned by Contractor, a Subcontractor, or an employee of Contractor or a Subcontractor, then the entity or individual owning such property item will be responsible for deciding whether to insure it, and if so in what amount.

6.06 *Waiver of Rights*

- A. All policies purchased in accordance with Paragraph 6.05, expressly including the builder's risk policy, shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any insureds thereunder, or against Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors. Owner and Contractor waive all rights against each other and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Engineer, its consultants, all Subcontractors, all individuals or entities identified in the Supplementary Conditions as insureds, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.
- B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, for:

1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and
 2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial occupancy or use pursuant to Paragraph 15.04, after Substantial Completion pursuant to Paragraph 15.03, or after final payment pursuant to Paragraph 15.06.
- C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 6.06.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them.
- D. Contractor shall be responsible for assuring that the agreement under which a Subcontractor performs a portion of the Work contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in the Supplementary Conditions as insureds, the Engineer and its consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by builder's risk insurance and any other property insurance applicable to the Work.

6.07 *Receipt and Application of Property Insurance Proceeds*

- A. Any insured loss under the builder's risk and other policies of insurance required by Paragraph 6.05 will be adjusted and settled with the named insured that purchased the policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.
- B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.05 shall distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.
- C. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the money so received applied on account thereof, and the Work and the cost thereof covered by Change Order, if needed.

ARTICLE 7 – CONTRACTOR'S RESPONSIBILITIES

7.01 *Supervision and Superintendence*

- A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.

- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

7.02 *Labor; Working Hours*

- A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.
- B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during daytime hours (7:00 AM to 7:00 PM), Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner's written consent, which will not be unreasonably withheld.

7.03 *Services, Materials, and Equipment*

- A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start up, and completion of the Work, whether or not such items are specifically called for in the Contract Documents.
- B. All materials and equipment incorporated into the Work shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.
- C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

7.04 *"Or Equals"*

- A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or equal" item is permitted, Contractor may request that Engineer authorize the use of other items of material or equipment, or items from other proposed suppliers under the circumstances described below.
 - 1. If Engineer in its sole discretion determines that an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer shall deem it an "or equal" item. For the purposes of this paragraph, a proposed item of material or equipment will be considered functionally equal to an item so named if:

- a. in the exercise of reasonable judgment Engineer determines that:
 - 1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;
 - 2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;
 - 3) it has a proven record of performance and availability of responsive service; and
 - 4) it is not objectionable to Owner.
- b. Contractor certifies that, if approved and incorporated into the Work:
 - 1) there will be no increase in cost to the Owner or increase in Contract Times; and
 - 2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.
- B. *Contractor's Expense:* Contractor shall provide all data in support of any proposed "or equal" item at Contractor's expense.
- C. *Engineer's Evaluation and Determination:* Engineer will be allowed a reasonable time to evaluate each "or-equal" request. Engineer may require Contractor to furnish additional data about the proposed "or-equal" item. Engineer will be the sole judge of acceptability. No "or-equal" item will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an "or-equal", which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.
- D. *Effect of Engineer's Determination:* Neither approval nor denial of an "or-equal" request shall result in any change in Contract Price. The Engineer's denial of an "or-equal" request shall be final and binding, and may not be reversed through an appeal under any provision of the Contract Documents.
- E. *Treatment as a Substitution Request:* If Engineer determines that an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item, Contractor may request that Engineer considered the proposed item as a substitute pursuant to Paragraph 7.05.

7.05 Substitutes

- A. Unless the specification or description of an item of material or equipment required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of material or equipment under the circumstances described below. To the extent possible such requests shall be made before commencement of related construction at the Site.
 - 1. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of material or equipment from anyone other than Contractor.
 - 2. The requirements for review by Engineer will be as set forth in Paragraph 7.05.B, as supplemented by the Specifications, and as Engineer may decide is appropriate under the circumstances.

3. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:
 - a. shall certify that the proposed substitute item will:
 - 1) perform adequately the functions and achieve the results called for by the general design,
 - 2) be similar in substance to that specified, and
 - 3) be suited to the same use as that specified.
 - b. will state:
 - 1) the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times,
 - 2) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item, and
 - 3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.
 - c. will identify:
 - 1) all variations of the proposed substitute item from that specified, and
 - 2) available engineering, sales, maintenance, repair, and replacement services.
 - d. shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in Contract Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.
- B. *Engineer's Evaluation and Determination:* Engineer will be allowed a reasonable time to evaluate each substitute request, and to obtain comments and direction from Owner. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an acceptable substitute. Engineer's determination will be evidenced by a Field Order or a proposed Change Order accounting for the substitution itself and all related impacts, including changes in Contract Price or Contract Times. Engineer will advise Contractor in writing of any negative determination.
- C. *Special Guarantee:* Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- D. *Reimbursement of Engineer's Cost:* Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract

Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

- E. *Contractor's Expense:* Contractor shall provide all data in support of any proposed substitute at Contractor's expense.
- F. *Effect of Engineer's Determination:* If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer's denial of a substitution request shall be final and binding, and may not be reversed through an appeal under any provision of the Contract Documents. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.05.D, by timely submittal of a Change Proposal.

7.06 *Concerning Subcontractors, Suppliers, and Others*

- A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner. **The Contractor shall not award work valued at more than fifty percent (50%) of the Contract Price to Subcontractor(s), without prior written approval of the Owner.**
- B. ~~**Deleted.** Contractor shall retain specific Subcontractors, Suppliers, or other individuals or entities for the performance of designated parts of the Work if required by the Contract to do so.~~
- C. Subsequent to the submittal of Contractor's Bid or final negotiation of the terms of the Contract, Owner may not require Contractor to retain any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against which Contractor has reasonable objection.
- D. Prior to entry into any binding subcontract or purchase order, Contractor shall submit to Owner the identity of the proposed Subcontractor or Supplier (unless Owner has already deemed such proposed Subcontractor or Supplier acceptable, during the bidding process or otherwise). Such proposed Subcontractor or Supplier shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within five days.
- E. Owner may require the replacement of any Subcontractor, Supplier, or other individual or entity retained by Contractor to perform any part of the Work. ~~Owner also may require Contractor to retain specific replacements; provided, however, that~~ Owner may not require a replacement to which Contractor has a reasonable objection. If Contractor has submitted the identity of certain Subcontractors, Suppliers, or other individuals or entities for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make written objection thereto), then Owner may subsequently revoke the acceptance of any such Subcontractor, Supplier, or other individual or entity so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity.
- F. If Owner requires the replacement of any Subcontractor, Supplier, or other individual or entity retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, or both, with respect to the replacement; and Contractor shall initiate a Change Proposal for such adjustment within 30 days of Owner's requirement of replacement.

- G. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.
- H. On a monthly basis Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.
- I. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions.
- J. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors, Suppliers, and all other individuals or entities performing or furnishing any of the Work.
- K. Contractor shall restrict all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed herein.
- L. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.
- M. All Work performed for Contractor by a Subcontractor or Supplier shall be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer.
- N. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor on account of Work performed for Contractor by the particular Subcontractor or Supplier.
- O. Nothing in the Contract Documents:
 - 1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier, or other individual or entity; nor
 - 2. shall create any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.

7.07 Patent Fees and Royalties

- A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.

- B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.
- C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

7.08 *Permits*

- A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of the submission of Contractor's Bid (or when Contractor became bound under a negotiated contract). Owner shall pay all charges of utility owners for connections for providing permanent service to the Work

7.09 *Taxes*

- A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

7.10 *Laws and Regulations*

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work or takes any other action knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all resulting costs and losses, and shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work or other action. It shall not be Contractor's responsibility to make certain that the Work described in the Contract Documents

is in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.

- C. Owner or Contractor may give notice to the other party of any changes after the submission of Contractor's Bid (or after the date when Contractor became bound under a negotiated contract) in Laws or Regulations having an effect on the cost or time of performance of the Work, including but not limited to changes in Laws or Regulations having an effect on procuring permits and on sales, use, value-added, consumption, and other similar taxes. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times resulting from such changes, then within 30 days of such notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

7.11 *Record Documents*

- A. Contractor shall maintain in a safe place at the Site one printed record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, written interpretations and clarifications, and approved Shop Drawings. Contractor shall keep such record documents in good order and annotate them to show changes made during construction. These record documents, together with all approved Samples, will be available to Engineer for reference. Upon completion of the Work, Contractor shall deliver these record documents to Engineer. **The Engineer will transfer the Contractor's record information to the original drawings, and submit prints to the Contractor for review. Contractor shall provide writing confirmation that the record drawings are complete and accurate before final payment is approved by the Engineer.**

7.12 *Safety and Protection*

- A. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:
 - 1. all persons on the Site or who may be affected by the Work;
 - 2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
 - 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify Owner; the owners of adjacent property, Underground Facilities, and other utilities; and other contractors and utility owners performing work at or adjacent to the Site, when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.

- C. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. The Supplementary Conditions identify any Owner's safety programs that are applicable to the Work.
- D. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.
- E. All damage, injury, or loss to any property referred to in Paragraph 7.12.A.2 or 7.12.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor at its expense (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).
- F. Contractor's duties and responsibilities for safety and protection shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 15.06.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).
- G. Contractor's duties and responsibilities for safety and protection shall resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.
- H. **It is expressly understood by the parties to this Agreement that the Contractor is solely responsible for initiation, maintenance, and supervision of safety precautions and programs in connection with the Work. The right of the Owner and Engineer to observe or otherwise review the Work and operations shall not relieve the Contractor from any of his covenants and obligations hereunder.**
- I. **The Contractor shall be responsible for and shall take necessary precautions and provide all material and equipment to protect, shore, brace and maintain all underground pipes, conduits, drains, sewers, water mains, gas mains, cables, and other underground construction uncovered in the proximity or otherwise affected by the Work. All pavement surfacing, driveways, curbs, walks, buildings, grass areas, trees, utility poles or guy wires damaged by the Contractor in performance of the Work shall be repaired and/or replaced to the satisfaction of the Owner, Engineer and effected property owner at the Contractor's expense. The Contractor shall also be responsible for all damage to streets, roads, highways, shoulders, ditches, embankments, culverts, bridges or other public or private property or facility, regardless of location or character, which may be caused by moving, hauling, or otherwise transporting equipment, materials, or men to and from the Work whether by Contractor or Subcontractors. The Contractor shall make satisfactory and acceptable arrangements with the owner of, or the agency or authority having jurisdiction over the damaged property or facility concerning its repair, replacement or payment of costs incurred in connection with said damage.**
- J. **The Contractor shall conduct its work so as to interfere as little as possible with public travel, whether vehicular or pedestrian. Whenever it is necessary to cross, obstruct or close roads, driveways, and walks, whether public or private, the Contractor shall obtain approval from the**

governing party and shall at its own expense provide and maintain suitable and safe bridges, detours and other temporary expedients for the accommodation of public and private drives before interfering with them. The provision for temporary expedients will not be required if the Contractor has obtained permission from the owner and tenant of the private property, or from the authority having jurisdiction over public property involved, to obstruct traffic at the designated point.

- K. **Safety provisions must be entirely adequate and meet with city, state or Federal regulations to protect the public on the sidewalks, streets and roads.**

7.13 *Safety Representative*

- A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

7.14 *Hazard Communication Programs*

- A. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

7.15 *Emergencies*

- A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

7.16 *Shop Drawings, Samples, and Other Submittals*

- A. *Shop Drawing and Sample Submittal Requirements:*
1. Before submitting a Shop Drawing or Sample, Contractor shall have:
 - a. reviewed and coordinated the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
 - b. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;
 - c. determined and verified the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
 - d. determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.

2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that submittal, and that Contractor approves the submittal.
 3. With each submittal, Contractor shall give Engineer specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be set forth in a written communication separate from the Shop Drawings or Sample submittal; and, in addition, in the case of Shop Drawings by a specific notation made on each Shop Drawing submitted to Engineer for review and approval of each such variation.
- B. *Submittal Procedures for Shop Drawings and Samples:* Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals. Each submittal will be identified as Engineer may require.
1. *Shop Drawings:*
 - a. Contractor shall submit the number of copies required in the Specifications.
 - b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by Paragraph 7.16.D.
 2. *Samples:*
 - a. Contractor shall submit the number of Samples required in the Specifications.
 - b. Contractor shall clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 7.16.D.
 3. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.
- C. *Other Submittals:* Contractor shall submit other submittals to Engineer in accordance with the accepted Schedule of Submittals, and pursuant to the applicable terms of the Specifications.
- D. *Engineer's Review:*
1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
 2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction or to safety precautions or programs incident thereto.
 3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

4. Engineer's review and approval of a Shop Drawing or Sample shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer will document any such approved variation from the requirements of the Contract Documents in a Field Order.
5. Engineer's review and approval of a Shop Drawing or Sample shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 7.16.A and B.
6. Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, shall not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.
7. Neither Engineer's receipt, review, acceptance or approval of a Shop Drawing, Sample, or other submittal shall result in such item becoming a Contract Document.
8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.D.4.

E. *Resubmittal Procedures:*

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.
2. Contractor shall furnish required submittals with sufficient information and accuracy to obtain required approval of an item with no more than three submittals. Engineer will record Engineer's time for reviewing a fourth or subsequent submittal of a Shop Drawings, sample, or other item requiring approval, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due to Contractor to secure reimbursement for such charges.
3. If Contractor requests a change of a previously approved submittal item, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due to Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

7.17 *Contractor's General Warranty and Guarantee*

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its officers, directors, members, partners, employees, agents, consultants, and subcontractors shall be entitled to rely on Contractor's warranty and guarantee.
- B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
 1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
 2. normal wear and tear under normal usage.

- C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:
1. observations by Engineer;
 2. recommendation by Engineer or payment by Owner of any progress or final payment;
 3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
 4. use or occupancy of the Work or any part thereof by Owner;
 5. any review and approval of a Shop Drawing or Sample submittal;
 6. the issuance of a notice of acceptability by Engineer;
 7. any inspection, test, or approval by others; or
 8. any correction of defective Work by Owner.
- D. If the Contract requires the Contractor to accept the assignment of a contract entered into by Owner, then the specific warranties, guarantees, and correction obligations contained in the assigned contract shall govern with respect to Contractor's performance obligations to Owner for the Work described in the assigned contract.

7.18 *Indemnification*

- A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable.
- B. In any and all claims against Owner or Engineer or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 7.18.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.
1. **Contractor specifically and expressly waives any immunity that may be granted it under workers' compensation acts, disability benefit acts, or other employee benefit acts in**

regard to 17.1.B above; provided Contractor's waiver of immunity by the provisions of this paragraph extends only to claims against Contractor by Indemnitees, and does not include, or extend to, any claims by Contractor's employees directly against Contractor.

- C. The indemnification obligations of Contractor under Paragraph 7.18.A shall not extend to the liability of Engineer and Engineer's officers, directors, members, partners, employees, agents, consultants and subcontractors arising out of:
 - 1. the preparation or approval of, or the failure to prepare or approve maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
 - 2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

7.19 *Delegation of Professional Design Services*

- A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable Laws and Regulations.
- B. If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.
- C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.
- D. Pursuant to this paragraph, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 7.16.D.1.
- E. Contractor shall not be responsible for the adequacy of the performance or design criteria specified by Owner or Engineer.

ARTICLE 8 – OTHER WORK AT THE SITE

8.01 *Other Work*

- A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.

- B. If Owner performs other work at or adjacent to the Site with Owner's employees, or through contracts for such other work, then Owner shall give Contractor written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any utility work at or adjacent to the Site, Owner shall provide such information to Contractor.
- C. Contractor shall afford each other contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected.
- D. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 8, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

8.02 *Coordination*

- A. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, to perform other work at or adjacent to the Site with Owner's employees, or to arrange to have utility owners perform work at or adjacent to the Site, the following will be set forth in the Supplementary Conditions or provided to Contractor prior to the start of any such other work:
 - 1. the identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;
 - 2. an itemization of the specific matters to be covered by such authority and responsibility; and
 - 3. the extent of such authority and responsibilities.
- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

8.03 *Legal Relationships*

- A. If, in the course of performing other work at or adjacent to the Site for Owner, the Owner's employees, any other contractor working for Owner, or any utility owner causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment shall take into account information (if any) regarding such other work that was

provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the Contract. When applicable, any such equitable adjustment in Contract Price shall be conditioned on Contractor assigning to Owner all Contractor's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.

- B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due to Contractor, and assign to such other contractor or utility owner the Owner's contractual rights against Contractor with respect to the breach of the obligations set forth in this paragraph.
- C. When Owner is performing other work at or adjacent to the Site with Owner's employees, Contractor shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of Contractor's failure to take reasonable and customary measures with respect to Owner's other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due to Contractor.
- D. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claims, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such damage, delay, disruption, or interference.

ARTICLE 9 – OWNER'S RESPONSIBILITIES

9.01 *Communications to Contractor*

- A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

9.02 *Replacement of Engineer*

- A. Owner may at its discretion appoint an engineer to replace Engineer, provided Contractor makes no reasonable objection to the replacement engineer. The replacement engineer's status under the Contract Documents shall be that of the former Engineer.

9.03 *Furnish Data*

- A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

9.04 *Pay When Due*

- A. Owner shall make payments to Contractor when they are due as provided in the Agreement.

9.05 *Lands and Easements; Reports, Tests, and Drawings*

- A. Owner's duties with respect to providing lands and easements are set forth in Paragraph 5.01.
- B. Owner's duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.03.
- C. Article 5 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of conditions at the Site, and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

9.06 *Insurance*

- A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.

9.07 *Change Orders*

- A. Owner's responsibilities with respect to Change Orders are set forth in Article 11.

9.08 *Inspections, Tests, and Approvals*

- A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.02.B.

9.09 *Limitations on Owner's Responsibilities*

- A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

9.10 *Undisclosed Hazardous Environmental Condition*

- A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.06.

9.11 *Evidence of Financial Arrangements*

- A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents (including obligations under proposed changes in the Work).

9.12 *Safety Programs*

- A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed.
- B. Owner shall furnish copies of any applicable Owner safety programs to Contractor.

ARTICLE 10 – ENGINEER’S STATUS DURING CONSTRUCTION

10.01 *Owner’s Representative*

- A. Engineer will be Owner’s representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner’s representative during construction are set forth in the Contract.

10.02 *Visits to Site*

- A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor’s executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer’s efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.
- B. Engineer’s visits and observations are subject to all the limitations on Engineer’s authority and responsibility set forth in Paragraph 10.08. Particularly, but without limitation, during or as a result of Engineer’s visits or observations of Contractor’s Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor’s means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

10.03 *Project Representative*

- A. A Project Representative will also represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work, then the authority and responsibilities of any such Project Representative will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 10.08. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer’s consultant, agent, or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

10.04 *Rejecting Defective Work*

- A. Engineer has the authority to reject Work in accordance with Article 14.

10.05 *Shop Drawings, Change Orders and Payments*

- A. Engineer’s authority, and limitations thereof, as to Shop Drawings and Samples, are set forth in Paragraph 7.16.
- B. Engineer’s authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, are set forth in Paragraph 7.19.
- C. Engineer’s authority as to Change Orders is set forth in Article 11.

- D. Engineer's authority as to Applications for Payment is set forth in Article 15.

10.06 *Determinations for Unit Price Work*

- A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor as set forth in Paragraph 13.03.

10.07 *Decisions on Requirements of Contract Documents and Acceptability of Work*

- A. Engineer will render decisions regarding the requirements of the Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth herein for initial interpretations, Change Proposals, and acceptance of the Work. In rendering such decisions and judgments, Engineer will not show partiality to Owner or Contractor, and will not be liable to Owner, Contractor, or others in connection with any proceedings, interpretations, decisions, or judgments conducted or rendered in good faith.

10.08 *Limitations on Engineer's Authority and Responsibilities*

- A. Neither Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer, shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.
- B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.
- C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.
- D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 15.06.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals, that the results certified indicate compliance with the Contract Documents.
- E. The limitations upon authority and responsibility set forth in this Paragraph 10.08 shall also apply to the Resident Project Representative, if any.

10.09 *Compliance with Safety Program*

- A. While at the Site, Engineer's employees and representatives will comply with the specific applicable requirements of Owner's and Contractor's safety programs (if any) of which Engineer has been informed.

ARTICLE 11 – AMENDING THE CONTRACT DOCUMENTS; CHANGES IN THE WORK

11.01 *Amending and Supplementing Contract Documents*

- A. The Contract Documents may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.
 - 1. *Change Orders:*
 - a. If an amendment or supplement to the Contract Documents includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order. A Change Order also may be used to establish amendments and supplements of the Contract Documents that do not affect the Contract Price or Contract Times.
 - b. Owner and Contractor may amend those terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, without the recommendation of the Engineer. Such an amendment shall be set forth in a Change Order.
 - 2. *Work Change Directives:* A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.04 regarding change of Contract Price. Contractor must submit any Change Proposal seeking an adjustment of the Contract Price or the Contract Times, or both, no later than 30 days after the completion of the Work set out in the Work Change Directive. Owner must submit any Claim seeking an adjustment of the Contract Price or the Contract Times, or both, no later than 60 days after issuance of the Work Change Directive.
 - 3. *Field Orders:* Engineer may authorize minor changes in the Work if the changes do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Such changes will be accomplished by a Field Order and will be binding on Owner and also on Contractor, which shall perform the Work involved promptly. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

11.02 *Owner-Authorized Changes in the Work*

- A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work. Such changes shall be supported by Engineer's recommendation, to the extent the change involves the design (as set forth in the Drawings, Specifications, or otherwise), or other engineering or technical matters. Such changes may be accomplished by a Change Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change

Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work shall be performed under the applicable conditions of the Contract Documents. Nothing in this paragraph shall obligate Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

11.03 *Unauthorized Changes in the Work*

- A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents, as amended, modified, or supplemented, except in the case of an emergency as provided in Paragraph 7.15 or in the case of uncovering Work as provided in Paragraph 14.05.

11.04 *Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price shall comply with the provisions of Paragraph 11.06. Any Claim for an adjustment of Contract Price shall comply with the provisions of Article 12.
- B. An adjustment in the Contract Price will be determined as follows:
 - 1. where the Work involved is covered by unit prices contained in the Contract Documents, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.03); or
 - 2. where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.04.C.2); or
 - 3. where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on the basis of the Cost of the Work (determined as provided in Paragraph 13.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 11.04.C).
- C. *Contractor's Fee:* When applicable, the Contractor's fee for overhead and profit shall be determined as follows:
 - 1. a mutually acceptable fixed fee; or
 - 2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. for costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor's fee shall be 15 percent;
 - b. for costs incurred under Paragraph 13.01.B.3, the Contractor's fee shall be five percent;
 - c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 11.01.C.2.a and 11.01.C.2.b is that the Contractor's fee shall be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.A.1 and 13.01.A.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually

performs the Work, a fee of five percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted work the maximum total fee to be paid by Owner shall be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the work;

- d. no fee shall be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;
- e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and
- f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 11.04.C.2.a through 11.04.C.2.e, inclusive.

11.05 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Times shall comply with the provisions of Paragraph 11.06. Any Claim for an adjustment in the Contract Times shall comply with the provisions of Article 12.
- B. An adjustment of the Contract Times shall be subject to the limitations set forth in Paragraph 4.05, concerning delays in Contractor's progress.

11.06 *Change Proposals*

- A. Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; appeal an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; contest a set-off against payment due; or seek other relief under the Contract. The Change Proposal shall specify any proposed change in Contract Times or Contract Price, or both, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents.
 - 1. *Procedures:* Contractor shall submit each Change Proposal to Engineer promptly (but in no event later than 30 days) after the start of the event giving rise thereto, or after such initial decision. The Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal. The supporting data shall be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event. Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal.
 - 2. *Engineer's Action:* Engineer will review each Change Proposal and, within 30 days after receipt of the Contractor's supporting data, either deny the Change Proposal in whole, approve it in whole, or deny it in part and approve it in part. Such actions shall be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change Proposal within 30 days, then either Owner or Contractor may at any time

thereafter submit a letter to the other party indicating that as a result of Engineer's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.

3. *Binding Decision:* Engineer's decision will be final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.
- B. *Resolution of Certain Change Proposals:* If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice shall be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.

11.07 *Execution of Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders covering:
 1. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive;
 2. changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;
 3. changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.02, (b) required because of Owner's acceptance of defective Work under Paragraph 14.04 or Owner's correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise), or other engineering or technical matters; and
 4. changes in the Contract Price or Contract Times, or other changes, which embody the substance of any final and binding results under Paragraph 11.06, or Article 12.
- B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of this Paragraph 11.07, it shall be deemed to be of full force and effect, as if fully executed.

11.08 *Notification to Surety*

- A. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

ARTICLE 12 – CLAIMS

12.01 *Claims*

- A. *Claims Process:* The following disputes between Owner and Contractor shall be submitted to the Claims process set forth in this Article:
1. Appeals by Owner or Contractor of Engineer's decisions regarding Change Proposals;
 2. Owner demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents; and
 3. Disputes that Engineer has been unable to address because they do not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters.
- B. *Submittal of Claim:* The party submitting a Claim shall deliver it directly to the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 days of the decision under appeal. The party submitting the Claim shall also furnish a copy to the Engineer, for its information only. The responsibility to substantiate a Claim shall rest with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, or both, Contractor shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and that to the best of Contractor's knowledge and belief the amount of time or money requested accurately reflects the full amount to which Contractor is entitled.
- C. *Review and Resolution:* The party receiving a Claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the Claim through the exchange of information and direct negotiations. The parties may extend the time for resolving the Claim by mutual agreement. All actions taken on a Claim shall be stated in writing and submitted to the other party, with a copy to Engineer.
- D. *Mediation:*
1. At any time after initiation of a Claim, Owner and Contractor may mutually agree to mediation of the underlying dispute. The agreement to mediate shall stay the Claim submittal and response process.
 2. If Owner and Contractor agree to mediation, then after 60 days from such agreement, either Owner or Contractor may unilaterally terminate the mediation process, and the Claim submittal and decision process shall resume as of the date of the termination. If the mediation proceeds but is unsuccessful in resolving the dispute, the Claim submittal and decision process shall resume as of the date of the conclusion of the mediation, as determined by the mediator.
 3. Owner and Contractor shall each pay one-half of the mediator's fees and costs.
- E. *Partial Approval:* If the party receiving a Claim approves the Claim in part and denies it in part, such action shall be final and binding unless within 30 days of such action the other party invokes the procedure set forth in Article 17 for final resolution of disputes.
- F. *Denial of Claim:* If efforts to resolve a Claim are not successful, the party receiving the Claim may deny it by giving written notice of denial to the other party. If the receiving party does not take

action on the Claim within 90 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of the inaction, the Claim is deemed denied, thereby commencing the time for appeal of the denial. A denial of the Claim shall be final and binding unless within 30 days of the denial the other party invokes the procedure set forth in Article 17 for the final resolution of disputes.

- G. *Final and Binding Results:* If the parties reach a mutual agreement regarding a Claim, whether through approval of the Claim, direct negotiations, mediation, or otherwise; or if a Claim is approved in part and denied in part, or denied in full, and such actions become final and binding; then the results of the agreement or action on the Claim shall be incorporated in a Change Order to the extent they affect the Contract, including the Work, the Contract Times, or the Contract Price.

ARTICLE 13 – COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

13.01 *Cost of the Work*

- A. *Purposes for Determination of Cost of the Work:* The term Cost of the Work means the sum of all costs necessary for the proper performance of the Work at issue, as further defined below. The provisions of this Paragraph 13.01 are used for two distinct purposes:
1. To determine Cost of the Work when Cost of the Work is a component of the Contract Price, under cost-plus-fee, time-and-materials, or other cost-based terms; or
 2. To determine the value of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price. When the value of any such adjustment is determined on the basis of Cost of the Work, Contractor is entitled only to those additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.
- B. *Costs Included:* Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work shall be in amounts no higher than those prevailing in the locality of the Project, shall not include any of the costs itemized in Paragraph 13.01.C, and shall include only the following items:
1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, and vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.
 2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to

Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.

3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 13.01.
4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.
5. Supplemental costs including the following:
 - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
 - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.
 - c. ~~Rentals of~~ **The cost for the use of** all construction equipment and machinery, and the parts thereof, **whether owned by the Contractor or** rented from Contractor or others **shall be calculated as follows and include the** ~~in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof~~ **for equipment involved only in the changed portion of the work covered under the Cost of the Work method. Transportation, loading and assembly costs will not be included for equipment already on the site which is being used for other portions of the Work. Hourly equipment and machinery rates shall be calculated from the Rental Rate Blue Book for Construction Equipment, and the equipment list submitted according to Paragraph 2.03 and 2.05 and as follows. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.**
 - 1) **For working equipment, the hourly rate shall be the monthly rental rate divided by 176 hours per month plus the hourly operating cost.**
 - 2) **For equipment on standby, the hourly rate shall be 50% of the monthly rental rate divided by 176 hours per month and the hourly operating cost shall not be applied.**
 - 3) **For specialized equipment rented for a short duration used for change order work or additional work not part of the scope of the Work bid, the equipment rental rate will be in accordance with the terms of a third party rental agreement or shall be negotiated prior to the work being performed.**

- d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.
 - e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
 - f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 6.05), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.
 - g. The cost of utilities, fuel, and sanitary facilities at the Site.
 - h. Minor expenses such as communication service at the Site, express and courier services, and similar petty cash items in connection with the Work.
 - i. The costs of premiums for all bonds and insurance that Contractor is required by the Contract Documents to purchase and maintain.
- C. *Costs Excluded:* The term Cost of the Work shall not include any of the following items:
- 1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.
 - 2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
 - 3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
 - 4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
 - 5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.
- D. *Contractor's Fee:* When the Work as a whole is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by

a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 11.04.C.

- E. *Documentation*: Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

13.02 Allowances

- A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.
- B. *Cash Allowances*: Contractor agrees that:
1. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
 2. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.
- C. *Contingency Allowance*: Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.
- D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

13.03 Unit Price Work

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.
- B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Payments to Contractor for Unit Price Work will be based on actual quantities.
- C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.
- D. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of the following paragraph.

- E. **The unit price of an item of Unit Price Work shall be subject to reevaluation and adjustment under the following conditions** ~~Within 30 days of Engineer's written decision under the preceding paragraph, Contractor may submit a Change Proposal, or Owner may file a Claim, seeking an adjustment in the Contract Price if:~~
1. **if the extended price of a particular item of Unit Price Work amounts to five percent (5%) or more of the Contract Price (based on estimated quantities at the time of Contract formation) and the variation in the quantity of that particular item of Unit Price Work actually furnished or performed by Contractor differs by more than twenty-five percent (25%) from the estimated quantity of such item indicated in the Agreement; and**
 2. there is no corresponding adjustment with respect to any other item of Work; and
 3. Contractor believes that it is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price, and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 14 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

14.01 *Access to Work*

- A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and authorities having jurisdiction will have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply therewith as applicable.

14.02 *Tests, Inspections, and Approvals*

- A. Contractor shall give Engineer timely notice of readiness of the Work (or specific parts thereof) for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.
- B. Owner shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by Owner, except that costs incurred in connection with tests or inspections of covered Work shall be governed by the provisions of Paragraph 14.05.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.
- D. Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required:
1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;

2. to attain Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work;
3. by manufacturers of equipment furnished under the Contract Documents;
4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and
5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

Such inspections and tests shall be performed by independent inspectors, testing laboratories, or other qualified individuals or entities acceptable to Owner and Engineer.

- E. If the Contract Documents require the Work (or part thereof) to be approved by Owner, Engineer, or another designated individual or entity, then Contractor shall assume full responsibility for arranging and obtaining such approvals.
- F. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation. Such uncovering shall be at Contractor's expense unless Contractor had given Engineer timely notice of Contractor's intention to cover the same and Engineer had not acted with reasonable promptness in response to such notice.

14.03 *Defective Work*

- A. *Contractor's Obligation:* It is Contractor's obligation to assure that the Work is not defective.
- B. *Engineer's Authority:* Engineer has the authority to determine whether Work is defective, and to reject defective Work.
- C. *Notice of Defects:* Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor.
- D. *Correction, or Removal and Replacement:* Promptly after receipt of written notice of defective Work, Contractor shall correct all such defective Work, whether or not fabricated, installed, or completed, or, if Engineer has rejected the defective Work, remove it from the Project and replace it with Work that is not defective.
- E. *Preservation of Warranties:* When correcting defective Work, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.
- F. *Costs and Damages:* In addition to its correction, removal, and replacement obligations with respect to defective Work, Contractor shall pay all claims, costs, losses, and damages arising out of or relating to defective Work, including but not limited to the cost of the inspection, testing, correction, removal, replacement, or reconstruction of such defective Work, fines levied against Owner by governmental authorities because the Work is defective, and the costs of repair or replacement of work of others resulting from defective Work. Prior to final payment, if Owner and Contractor are unable to agree as to the measure of such claims, costs, losses, and damages resulting from defective Work, then Owner may impose a reasonable set-off against payments due under Article 15.

14.04 *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner prefers to accept it, Owner may do so (subject, if such acceptance occurs prior to final payment, to Engineer's confirmation that such acceptance is in general accord with the design intent and applicable engineering principles, and will not endanger public safety). Contractor shall pay all claims, costs, losses, and damages attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness), and for the diminished value of the Work to the extent not otherwise paid by Contractor. If any such acceptance occurs prior to final payment, the necessary revisions in the Contract Documents with respect to the Work shall be incorporated in a Change Order. If the parties are unable to agree as to the decrease in the Contract Price, reflecting the diminished value of Work so accepted, then Owner may impose a reasonable set-off against payments due under Article 15. If the acceptance of defective Work occurs after final payment, Contractor shall pay an appropriate amount to Owner.

14.05 *Uncovering Work*

- A. Engineer has the authority to require special inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.
- B. If any Work is covered contrary to the written request of Engineer, then Contractor shall, if requested by Engineer, uncover such Work for Engineer's observation, and then replace the covering, all at Contractor's expense.
- C. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, then Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, and provide all necessary labor, material, and equipment.
1. If it is found that the uncovered Work is defective, Contractor shall be responsible for all claims, costs, losses, and damages arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and pending Contractor's full discharge of this responsibility the Owner shall be entitled to impose a reasonable set-off against payments due under Article 15.
 2. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, then Contractor may submit a Change Proposal within 30 days of the determination that the Work is not defective.

14.06 *Owner May Stop the Work*

- A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, then Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the

benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

14.07 Owner May Correct Defective Work

- A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace rejected Work as required by Engineer, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, then Owner may, after seven days written notice to Contractor, correct or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 14.07, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this paragraph.
- C. All claims, costs, losses, and damages incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.
- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 14.07.

ARTICLE 15 – PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD

15.01 Progress Payments

- A. *Basis for Progress Payments:* The Schedule of Values established as provided in Article 2 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed during the pay period, as determined under the provisions of Paragraph 13.03. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.
- B. *Applications for Payments:*
 - 1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens, and evidence that the

materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner. **Payment for materials in storage shall be based on the actual cost of the materials and equipment to Contactor and shall not include any overhead or profit. Documentation warranting Owner has received the materials and equipment free and clear of all Liens will be waived for the material in storage included in the first progress payment. However, proof of payment and clear title must be submitted with Application No. 2 for all material included in Application No. 1. Without such documentation amounts paid per Application No. 1 for materials in storage will be deducted from Application No 2. Beginning with the second application, all payment for materials in storage will require documentation warranting that Owner is receiving the materials free and clear of all liens.**

2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement. **Retainage may be used by Owner to offset costs for any of the losses enumerated in Paragraphs 15.01.C.6.a through 15.01.C.6.e inclusive, 15.01.E.1.a through 15.01.E.1.i inclusive or 16.02.E. In additions retainage may be used by the Owner to protect against loss from failure of the Contractor to complete necessary work and to offset any liquidated damages due Owner.**

No payments will be made that would deplete the retainage, place in escrow any funds that are required for retainage, or invest retainage for the benefit of the Contractor.

4. **Each Application for Payment shall be accompanied by Contractor's updated progress schedule, shop drawing schedule, procurement schedule, and other data specified herein. Owner reserves the right to required submission of certified payroll records by the Contractor.**

C. Review of Applications:

1. Engineer will, within 10 days after receipt of each Application for Payment, including each resubmittal, either indicate in writing a recommendation of payment and present the Application to Owner, or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.
2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:
 - a. the Work has progressed to the point indicated;
 - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work

- under Paragraph 13.03, and any other qualifications stated in the recommendation); and
- c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
- a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract; or
 - b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.
4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
- a. to supervise, direct, or control the Work, or
 - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
 - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or
 - d. to make any examination to ascertain how or for what purposes Contractor has used the money paid on account of the Contract Price, or
 - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 15.01.C.2.
6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:
- a. the Work is defective, requiring correction or replacement;
 - b. the Contract Price has been reduced by Change Orders;
 - c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
 - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or
 - e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.

D. *Payment Becomes Due:*

1. **The Application for Payment with Engineer's recommendations will be presented to the Owner and Agency (if applicable) for consideration. If both Owner and Agency find the Application for Payment acceptable, the recommended amount less any reduction under the provision of Paragraph 15.01.E will become due twenty (20) days after the Application for Payment is presented to the Owner, and the Owner will make payment to the Contractor.** ~~Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended (subject to any Owner set-offs) will become due, and when due will be paid by Owner to Contractor.~~

E. *Reductions in Payment by Owner:*

1. In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:
 - a. claims have been made against Owner on account of Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages on account of Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;
 - b. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;
 - c. Contractor has failed to provide and maintain required bonds or insurance;
 - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;
 - e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;
 - f. the Work is defective, requiring correction or replacement;
 - g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
 - h. the Contract Price has been reduced by Change Orders;
 - i. an event that would constitute a default by Contractor and therefore justify a termination for cause has occurred;
 - j. liquidated damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or final completion of the Work;
 - k. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;
 - l. there are other items entitling Owner to a set off against the amount recommended.
2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate written

notice (with a copy to Engineer) stating the reasons for such action and the specific amount of the reduction, and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, if Contractor remedies the reasons for such action. The reduction imposed shall be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.

3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 15.01.C.1 and subject to interest as provided in the Agreement.

15.02 *Contractor's Warranty of Title*

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all Liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than seven days after the time of payment by Owner.

15.03 *Substantial Completion*

- A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete and request that Engineer issue a certificate of Substantial Completion. Contractor shall at the same time submit to Owner and Engineer an initial draft of punch list items to be completed or corrected before final payment.
- B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer or Owner does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor. **Contractor shall immediately correct the deficiencies and re-notify the Engineer in writing that the Work is substantially complete.**
- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a preliminary certificate of Substantial Completion which shall fix the date of Substantial Completion. Engineer shall attach to the certificate a punch list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the preliminary certificate during which to make written objection to Engineer as to any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing that the Work is not substantially complete, stating the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner's objections Engineer concludes that the Work is substantially complete, then Engineer will, within said 14 days, execute and deliver to Owner and Contractor a final certificate of Substantial Completion (with a revised punch list of items to be completed or corrected) reflecting such changes from the preliminary certificate as Engineer believes justified after consideration of any objections from Owner.
- D. At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Contractor will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's

risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and Contractor agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.

- E. After Substantial Completion the Contractor shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases Contractor may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.
- F. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the punch list.

15.04 *Partial Use or Occupancy*

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:
 - 1. At any time Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 15.03.A through E for that part of the Work.
 - 2. At any time Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
 - 3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 15.03 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.
 - 4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 6.05 regarding builder's risk or other property insurance.

15.05 *Final Inspection*

- A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work, or agreed portion thereof, is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

15.06 *Final Payment*

A. *Application for Payment:*

1. After Contractor has, in the opinion of Engineer **and Owner**, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, annotated record documents (as provided in Paragraph 7.11), and other documents, Contractor may make application for final payment.
2. The final Application for Payment shall be accompanied (except as previously delivered) by:
 - a. all documentation called for in the Contract Documents;
 - b. consent of the surety, if any, to final payment;
 - c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.
 - d. a list of all disputes that Contractor believes are unsettled; and
 - e. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work, **and**
 - f. **record documents.**
3. In lieu of the releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.

B. *Engineer's Review of Application and Acceptance:*

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the Application for Payment to Owner for payment. Such recommendation shall account for any set-offs against payment that are necessary in Engineer's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to the provisions of Paragraph 15.07. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final

payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

- C. *Completion of Work*: The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment.
- D. *Payment Becomes Due*: Thirty days after the presentation to Owner of the final Application for Payment and accompanying documentation, the amount recommended by Engineer (less any further sum Owner is entitled to set off against Engineer's recommendation, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions above with respect to progress payments) will become due and shall be paid by Owner to Contractor.

15.07 *Waiver of Claims*

- A. The making of final payment will not constitute a waiver by Owner of claims or rights against Contractor. Owner expressly reserves claims and rights arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 15.05, from Contractor's failure to comply with the Contract Documents or the terms of any special guarantees specified therein, from outstanding Claims by Owner, or from Contractor's continuing obligations under the Contract Documents.
- B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted or appealed under the provisions of Article 17.

15.08 *Correction Period*

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents, or by any specific provision of the Contract Documents), any Work is found to be defective, or if the repair of any damages to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas used by Contractor as permitted by Laws and Regulations, is found to be defective, then Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
 - 1. correct the defective repairs to the Site or such other adjacent areas;
 - 2. correct such defective Work;
 - 3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
 - 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting therefrom.
- B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others).

- C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.
- E. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph shall not be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

ARTICLE 16 – SUSPENSION OF WORK AND TERMINATION

16.01 *Owner May Suspend Work*

- A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by written notice to Contractor and Engineer. Such notice will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension. Any Change Proposal seeking such adjustments shall be submitted no later than 30 days after the date fixed for resumption of Work.

16.02 *Owner May Terminate for Cause*

- A. The occurrence of any one or more of the following events will constitute a default by Contractor and justify termination for cause:
 - 1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule);
 - 2. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;
 - 3. Contractor's disregard of Laws or Regulations of any public body having jurisdiction; or
 - 4. Contractor's repeated disregard of the authority of Owner or Engineer.
- B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) ten days written notice that Owner is considering a declaration that Contractor is in default and termination of the contract, Owner may proceed to:
 - 1. declare Contractor to be in default, and give Contractor (and any surety) notice that the Contract is terminated; and
 - 2. enforce the rights available to Owner under any applicable performance bond.
- C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which

Owner has paid Contractor but which are stored elsewhere, and complete the Work as Owner may deem expedient.

- D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within seven days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.
- E. If Owner proceeds as provided in Paragraph 16.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds the cost to complete the Work, including all related claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals) sustained by Owner, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses, and damages exceeds such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this paragraph, Owner shall not be required to obtain the lowest price for the Work performed.
- F. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue, or any rights or remedies of Owner against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by Owner will not release Contractor from liability.
- G. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond shall govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

16.03 *Owner May Terminate For Convenience*

- A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
 - 1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
 - 2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and
 - 3. other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.
- B. Contractor shall not be paid on account of loss of anticipated overhead, profits, or revenue, or other economic loss arising out of or resulting from such termination.

16.04 *Contractor May Stop Work or Terminate*

- A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 30 days

to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the contract and recover from Owner payment on the same terms as provided in Paragraph 16.03.

- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this paragraph are not intended to preclude Contractor from submitting a Change Proposal for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this paragraph.

ARTICLE 17 – FINAL RESOLUTION OF DISPUTES

17.01 *Methods and Procedures*

- A. *Disputes Subject to Final Resolution:* The following disputed matters are subject to final resolution under the provisions of this Article:
1. A timely appeal of an approval in part and denial in part of a Claim, or of a denial in full; and
 2. Disputes between Owner and Contractor concerning the Work or obligations under the Contract Documents, and arising after final payment has been made.
- B. *Final Resolution of Disputes:* For any dispute subject to resolution under this Article, Owner or Contractor may:
1. elect in writing to invoke the dispute resolution process provided for in the Supplementary Conditions; or
 2. agree with the other party to submit the dispute to another dispute resolution process; or
 3. if no dispute resolution process is provided for in the Supplementary Conditions or mutually agreed to, give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction.

ARTICLE 18 – MISCELLANEOUS

18.01 *Giving Notice*

- A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:
1. delivered in person, by a commercial courier service or otherwise, to the individual or to a member of the firm or to an officer of the corporation for which it is intended; or
 2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the sender of the notice.

18.02 *Computation of Times*

- A. When any period of time is referred to in the Contract by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a

Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

18.03 *Cumulative Remedies*

- A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract. The provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

18.04 *Limitation of Damages*

- A. With respect to any and all Change Proposals, Claims, disputes subject to final resolution, and other matters at issue, neither Owner nor Engineer, nor any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, shall be liable to Contractor for any claims, costs, losses, or damages sustained by Contractor on or in connection with any other project or anticipated project.

18.05 *No Waiver*

- A. A party's non-enforcement of any provision shall not constitute a waiver of that provision, nor shall it affect the enforceability of that provision or of the remainder of this Contract.

18.06 *Survival of Obligations*

- A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract, as well as all continuing obligations indicated in the Contract, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

18.07 *Controlling Law*

- A. This Contract is to be governed by the law of the state in which the Project is located.

18.08 *Headings*

- A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

SECTION 00 80 00

SUPPLEMENTARY CONDITIONS

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract, EJCDC® C-700 (2013 Edition). All provisions that are not so amended or supplemented remain in full force and effect.

To the greatest extent possible the modifications to the Standard General Conditions of the Construction Contract (EJCDC 700) have been made electronically in the text of the General Conditions. The modifications are shown in the General Conditions as strikeout for deletions and bold/underline for additions. These Supplementary Conditions contain additional “project specific” changes, additions or modifications.

The terms used in these Supplementary Conditions have the meanings stated in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings stated below, which are applicable to both the singular and plural thereof.

The address system used in these Supplementary Conditions is the same as the address system used in the General Conditions, with the prefix "SC" added thereto.

ARTICLE 5 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

SC-5.03 Subsurface and Physical Conditions

SC-5.03.A. Replace subparagraph 5.03.A. with:

- A. ***Reports and Drawings:*** The Supplementary conditions include no reports of explorations or tests of subsurface conditions at or adjacent to the Site.

SC-5.06 Hazardous Environmental Conditions at Site

SC-5.06.A. Replace subparagraph 5.06.A. with:

- A. ***Reports and Drawings:*** The Supplementary conditions do not identify reports or drawings of Hazardous Environmental Conditions or adjacent to the Site.

ARTICLE 6 – BONDS AND INSURANCE

SC-6.03 Contractor's Liability Insurance

Add the following new paragraph immediately after Paragraph 6.03.J:

- K. The limits of liability for the insurance required by Paragraph 6.03 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:

1. Workers' Compensation, and related coverages under Paragraphs 6.03.A.1 and A.2 of the General Conditions:

State:	<u>Statutory</u>
Federal, if applicable (e.g., Longshoreman's):	<u>Statutory</u>
Employer's Liability:	
Bodily injury, each accident	<u>\$1,000,000</u>
Bodily injury by disease, each employee	<u>\$1,000,000</u>
Bodily injury/disease aggregate	<u>\$1,000,000</u>

2. Contractor's Commercial General Liability under Paragraphs 6.03.B and 6.03.C of the General Conditions:

General Aggregate	<u>\$2,000,000</u>
Products - Completed Operations Aggregate	<u>\$1,000,000</u>
Personal and Advertising Injury	<u>\$1,000,000</u>
Each Occurrence (Bodily Injury and Property Damage)	<u>\$1,000,000</u>

3. Automobile Liability under Paragraph 6.03.D. of the General Conditions:

Combined Single Limit \$1,000,000

4. Excess or Umbrella Liability:

Per Occurrence	<u>\$4,000,000</u>
General Aggregate	<u>\$4,000,000</u>

5. Contractor's Pollution Liability:

Each Occurrence	<u>NA</u>
General Aggregate	<u>NA</u>

☒ If box is checked, Contractor is not required to provide Contractor's Pollution Liability insurance under this Contract

6. Additional Insureds: In addition to Owner and Engineer, include as additional insureds the following:

a.

7. Contractor's Professional Liability:

Each Claim	<u>NA</u>
Annual Aggregate	<u>NA</u>

ARTICLE 7 – CONTRACTOR'S RESPONSIBILITIES

SC-7.12 Safety and Protection

- A. The Contractor is to prepare and maintain a project specific health and safety plan. Health and Safety plan will be subject to review and approval by Engineer and Owner.

ARTICLE 17 – FINAL RESOLUTION OF DISPUTES

SC-17.02 Arbitration

- A. All matters subject to final resolution under this Article will be decided by arbitration in accordance with the Construction Industry Rules of the American Arbitration Association subject to the conditions and limitations of this paragraph. This agreement to arbitrate and any other agreement or consent to arbitrate entered into will be specifically enforceable under the prevailing law of any court having jurisdiction.
- B. The demand for arbitration will be filed in writing with the other party to the Contract. The demand for arbitration will be made within the specific time required in this Article, or if no specified time is applicable within a reasonable time after the matter in question has arisen, and in no event shall any such demand be made after the date when institution of legal or equitable proceedings based on such matter in question would be barred by the applicable statute of limitations. The demand for arbitration should include specific reference to Paragraph SC-17.02.D below.
- C. No arbitration arising out of or relating to the Contract shall include by consolidation, joinder, or in any other manner any other individual or entity (including Engineer, and Engineer's consultants and the officers, directors, partners, agents, employees or consultants of any of them) who is not a party to this Contract unless:
1. the inclusion of such other individual or entity is necessary if complete relief is to be afforded among those who are already parties to the arbitration; and
 2. such other individual or entity is substantially involved in a question of law or fact which is common to those who are already parties to the arbitration and which will arise in such proceedings.
- D. The award rendered by the arbitrator(s) shall be consistent with the agreement of the parties, in writing, and include a concise breakdown of the award, and a written explanation of the award specifically citing the Contract provisions deemed applicable and relied on in making the award.

- E. The award will be final. Judgment may be entered upon it in any court having jurisdiction thereof, and it will not be subject to modification or appeal, subject to provisions of the Laws and Regulations relating to vacating or modifying an arbitral award.**
- F. The fees and expenses of the arbitrators and any arbitration service shall be shared equally by Owner and Contractor.**

SECTION 01 00 00 GENERAL REQUIREMENTS

PART 1 - SCOPE OF WORK

1.01 General

The Project consists of the construction of a wood framed, elevated structure for kennel and veterinary services as described in the project drawings.

PART 2 - PRE-CONSTRUCTION REQUIREMENTS

2.01 NONE

PART 3 - EXTRA OR DISPUTED WORK REPORTS

- 3.01 If payment for work performed is to be based on time and materials, or if a claim is contemplated in which time and material reports would assist in settling the claim, the Contractor shall maintain adequate records on the Daily Report forms available from the Engineer. The reported work shall have the Engineer's signature to indicate his concurrence prior to being submitted to the Engineer or Contract Administrator within 48 hours of the time the work was performed. Concurrence by the Engineer does not indicate agreement to or authorization of "extra work" or "extra payment" but rather indicates agreement that the work effort recorded during that time period was in fact done.

PART 4 - MATERIAL TESTING AND INSPECTION

4.01 Contractor's Obligation

- A. The Contractor shall obtain and pay for all testing that may be necessary to qualify Contractor-furnished materials for use in the work. This shall include material quality tests, mix designs, equipment and plant calibration, and other similar tests required to qualify Contractor-furnished materials for compliance with the specifications. The Contractor shall submit test results to the Engineer sufficiently in advance of the work so that approval to proceed is received by the Contractor prior to using that material in the work.
- B. Samples of material required for testing shall be furnished by the Contractor.
- C. The Contractor is responsible for coordinating with the Engineer and requesting all testing, including field testing paid for by the Owner.
- D. The Contractor shall pay for all failing field tests performed to monitor construction control of the materials used in the work.
- E. Payment for failing field tests will be deducted from any amounts due or to become due to the Contractor.

4.02 Owner's Obligation

- A. The Owner will be paying for the Engineer to be onsite part-time during the construction.

PART 5 - WEATHER LIMITATIONS

- 5.01 The Contractor shall protect each increment of completed work against detrimental effects due to weather, by approved methods. Any increment of completed work that is damaged by freezing or rain, shall be reconditioned, reshaped, re-compacted, or replaced by the Contractor in conformance with the requirements of this specification without additional cost to the Owner.

PART 6 - NOTICE TO BE GIVEN

- 6.01 Contractor shall notify the Engineer at least 72 hours prior to the following:
- A. On-site testing, and
 - B. Temporary blockage or rerouting of traffic.

PART 7 - LABOR STANDARDS, REPORTING, AND PREVAILING WAGE RATES DETERMINATIONS

- 7.01 The prevailing wage rates of the State of Alaska apply to this contract as do any requirements of the State of Alaska associated with the use of these State prevailing wages.

PART 8 - EXECUTION OF WORK

- 8.01 Survey Control
- Benchmarks, monuments, and baselines shown on the Drawings, shall be used for horizontal and vertical control by the Contractor. Caution shall be used when working near these and other survey monuments so as not to disturb them.
- 8.02 Disturbing Existing Monuments and Property Corners
- Should the Contractor's normal prosecution of work require that he disturb any property corners or survey monuments, he shall re-establish them after completion of the project and at no additional cost to the Owner. All referencing and re-establishment of property corners and survey monuments shall be performed by a Land Surveyor registered in the State of Alaska.
- 8.03 Construction Survey
- All construction survey stakes will be placed by the Contractor, based on the reference points indicated in the Drawings.
- 8.04 Traffic Control
- Contractor shall not block or inhibit movement of City of Bethel vehicles entering or leaving the Public Works facility. Emergency operations could require access to the facility 24 hours per day.

PART 9 - AS-BUILTS**9.01 General**

The Contractor shall provide the Owner as-built information on all construction. This information will include copies of the Contractor's field survey notes and a set of the Drawings red-lined with as-built information. Items to be as-built by the Contractor, include, but not are limited to, the water main alignments, culverts length and location, service line placement, service boxes, etc.

A. Control

Basis for horizontal control for as-built information shall be the system of stationing shown on the Drawings. All elevations shall be based on the datum used for design.

B. Survey Notes

All field survey notes shall include date, name of surveyor or foreman, and adequate description of TBM's when used. Sketches shall have north arrow and show relationship or ties to stationing control. All notes shall be reduced to show actual elevation at design datum.

END OF GENERAL REQUIREMENTS

SECTION 01 00 01 METHOD OF MEASUREMENT AND BASIS OF PAYMENT

PART 1 - GENERAL

1.01 Scope

The method of measurement and basis of payment is described in this section.

1.02 General

- A. The total bid price for each item of the Contract shall cover all work shown on the Construction Drawings and required by the Specifications and other Contract Documents. All costs in connection with the Work, including furnishing all materials, equipment, supplies and appurtenances; providing all construction, equipment, and tools, performing all necessary labor and supervision to fully complete the Work and associated start-up and Commissioning, shall be included in the unit and lump sum bid prices. No item required by the Contract Documents for the proper and successful completion of the Work will be paid for outside of or in addition to the prices submitted in the bid. All work not specifically set forth as a pay item in the Bid Form included but not limited to reclamation, sodding, topsoil, seed, reinstalling existing signs and fences, replacing construction caused damaged signs and driveways, shall be considered a subsidiary obligation of the Contractor and all costs in connection therewith shall be included in the bid prices. Bid prices will also apply to additional similar work that is not shown on the plans that the Engineer may require to be installed during the project.
- B. All work completed under the Contract will be measured by the Engineer according to the United States Standard Measure. A station when used as a definition or term of measurement shall be 100 linear feet measured horizontally, unless otherwise specified.
- C. The method of measurement and computations to be used in determination of quantities of material furnished and of work performed under the Contract will be those methods generally recognized as conforming to standard engineering practice.
- D. Unless otherwise specified, longitudinal measurements for area computations will be made horizontally, and no deductions will be made for individual items having an area of nine square feet or less. Unless otherwise specified, transverse measurements for area computations will be the neat dimensions shown on the Drawings or ordered in writing by the Engineer.
- E. All items which are measured by the linear foot, such as pipe culverts, sewers or water lines, will be measured parallel to the base or foundations upon which structures are placed, unless otherwise shown on the Drawings.

1.03 ESTIMATED QUANTITIES

- A. The basis of payment for work and materials will be by lump sum as indicated. The Contractor shall supply a schedule of values for each lump sum item to be reviewed and approved by the Engineer.
- B. The Contractor agrees to make no claim for damages, anticipated profits, or otherwise on account of any difference between the amounts of work actually performed and materials actually furnished and the estimated amounts herein.

- C. If the Contractor desires to receive payment for materials in storage for any bid item, the Contractor shall provide a breakout of all materials and their actual costs for that bid item. The Contractor shall furnish the Engineer copies of the supplier's invoices relating to the breakout to verify all materials being requested for payment under that bid item. The Contractor shall furnish copies of the required invoices no later than 5 business days before the cut-off-date of each progress payment. Invoices received later than 5 business days before the cutoff date will not be included in that progress payment. Materials in storage will only be paid for major bid items and will not be paid for associated items such as nuts, bolts, glue, gaskets, tools, etc. Materials in storage are Contractor responsibility and Contractor must provide insurance to cover any loss, theft, damage, etc. Quantities to be utilized on the monthly pay request will be based on signed daily quantities.
- D. The following applies to materials in storage; materials in storage will only be allowed on the first three pay requests received from the Contractor unless otherwise agreed to by the Engineer. Materials in storage must be tied to an actual bid item, and quantities in storage must be removed from the storage quantity as work progresses. All materials in storage will be removed from the pay estimate no later than the sixth pay estimate, for each construction season. Any materials ordered and stored over the winter shall be secured and properly covered in accordance with the material manufactures recommendations and per the Engineer's directions.
- E. Contractor shall develop a form on which to record the percent complete for all lump sum bid items and submit the form at the preconstruction meeting, to the Engineer for approval. At the end of each pay period the Engineer and Contractor must agree on bid schedule values and the percent completion actually installed. A copy signed by the Contractor must be distributed to the Resident Project Representative on a monthly basis 5 days before the monthly pay period ends. Payment for lump sum items shall be made in accordance with the agreed upon percent complete each progress payment.

1.04 METHOD OF MEASUREMENT AND BASIS OF PAYMENT

A. BID SCHEDULE

101 – Mobilization and Demobilization (Lump Sum)

Payment will be made on a lump sum basis for all Contractor Mobilization and Demobilization efforts. Disposal of unsalvageable materials at local landfill shall be incidental to Mobilization and Demobilization. Bonding and Insurance requirements shall be incidental to this Pay Item.

102 – Construction Survey and Record Drawings (Lump Sum)

Payment will be made on a lump sum basis for all work associated with conducting a construction survey, maintaining on-site construction record drawings, and submitting final record drawings. Preparation of all detailed record drawings in accordance with the specifications will also be paid under this item. Forty percent (40%) of this line item will be withheld until the Engineer approves record drawings.

103 – Installation of Dog Pound Facility (Lump Sum)

Payment will be made on a lump sum basis for all Work required to complete the Dog Pound Facility shown on the Drawings and specified herein, including the site development and utilities. This Pay Item shall include all Work not specified in other pay items and all Work necessary to provide a final finished project capable of the performance specified for all

components and systems of the project.

104 – Commission Mechanical Systems and Provide O&M Manuals (Lump Sum)

Payment will be made on a lump sum basis for Contractor to provide the equipment, personnel, and logistical support to perform all system Startup, Testing, and Commissioning Work specified including preparation and submittal of Facility Operation and Maintenance manuals, and City training.

END OF METHOD OF MEASUREMENT AND BASIS OF PAYMENT

SECTION 05 40 00 COLD-FORMED METAL FRAMING

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Exterior non-load-bearing wall framing.

B. Related Requirements:

1. Section 05 50 00 "Metal Fabrications" for miscellaneous steel shapes, masonry shelf angles, and connections used with cold-formed metal framing.
2. Section 09 22 16 "Non-Structural Metal Framing" for standard, interior non-load-bearing, metal-stud framing, with height limitations and ceiling-suspension assemblies.

1.02 ACTION SUBMITTALS

A. Product Data: For the following:

1. Cold-formed steel framing materials.
2. Load Bearing wall framing
3. Interior non-load-bearing wall framing.
4. Vertical deflection clips.
5. Post-installed anchors.

6. Power-actuated anchors.

B. Shop Drawings:

1. Include layout, spacings, sizes, thicknesses, and types of cold-formed steel framing; fabrication; and fastening and anchorage details, including mechanical fasteners.
2. Indicate reinforcing channels, opening framing, supplemental framing, strapping, bracing, bridging, splices, accessories, connection details, and attachment to adjoining work.

C. Delegated Design Submittal: For cold-formed steel framing.

1.03 INFORMATIONAL SUBMITTALS

A. Qualification Data: For testing agency.

B. Welding certificates.

C. Product Certificates: For each type of code-compliance certification for studs and tracks.

D. Product Test Reports: For each listed product, for tests performed by [manufacturer and witnessed by a qualified testing agency] [a qualified testing agency].

1. Steel sheet.

2. Expansion anchors.
3. Power-actuated anchors.
4. Mechanical fasteners.
5. Miscellaneous structural clips and accessories.

1.04 QUALITY ASSURANCE

- A. Testing Agency Qualifications: Qualified according to ASTM E329 for testing indicated.
- B. Product Tests: Mill certificates or data from a qualified independent testing agency, or in-house testing with calibrated test equipment, indicating steel sheet complies with requirements, including base-metal thickness, yield strength, tensile strength, total elongation, chemical requirements, and metallic-coating thickness.
- C. Code-Compliance Certification of Studs and Tracks: Provide documentation that framing members are certified according to the product-certification program of the Certified Steel Stud Association the Steel Framing Industry Association the Steel Stud Manufacturers Association or the Supreme Steel Framing System Association.
- D. Welding Qualifications: Qualify procedures and personnel according to the following:
 1. AWS D1.1/D1.1M, "Structural Welding Code - Steel."
 2. AWS D1.3/D1.3M, "Structural Welding Code - Sheet Steel."
- E. Comply with AISI S230 "Standard for Cold-Formed Steel Framing - Prescriptive Method for One and Two Family Dwellings."

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Protect and store cold-formed steel framing from corrosion, moisture staining, deformation, and other damage during delivery, storage, and handling as required in AISI S202.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
 1. CEMCO; California Expanded Metal Products Co.
 2. MRI Steel Framing, LLC.
 3. Mill Steel Framing; Mill Steel Company.
 4. SCAFCO Steel Stud Company; Stone Group of Companies.

2.02 PERFORMANCE REQUIREMENTS

- A. Delegated Design: Engage a qualified professional engineer, as defined in Section 01 40 00 "Quality Requirements," to design cold-formed steel framing.
- B. Structural Performance: Provide cold-formed steel framing capable of withstanding design loads within limits and under conditions indicated.
 - 1. Design Loads: As indicated on Drawings.
 - 2. Deflection Limits: Design framing systems to withstand service-level (ASD) loads without deflections greater than the following:
 - a. Exterior Load-Bearing Framing: Horizontal deflection of $L/180$ of the wall height.
 - b. Interior Non-Load-Bearing Framing: Horizontal deflection of $L/180$ of the wall height. Under a horizontal load of 5 lbf/sq. ft.
 - 3. Design framing systems to provide for movement of framing members located outside the insulated building envelope without damage or overstressing, sheathing failure, connection failure, undue strain on fasteners and anchors, or other detrimental effects when subject to a maximum ambient temperature change of 120 deg F.
 - 4. Design framing system to maintain clearances at openings, to allow for construction tolerances, and to accommodate live load deflection of primary building structure as follows:
 - a. Upward and downward movement of $L/240$ (based on span of structural member).
- C. Cold-Formed Steel Framing Standards: Unless more stringent requirements are indicated, framing complies with AISI S100 and AISI S240.

2.03 COLD-FORMED STEEL FRAMING MATERIALS

- A. Framing Members, General: Comply with AISI S240 for conditions indicated.
- B. Steel Sheet: ASTM A1003/A1003M, Structural Grade, Type H, metallic coated, of grade and coating designation as follows:
 - 1. Grade: As required by structural performance.
 - 2. Coating: G90 or equivalent.
- C. Steel Sheet for Vertical Deflection Clips: ASTM A653/A653M, structural steel, zinc coated, of grade and coating as follows:
 - 1. Grade: As required by structural performance.
 - 2. Coating: G90.

2.04 LOAD-BEARING WALL FRAMING

- A. Steel Studs: Manufacturer's standard C-shaped steel studs, of web depths indicated, punched, with stiffened flanges, and as follows:

1. Minimum Base-Metal Thickness: 0.0329 inch.
 2. Flange Width: 1-3/8 inches minimum..
- B. Steel Track: Manufacturer's standard U-shaped steel track, of web depths indicated, unpunched, with unstiffened flanges, and as follows:
1. Minimum Base-Metal Thickness: 0.0329 inch minimum, Matching steel studs.
 2. Flange Width: 1-1/4 inches.
- C. Steel Box or Back-to-Back Headers: Manufacturer's standard C-shapes used to form header beams, of web depths indicated, unpunched, with stiffened flanges, and as follows:
1. Minimum Base-Metal Thickness: 0.0329 inch.
 2. Flange Width: 1-3/8 inches minimum..

2.05 INTERIOR NON-LOAD-BEARING WALL FRAMING

- A. Steel Studs: Manufacturer's standard C-shaped steel studs, of web depths indicated, punched, with stiffened flanges, and as follows:
1. Minimum Base-Metal Thickness: 0.0329 inch.
 2. Flange Width: 1-3/8 inches minimum..
- B. Steel Track: Manufacturer's standard U-shaped steel track, of web depths indicated, unpunched, with unstiffened flanges, and as follows:
1. Minimum Base-Metal Thickness: 0.0329 inch minimum, Matching steel studs.
 2. Flange Width: 1-1/4 inches.
- C. Vertical Deflection Clips, Exterior: Manufacturer's standard bypass clips, capable of accommodating upward and downward vertical displacement of primary structure through positive mechanical attachment to stud web.
- D. Single Deflection Track: Manufacturer's single, deep-leg, U-shaped steel track; unpunched, with unstiffened flanges, of web depth to contain studs while allowing free vertical movement, with flanges designed to support horizontal loads and transfer them to the primary structure, and as follows:
1. Minimum Base-Metal Thickness: 0.0428 inch minimum, Matching steel studs.
 2. Flange Width: 1-1/4 inches.

2.06 FRAMING ACCESSORIES

- A. Fabricate steel-framing accessories from ASTM A1003/A1003M, Structural Grade, Type H, metallic coated steel sheet, of same grade and coating designation used for framing members.
- B. Provide accessories of manufacturer's standard thickness and configuration, unless otherwise indicated, as follows:
1. Supplementary framing.

2. Bracing, bridging, and solid blocking.
3. Web stiffeners.
4. Anchor clips.
5. End clips.
6. Foundation clips.
7. Hole-reinforcing plates.
8. Backer plates.

2.07 ANCHORS, CLIPS, AND FASTENERS

- A. Steel Shapes and Clips: ASTM A36/A36M, zinc coated by hot-dip process according to ASTM A123/A123M.
- B. Post-Installed Anchors: Fastener systems with bolts of same basic metal as fastened metal, if visible, unless otherwise indicated; with working capacity greater than or equal to the design load, according to an evaluation report acceptable to authorities having jurisdiction, based on ICC-ES AC01 ICC-ES AC193 ICC-ES AC58 or ICC-ES AC308 as appropriate for the substrate.
 1. Uses: Securing cold-formed steel framing to structure.
- C. Power-Actuated Anchors: Fastener systems with working capacity greater than or equal to the design load, according to an evaluation report acceptable to authorities having jurisdiction, based on ICC-ES AC70.
- D. Mechanical Fasteners: ASTM C1513, corrosion-resistant-coated, self-drilling, self-tapping, steel drill screws.
 1. Head Type: Low-profile head beneath sheathing; manufacturer's standard elsewhere.
- E. Welding Electrodes: Comply with AWS standards.

2.08 MISCELLANEOUS MATERIALS

- A. Galvanizing Repair Paint: ASTM A780/A780M MIL-P-21035B or SSPC-Paint 20.

2.09 FABRICATION

- A. Fabricate cold-formed steel framing and accessories plumb, square, and true to line, and with connections securely fastened, according to referenced AISI's specifications and standards, manufacturer's written instructions, and requirements in this Section.
 1. Fabricate framing assemblies using jigs or templates.
 2. Cut framing members by sawing or shearing; do not torch cut.
 3. Fasten cold-formed steel framing members by welding, screw fastening, clinch fastening, pneumatic pin fastening, or riveting as standard with fabricator. Wire tying of framing members is not permitted.
 - a. Comply with AWS D1.3/D1.3M requirements and procedures for welding, appearance and quality of welds, and methods used in correcting welding work.

- b. Locate mechanical fasteners and install according to Shop Drawings, with screws penetrating joined members by no fewer than three exposed screw threads.
- 4. Fasten other materials to cold-formed steel framing by welding, bolting, pneumatic pin fastening, or screw fastening, according to Shop Drawings.
- B. Reinforce, stiffen, and brace framing assemblies to withstand handling, delivery, and erection stresses. Lift fabricated assemblies by means that prevent damage or permanent distortion.
- C. Tolerances: Fabricate assemblies level, plumb, and true to line to a maximum allowable variation of 1/8 inch in 10 feet and as follows:
 - 1. Spacing: Space individual framing members no more than plus or minus 1/8 inch from plan location. Cumulative error are not to exceed minimum fastening requirements of sheathing or other finishing materials.
 - 2. Squareness: Fabricate each cold-formed steel framing assembly to a maximum out-of-square tolerance of 1/8 inch.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine substrates, areas, conditions, and abutting structural framing for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 INSTALLATION, GENERAL

- A. Cold-formed steel framing may be shop or field fabricated for installation, or it may be field assembled.
- B. Install cold-formed steel framing according to AISI S200, AISI S202, and manufacturer's written instructions unless more stringent requirements are indicated.
- C. Install shop- or field-fabricated, cold-formed framing and securely anchor to supporting structure.
 - 1. Screw, bolt, or weld wall panels at horizontal and vertical junctures to produce flush, even, true-to-line joints with maximum variation in plane and true position between fabricated panels not exceeding 1/16 inch.
- D. Install cold-formed steel framing and accessories plumb, square, and true to line, and with connections securely fastened.
 - 1. Cut framing members by sawing or shearing; do not torch cut.
 - 2. Fasten cold-formed steel framing members by welding, screw fastening, clinch fastening, or riveting. Wire tying of framing members is not permitted.
 - a. Comply with AWS D1.3/D1.3M requirements and procedures for welding, appearance and quality of welds, and methods used in correcting welding work.

- b. Locate mechanical fasteners, install according to Shop Drawings, and comply with requirements for spacing, edge distances, and screw penetration.
- E. Install framing members in one-piece lengths unless splice connections are indicated for track or tension members.
- F. Install temporary bracing and supports to secure framing and support loads equal to those for which structure was designed. Maintain braces and supports in place, undisturbed, until entire integrated supporting structure has been completed and permanent connections to framing are secured.
- G. Fasten hole-reinforcing plate over web penetrations that exceed size of manufacturer's approved or standard punched openings.

3.03 INSTALLATION OF LOAD-BEARING WALL FRAMING

- A. Install continuous top and bottom tracks sized to match studs. Align tracks accurately and securely anchor at corners and ends, and at spacings as follows:
 - 1. Anchor Spacing: As indicated on Drawings.
- B. Squarely seat studs against top and bottom tracks, with gap not exceeding 1/8 inch between the end of wall-framing member and the web of track.
- C. Set studs plumb, except as needed for diagonal bracing or required for nonplumb walls or warped surfaces and similar configurations.
- D. Align studs vertically where floor framing interrupts wall-framing continuity. Where studs cannot be aligned, continuously reinforce track to transfer load.
- E. Align floor and roof framing over studs according to AISI S200, Section C1. Where framing cannot be aligned, continuously reinforce track to transfer loads.
- F. Anchor studs abutting structural columns or walls, including masonry walls, to supporting structure.
- G. Install headers over wall openings wider than stud spacing. Locate headers above openings. Fabricate headers of compound shapes indicated or required to transfer load to supporting studs, complete with clip-angle connectors, web stiffeners, or gusset plates.
 - 1. Frame wall openings with not less than a double stud at each jamb of frame. Fasten jamb members together to uniformly distribute loads.
 - 2. Install tracks and jack studs above and below wall openings. Anchor tracks to jamb studs with clip angles or by welding, and space jack studs same as full-height wall studs.
- H. Install supplementary framing, blocking, and bracing in stud framing indicated to support fixtures, equipment, services, casework, heavy trim, furnishings, and similar work requiring attachment to framing.

1. Install supplementary framing, blocking, and bracing in stud framing indicated to support fixtures, equipment, services, casework, heavy trim, furnishings, and similar work requiring attachment to framing.
 - I. Install horizontal bridging in stud system, spaced vertically 48 inches. Fasten at each stud intersection.
 1. Channel Bridging: Cold-rolled steel channel, welded or mechanically fastened to webs of punched studs with a minimum of two screws into each flange of the clip angle for framing members up to 6 inches deep.
 2. Strap Bridging: Combination of flat, taut, steel sheet straps of width and thickness indicated and stud-track solid blocking of width and thickness to match studs. Fasten flat straps to stud flanges and secure solid blocking to stud webs or flanges.
 3. Bar Bridging: Proprietary bridging bars installed according to manufacturer's written instructions.
 - J. Install miscellaneous framing and connections, including supplementary framing, web stiffeners, clip angles, continuous angles, anchors, and fasteners, to provide a complete and stable wall-framing system.
- 3.04 INSTALLATION OF INTERIOR NON-LOAD BEARING WALL FRAMING
- A. Install continuous tracks sized to match studs. Align tracks accurately and securely anchor to supporting structure.
 - B. Fasten both flanges of studs to top and bottom track unless otherwise indicated. Space studs as follows:
 1. Stud Spacing: As indicated on Drawings.
 - C. Set studs plumb, except as needed for diagonal bracing or required for nonplumb walls or warped surfaces and similar requirements.
 - D. Isolate non-load-bearing steel framing from building structure to prevent transfer of vertical loads while providing lateral support.
 1. Connect vertical deflection clips to bypassing studs and anchor to building structure.
 - E. Install horizontal bridging in wall studs, spaced vertically in rows indicated on Shop Drawings but not more than 48 inches apart. Fasten at each stud intersection.
 1. Channel Bridging: Cold-rolled steel channel, welded or mechanically fastened to webs of punched studs.
 2. Strap Bridging: Combination of flat, taut, steel sheet straps of width and thickness indicated and stud-track solid blocking of width and thickness to match studs. Fasten flat straps to stud flanges and secure solid blocking to stud webs or flanges.
 3. Bar Bridging: Proprietary bridging bars installed according to manufacturer's written instructions.

- F. Install miscellaneous framing and connections, including stud kickers, web stiffeners, clip angles, continuous angles, anchors, and fasteners, to provide a complete and stable wall-framing system.
- G. Install miscellaneous framing and connections, including stud kickers, web stiffeners, clip angles, continuous angles, anchors, and fasteners, to provide a complete and stable wall-framing system.

3.05 INSTALLATION TOLERANCES

- A. Install cold-formed steel framing level, plumb, and true to line to a maximum allowable tolerance variation of 1/8 inch in 10 feet and as follows:
 - 1. Space individual framing members no more than plus or minus 1/8 inch from plan location. Cumulative error are not to exceed minimum fastening requirements of sheathing or other finishing materials.

3.06 REPAIR

- A. Galvanizing Repairs: Prepare and repair damaged galvanized coatings on fabricated and installed cold-formed steel framing with galvanized repair paint according to ASTM A780/A780M and manufacturer's written instructions.

3.07 FIELD QUALITY CONTROL

- A. Testing: Owner will engage a qualified independent testing and inspecting agency to perform field tests and inspections and prepare test reports.
- B. Field and shop welds will be subject to testing and inspecting.
- C. Testing agency will report test results promptly and in writing to Contractor and Architect.
- D. Cold-formed steel framing will be considered defective if it does not pass tests and inspections.
- E. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

3.08 PROTECTION

- A. Provide final protection and maintain conditions, in a manner acceptable to manufacturer and Installer, that ensure that cold-formed steel framing is without damage or deterioration at time of Substantial Completion.

END OF COLD-FORMED METAL FRAMING

SECTION 06 10 00 ROUGH CARPENTRY

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Wood products.
 - 2. Wood-preservative-treated lumber.
 - 3. Dimension lumber framing.
 - 4. Miscellaneous lumber.
 - 5. Plywood backing panels.

1.02 DEFINITIONS

- A. Boards or Strips: Lumber of less than 2 inches nominal size in least dimension.
- B. Dimension Lumber: Lumber of 2 inches nominal size or greater but less than 5 inches nominal size in least dimension.
- C. Exposed Framing: Framing not concealed by other construction.
- D. Lumber grading agencies, and abbreviations used to reference them, include the following:
 - 1. NLGA: National Lumber Grades Authority.
 - 2. WCLIB: West Coast Lumber Inspection Bureau.
 - 3. WWPA: Western Wood Products Association.

1.03 ACTION SUBMITTALS

- A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.
 - 1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Indicate type of preservative used and net amount of preservative retained.
 - 2. For products receiving a waterborne treatment, include statement that moisture content of treated materials was reduced to levels specified before shipment to Project site.

1.04 INFORMATIONAL SUBMITTALS

- A. Material Certificates:

1. For dimension lumber specified to comply with minimum allowable unit stresses. Indicate species and grade selected for each use and design values approved by the ALSC Board of Review.
2. For preservative-treated wood products. Indicate type of preservative used and net amount of preservative retained.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Stack wood products flat with spacers beneath and between each bundle to provide air circulation. Protect wood products from weather by covering with waterproof sheeting, securely anchored. Provide for air circulation around stacks and under coverings.

PART 2 - PRODUCTS

2.01 WOOD PRODUCTS

- A. Lumber: Comply with DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, comply with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Grade lumber by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.
 1. Factory mark each piece of lumber with grade stamp of grading agency.
 2. Where nominal sizes are indicated, provide actual sizes required by DOC PS 20 for moisture content specified. Where actual sizes are indicated, they are minimum dressed sizes for dry wood products.
 3. Dressed lumber, S4S, unless otherwise indicated.
- B. Maximum Moisture Content:
 1. Dimension Lumber: 19 percent.

2.02 WOOD-PRESERVATIVE-TREATED LUMBER

- A. Preservative Treatment by Pressure Process: AWP A U1, Use categories as follows:
 1. UC3B: Uncoated products including sawn products in exterior construction not in contact with ground, exposed to all weather cycles including prolonged wetting.
 2. UC4B: Timbers in contact with ground, including but not limited to ramp and stair stringer foundations.
 3. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium. Do not use inorganic boron (SBX) for sill plates.
 4. For exposed items indicated to receive a stained or natural finish, chemical formulations are not to require incising, contain colorants, bleed through, or otherwise adversely affect finishes.
 5. After treatment, redry dimension lumber to 19 percent maximum moisture content. Do not use material that is warped or that does not comply with requirements for untreated material.

B. Mark lumber with treatment quality mark of an inspection agency approved by the ALSC Board of Review.

1. For exposed lumber indicated to receive a stained or natural finish, omit marking and provide certificates of treatment compliance issued by inspection agency.

C. Application: Treat items indicated on Drawings, and the following:

1. Wood cants, nailers, curbs, equipment support bases, blocking, stripping, and similar members in connection with roofing, flashing, vapor barriers, and waterproofing.
2. Wood sills, sleepers, blocking, and similar concealed members in contact with concrete.
3. Wood floor plates that are installed over concrete slabs-on-grade.

2.03 DIMENSION LUMBER FRAMING

A. Joists, Rafters, and Other Framing by Grade: No. 2 grade.

1. Species:

- a. As indicated on Drawings; WCLIB or WWPA.

B. Exposed Framing: Hand-select material indicated to receive a stained or natural finish for uniformity of appearance and freedom from characteristics, on exposed surfaces and edges, that would impair finish appearance, including decay, honeycomb, knot-holes, shake, splits, torn grain, and wane.

1. Species and Grade:

- a. Douglas fir-larch; No. 1 grade; WCLIB or WWPA.

2.04 MISCELLANEOUS LUMBER

A. Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the following:

1. Blocking.
2. Nailers.
3. Cants.
4. Furring.
5. Grounds.

B. Dimension Lumber Items: Construction or No. 2 grade lumber of any of the following species:

1. Hem-fir; WCLIB or WWPA.
2. Douglas fir-larch; WCLIB or WWPA.

2.05 PLYWOOD BACKING PANELS

- A. Equipment Backing Panels: Plywood, DOC PS 1, Exterior, A-C in thickness indicated or, if not indicated, not less than 3/4-inch nominal thickness.

2.06 FASTENERS

- A. General: Fasteners are to be of size and type indicated and comply with requirements specified in this article for material and manufacture. Provide nails or screws, in sufficient length, to penetrate not less than 1-1/2 inches into wood substrate.
 - 1. Where rough carpentry is exposed to weather, in ground contact, pressure-preservative treated, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A153 or ASTM F2329.
- B. Nails, Brads, and Staples: ASTM F1667.
- C. Power-Driven Fasteners: Fastener systems with an evaluation report acceptable to authorities having jurisdiction, based on ICC-ES AC70.
- D. Post-Installed Anchors: Fastener systems with an evaluation report acceptable to authorities having jurisdiction, based on ICC-ES AC193 ICC-ES AC308 as appropriate for the substrate.
- E. Wood Screws and Lag Screws: ASME B18.2.1, ASME B18.6.1, or ICC-ES AC233.
- F. Carbon Steel Bolts: ASTM A307 with ASTM A563 hex nuts and, where indicated, flat washers all hot-dip zinc coated.

2.07 METAL FRAMING ANCHORS

- A. Metal framing anchors shall be Simpson Strong-Tie or equal.
- B. Allowable design loads, as published by manufacturer, are to comply with or exceed those of products of manufacturer indicated. Manufacturer's published values are to be determined from empirical data or by rational engineering analysis and demonstrated by comprehensive testing performed by a qualified independent testing agency.
- C. Materials: Unless otherwise indicated, fabricate from the following materials:
 - 1. Galvanized-Steel Sheet: Hot-dip, zinc-coated steel sheet complying with ASTM A653, G90 coating designation.
 - a. Use for interior locations unless otherwise indicated.
 - 2. Heavy-Galvanized-Steel Sheet: Hot-dip, zinc-coated steel sheet complying with ASTM A653; structural steel (SS); G185 coating designation; and not less than 0.036 inch thick.
 - a. Use for wood-preservative-treated lumber and where indicated.

2.08 MISCELLANEOUS MATERIALS

- A. Sill-Sealer Gaskets:

1. Closed-cell neoprene foam, 1/4 inch thick, selected from manufacturer's standard widths to suit width of sill members indicated.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Framing Standard: Comply with AF&PA's WCD 1, "Details for Conventional Wood Frame Construction," unless otherwise indicated.
- B. Set work to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough carpentry accurately to other construction. Locate furring, nailers, blocking, grounds, and similar supports to comply with requirements for attaching other construction.
- C. Install plywood backing panels by fastening to studs; coordinate locations with utilities requiring backing panels.
- D. Install metal framing anchors to comply with manufacturer's written instructions. Install fasteners through each fastener hole.
- E. Install sill sealer gasket to form continuous seal between sill plates and foundation.
- F. Do not splice structural members between supports unless otherwise indicated.
- G. Provide blocking and framing as indicated and as required to support facing materials, fixtures, specialty items, and trim.
 1. Provide metal clips for fastening gypsum board or lath at corners and intersections where framing or blocking does not provide a surface for fastening edges of panels. Space clips not more than 16 inches o.c.
- H. Provide fire blocking in furred spaces, stud spaces, and other concealed cavities as indicated and as follows:
 1. Fire block concealed spaces of wood-framed walls and partitions at ceiling line and at not more than 96 inches o.c. Where fire blocking is not inherent in framing system used, provide closely fitted solid wood blocks of same width as framing members and 2-inch nominal thickness.
- I. Sort and select lumber so that natural characteristics do not interfere with installation or with fastening other materials to lumber. Do not use materials with defects that interfere with function of member or pieces that are too small to use with minimum number of joints or optimum joint arrangement.
- J. Comply with AWPA M4 for applying field treatment to cut surfaces of preservative-treated lumber.
 1. Use inorganic boron for items that are continuously protected from liquid water.
 2. Use copper naphthenate for items not continuously protected from liquid water.

- K. Where wood-preservative-treated lumber is installed adjacent to metal decking, install continuous flexible flashing separator between wood and metal decking.
- L. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
 - 1. Table 2304.10.2, "Fastening Schedule," in ICC's International Building Code (IBC).
 - 2. ICC-ES evaluation report for fastener.
- M. Use steel common nails unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting wood. Drive nails snug but do not countersink nail heads unless otherwise indicated.

3.02 INSTALLATION OF WOOD BLOCKING AND NAILERS

- A. Install where indicated and where required for attaching other work. Form to shapes indicated and cut as required for true line and level of attached work. Coordinate locations with other work involved.
- B. Attach wood blocking to substrates to support applied loading. Recess bolts and nuts flush with surfaces unless otherwise indicated.
- C. Attach wood roofing nailers securely to substrate to resist the designed outward and upward wind loads indicated on Drawings and in accordance with ANSI/SPRI ED-1, Tables A6 and A7.

3.03 INSTALLATION OF WOOD FURRING

- A. Install level and plumb with closure strips at edges and openings. Shim with wood as required for tolerance of finish work.

3.04 INSTALLATION OF SPECIAL FRAMING

- A. Provide special framing as indicated for eaves, overhangs, dormers, and similar conditions if any.

END OF ROUGH CARPENTRY

**SECTION 06 10 53
MISCELLANEOUS ROUGH CARPENTRY**

PART 1 GENERAL**1.01 REFERENCE STANDARDS**

- A. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2023.
- B. AWP A U1 - Use Category System: User Specification for Treated Wood; 2023.
- C. PS 20 - American Softwood Lumber Standard; 2021.

1.02 DELIVERY, STORAGE, AND HANDLING

- A. General: Cover wood products to protect against moisture. Support stacked products to prevent deformation and to allow air circulation.

PART 2 PRODUCTS**2.01 GENERAL REQUIREMENTS**

- A. Dimension Lumber: Comply with PS 20 and requirements of specified grading agencies.
 - 1. If no species is specified, provide species graded by the agency specified; if no grading agency is specified, provide lumber graded by grading agency meeting the specified requirements.
 - 2. Grading Agency: Grading agency whose rules are approved by the Board of Review, American Lumber Standard Committee (www.alsc.org) and who provides grading service for the species and grade specified; provide lumber stamped with grade mark unless otherwise indicated.

2.02 DIMENSION LUMBER FOR CONCEALED APPLICATIONS

- A. Sizes: Nominal sizes as indicated on drawings, S4S.
- B. Moisture Content: S-dry or MC19.
- C. Window and Door Bucks: 1-1/2 inch thick laminated strand lumber.

2.03 ACCESSORIES

- A. Fasteners and Anchors:
 - 1. Metal and Finish: Hot-dipped galvanized steel complying with ASTM A153/A153M for high humidity and preservative-treated wood locations, unfinished steel elsewhere.

2.04 FACTORY WOOD TREATMENT

- A. Treated Lumber and Plywood: Comply with requirements of AWP A U1 - Use Category System for wood treatments determined by use categories, expected service conditions, and specific applications.
- B. Preservative Treatment:
 - 1. Preservative Pressure Treatment of Plywood Above Grade: AWP A U1, Use Category UC2 and UC3B, Commodity Specification F using waterborne preservative to 0.25 lb/cu ft retention.
 - a. Kiln dry plywood after treatment to maximum moisture content of 19 percent.

PART 3 EXECUTION**3.01 INSTALLATION - GENERAL**

- A. Select material sizes to minimize waste.
- B. Reuse scrap to the greatest extent possible; clearly separate scrap for use on site as accessory components, including: shims, bracing, and blocking.
- C. Where treated wood is used on interior, provide temporary ventilation during and immediately after installation sufficient to remove indoor air contaminants.

	06 10 53 - 1
	Miscellaneous Rough Carpentry

3.02 BLOCKING, NAILERS, AND SUPPORTS

- A. Provide framing and blocking members as indicated or as required to support finishes, fixtures, specialty items, and trim.

3.03 ROOF-RELATED CARPENTRY

- A. Coordinate installation of roofing carpentry with deck construction, framing of roof openings, and roofing assembly installation.

3.04 SITE APPLIED WOOD TREATMENT

- A. Apply preservative treatment compatible with factory applied treatment at site-sawn cuts, complying with manufacturer's instructions.
- B. Allow preservative to dry prior to erecting members.

END OF SECTION

	06 10 53 - 2
	Miscellaneous Rough Carpentry

SECTION 061753

SHOP-FABRICATED WOOD TRUSSES AND JOISTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Wood products.

1.2 DEFINITIONS

- A. Metal-Plate-Connected Wood Trusses:** Planar structural units consisting of metal-plate-connected members fabricated from dimension lumber and cut and assembled before delivery to Project site.
- B. Open Web Joist:** Planar structural units consisting of pin connected members fabricated from dimension lumber and tubular steel cut and assembled before delivery to Project site.

1.3 ACTION SUBMITTALS

A. Product Data:

1. Metal-plate connectors, metal truss accessories, and fasteners.
2. Open web joists.

B. Shop Drawings: Show fabrication and installation details for trusses and open web joists.

1. Show location, pitch, span, camber, configuration, and spacing for each type of truss and joist required.
2. Indicate sizes, stress grades, and species of lumber.
3. Indicate locations, sizes, and materials for permanent bracing required to prevent buckling of individual truss members due to design loads.
4. Indicate type, size, material, finish, design values, orientation, and location of metal connector plates.
5. Show splice details and bearing details.

C. Delegated Design Submittals: Include analysis data signed and sealed by the qualified professional engineer responsible for their preparation. Professional engineer shall be licensed to practice in Alaska.

1.4 INFORMATIONAL SUBMITTALS

A. Product Certificates: For metal-plate-connected wood trusses, signed by officer of truss-fabricating firm.

B. Evaluation Reports: For the following, from ICC-ES:

1. Metal-plate connectors.

2. Metal truss accessories.

1.5 QUALITY ASSURANCE

- A. Metal Connector-Plate Manufacturer Qualifications: A manufacturer that is a member of TPI and that complies with quality-control procedures in TPI 1 for manufacture of connector plates.
- B. Fabricator Qualifications: Shop that complies with quality-control procedures in TPI 1 and is acceptable to the Architect and authorities having jurisdiction.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Handle and store metal-plate-connected trusses to comply with recommendations in SBCA BCSI, "Building Component Safety Information: Guide to Good Practice for Handling, Installing, Restraining, & Bracing Metal Plate Connected Wood Trusses."
- B. Store trusses and joists flat, off of ground, and adequately supported to prevent lateral bending. Protect trusses and joists from weather by covering with waterproof sheeting, securely anchored. Provide for air circulation around stacks and under coverings.
- C. Keep open web joists straight and plumb. Provide lateral support for the individual joists and the entire system until the sheathing material has been applied.
- D. Inspect trusses and joists showing discoloration, corrosion, or other evidence of deterioration. Discard and replace trusses that are damaged or defective.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Delegated Design: Engage a qualified professional engineer licensed to practice engineering in Alaska to design metal-plate-connected wood trusses and open web joists.
- B. Structural Performance: Metal-plate-connected wood trusses are to be capable of withstanding design loads within limits and under conditions indicated. Comply with requirements in TPI 1 unless more stringent requirements are specified below.

1. Design Loads:

- a. Top chord dead load: 10 pounds per square foot.
- b. Bottom chord dead load: 5 pounds per square foot.
- c. Uniform snow load: 40 pounds per square foot.
- d. Unbalanced snow load:
 - 1) Windward: 12 pounds per square foot.
 - 2) Leeward surcharge: 14 pounds per square foot for a distance of 6 feet from truss ridge.
- e. Wind uplift, main force resisting system (strength level): 38 pounds per square foot.
- f. Wind uplift, components and cladding: as indicated.

2. Maximum Deflection under Design Loads:
 - a. Roof Trusses: Vertical total load deflection of 1/240 of span.
 - C. Structural Performance: Open web joists are to be capable of withstanding design loads within limits and under conditions indicated.
 1. Design Loads:
 - a. Top chord dead load: 14 pounds per square foot.
 - b. Bottom chord dead load: 6 pounds per square foot.
 - c. Live load: 50 pounds per square foot.
 2. Maximum Deflection under Design Loads:
 - a. Open Web Joists: Vertical live load deflection of 1/480 of span.
 - D. Comply with applicable requirements and recommendations of TPI 1, TPI DSB, and SBCA BCSI.
 - E. Wood Structural Design Standard: Comply with applicable requirements in AF&PA's "National Design Specifications for Wood Construction" and its "Supplement."
- ## 2.2 WOOD PRODUCTS
- A. Lumber: DOC PS 20 and applicable rules of any rules-writing agency certified by the American Lumber Standard Committee (ALSC) Board of Review. Provide lumber graded by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.
 1. Factory mark each piece of lumber with grade stamp of grading agency.
 2. Provide dressed lumber, S4S.
 3. Provide dry lumber with 19 percent maximum moisture content at time of dressing.
- ## 2.3 METAL CONNECTOR PLATES
- A. Fabricate connector plates to comply with TPI 1.
 - B. Hot-Dip Galvanized-Steel Sheet: ASTM A653; Structural Steel (SS); G60 coating designation; and not less than 0.036 inch thick.
 1. Use for interior locations unless otherwise indicated.
- ## 2.4 OPEN WEB JOISTS
- A. Joist to be fabricated with wood chords and metal webs. Joists shall meet the requirements of ICC-ES Evaluation Report ESR-1774.
 - B. Basis of Design: Red-L by Redbuilt LLC.
- ## 2.5 FASTENERS
- A. Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture.

1. Provide fasteners for use with metal framing anchors that comply with written recommendations of metal framing manufacturer.

B. Nails, Brads, and Staples: ASTM F1667.

2.6 MISCELLANEOUS MATERIALS

- A. Galvanizing Repair Paint: SSPC-Paint 20, with dry film containing a minimum of 92 percent zinc dust by weight.

2.7 FABRICATION

- A. Cut truss members to accurate lengths, angles, and sizes to produce close-fitting joints.
- B. Fabricate metal connector plates to sizes, configurations, thicknesses, and anchorage details required to withstand design loads for types of joint designs indicated.
- C. Assemble truss members in design configuration indicated; use jigs or other means to ensure uniformity and accuracy of assembly, with joints closely fitted to comply with tolerances in TPI 1. Position members to produce design camber indicated.
 1. Fabricate wood trusses within manufacturing tolerances in TPI 1.
- D. Connect truss members by metal connector plates located and securely embedded simultaneously in both sides of wood members by air or hydraulic press.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install wood trusses open web joists only after supporting construction is in place and is braced and secured.
- B. If trusses are delivered to Project site in more than one piece, assemble trusses before installing.
- C. Hoist trusses in place by lifting equipment suited to sizes and types of trusses required, exercising care not to damage truss members or joints by out-of-plane bending or other causes.
- D. Install and brace trusses according to TPI recommendations and as indicated.
- E. Install and brace open web joists according to manufacturer's instructions and joist engineer's specifications and drawings.
- F. Install trusses and joists plumb, square, and true to line and securely fasten to supporting construction.
- G. Space trusses as indicated; adjust and align trusses in location before permanently fastening.
- H. Anchor trusses securely at bearing points; use metal truss tie-downs as applicable. Install fasteners through each fastener hole in metal framing anchors according to manufacturer's fastening schedules and written instructions.

- I. Install and fasten permanent bracing during truss and joist erection and before construction loads are applied. Anchor ends of permanent bracing where terminating at walls or beams.
- J. Install wood trusses within installation tolerances in TPI 1.
- K. Do not alter trusses and joists in field. Do not cut, drill, notch, or remove truss members.
- L. Replace wood trusses and joists that are damaged or do not comply with requirements.
 - 1. Damaged trusses may be repaired according to truss repair details signed and sealed by the qualified professional engineer responsible for truss design, when approved by Architect.

3.2 REPAIRS AND PROTECTION

- A. Protect wood trusses from weather.
- B. Repair damaged galvanized coatings on exposed surfaces in accordance with ASTM A780 and manufacturer's written instructions.

END OF SHOP-FABRICATED WOOD TRUSSES AND JOISTS

SECTION 06 18 00 GLUED-LAMINATED CONSTRUCTION

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Structural glued-laminated timber.
2. Timber connectors.

1.02 DEFINITIONS

- A. Structural Glued-Laminated (Glulam) Timber:** An engineered, stress-rated timber product assembled from selected and prepared wood laminations bonded together with adhesives and with the grain of the laminations approximately parallel longitudinally.

1.03 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include data on lumber, adhesives, fabrication, and protection.
2. For preservative-treated wood products. Include chemical treatment manufacturer's written instructions for handling, storing, installing, and finishing treated material.
3. For connectors. Include installation instructions.

1.04 INFORMATIONAL SUBMITTALS

- A. Certificates of Conformance:** Issued by a qualified testing and inspecting agency indicating that structural glued-laminated timber complies with requirements in ANSI A190.1.
- B. Material Certificates:** For preservative-treated wood products, from manufacturer. Indicate type of preservative used and net amount of preservative retained.
- C. Research/Evaluation Reports:** For structural glued-laminated timber and timber connectors, from ICC-ES.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications:** An AITC- or APA-EWS-licensed firm.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. General:** Comply with provisions in AITC 111.
- B. Individually wrap members using plastic-coated paper covering with water-resistant seams.**

PART 2 - PRODUCTS

2.01 STRUCTURAL GLUED-LAMINATED TIMBER

- A. General: Provide structural glued-laminated timber that complies with ANSI A190.1 and ANSI 117 or research/evaluation reports acceptable to authorities having jurisdiction.
 - 1. Factory mark each piece of structural glued-laminated timber with AITC Quality Mark or APA-EWS trademark. Place mark on surfaces that are not exposed in the completed Work.
 - 2. Provide structural glued-laminated timber made with wet-use adhesive complying with ANSI A190.1.
- B. Species and Grades: For beams.
 - 1. Species and Combination Symbol: As indicated in Drawings
- C. Appearance Grade:
 - 1. Concealed: Industrial or better, complying with AITC 110.
 - 2. Exposed: Architectural, complying with AITC 110.

2.02 PRESERVATIVE TREATMENT

- A. Preservative Treatment:
 - 1. Exterior glued-laminated timber exposed to weather, comply with AWPA U1, Use Category 3B.
 - 2. Exterior glued-laminated timber in contact with ground, comply with AWPA U1, Use Category 4A.
- B. Preservative: As recommended by structural glued-laminated timber supplier.
- C. After dressing members, apply a copper naphthenate field-treatment preservative to comply with AWPA M4 to surfaces cut to a depth of more than 1/16 inch.

2.03 TIMBER CONNECTORS

- A. A. Timber connectors shall be Simpson Strong-Tie or equal.
- B. Materials: Unless otherwise indicated, fabricate from the following materials:
 - 1. Structural-steel shapes, plates, and flat bars complying with ASTM A36.
 - 2. Hot-rolled steel sheet complying with ASTM A1011, Structural Steel, Type SS, Grade 33.
- C. Hot-dip galvanize exterior steel assemblies and fasteners after fabrication to comply with ASTM A123.

2.04 MISCELLANEOUS MATERIALS

- A. End Sealer: Manufacturer's standard, transparent, colorless wood sealer that is effective in retarding the transmission of moisture at cross-grain cuts and is compatible with indicated finish.

- B. Penetrating Sealer: Manufacturer's standard, transparent, penetrating wood sealer that is compatible with indicated finish.

2.05 FABRICATION

- A. Shop fabricate for connections to greatest extent possible, including cutting to length and drilling bolt holes.
- B. Where preservative-treated members are indicated, fabricate (cut, drill, surface, and sand) before treatment to greatest extent possible. Where fabrication must be done after treatment, apply a field-treatment preservative to comply with AWP A M4.
- C. End-Cut Sealing: Immediately after end cutting each member to final length and after preservative treatment, apply a saturation coat of end sealer to ends and other cross-cut surfaces, keeping surfaces flood coated for not less than 10 minutes.
- D. Seal Coat: After fabricating, sanding, and end-coat sealing, apply a heavy saturation coat of penetrating sealer on surfaces of each unit except for preservative-treated wood.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine substrates in areas to receive structural glued-laminated timber, with Installer present, for compliance with requirements, installation tolerances, and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 INSTALLATION

- A. General: Erect structural glued-laminated timber true and plumb and with uniform, close-fitting joints. Provide temporary bracing to maintain lines and levels until permanent supporting members are in place.
- B. Cutting: Avoid extra cutting after fabrication. Where field fitting is unavoidable, comply with requirements for shop fabrication.
 - 1. Where preservative-treated members must be cut during erection, apply a field-treatment preservative to comply with AWP A M4.
- C. Install timber connectors as indicated.

3.03 ADJUSTING

- A. Repair damaged surfaces after completing erection. Replace damaged structural glued-laminated timber if repairs are not approved by Architect.

3.04 PROTECTION

- A. Do not remove wrappings on individually wrapped members until they no longer serve a useful purpose, including protection from weather, sunlight, soiling, and damage from work of other trades.
 - 1. Coordinate wrapping removal with finishing work. Retain wrapping where it can serve as a painting shield.

2. Slit underside of wrapping to prevent accumulation of moisture inside the wrapping.

END OF GLUED-LAMINATED CONSTRUCTION

SECTION 06 20 00 FINISH CARPENTRY

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Finish carpentry items.
- B. Window casings and moldings.

1.02 REFERENCE STANDARDS

- A. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2023d.

1.03 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Shop Drawings: Indicate materials, component profiles, fastening methods, jointing details, and accessories.

PART 2 PRODUCTS

2.01 FINISH CARPENTRY ITEMS

2.02 ACCESSORIES

- A. Adhesive: Type recommended by fabricator to suit application.
- B. Lumber for Shimming, Blocking, and ____: Softwood lumber of ____ species.
- C. Cellular PVC Trim and Moldings: Extruded, expanded PVC; UV-resistant, heat-stabilized, and rigid material; for exterior use only.
 - 1. Density: 31 pounds per cubic foot, minimum.
 - 2. Flame Spread: ASTM E84, 75, maximum.
 - 3. Manufacturers:
 - a. AZEK Building Products, Inc; PVC Trim: www.azek.com/#sle.

2.03 HARDWARE

- A. Countertop Support Brackets: Fixed, L-shaped, face-of-stud mounting.
 - 1. Material: Steel; T-shape cross-section.
 - a. Finish: Manufacturer's standard, factory-applied, textured powder coat.
 - b. Color: Black.
 - c. Height: 9 inches.
 - d. Support Length: 9 inches.
 - e. Width: 1 inch.

2.04 FABRICATION

- A. Shop assemble work for delivery to site, permitting passage through building openings.
- B. When necessary to cut and fit on site, provide materials with ample allowance for cutting. Provide trim for scribing and site cutting.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify adequacy of backing and support framing.

3.02 INSTALLATION

- A. Set and secure materials and components in place, plumb and level.
- B. Carefully scribe work abutting other components, with maximum gaps of 1/32 inch. Do not use additional overlay trim to conceal larger gaps.

	06 20 00 - 1
	Finish Carpentry

3.03 TOLERANCES

- A. Maximum Variation from True Position: 1/16 inch.
- B. Maximum Offset from True Alignment with Abutting Materials: 1/32 inch.

END OF SECTION

	06 20 00 - 2
	Finish Carpentry

SECTION 06 74 00 COMPOSITE GRATINGS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Pultruded gratings.
- B. Grating edge components.
- C. Panel clips.

1.02 REFERENCE STANDARDS

- A. ASCE/ACMA (PS) - ASCE/ACMA Pre-Standard for Load & Resistance Design (LRFD) of Pultruded (FRP) Structures; 2010.
- B. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2023d.

1.03 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Product Data - Pultruded Gratings: Include resin, load/deflection tables, panel size, bearing bar sectional shape, and bearing bar depth.
- C. Shop Drawings: For each grating system:
 - 1. Elevations, Plans, and Sections: Include dimensions; indicate panel sizes, panel layouts, and clearances between panels and adjacent construction.
 - 2. Details: Include connection, fastening, and anchorage details; indicate clearances between grating and adjacent construction.
- D. Samples: Two samples of each type of composite grating, 12 inches by 12 inches in size; indicate specified surfacing and color.
- E. Design Calculations for Systems Not Designed in Contract Documents:
 - 1. Sufficient to demonstrate compliance with ASCE/ACMA (PS) and applicable building code; signed and sealed by Engineer of Record for design of composite gratings.
- F. Test Reports: Provide test reports of surfacing burning characteristics of tested grating panel; provide report in accordance with reporting criteria of ASTM E84.
- G. Contractor's Design-Related Professional Services: Designer's qualification statement.
- H. Manufacturer's Instructions: Manufacturer's published installation instructions.
- I. Warranty Documentation: Manufacturer warranty; ensure that forms have been completed in Owner's name and registered with manufacturer.

1.04 QUALITY ASSURANCE

- A. Structural Designer Qualifications: Professional Structural Engineer experienced in design of composite grating systems and licensed in the State in which the Project is located.
- B. Fabricator Qualifications: Company specializing in fabricating products of this section, with not less than ten years of documented experience.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to project site in original, unbroken packages or bundles bearing label of manufacturer.
- B. Store materials in enclosed areas, under cover, and elevated above grade.
- C. Store resins, catalysts, and hardeners in accordance with manufacturer's instructions.
- D. Protect composite grating panels from damage, including abrasion, cracking, chipping, and twisting.

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	Composite Gratings

1.06 WARRANTY

- A. See Section 01 78 00 - Closeout Submittals for additional warranty requirements.
- B. Provide manufacturer's standard three-year warranty against defective products.

PART 2 PRODUCTS**2.01 COMPOSITE GRATINGS - GENERAL**

- A. Fiber-Reinforced Polymer (FRP) Composite Gratings:
 - 1. Composite grating plates manufactured by molded or pultrusion process; composed of reinforcements and resins; in qualities, quantities, and arrangements required to meet specified requirements.
 - 2. Fire-Retarding Resin Additives: Compatible with fiber and resin systems.
 - 3. Ultraviolet Protection Resin Additive: Compatible with fiber and resin systems.
 - 4. Surface Burning Characteristics: Flame spread rating of 25 or less when tested in accordance with ASTM E84.
 - 5. Ultraviolet Protection Coating: For additional protection, provide 1 mil, minimum, ultraviolet-resistant coating.
 - 6. Finished Surfaces: Smooth, resin-rich, free of voids; without dry spots, cracks, crazes, or unreinforced areas.

2.02 PULTRUDED GRATINGS

- A. Manufacturers:
 - 1. McNICHOLS: Fiberglass Grating Pultruded, I-Bar, MS-I-4015 - DURAGRID®, ADA, Fiberglass, SPF Polyester Resin, Gray, 1.500" Height x 0.600" Top Flange Width I-Bar, Fine Grit Surface, 40% Open Area.
 - 2. Substitutions: See Section 01 60 00 - Product Requirements.
- B. Description: Fiber-reinforced polymer (FRP) composite grating panels assembled from pultruded bearing bars and cross rods that are mechanically and chemically bonded together.
 - 1. Maximum Spacing of Cross Rods: 12 inches.
- C. Pultruded Gratings:
 - 1. Resin: Fiberglass-reinforced vinyl ester resin.
 - 2. Bearing Bar Depth: 1-1/2 inches.
 - 3. Surfacing: Bonded grit.
 - 4. Color: Light gray.

2.03 GRATING EDGE COMPONENTS

- A. Manufacturer's standard composite edge components for composite grating, including edge banding and kickplates.

2.04 PANEL CLIPS

- A. Manufacturer's standard metal clips for securing grating panels to structural supports; end panel clips for panel-to-panel unsupported connections.

2.05 ACCESSORIES

- A. Anchorage Devices: Provide anchorage devices for securing structural composites to in-place construction as determined by Structural Engineer of Record for design of composite grating systems.
- B. Stainless Steel Fasteners: As recommended by manufacturer.

2.06 FABRICATION

- A. Assemble grating panels for tightly fitted and secured joints.
- B. Fabricate grating panels free from warps, twists, or other defects that would negatively affect appearance and serviceability.

	06 74 00 - 2
	Composite Gratings

- C. Seal cut edges, holes, and abrasions with resin compatible with grating resin to provide maximum corrosion resistance.
- D. Fabricate grating panels to be readily-removable.
- E. Fabricate grating panels to sizes that will accommodate clearances indicated below:
 - 1. Between Panels and Side of Trench: 1/4 inch.

2.07 SOURCE QUALITY CONTROL

- A. See Section 01 40 00 - Quality Requirements for additional requirements.
- B. Flame Spread Rating Testing: Provide full-scale testing of actual production grating panel of same material specified for project; test for compliance with specified flame spread rating of 25 or less in accordance with ASTM E84.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install grating panels and contiguous grating layouts with specified clips and fasteners in accordance with manufacturer's installation instructions and as required to meet specified performance requirements.
- B. Install grating panels plumb and level with clearances indicated below:
 - 1. Between Panels and Side of Trench: 1/4 inch.
 - 2. Between Panels and Vertical Surfaces: 1/2 inch.
 - 3. Between Adjacent Panels: 1/4 inch.
- C. Seal field cuts, drilled edges, holes, and abrasions with compatible resin recommended by manufacturer based on application and corrosive environment.

3.02 CLEANING

- A. Clean composite gratings in accordance with manufacturer's instructions.

3.03 PROTECTION

- A. Protect installed composite gratings from subsequent construction operations.

END OF SECTION

	06 74 00 - 3
	Composite Gratings

SECTION 06 83 16
FIBERGLASS REINFORCED PANELING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Fiberglass reinforced plastic panels.
- B. Trim.

1.02 REFERENCE STANDARDS

- A. ASTM D256 - Standard Test Methods for Determining the Izod Pendulum Impact Resistance of Plastics; 2023, with Editorial Revision.
- B. ASTM D3273 - Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber; 2021.
- C. ASTM D5319 - Standard Specification for Glass-Fiber Reinforced Polyester Wall and Ceiling Panels; 2022.
- D. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2023d.

1.03 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Samples: Submit two samples 3 inch by 3 inch in size illustrating material and surface design of panels.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Fiberglass Reinforced Plastic Panels:

2.02 PANEL SYSTEMS

- A. Wall Panels:
 - 1. Panel Size: 4 by 8 feet.
 - 2. Panel Thickness: 0.10 inch.
 - 3. Surface Design: Embossed.
 - 4. Color: White.
 - 5. Attachment Method: Mechanical fasteners concealed by trim, with sealant in joints.

2.03 MATERIALS

- A. Panels: Fiberglass reinforced plastic (FRP), complying with ASTM D5319.
 - 1. Surface Burning Characteristics: Maximum flame spread index of 25 and smoke developed index of 450; when system tested in accordance with ASTM E84.
 - 2. Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.
 - 3. Impact Strength: Greater than 6 ft lb force per inch, when tested in accordance with ASTM D256.
- B. Trim: Vinyl; color coordinating with panel.
- C. Fasteners: Nylon rivets.
- D. Adhesive: Type recommended by panel manufacturer.
- E. Sealant: Type recommended by panel manufacturer; white.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify existing conditions and substrate flatness before starting work.
- B. Verify that substrate conditions are ready to receive the work of this section.

	06 83 16 - 1
	Fiberglass Reinforced Paneling

3.02 INSTALLATION - WALLS

- A. Install panels in accordance with manufacturer's instructions.
- B. Cut and drill panels with carbide tipped saw blades, drill bits, or snips.
- C. Pre-drill fastener holes in panels, 1/8 inch greater in diameter than fastener, spaced as indicated by panel manufacturer.
- D. Apply adhesive to the back side of the panel using trowel as recommended by adhesive manufacturer.
- E. Apply panels to wall with seams plumb and pattern aligned with adjoining panels.
- F. Install panels with manufacturer's recommended gap for panel field and corner joints.
- G. Drive fasteners to provide snug fit, and do not over-tighten.
- H. Place trim on panel before fastening edges, as required.
- I. Fill channels in trim with sealant before attaching to panel.
- J. Install trim with adhesive and screws or nails, as required.
- K. Seal gaps at floor, ceiling, and between panels with applicable sealant to prevent moisture intrusion.
- L. Remove excess sealant after paneling is installed and prior to curing.

END OF SECTION

	06 83 16 - 2
	Fiberglass Reinforced Paneling

SECTION 07 21 19 FOAMED-IN-PLACE INSULATION

PART 1 GENERAL

1.01 REFERENCE STANDARDS

- A. ASTM C518 - Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus; 2021.
- B. ASTM D2842 - Standard Test Method for Water Absorption of Rigid Cellular Plastics; 2019.
- C. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2023d.
- D. ASTM E96/E96M - Standard Test Methods for Gravimetric Determination of Water Vapor Transmission Rate of Materials; 2023.
- E. ASTM E2178 - Standard Test Method for Determining Air Leakage Rate and Calculation of Air Permeance of Building Materials; 2021a.
- F. FM 4880 - Examination Standard for Class 1 Fire Rating of Building Panels or Interior Finish Materials; 2022.
- G. NFPA 275 - Standard Method of Fire Tests for the Evaluation of Thermal Barriers; 2022.
- H. NFPA 285 - Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Wall Assemblies Containing Combustible Components; 2023.
- I. NFPA 286 - Standard Methods of Fire Tests for Evaluating Contribution of Wall and Ceiling Interior Finish to Room Fire Growth; 2024.
- J. UL 1040 - Standard for Safety Fire Test of Insulated Wall Construction; Current Edition, Including All Revisions.
- K. UL 1715 - Standard for Safety Fire Test of Interior Finish Material; Current Edition, Including All Revisions.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Foamed-In-Place Insulation: Medium-density, rigid or semi-rigid, open cell or closed cell polyurethane foam; foamed on-site, using blowing agent of water or non-ozone-depleting gas.
 - 1. Regulatory Requirements: Comply with applicable code for flame and smoke, concealment, and fire protection requirements.
 - a. Fire Protection: Provide 15-minute thermal barrier of 1/2 inch gypsum board or equivalent material complying with NFPA 275 test method, or foamed-in-place insulation either exposed or with covering that complies with FM 4880, NFPA 286, UL 1040, or UL 1715.
 - 2. Thermal Resistance: R-value of 5.0, minimum, per 1 inch thickness at 75 degrees F mean temperature when tested in accordance with ASTM C518.
 - 3. Water Vapor Permeance: Vapor retarder; 2 perms, maximum, when tested at intended thickness in accordance with ASTM E96/E96M, desiccant method.
 - 4. Water Absorption: Less than 2 percent by volume, maximum, when tested in accordance with ASTM D2842.
 - 5. Air Permeance: 0.04 cfm per square foot, maximum, when tested at intended thickness in accordance with ASTM E2178 at 1.57 psf.
 - 6. Closed Cell Content: At least 90 percent.
 - 7. Surface Burning Characteristics: Flame spread/smoke developed index of 25/450, maximum, when tested in accordance with ASTM E84.

2.02 ACCESSORIES

- A. Primer: As required by insulation manufacturer.

	07 21 19 - 1
	Foamed-In-Place Insulation

- B. Protective Coating: Intumescent coating of type recommended by insulation manufacturer and as required to comply with applicable codes.
 - 1. Coating Type: Single component, water-based.
 - 2. Protected Insulation Type: Spray polyurethane foam (SPF).
 - 3. Application: Apply using brush, roller, or airless sprayer.
 - 4. Surface Burning Characteristics: Flame spread/smoke developed index of 25/450, maximum, when tested in accordance with ASTM E84.
 - 5. Exterior Wall System: Comply with NFPA 285.
 - 6. Color: As indicated on drawings.

PART 3 EXECUTION

3.01 APPLICATION

- A. Apply insulation in accordance with manufacturer's instructions.
- B. Apply to a minimum cured thickness of 5 inch.
- C. Apply protective coating monolithically, without voids, to fully cover foam insulation, to achieve fire rating required.

END OF SECTION

	07 21 19 - 2
	Foamed-In-Place Insulation

SECTION 07 26 00 VAPOR RETARDERS

PART 1 GENERAL

1.01 RELATED REQUIREMENTS

- A. Section 06 10 00 - Rough Carpentry: Vapor retarders on exterior wall sheathing.
- B. Section 07 21 00 - Thermal Insulation: Vapor retarder installed in conjunction with batt insulation.

1.02 REFERENCE STANDARDS

- A. ASTM D1970/D1970M - Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection; 2021.

1.03 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide data on material characteristics, performance criteria, and limitations.

PART 2 PRODUCTS

2.01 ACCESSORIES

- A. Sealants, Tapes, and Accessories for Sealing Vapor Retarder and Adjacent Substrates: As indicated, complying with vapor retarder manufacturer's installation instructions.
- B. Flexible Flashing: Self-adhesive sheet flashing complying with ASTM D1970/D1970M; slip resistance requirement waived if not installed on roof.
 - 1. Width: 4 inches.
 - 2. Ultraviolet (UV) and Weathering Resistance: Approved by manufacturer for up to 30 days of weather exposure.
- C. Vapor Retarder Tape: Coated polyester film with acrylic adhesive backing; pressure sensitive.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install materials in accordance with manufacturer's installation instructions.
- B. Vapor Retarders: Install continuous airtight barrier over surfaces indicated, with sealed seams and sealed joints to adjacent surfaces.
- C. Apply sealants and adhesives within recommended temperature range in accordance with manufacturer's installation instructions.
- D. Self-Adhered Sheets:
 - 1. Prepare substrate in accordance with sheet manufacturer's installation instructions; fill and tape joints in substrate and between dissimilar materials.
 - 2. Lap sheets shingle fashion to shed water and seal laps airtight.
 - 3. Once sheets are in place, press firmly into substrate with resilient hand roller; ensure that laps are firmly adhered with no gaps or fishmouths.
 - 4. Use same material, or other material approved by sheet manufacturer, to seal sheets to adjacent substrates, and as flashing.
 - 5. At expansion joints, provide transition to joint assemblies approved by sheet manufacturer.
- E. Openings and Penetrations in Exterior Vapor Retarders:
 - 1. Install flashing over sills, covering entire sill framing member, and extend at least 5 inches onto vapor retarder and at least 6 inches up jambs; mechanically fasten stretched edges.
 - 2. At openings with frames having nailing flanges, seal head and jamb flanges using a continuous bead of sealant compressed by flange and cover flanges with sealing tape at least 4 inches wide; do not seal sill flange.

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	Vapor Retarders

3. At openings with nonflanged frames, seal vapor retarder to each side of framing at opening using flashing at least 9 inches wide, and covering entire depth of framing.
4. At head of openings, install flashing under vapor retarder extending at least 2 inches beyond face of jambs; seal vapor retarder to flashing.
5. At interior face of openings, seal gaps between window/door frame and rough framing using appropriate joint sealant over backer rod.
6. Service and Other Penetrations: Form flashing around penetrating items and seal to surface of vapor retarder.

END OF SECTION

	07 26 00 - 2
	Vapor Retarders

SECTION 07 41 13 METAL ROOF PANELS

PART 1 GENERAL

1.01 RELATED REQUIREMENTS

- A. Section 06 10 00 - Rough Carpentry: Roof sheathing.
- B. Section 07 21 00 - Thermal Insulation: Rigid roof insulation.
- C. Section 07 42 13 - Metal Wall Panels: Preformed wall panels.
- D. Section 07 92 00 - Joint Sealants: Sealing joints between metal roof panel system and adjacent construction.

1.02 REFERENCE STANDARDS

- A. AAMA 2605 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels (with Coil Coating Appendix); 2022.
- B. ASTM A792/A792M - Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process; 2023.
- C. ASTM C1363 - Standard Test Method for Thermal Performance of Building Materials and Envelope Assemblies by Means of a Hot Box Apparatus; 2019.
- D. ASTM E1592 - Standard Test Method for Structural Performance of Sheet Metal Roof and Siding Systems by Uniform Static Air Pressure Difference; 2005 (Reapproved 2017).
- E. ASTM E1646 - Standard Test Method for Water Penetration of Exterior Metal Roof Panel Systems by Uniform Static Air Pressure Difference; 1995 (Reapproved 2018).
- F. ASTM E1680 - Standard Test Method for Rate of Air Leakage through Exterior Metal Roof Panel Systems; 2016 (Reapproved 2022).
- G. UL 580 - Standard for Tests for Uplift Resistance of Roof Assemblies; Current Edition, Including All Revisions.

1.03 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Storage and handling requirements and recommendations.
 - 2. Installation methods.
 - 3. Specimen warranty.
- C. Shop Drawings: Include layouts of roof panels, details of edge and penetration conditions, spacing and type of connections, flashings, underlayments, and special conditions.
 - 1. Show work to be field-fabricated or field-assembled.
- D. Selection Samples: For each roofing system specified, submit color chips representing manufacturer's full range of available colors and patterns.
- E. Installer's qualification statement.
- F. Test Reports: Indicate compliance of metal roofing system to specified requirements.
- G. Warranty: Submit specified manufacturer's warranty and ensure that forms have been completed in Owner's name and are registered with manufacturer.

1.04 QUALITY ASSURANCE

- A. Installer Qualifications: Company specializing in performing work of the type specified and with at least three years of documented experience.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Provide strippable plastic protection on prefinished roofing panels for removal after installation.

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	Metal Roof Panels

- B. Store roofing panels on project site as recommended by manufacturer to minimize damage to panels prior to installation.

1.06 FIELD CONDITIONS

- A. Do not install metal roof panels when surface, ambient air, or wind chill temperatures are below 45 degrees F.

1.07 WARRANTY

- A. See Section 01 78 00 - Closeout Submittals for additional warranty requirements.
- B. Finish Warranty: Provide 5-year manufacturer warranty against excessive degradation of exterior finish. Include provision for replacement of units with excessive fading, chalking, or flaking. Complete forms in Owner's name and register with warrantor.
- C. Special Warranty: Provide 2-year warranty for weathertightness of roofing system, including agreement to repair or replace metal roof panels that fail to keep out water commencing on the Date of Substantial Completion. Complete forms in Owner's name and register with warrantor.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Structural Metal Roof Insulated Panel Manufacturers:
 1. All Weather Insulated Panels, a Vicwest company: www.awipanel.com/#sle.
 2. ATAS International, Inc; Isoleren RL: www.atas.com/#sle.
 3. Centria, a Nucor Company: www.centria.com/#sle.
 4. Kingspan Insulated Panels; KingRib Insulated Roof Panel: www.kingspan.com/#sle.
 5. Metl-Span, a Nucor Company: www.metlspan.com/#sle.
 6. Substitutions: See Section 01 60 00 - Product Requirements.

2.02 PERFORMANCE REQUIREMENTS

- A. Metal Roof Panels: Provide complete roofing assemblies, including roof panels, clips, fasteners, connectors, and miscellaneous accessories, tested for compliance with the following minimum standards:
 1. Structural Design Criteria: Provide panel assemblies designed to safely support design loads at support spacing indicated, with deflection not to exceed L/180 of span length(L) when tested in accordance with ASTM E1592.
 - a. Dead Loads: Weight of roofing system.
 - b. Live Loads: As indicated on drawings.
 2. Overall: Complete weathertight system tested and approved in accordance with ASTM E1592.
 3. Wind Uplift: Class 90 wind uplift resistance of UL 580.
 4. Air Infiltration: Maximum 0.06 cfm/sq ft at air pressure differential of 6.24 lbf/sq ft, when tested according to ASTM E1680.
 5. Water Penetration: No water penetration when tested in accordance with procedures and recommended test pressures of ASTM E1646; perform test immediately following air infiltration test.
 6. Thermal Movement: Design system to accommodate without deformation anticipated thermal movement over ambient temperature range of 100 degrees F.
 7. Thermal Resistance: Provide throughout system, R-value of 15 (2.6) at 2 inch (51 mm) thick, minimum, when tested in accordance with ASTM C1363.

2.03 STRUCTURAL METAL ROOF PANELS

- A. General: Provide complete engineered system complying with specified requirements and capable of remaining weathertight while withstanding anticipated movement of substrate and thermally induced movement of roofing system.
- B. Structural Insulated Metal Panels: Factory-formed panels with factory-applied finish.
- C. Structural Insulated Metal Panels: Factory-formed panels with factory-applied finish.

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	Metal Roof Panels

1. Type: Double-skin, factory assembled with foamed-in-place polyurethane insulation.
 - a. Thickness: 6 inches, nominal.
2. Steel Panels:
 - a. Aluminum-zinc alloy-coated SS (structural steel) sheet complying with ASTM A792/A792M; minimum AZ50 coating.
 - b. Steel Thickness: Minimum 22 gauge, 0.03 inch.
3. Profile: Standing seam, with minimum 1-1/2-inch seam height; concealed fastener system for field seaming with special tool.
4. Texture: Smooth.
5. Length: Full length of roof slope, without lapped horizontal joints.
6. Width: Maximum panel coverage of 24 inches.

2.04 ATTACHMENT SYSTEM

- A. Concealed System: Provide manufacturer's standard stainless steel or nylon-coated aluminum concealed anchor clips designed for specific roofing system and engineered to meet performance requirements, including anticipated thermal movement.

2.05 FINISHES

- A. Fluoropolymer Coil Coating System: Polyvinylidene fluoride (PVDF) multi-coat superior performing organic coatings system complying with AAMA 2605, including at least 70 percent PVDF resin, and at least 80 percent of coil coated metal surfaces having minimum total dry film thickness (DFT) of 0.9 mil, 0.0009 inch; color and gloss as selected by Architect from manufacturer's standard line.

2.06 ACCESSORIES

- A. Miscellaneous Sheet Metal Items: Provide flashings, trim, closure strips, caps, and similar sheet metal items of the same material, thickness, and finish as used for the roofing panels. Items completely concealed after installation may optionally be made of stainless steel.
- B. Rib and Ridge Closures: Provide prefabricated, close-fitting components of steel with corrosion resistant finish or combination steel and closed-cell foam.
- C. Sealants:
 1. Exposed Sealant: Elastomeric; silicone, polyurethane, or silyl-terminated polyether/polyurethane.
 2. Concealed Sealant: Non-curing butyl sealant or tape sealant.

PART 3 EXECUTION

3.01 PREPARATION

- A. Broom clean wood sheathing prior to installation of roofing system.
- B. Coordinate roofing work with provisions for roof drainage, flashing, trim, penetrations, and other adjoining work to ensure that completed roof will be free of leaks.
- C. Remove protective film from surface of roof panels immediately prior to installation; strip film carefully to avoid damage to prefinished surfaces.
- D. Separate dissimilar metals by applying a bituminous coating, self-adhering rubberized asphalt sheet, or other permanent method approved by metal roof panel manufacturer.
- E. At locations where metal will be in contact with wood or other absorbent material subject to wetting, seal joints with sealing compound and apply one coat of heavy-bodied bituminous paint.

3.02 INSTALLATION

- A. Overall: Install roofing system in accordance with approved shop drawings and metal roof panel manufacturer's instructions and recommendations, as applicable to specific project conditions; securely anchor components of roofing system in place allowing for thermal and structural movement.

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	Metal Roof Panels

1. Install roofing system with concealed clips and fasteners, except as otherwise recommended by manufacturer for specific circumstances.
 2. Minimize field cutting of panels. Where field cutting is required, use methods that will not distort panel profiles. Use of torches for field cutting is prohibited.
- B. Accessories: Install necessary components that are required for complete roofing assembly, including flashings, gutters, downspouts, trim, moldings, closure strips, caps, rib closures, ridge closures, and similar roof accessory items.
- C. Roof Panels: Install metal roof panels in accordance with manufacturer's installation instructions, minimizing transverse joints except at junction with penetrations.
1. Form weathertight standing seams incorporating concealed clips, using an automatic mechanical seaming device approved by panel manufacturer.

END OF SECTION

	07 41 13 - 4
	Metal Roof Panels

SECTION 07 42 13
INSULATED METAL WALL PANELS - KINGSPAN

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Factory-assembled, insulated metal panels for walls and under-building soffits, with trim, and accessory components.

1.02 RELATED REQUIREMENTS

- A. Section 05 40 00 - Cold-Formed Metal Framing: Metal framing members supporting insulated metal wall panels.
- B. Section 07 21 00 - Thermal Insulation.
- C. Section 07 26 00 - Vapor Retarders: Vapor retarder materials.
- D. Section 07 41 13 - Metal Roof Panels.
- E. Section 07 62 00 - Sheet Metal Flashing and Trim.

1.03 REFERENCE STANDARDS

- A. ASTM A755/A755M - Standard Specification for Steel Sheet, Metallic Coated by the Hot-Dip Process and Prepainted by the Coil-Coating Process for Exterior Exposed Building Products; 2018.
- B. ASTM A792/A792M - Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process; 2023.
- C. ASTM C518 - Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus; 2021.
- D. ASTM C591 - Standard Specification for Unfaced Preformed Rigid Cellular Polyisocyanurate Thermal Insulation; 2022.
- E. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2018.
- F. ASTM D1621 - Standard Test Method for Compressive Properties of Rigid Cellular Plastics; 2016 (Reapproved 2023).
- G. ASTM D1622 - Standard Test Method for Apparent Density of Rigid Cellular Plastics; 2020.
- H. ASTM D2244 - Standard Practice for Calculation of Color Tolerances and Color Differences from Instrumentally Measured Color Coordinates; 2023.
- I. ASTM D4214 - Standard Test Methods for Evaluating the Degree of Chalking of Exterior Paint Films; 2023.
- J. ASTM E72 - Standard Test Methods of Conducting Strength Tests of Panels for Building Construction; 2022.
- K. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2023d.
- L. ASTM E330/E330M - Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference; 2014 (Reapproved 2021).
- M. Miami (APD) - Approved Products Directory; Miami-Dade County; Current Edition.
- N. NFPA 285 - Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Wall Assemblies Containing Combustible Components; 2023.

1.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide manufacturer documentation on tested structural, thermal, and fire resistance capabilities of assembled panel.

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	Insulated Metal Wall Panels - Kingspan

- C. Shop Drawings: Indicate panel profiles, layout, exterior sheet gauge, interior sheet gauge, joints, dimensions, spans, sealant locations, construction details, methods of anchorage, and sequence of installation.
- D. Selection Samples: For each finish product specified, submit at least three sample color chips representing manufacturer's standard range of available colors, sheen, and texture; 3 by 5 inch minimum.
- E. Design Data: Provide calculations verifying panels will withstand design wind loads indicated without detrimental effects or exceeding deflection criteria.
- F. Warranty Documentation: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.

1.05 QUALITY ASSURANCE

- A. Installer Qualifications: Company specializing in performing work of type specified in this section and authorized by panel manufacturer.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Store prefinished material above ground with weather protection to prevent twisting, bending, or abrasion, and to provide ventilation. Slope metal sheets to ensure drainage.

1.07 WARRANTY

- A. See Section 01 78 00 - Closeout Submittals for additional warranty requirements.
- B. Limited Warranty: Standard form in which manufacturer agrees to repair or replace items that fail in materials or workmanship within specified warranty period. Include structural performance, including bond integrity, deflection, and buckling.
 - 1. Warranty Period: Two years from Date of Substantial Completion, or two years and three months from date of shipment from manufacturer's plant, whichever occurs first.
- C. Finish Warranty: Standard form in which manufacturer agrees to repair or replace metal panels that evidence deterioration of fluoropolymer finish. Deterioration includes flaking or peeling from approved primed metal substrate, chalk over 8 when tested in accordance with ASTM D4214, Method A, and color fading over 5 delta units on panels when tested in accordance with ASTM D2244.
 - 1. Warranty Period: Twenty years from Date of Substantial Completion, or twenty years and three months from date of shipment from manufacturer's plant, whichever occurs first.
- D. Thermal Warranty: Standard form in which manufacturer agrees to repair or replace panels that exhibit greater than 10 percent reduction from published R-value (RSI-value) at time of manufacture, as measured in compliance with ASTM C518 within specified warranty period.
 - 1. Warranty Period: Thirty years from Date of Substantial Completion, or 30 years and three months from date of shipment from manufacturer's plant, whichever occurs first.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Kingspan Insulated Panels: KS Series QuadCore www.kingspan.com/#sle.
- B. Substitutions: See Section 01 60 00 - Product Requirements.

2.02 PANEL SYSTEM

- A. Metal Panel System: Factory-assembled metal panel system, with trim, related flashings and accessory components.
 - 1. Provide positive drainage to exterior for moisture entering or condensation occurring within panel system.
 - 2. Accommodate tolerances of building structural framing.
 - 3. Provide continuity of thermal barrier at building enclosure elements in conjunction with thermal insulating materials; see Section 07 21 00.

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	Insulated Metal Wall Panels - Kingspan

4. Provide continuity of vapor retarder at building enclosure elements in conjunction with vapor retarder materials; see Section 07 26 00.

2.03 PERFORMANCE REQUIREMENTS

- A. Thermal Performance: Provide thermal resistance through entire system; minimum R-value of minimum.
 1. ≈ 8 per inch per ASTM C518 @ 75°F mean temperature
 2. ≈ 9 per inch per ASTM C518 @ 35°F mean temperature
- B. Structural Performance: Design and size to withstand dead loads and wind loads caused by positive and negative wind pressure acting normal to plane of panel.
 1. Verify structural performance in accordance with ASTM E72 and ASTM E330/E330M, using test pressure 1.5 times design wind pressure, with 10 seconds duration of maximum load.
 2. Design Wind Loads: Calculated complying with requirements of authorities having jurisdiction.
- C. Fire Test Performance:
 1. Fire Propagation Performance Testing: Tested with and successfully passed acceptance criteria of NFPA 285.
- D. Wind-Borne-Debris Resistance: Identical full-size assembly without auxiliary protection, having Miami-Dade County approval - Miami (APD) for Large and Small Missile impact and pressure cycling at design wind pressure.
- E. Movement: Accommodate movement caused by following items without damage to system, components, or deterioration of seals:
 1. Normal movement between system components.
 2. Seasonal temperature cycling.

2.04 PANELS AND TRIM

- A. Wall Panels: Factory-assembled, foamed-in-place, insulated metal panels with exterior and interior sheet metal skins; panels interlock at edges.
 1. Panel Width: As indicated on drawings.
 2. Panel Orientation: Horizontally applied at walls, and perpendicular to floor framing for soffits..
 3. Exterior Panel Face Profile: Shadowline.
 4. Interior Panel Face Profile: Shadowline.
 5. Panel Thickness: 5 inches.
 6. Exterior Sheet: Prefinished aluminum-zinc-alloy-coated steel, 22 gauge, 0.0299 inch minimum base metal thickness; stucco embossed.
 7. Interior Sheet: Prefinished galvanized steel, 24 gauge, 0.0239 inch minimum base metal thickness.
 8. Horizontal Joints Between Panels: 1/8 inch wide joint reveal.
 9. Vertical Joints Between Panels: 1/8-inch reveals.
 - a. Gasket Color: Standard black gasket.
 10. Sealant at Exposed Joints (Horizontal Panel Applications): Elastomeric polyurethane sealant complying with ASTM C920.
 11. Fabricate panels in longest practicable lengths.
 12. Exterior Face of Panel Paint Finish: Two-coat, polyvinylidene fluoride (PVDF) 1.0 mil, 0.001 inch system; 0.2 mil, 0.0002 inch primer with 0.8 mil, 0.0008 inch Kynar 500 (70 percent) SOLID color coat.
 - a. Color: As selected from manufacturer's current insulated wall panel color chart.
- B. Soffit Panels: Same as wall panels.
- C. Trim, Closure Pieces, Expansion Joints, Caps, Flashings, Fascias, Infills, and External Corners: Same material, thickness, and finish as exterior face of insulated metal panel; brake formed to

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required profiles; fabricated in longest practicable lengths.

1. Thickness: 22 gauge, 0.0336 inch.
2. Exposed Fasteners: Not permitted.
3. Profiles: As indicated on drawings.

2.05 PANEL MATERIALS

- A. Precoated Aluminum-Zinc-Alloy-Coated Steel Sheet: ASTM A755/A755M steel coil material with AZ50 coated steel in accordance with ASTM A792/A792M.
 1. Color of Exposed Exterior Surfaces: As selected by Architect from manufacturer's standard range.
- B. Gaskets: Manufacturer's standard type suitable for use with panel system, permanently resilient; color as selected by Architect.
- C. Panel Sealants: Manufacturer's standard type suitable for use with installation of panel system; nonstaining, skinning, nonshrinking, nonsagging, ultraviolet, and ozone resistant; color as selected by Architect.

2.06 FOAMED-IN-PLACE INSULATION

- A. QuadCore hybrid polyisocyanurate foamed-in-place core, ASTM C591 Type IV, CFC and HCFC free, Halogenated Flame Retardant (HFR) free, compliant with Montreal Protocol and Clean Air Act, with the following minimum physical properties:
 1. Thermal Resistance of Insulated Panel: Nominal R-value of 8.0 per inch thickness when tested in accordance with ASTM C518 at 75 degree F mean temperature; nominal R-value of 9.0 per inch thickness when tested at 35 degrees F.
 2. Compressive Strength: 24 psi, when tested in accordance with ASTM D1621.
 3. Density: 2.2 to 2.8 lb/cu ft, when tested in accordance with ASTM D1622.
 4. Surface Burning Characteristics: Flame spread index of 25 or less, smoke developed index of 90 or less, when tested in accordance with ASTM E84.
 5. Manufacturer: Kingspan Insulated Panels; QuadCore.
 - a. Substitutions: Not permitted.

2.07 ACCESSORIES

- A. Fasteners: Manufacturer's standard corrosion-resistant type to suit application; hot-dip galvanized steel with soft neoprene washers. Where exposed fasteners are required, provide cap color to match exterior panel.
- B. Clips: Manufacturer's standard stainless steel clips.
- C. Field Touch-up Paint: As recommended by panel manufacturer.
- D. Concealed Sealants: Noncuring butyl sealant or tape sealant; type as recommended by panel manufacturer.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that structural framing is ready to receive panel system.

3.02 INSTALLATION

- A. Install panel system on walls and soffits in accordance with manufacturer's instructions.
- B. Install panels plumb, level, and true-to-line with dimensions and layout indicated on approved shop drawings.
- C. Protect panel surfaces from contacting cementitious materials and dissimilar metals.
- D. Permanently fasten panel system to structural supports; aligned, level, and plumb, within specified tolerances.
- E. Locate panel joints over supports.
- F. Use concealed fasteners unless otherwise indicated by Architect.

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	Insulated Metal Wall Panels - Kingspan

- G. Seal and place gaskets to prevent weather penetration, and maintain neat appearance.
- H. Field drill weep holes where appropriate in horizontal trim; minimum 1/8" diameter at 24 inches on center.

3.03 REPAIR

- A. Touch-up, repair, or replace metal panels and trim that have been damaged.

3.04 CLEANING

- A. Remove protective film from metal panels immediately after installation.

END OF SECTION

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	Insulated Metal Wall Panels - Kingspan

SECTION 07 92 00 JOINT SEALANTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Nonsag gunnable joint sealants.
- B. Self-leveling pourable joint sealants.
- C. Joint backings and accessories.

1.02 REFERENCE STANDARDS

- A. ASTM C834 - Standard Specification for Latex Sealants; 2017 (Reapproved 2023).
- B. ASTM C919 - Standard Practice for Use of Sealants in Acoustical Applications; 2022.
- C. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2018.
- D. ASTM C1193 - Standard Guide for Use of Joint Sealants; 2016 (Reapproved 2023).
- E. ASTM C1248 - Standard Test Method for Staining of Porous Substrate by Joint Sealants; 2022.
- F. SCAQMD 1168 - Adhesive and Sealant Applications; 1989, with Amendment (2022).

1.03 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Product Data: Submit manufacturer's technical datasheets for each product to be used; include the following:
 - 1. Physical characteristics, including movement capability, VOC content, hardness, cure time, and color availability.
 - 2. List of backing materials approved for use with the specific product.
 - 3. Backing material recommended by sealant manufacturer.
 - 4. Substrates that product is known to satisfactorily adhere to and with which it is compatible.
 - 5. Substrates the product should not be used on.
- C. Executed warranty.

1.04 WARRANTY

- A. See Section 01 78 00 - Closeout Submittals for additional warranty requirements.
- B. Manufacturer Warranty: Provide 2-year manufacturer warranty for installed sealants and accessories that fail to achieve a watertight seal, exhibit loss of adhesion or cohesion, or do not cure. Complete forms in Owner's name and register with manufacturer.

PART 2 PRODUCTS

2.01 JOINT SEALANT APPLICATIONS

- A. Scope:
 - 1. Exterior Joints:
 - a. Seal the following joints:
 - 1) Joints between doors, windows, and other frames or adjacent construction.
 - 2. Interior Joints:
 - a. Do not seal interior joints indicated on drawings as not sealed.
 - b. Seal the following joints:
 - 1) Joints between door frames and window frames and adjacent construction.
 - 2) In sound-rated wall and ceiling assemblies, gaps at electrical outlets, wiring devices, and piping penetrations.
 - 3) In sound-rated wall and ceiling assemblies, seal joints between wall assemblies and ceiling assemblies; between wall assemblies and other construction; between ceiling assemblies and other construction.
- B. Exterior Joints: Use nonsag nonstaining silicone sealant, unless otherwise indicated.

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	Joint Sealants

1. Lap Joints in Sheet Metal Fabrications: Butyl rubber, noncuring.
2. Lap Joints between Manufactured Metal Panels: Butyl rubber, noncuring.
- C. Interior Joints: Use nonsag polyurethane sealant, unless otherwise indicated.
 1. Wall and Ceiling Joints in Nonwet Areas: Acrylic emulsion latex sealant.
 2. Floor Joints in Wet Areas: Nonsag polyurethane non-traffic-grade sealant suitable for continuous liquid immersion.
 3. Type ____ - Joints between Tile in Wet Areas and Floors, Walls, and Ceilings: Mildew-resistant silicone sealant; white.
 4. Other Floor Joints: Self-leveling polyurethane traffic-grade sealant.
- D. Interior Wet Areas: Bathrooms and kennel areas; fixtures in wet areas include plumbing fixtures, countertops, cabinets, and other similar items.

2.02 JOINT SEALANTS - GENERAL

- A. Sealants and Primers: Provide products having lower volatile organic compound (VOC) content than indicated in SCAQMD 1168.

2.03 NONSAG JOINT SEALANTS

- A. Nonstaining Silicone Sealant: ASTM C920, Grade NS, Uses M and A; not expected to withstand continuous water immersion or traffic.
 1. Movement Capability: Plus and minus ____ percent, minimum.
 2. Nonstaining to Porous Stone: Nonstaining to light-colored natural stone when tested in accordance with ASTM C1248.
 3. Dirt Pick-Up: Reduced dirt pick-up compared to other silicone sealants.
 4. Color: Match adjacent finished surfaces.
 5. Service Temperature Range: Minus 20 to 180 degrees F.
- B. Silicone Sealant: ASTM C920, Grade NS, Uses M and A; not expected to withstand continuous water immersion or traffic.
 1. Movement Capability: Plus and minus 25 percent, minimum.
 2. Color: Match adjacent finished surfaces.
- C. Mildew-Resistant Silicone Sealant: ASTM C920, Grade NS, Uses M and A; single component, mildew resistant; not expected to withstand continuous water immersion or traffic.
 1. Color: White.
- D. Polymer Sealant: ASTM C920; single component, cured sealant is paintable and mold/mildew resistant, low odor and VOC, and ultraviolet (UV) resistant.
 1. Color: White.
- E. Polyurethane Sealant: ASTM C920, Grade NS, Uses M and A; single or multi-component; not expected to withstand continuous water immersion or traffic.
 1. Movement Capability: Plus and minus 25 percent, minimum.
- F. Polyurethane Sealant for Continuous Water Immersion: ASTM C920, Grade NS, Uses M and A; single or multicomponent; explicitly approved by manufacturer for continuous water immersion; suitable for traffic exposure when recessed below traffic surface.
 1. Movement Capability: Plus and minus 35 percent, minimum.
- G. Type ____ - Acrylic Emulsion Latex: Water-based; ASTM C834, single component, nonstaining, nonbleeding, nonsagging; not intended for exterior use.
- H. Noncuring Butyl Sealant: Solvent-based, single component, nonsag, nonskinning, nonhardening, nonbleeding; nonvapor permeable; intended for fully concealed applications.

2.04 SELF-LEVELING JOINT SEALANTS

- A. Self-Leveling Polyurethane Sealant for Continuous Water Immersion: Polyurethane; ASTM C920, Grade P, Uses M and A; single component; explicitly approved by manufacturer for traffic exposure and continuous water immersion.
 1. Movement Capability: Plus and minus 25 percent, minimum.

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	Joint Sealants

2. Color: Gray.
- B. Flexible Polyurethane Foam: Single component, gun grade, and low-expanding.
 1. Color: White.

2.05 ACCESSORIES

- A. Sealant Backing Materials, General: Materials placed in joint before applying sealants; assists sealant performance and service life by developing optimum sealant profile and preventing three-sided adhesion; type and size recommended by sealant manufacturer for compatibility with sealant, substrate, and application.
- B. Masking Tape: Self-adhesive, nonabsorbent, nonstaining, removable without adhesive residue, and compatible with surfaces adjacent to joints and sealants.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that joints are ready to receive work.
- B. Verify that backing materials are compatible with sealants.
- C. Verify that backer rods are of the correct size.

3.02 PREPARATION

- A. Remove loose materials and foreign matter that could impair adhesion of sealant.
- B. Clean joints, and prime as necessary, in accordance with manufacturer's instructions.
- C. Perform preparation in accordance with manufacturer's instructions and ASTM C1193.
- D. Mask elements and surfaces adjacent to joints from damage and disfigurement due to sealant work; be aware that sealant drips and smears may not be completely removable.

3.03 INSTALLATION

- A. Install this work in accordance with sealant manufacturer's requirements for preparation of surfaces and material installation instructions.
- B. Provide joint sealant installations complying with ASTM C1193.
- C. Install acoustical sealant application work in accordance with ASTM C919.
- D. Measure joint dimensions and size joint backers to achieve width-to-depth ratio, neck dimension, and surface bond area as recommended by manufacturer, except where specific dimensions are indicated.
- E. Install bond breaker backing tape where backer rod cannot be used.
- F. Install sealant free of air pockets, foreign embedded matter, ridges, and sags, and without getting sealant on adjacent surfaces.
- G. Do not install sealant when ambient temperature is outside manufacturer's recommended temperature range, or will be outside that range during the entire curing period, unless manufacturer's approval is obtained and instructions are followed.
- H. Nonsag Sealants: Tool surface concave, unless otherwise indicated; remove masking tape immediately after tooling sealant surface.

END OF SECTION

	07 92 00 - 3
	Joint Sealants

**SECTION 08 11 13
HOLLOW METAL DOORS AND FRAMES**

PART 1 GENERAL**1.01 SECTION INCLUDES**

- A. Non-fire-rated hollow metal doors and frames.
- B. Thermally insulated hollow metal doors with frames.
- C. Accessories, including glazing, louvers, and matching panels.

1.02 RELATED REQUIREMENTS

- A. Section 08 71 00 - Door Hardware.
- B. Section 08 80 00 - Glazing: Glass for doors and borrowed lites.
- C. Section 09 91 13 - Exterior Painting: Field painting.
- D. Section 09 91 23 - Interior Painting: Field painting.

1.03 ABBREVIATIONS AND ACRONYMS

- A. ANSI: American National Standards Institute.
- B. NAAMM: National Association of Architectural Metal Manufacturers.
- C. SDI: Steel Door Institute.
- D. UL: Underwriters Laboratories.

1.04 REFERENCE STANDARDS

- A. ADA Standards - 2010 ADA Standards for Accessible Design; 2010.
- B. ANSI/SDI A250.3 - Test Procedure and Acceptance Criteria for Factory Applied Finish Coatings for Steel Doors and Frames; 2019.
- C. ANSI/SDI A250.4 - Test Procedure and Acceptance Criteria for Physical Endurance for Steel Doors, Frames and Frame Anchors; 2022.
- D. ANSI/SDI A250.8 - Specifications for Standard Steel Doors and Frames (SDI-100); 2023.
- E. ANSI/SDI A250.10 - Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames; 2020.
- F. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2023.
- G. ASTM A1008/A1008M - Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, Required Hardness, Solution Hardened, and Bake Hardenable; 2023, with Editorial Revision.
- H. ASTM A1011/A1011M - Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength; 2023.
- I. ICC A117.1 - Accessible and Usable Buildings and Facilities; 2017.

PART 2 PRODUCTS**2.01 MANUFACTURERS**

- A. Hollow Metal Doors and Frames:
 - 1. Ceco Door, an Assa Abloy Group company: www.assaabloydss.com/#sle.
 - 2. Curries, an Assa Abloy Group company: www.assaabloydss.com/#sle.
 - 3. Steelcraft, an Allegion brand: www.allegion.com/#sle.
 - 4. Substitutions: See Section 01 60 00 - Product Requirements.

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	Hollow Metal Doors and Frames

2.02 PERFORMANCE REQUIREMENTS

- A. Requirements for Hollow Metal Doors and Frames:
 - 1. Steel Sheet: Comply with one or more of the following requirements; galvanized steel complying with ASTM A653/A653M, cold-rolled steel complying with ASTM A1008/A1008M, or hot-rolled pickled and oiled (HRPO) steel complying with ASTM A1011/A1011M, commercial steel (CS) Type B, for each.
 - 2. Accessibility: Comply with ICC A117.1 and ADA Standards.
- B. Combined Requirements: If a particular door and frame unit is indicated to comply with more than one type of requirement, comply with the specified requirements for each type; for instance, an exterior door that is also indicated as being sound-rated must comply with the requirements specified for exterior doors and for sound-rated doors; where two requirements conflict, comply with the most stringent.

2.03 HOLLOW METAL DOORS

- A. Exterior Doors: Thermally insulated.
 - 1. Based on SDI Standards: ANSI/SDI A250.8 (SDI-100).
 - a. Level 2 - Heavy-duty.
 - b. Physical Performance Level B, 500,000 cycles; in accordance with ANSI/SDI A250.4.
 - c. Model 1 - Full Flush.
 - d. Door Face Metal Thickness: 18 gauge, 0.042 inch, minimum.
 - 2. Door Core Material: Manufacturers standard core material/construction and in compliance with requirements.
 - 3. Door Thickness: 1-3/4 inches, nominal.
 - 4. Top Closures for Outswinging Doors: Flush with top of faces and edges.
 - 5. Door Face Sheets: Flush.
 - 6. Weatherstripping: Refer to Section 08 71 00.
 - 7. Door Finish: Factory finished.
- B. Interior Doors, Non-Fire-Rated:
 - 1. Based on SDI Standards: ANSI/SDI A250.8 (SDI-100).
 - a. Level 2 - Heavy-duty.
 - b. Physical Performance Level B, 500,000 cycles; in accordance with ANSI/SDI A250.4.
 - c. Model 1 - Full Flush.
 - d. Door Face Metal Thickness: 18 gauge, 0.042 inch, minimum.
 - 2. Door Core Material: Manufacturers standard core material/construction and in compliance with requirements.
 - 3. Door Thickness: 1-3/4 inches, nominal.
 - 4. Door Face Sheets: Flush.
 - 5. Door Finish: Factory finished.

2.04 HOLLOW METAL FRAMES

- A. Comply with standards and/or custom guidelines as indicated for corresponding door in accordance with applicable door frame requirements.
- B. Exterior Door Frames: Full profile/continuously welded type.
 - 1. Galvanizing: Components hot-dipped zinc-iron alloy-coated (galvanized) in accordance with ASTM A653/A653M, with A40/ZF120 coating.
 - 2. Frame Metal Thickness: 18 gauge, 0.042 inch, minimum.
 - 3. Frame Finish: Factory finished.
 - 4. Weatherstripping: Separate, see Section 08 71 00.
- C. Interior Door Frames, Non-Fire Rated: Full profile/continuously welded type.
 - 1. Frame Metal Thickness: 18 gauge, 0.042 inch, minimum.
 - 2. Frame Finish: Factory finished.

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	Hollow Metal Doors and Frames

2.05 FINISHES

- A. Primer: Rust-inhibiting, complying with ANSI/SDI A250.10, door manufacturer's standard.
- B. Factory Finish: Complying with ANSI/SDI A250.3, manufacturer's standard coating.
 - 1. Color: As indicated on drawings.

2.06 ACCESSORIES

- A. Door Window Frames: Door window frames with glazing securely fastened within door opening.
 - 1. Size: As indicated on drawings.
 - 2. Frame Material: 18 gauge, 0.0478 inch, galvanized steel.
 - 3. Metal Finish: Dark Bronze polyester powder coating.
- B. Glazing: As specified in Section 08 80 00, factory installed.
- C. Removable Stops: Formed sheet steel, shape as indicated on drawings, mitered or butted corners; prepared for countersink style tamper proof screws.

PART 3 EXECUTION**3.01 EXAMINATION**

- A. Verify existing conditions before starting work.
- B. Verify that opening sizes and tolerances are acceptable.
- C. Verify that finished walls are in plane to ensure proper door alignment.

3.02 INSTALLATION

- A. Install doors and frames in accordance with manufacturer's instructions and related requirements of specified door and frame standards or custom guidelines indicated.
- B. Coordinate frame anchor placement with wall construction.
- C. Install door hardware as specified in Section 08 71 00.
- D. Comply with glazing installation requirements of Section 08 80 00.
- E. Touch up damaged factory finishes.

3.03 TOLERANCES

- A. Maximum Diagonal Distortion: 1/16 inch measured with straight edge, corner to corner.

3.04 ADJUSTING

- A. Adjust for smooth and balanced door movement.

END OF SECTION

	08 11 13 - 3
	Hollow Metal Doors and Frames

**SECTION 08 30 06
INTERIOR SLIDING DOORS**

PART 1 GENERAL**1.01 SECTION INCLUDES**

- A. Factory fabricated interior sliding door frame and track systems with operating hardware.

1.02 RELATED REQUIREMENTS

- A. Section 08 71 00 - Door Hardware.
- B. Section 08 80 00 - Glazing: Product and execution requirements for glass type and installation.
- C. Section 09 91 23 - Interior Painting: Opaque painted finish on sliding wood doors.

1.03 REFERENCE STANDARDS

- A. ASTM E90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements; 2023.
- B. ASTM E413 - Classification for Rating Sound Insulation; 2022.

1.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide component dimensions, information on glass and glazing, and descriptions of hardware and accessories.
- C. Shop Drawings: Indicate opening dimensions, elevations of different types, framed opening tolerances, and installation requirements.
- D. Warranty, executed in Owner's name.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to project site and store in manufacturer's protective cartons until openings are ready for door installation.

1.06 WARRANTY

- A. See Section 01 78 00 - Closeout Submittals for additional warranty requirements.

PART 2 PRODUCTS**2.01 MANUFACTURERS**

- A. Interior Sliding Doors:
 1. Serenity Sliding Door Systems; SD101 - Surface Mounted Single Sliding: www.serenityslidingdoor.com/#sle.
 2. AD SYSTEMS, 2201 100th St. SW, Everett, WA 98204
 - a. ExamSlide™ High Performance Barn (Sliding) Door System by AD Systems.
 3. Substitutions: See Section 016000-Product Requirements.

2.02 SLIDING DOOR TRACK SYSTEMS

- A. Interior Sliding Door Track Systems:
 1. Description: Aluminum-cased frame that wraps wall at jambs and head of opening with trim; includes face trim at track, receiving channel, adjustable top track assembly, carriage assemblies having weight rating of at least 220 lb, frames with integral double seal full gasketing, soft close units, receiving channel, brush type seals, and factory-prepped locks.
 2. Configuration: On wall surface-mount system as indicated on drawings.
 3. Frame Finish: Class I natural anodized (Standard).
 - a. Color: As selected by Architect from manufacturer's standard colors.
 4. Door Thickness: 1-3/4 inches.
 5. Wall Thickness: 4-7/8 inches, with 5 inch wide cased open frame.
 6. Hardware:

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	Interior Sliding Doors

- a. Finish: Stainless Steel, 32 Bright, with antimicrobial coating applied or included in finish coating.
 - b. Back to Back Ladder Pull: 12 inches long, with passage latch.
 - c. Deadlock: PD95 - Sliding Door Deadlock, ADA Thumb-turn and Release.
- B. Construction: Factory assemble door frame as one unit, including head jambs, and sill; factory assemble operating and fixed panels; self-closing with mechanical spring.
 - 1. Provide smoke seals.

2.03 COMPONENTS

2.04 PERFORMANCE REQUIREMENTS

- A. Member Deflection: Limit member deflection to flexure limit of glass in any direction, with full recovery of glazing materials.
- B. Acoustical Performance: Provide door assembly and components with Sound Transmission Class (STC) rating of 35, minimum, when tested in accordance with ASTM E90, and ratings derived from ASTM E413.

2.05 ASSEMBLY

- A. Factory assemble frame as one unit, including head and jambs; factory assemble operating and fixed door or sidelite panels.
- B. Sizes: Allow for tolerances of rough framed openings, clearances, and shims around perimeter of assemblies.
- C. Joints and Connections: Flush, hairline width, and waterproof; accurately and rigidly joined corners.

2.06 ACCESSORIES

- A. Pull Handles: Manufacturer's standard type.
 - 1. Color: As selected by Architect from manufacturer's standard range.
- B. Sliding Panel Bottom Rollers: Stainless steel, adjustable from interior.
- C. Blocking: Provide support wall blocking as required for sliding door locations in accordance with sliding door manufacturer's requirements.
- D. Anchors: Hot-dipped galvanized or stainless steel.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install sliding door units in accordance with manufacturer's instructions.
- B. Attach frame and shims to perimeter opening to accommodate construction tolerances and other irregularities.
- C. Use anchorage devices to securely fasten sliding door assembly to wall construction without distortion or imposed stresses.
- D. Install operating hardware.

3.02 TOLERANCES

- A. Maintain dimensional tolerances and alignment with adjacent work.
- B. Maximum Variation from Plumb: 1/16 inch.
- C. Maximum Variation from Level: 1/16 inch.
- D. Longitudinal or Diagonal Warp: Plus or minus 1/8 inch from 10 foot straight edge.

3.03 ADJUSTING

- A. Adjust hardware for smooth operation.

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	Interior Sliding Doors

3.04 CLEANING

- A. Remove protective material from factory finished surfaces.
- B. Remove labels and visible markings.
- C. Wash surfaces by method recommended and acceptable to sealant and sliding door manufacturer; rinse and wipe surfaces clean.

END OF SECTION

	08 30 06 - 3
	Interior Sliding Doors

**SECTION 08 54 13
FIBERGLASS WINDOWS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Factory fabricated fiberglass windows with fixed and operating sash.
- B. Glazed by factory or on-site; including infill panels.
- C. Operating hardware.
- D. Insect screens.

1.02 RELATED REQUIREMENTS

- A. Section 08 80 00 - Glazing.

1.03 REFERENCE STANDARDS

- A. AAMA/WDMA/CSA 101/I.S.2/A440 - North American Fenestration Standard/Specification for Windows, Doors, and Skylights; 2022.
- B. ASTM E90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements; 2023.
- C. ASTM E331 - Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference; 2000 (Reapproved 2023).
- D. ASTM E1332 - Standard Classification for Rating Outdoor-Indoor Sound Attenuation; 2022.
- E. ASTM E1996 - Standard Specification for Performance of Exterior Windows, Curtain Walls, Doors, and Impact Protective Systems Impacted by Windborne Debris in Hurricanes; 2023.
- F. FS L-S-125 - Screening, Insect, Nonmetallic; 1972b, with Notice (1987).

1.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide component dimensions, anchors, fasteners, glass, and internal drainage details.
- C. Shop Drawings: Indicate opening dimensions, framed opening tolerances, affected related work, installation requirements.
- D. Manufacturer's Certificate: Certify that products of this section meet or exceed specified requirements.
- E. Grade Substantiation: Prior to submitting shop drawings or starting fabrication, submit one of the following showing compliance with specified grade:
 - 1. Evidence of AAMA Certification.
 - 2. Evidence of WDMA Certification.
 - 3. Evidence of CSA Certification.
 - 4. Test report(s) by independent testing agency itemizing compliance and acceptable to authorities having jurisdiction.
- F. Test Reports: Prior to submitting shop drawings or starting fabrication, submit test report(s) by independent testing agency showing compliance with performance requirements in excess of those prescribed by specified grade.
- G. Manufacturer's Qualification Statement.
- H. Warranty Documentation: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than three years of documented experience.

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	Fiberglass Windows

- B. Installer Qualifications: Company specializing in performing work of the type specified and with at least three years of documented experience.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Protect finished surfaces with wrapping. Do not use adhesive papers or sprayed coatings that bond when exposed to sunlight or weather.

1.07 FIELD CONDITIONS

- A. Do not install sealants when ambient temperature is less than 40 degrees F.
B. Maintain this minimum temperature during and after installation of sealants.

1.08 WARRANTY

- A. See Section 01 78 00 - Closeout Submittals for additional warranty requirements.
B. Correct defective Work within a ten year period after Date of Substantial Completion.
C. Provide ten year manufacturer warranty for insulated glass units from seal failure, interpane dusting or misting, and replacement of same. Include coverage for degradation of color finish.
D. Failures include, but are not limited to, the following:
1. Failure to meet performance requirements.
2. Structural failures including excessive deflection, water leakage, and air infiltration.
3. Faulty operation of movable sash and hardware.
4. Deterioration of materials and finishes beyond normal weathering.
5. Failure of insulating glass.
E. Warranty Period:
1. Window: 10 years from date of Substantial Completion.
2. Glazing Units: 10 years from date of Substantial Completion.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Fiberglass Windows: Source Limitations: Obtain fiberglass windows from single source from single manufacturer.
1. Alpen 725 Series Windows, as Manufactured by Alpen HHP.
2. Substitutions: See Section 01 60 00 - Product Requirements.

2.02 WINDOW UNITS

- A. Fiberglass Windows: Hollow, tubular, multi-layer fiber reinforced material; factory fabricated; with vision glass, related flashings, anchorage and attachment devices.
1. Configuration: As indicated on drawings.
2. Product Type: AP - Awning projected window and FW - Fixed window in accordance with AAMA/WDMA/CSA 101/I.S.2/A440.
3. Color: White.
4. Movement: Accommodate movement between window and perimeter framing and deflection of lintel, without damage to components or deterioration of seals.
5. System Internal Drainage: Drain to the exterior by means of a weep drainage network any water entering joints, condensation occurring in glazing channel, and migrating moisture occurring within system.
6. Thermal Movement: Design to accommodate thermal movement caused by 120 degrees F temperature change without buckling stress on glass, joint seal failure, damaging loads on structural elements, damaging loads on fasteners, reduction in performance or other detrimental effects.

2.03 PERFORMANCE REQUIREMENTS

- A. Grade: AAMA/WDMA/CSA 101/I.S.2/A440 requirements for specific window type:
1. Performance Class (PC): CW.

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	Fiberglass Windows

2. Performance Grade (PG): 30, with minimum design pressure (DP) of 30.08 psf.
- B. Design Pressure (DP): In accordance with applicable codes.
- C. Windborne-Debris-Impact Resistance: Capable of resisting impact from windborne debris based on testing glazed windows identical to those specified, according to ASTM E 1886 and testing information in ASTM E 1996 and requirements of authorities having jurisdiction.
- D. Overall Thermal Transmittance (U-value): 0.27, maximum, including glazing, measured on window sizes required for this project.
- E. Water Leakage: No uncontrolled leakage on interior face when tested in accordance with ASTM E331 at differential pressure of 12.11 pounds per square foot.
- F. Acoustic Performance: Minimum outdoor-indoor transmission class (OITC) rating of 26, when tested in accordance with ASTM E90 and ASTM E1332.

2.04 COMPONENTS

- A. Insect Screen Frame: Rolled aluminum frame of rectangular sections; fit with adjustable hardware; nominal size similar to operable glazed unit.
- B. Insect Screens: FS L-S-125 woven plastic mesh; 14/18 mesh size.
 1. Color: Black.
- C. Operable Sash Weather Stripping: Wool pile; permanently resilient, profiled to effect weather seal.
- D. Sealant for Setting Sills and Sill Flashing: Non-curing butyl type.

2.05 GLASS AND GLAZING MATERIALS

- A. Glass and Glazing Materials: See Section 08 80 00 for Types described below:

2.06 HARDWARE

- A. Casement and Awning Sash: Zinc die-cast steel worm-gear operator with Painted finish.
- B. Window Opening Control Devices (WOCD): Provide operable window sash hardware that limits openings to only allow passage of 4 inch diameter rigid sphere or less, and are easily releasable to fully open without use of keys, tools, or special knowledge.
- C. Finish For Exposed Hardware: Match window finish.

2.07 FABRICATION

- A. Fabricate components with minimum clearances and shim spacing around perimeter of assembly, yet enabling installation and dynamic movement of perimeter seal.
- B. Arrange fasteners to be concealed from view.
- C. Permit internal drainage weep holes and channels to migrate moisture to exterior. Provide internal drainage of glazing spaces to exterior through weep holes.
- D. Assemble insect screen frame, miter and reinforced frame corners. Fit mesh taut into frame and secure. Fit frame with four spring loaded steel pin retainers.
- E. Double weatherstrip operable units.
- F. Factory glaze window units.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify wall openings and adjoining water-resistive barrier seal materials are ready to receive work of this section.

3.02 INSTALLATION

- A. Install windows in accordance with manufacturer's instructions.

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	Fiberglass Windows

- B. Attach window frame and shims to perimeter opening to accommodate construction tolerances and other irregularities.
- C. Align window plumb and level, free of warp or twist. Maintain dimensional tolerances and alignment with adjacent work.

3.03 ADJUSTING

- A. Adjust hardware for smooth operation and secure weathertight closure.

3.04 CLEANING

- A. Remove protective material from pre-finished surfaces.
- B. Wash surfaces by method recommended and acceptable to window manufacturer; rinse and wipe surfaces clean.
- C. Remove excess glazing sealant by moderate use of mineral spirits or other solvent acceptable to sealant manufacturer.

END OF SECTION

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	Fiberglass Windows

**SECTION 08 80 00
GLAZING****PART 1 GENERAL****1.01 SECTION INCLUDES**

- A. Insulating glass units.
- B. Glazing units.
- C. Glass coatings.
- D. Glazing compounds.

1.02 RELATED REQUIREMENTS

- A. Section 07 26 00 - Vapor Retarders.
- B. Section 07 92 00 - Joint Sealants: Sealants for other than glazing purposes.
- C. Section 08 11 13 - Hollow Metal Doors and Frames: Glazed lites in doors.
- D. Section 08 54 13 - Fiberglass Windows: Glazing provided by window manufacturer.

1.03 REFERENCE STANDARDS

- A. 16 CFR 1201 - Safety Standard for Architectural Glazing Materials; Current Edition.
- B. ANSI Z97.1 - American National Standard for Safety Glazing Materials Used in Buildings - Safety Performance Specifications and Methods of Test; 2015 (Reaffirmed 2020).
- C. ASTM C1036 - Standard Specification for Flat Glass; 2021.
- D. ASTM C1048 - Standard Specification for Heat-Strengthened and Fully Tempered Flat Glass; 2018.
- E. ASTM C1193 - Standard Guide for Use of Joint Sealants; 2016 (Reapproved 2023).
- F. ASTM C1376 - Standard Specification for Pyrolytic and Vacuum Deposition Coatings on Flat Glass; 2021a.
- G. ASTM E1300 - Standard Practice for Determining Load Resistance of Glass in Buildings; 2016.
- H. ASTM E2190 - Standard Specification for Insulating Glass Unit Performance and Evaluation; 2019.
- I. GANA (SM) - GANA Sealant Manual; 2008.
- J. NFRC 100 - Procedure for Determining Fenestration Product U-factors; 2023.
- K. NFRC 200 - Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence; 2023.
- L. NFRC 300 - Test Method for Determining the Solar Optical Properties of Glazing Materials and Systems; 2023.

1.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Product Data on Insulating Glass Unit, Glazing Unit, Plastic Sheet Glazing Unit, Plastic Film, and _____ Glazing Types: Provide structural, physical and environmental characteristics, size limitations, special handling and installation requirements.
- C. Product Data on Glazing Compounds and Accessories: Provide chemical, functional, and environmental characteristics, limitations, special application requirements, and identify available colors.
- D. Warranty Documentation: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.

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	Glazing

1.05 QUALITY ASSURANCE

- A. Installer Qualifications: Company specializing in performing work of the type specified and with at least three years documented experience.

1.06 FIELD CONDITIONS

- A. Do not install glazing when ambient temperature is less than 40 degrees F.
- B. Maintain minimum ambient temperature before, during and 24 hours after installation of glazing compounds.

1.07 WARRANTY

- A. See Section 01 78 00 - Closeout Submittals for additional warranty requirements.
- B. Insulating Glass Units: Provide a five (5) year manufacturer warranty to include coverage for seal failure, interpane dusting or misting, including providing products to replace failed units.

PART 2 PRODUCTS**2.01 PERFORMANCE REQUIREMENTS - EXTERIOR GLAZING ASSEMBLIES**

- A. Provide type and thickness of exterior glazing assemblies to support assembly dead loads, and to withstand live loads caused by positive and negative wind pressure acting normal to plane of glass.
 - 1. Comply with ASTM E1300 for design load resistance of glass type, thickness, dimensions, and maximum lateral deflection of supported glass.
 - 2. Provide glass edge support system sufficiently stiff to limit the lateral deflection of supported glass edges to less than 1/175 of their lengths under specified design load.
 - 3. Glass thicknesses listed are minimum.
- B. Weather-Resistive Barrier Seals: Provide completed assemblies that maintain continuity of building enclosure water-resistive barrier, vapor retarder, and/or air barrier.
 - 1. In conjunction with weather barrier related materials described in other sections, as follows:
 - 2. To utilize inner pane of multiple pane insulating glass units for continuity of vapor retarder and/or air barrier seal.
 - 3. To maintain a continuous vapor retarder and/or air barrier throughout glazed assembly from glass pane to heel bead of glazing sealant.
- C. Thermal and Optical Performance: Provide exterior glazing products with performance properties as indicated. Performance properties are in accordance with manufacturer's published data as determined with the following procedures and/or test methods:
 - 1. Center of Glass U-Value: Comply with NFRC 100 using Lawrence Berkeley National Laboratory (LBNL) WINDOW 6.3 computer program.
 - 2. Center of Glass Solar Heat Gain Coefficient (SHGC): Comply with NFRC 200 using Lawrence Berkeley National Laboratory (LBNL) WINDOW 6.3 computer program.
 - 3. Solar Optical Properties: Comply with NFRC 300 test method.

2.02 GLASS MATERIALS

- A. Float Glass: Provide float glass based glazing unless otherwise indicated.
 - 1. Annealed Type: ASTM C1036, Type I - Transparent Flat, Class 1 - Clear, Quality - Q3.
 - 2. Kind FT - Fully Tempered Type: Complies with ASTM C1048.
 - 3. Fully Tempered Safety Glass: Complies with ANSI Z97.1 or 16 CFR 1201 criteria for safety glazing used in hazardous locations.

2.03 INSULATING GLASS UNITS

- A. Insulating Glass Units: Types as indicated.
 - 1. Durability: Certified by an independent testing agency to comply with ASTM E2190.
 - 2. Coated Glass: Comply with requirements of ASTM C1376 for pyrolytic (hard-coat) or magnetic sputter vapor deposition (soft-coat) type coatings on flat glass; coated vision

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	Glazing

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- glass, Kind CV; coated overhead glass, Kind CO; or coated spandrel glass, Kind CS.
 - 3. Metal-Edge Spacers: Aluminum, bent and soldered corners.
 - 4. Spacer Color: Black.
 - 5. Edge Seal:
 - a. Dual-Sealed System: Provide polyisobutylene sealant as primary seal applied between spacer and glass panes, and silicone, polysulfide, or polyurethane sealant as secondary seal applied around perimeter.
 - b. Color: Black.
 - 6. Purge interpane space with dry air, hermetically sealed.
 - 7. Capillary Tubes: Provide tubes from air space for insulating glass units without inert type gas that have a change of altitude greater than 2500 feet between point of fabrication and point of installation to permit pressure equalization of air space.
 - a. Breather Tubes: Seal or crimp breather tubes upon installation in accordance with insulating glass fabricator's requirements.
 - B. Type IG-1 - Insulating Glass Units: Vision glass, double glazed.
 - 1. Applications: Exterior door lites
 - 2. Space between lites filled with argon.
 - 3. Outboard Lite: Fully tempered float glass, 1/4 inch thick, minimum.
 - a. Tint: Clear.
 - 4. Metal edge spacer.
 - 5. Inboard Lite: Fully tempered float glass, 1/4 inch thick, minimum.
 - a. Tint: Clear.
 - 6. Total Thickness: 1 inch.
 - 7. Thermal Transmittance (U-Value), Summer - Center of Glass: 0.26, nominal.
 - 8. Visible Light Transmittance (VLT): 52 percent, nominal.
 - 9. Solar Heat Gain Coefficient (SHGC): 0.22, nominal.
 - C. Type IG-2 - Insulating Glass Units: Vision glass, triple glazed.
 - 1. Applications: Exterior glazing unless otherwise indicated.
 - 2. Space between lites filled with argon.
 - 3. Outboard Lite: Fully tempered float glass, 1/4 inch thick, minimum.
 - a. Tint: Clear.
 - b. Coating: Low-E (passive type), on #2 surface.
 - 4. Middle Lite: Annealed float glass, 1/4 inch thick, minimum.
 - 5. Inboard Lite: Fully tempered float glass, 1/4 inch thick, minimum.
 - a. Tint: Clear.
 - 6. Total Thickness: 1 inch.
 - 7. Thermal Transmittance (U-Value), Summer - Center of Glass: 0.13, nominal.
 - 8. Visible Light Transmittance (VLT): 57 percent, nominal.
 - 9. Solar Heat Gain Coefficient (SHGC): 0.25, nominal.

2.04 GLAZING COMPOUNDS

- A. Type GC-1 - Glazing Putty: Polymer modified latex recommended by manufacturer for outdoor use, knife grade consistency; gray color.

PART 3 EXECUTION

3.01 VERIFICATION OF CONDITIONS

- A. Verify that openings for glazing are correctly sized and within tolerances, including those for size, squareness, and offsets at corners.
- B. Verify that surfaces of glazing channels or recesses are clean, free of obstructions that may impede moisture movement, weeps are clear, and support framing is ready to receive glazing system.

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	Glazing

3.02 INSTALLATION, GENERAL

- A. Install glazing in compliance with written instructions of glass, gaskets, and other glazing material manufacturers, unless more stringent requirements are indicated, including those in glazing referenced standards.
- B. Install glazing sealants in accordance with ASTM C1193, GANA (SM), and manufacturer's instructions.
- C. Do not exceed edge pressures around perimeter of glass lites as stipulated by glass manufacturer.
- D. Set glass lites in proper orientation so that coatings face exterior or interior as indicated.

3.03 SCHEDULES

- A. Steel Door Glazing:
 - 1. Exterior: Glass Type IG2, 1/4 inch thick, install glass using wet method with Type CG-1 glazing compound.
- B. Custom Casework Glazing: Glazed cabinet doors, FT, install glass using dry method.

END OF SECTION

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	Glazing

SECTION 09 21 16 GYPSUM BOARD ASSEMBLIES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Performance criteria for gypsum board assemblies.
- B. Metal stud wall framing.
- C. Metal channel ceiling framing.
- D. Acoustic insulation.
- E. Gypsum sheathing.
- F. Gypsum wallboard.
- G. Joint treatment and accessories.
- H. Acoustic (sound-dampening) wall and ceiling board.

1.02 RELATED REQUIREMENTS

- A. Section 05 40 00 - Cold-Formed Metal Framing: Structural steel stud framing.
- B. Section 06 10 00 - Rough Carpentry: Wood blocking product and execution requirements.
- C. Section 07 92 00 - Joint Sealants: Sealing acoustical gaps in construction other than gypsum board or plaster work.

1.03 REFERENCE STANDARDS

- A. AISI S220 - North American Standard for Cold-Formed Steel Nonstructural Framing; 2020.
- B. AISI S240 - North American Standard for Cold-Formed Steel Structural Framing; 2015, with Errata (2020).
- C. ASTM A1003/A1003M - Standard Specification for Steel Sheet, Carbon, Metallic- and Nonmetallic-Coated for Cold-Formed Framing Members; 2015.
- D. ASTM C1007 - Standard Specification for Installation of Load Bearing (Transverse and Axial) Steel Studs and Related Accessories; 2020.
- E. ASTM C475/C475M - Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board; 2017 (Reapproved 2022).
- F. ASTM C665 - Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing; 2023.
- G. ASTM C754 - Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products; 2020.
- H. ASTM C840 - Standard Specification for Application and Finishing of Gypsum Board; 2023.
- I. ASTM C954 - Standard Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Steel Studs from 0.033 in. (0.84 mm) to 0.112 in. (2.84 mm) in Thickness; 2022.
- J. ASTM C1002 - Standard Specification for Steel Self-Piercing Tapping Screws for Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs; 2022.
- K. ASTM C1047 - Standard Specification for Accessories for Gypsum Wallboard and Gypsum Veneer Base; 2019.
- L. ASTM C1396/C1396M - Standard Specification for Gypsum Board; 2017.
- M. ASTM D3273 - Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber; 2021.
- N. ASTM E90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements; 2023.

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	Gypsum Board Assemblies

- O. ASTM E413 - Classification for Rating Sound Insulation; 2022.
- P. GA-216 - Application and Finishing of Gypsum Panel Products; 2021.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Store gypsum products and accessories indoors and keep above freezing. Elevate boards above floor, on nonwicking supports, in accordance with manufacturer's recommendations.
- B. Store metal products to prevent corrosion.

PART 2 PRODUCTS

2.01 GYPSUM BOARD ASSEMBLIES

- A. Provide completed assemblies complying with ASTM C840 and GA-216.
- B. Interior Partitions, Indicated as Acoustic: Provide completed assemblies with the following characteristics:
 - 1. Acoustic Attenuation: STC of 45-49 calculated in accordance with ASTM E413, based on tests conducted in accordance with ASTM E90.
- C. Grid Suspension Systems: Provide grid suspension systems in accordance with ASTM C840.
 - 1.

2.02 METAL FRAMING MATERIALS

- A. Steel Sheet: ASTM A1003/A1003M, subject to the ductility limitations indicated in AISI S220 or equivalent.
- B. Nonstructural Framing System Components: AISI S220; galvanized sheet steel, of size and properties necessary to comply with ASTM C754 for the spacing indicated, with maximum deflection of wall framing of L/120 at 5 psf.
 - 1. Studs: C-shaped with knurled or embossed faces.
 - 2. Runners: U shaped, sized to match studs.
 - 3. Ceiling Channels: C-shaped.
- C. Partition Head To Structure Connections: Provide track fastened to structure with legs of sufficient length to accommodate deflection, for friction fit of studs cut short and fastened as indicated on drawings.
- D. Non-structural Framing Accessories:
 - 1. Ceiling Hangers: Type and size as specified in ASTM C754 for spacing required.
- E. Grid Suspension Systems: Steel grid system of main tees and support bars connected to structure using hanging wire.

2.03 BOARD MATERIALS

- A. Manufacturers - Gypsum-Based Board:
 - 1. American Gypsum Company: www.americangypsum.com/#sle.
 - 2. CertainTeed Corporation: www.certainteed.com/#sle.
 - 3. Georgia-Pacific Gypsum: www.gpgypsum.com/#sle.
 - 4. USG Corporation: www.usg.com/#sle.
 - 5. Substitutions: See Section 01 60 00 - Product Requirements.
- B. Gypsum Wallboard: Paper-faced gypsum panels as defined in ASTM C1396/C1396M; sizes to minimize joints in place; ends square cut.
 - 1. Application: Use for vertical surfaces and ceilings, unless otherwise indicated.
 - 2. Thickness:
 - a. Vertical Surfaces: 5/8 inch.
- C. Ceiling Board: Special sag resistant gypsum ceiling board as defined in ASTM C1396/C1396M; sizes to minimize joints in place; ends square cut.
 - 1. Application: Ceilings, unless otherwise indicated.
 - 2. Thickness: 1/2 inch.

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	Gypsum Board Assemblies

3. Edges: Tapered.
- D. Acoustical Sound Dampening Wall and Ceiling Board: Two layers of heavy paper-faced, high-density gypsum board separated by a viscoelastic polymer layer and capable of achieving STC rating of 50 or more in typical stud wall assemblies as calculated in accordance with ASTM E413 and when tested in accordance with ASTM E90.
 1. Thickness: 5/8 inch.
 2. Long Edges: Tapered.
 3. Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.

2.04 GYPSUM BOARD ACCESSORIES

- A. Acoustic Insulation: ASTM C665; preformed mineral-fiber, friction fit type, unfaced; thickness 2 inches.
- B. Acoustic Sealant: Acrylic emulsion latex or water-based elastomeric sealant; do not use solvent-based non-curing butyl sealant.
- C. Finishing Accessories: ASTM C1047, extruded aluminum alloy (6063 T5) or galvanized steel sheet ASTM A924/A924M G90, unless noted otherwise.
 1. Types: As detailed or required for finished appearance.
 2. Special Shapes: In addition to conventional corner bead and control joints, provide U-bead at exposed panel edges.
- D. Joint Materials: ASTM C475/C475M and as recommended by gypsum board manufacturer for project conditions.
 1. Paper Tape: 2 inch wide, creased paper tape for joints and corners, except as otherwise indicated.
 2. Joint Compound: Drying type, vinyl-based, ready-mixed.
 3. Joint Compound: Setting type, field-mixed.
- E. Finishing Compound: Surface coat and primer, takes the place of skim coating.
- F. Screws for Fastening of Gypsum Panel Products to Cold-Formed Steel Studs Less than 0.033 inches in Thickness and Wood Members: ASTM C1002; self-piercing tapping screws, corrosion-resistant.
- G. Screws for Fastening of Gypsum Panel Products to Steel Members from 0.033 to 0.112 inch in Thickness: ASTM C954; steel drill screws, corrosion-resistant.
- H. Anchorage to Substrate: Tie wire, nails, screws, and other metal supports, of type and size to suit application; to rigidly secure materials in place.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that project conditions are appropriate for work of this section to commence.

3.02 FRAMING INSTALLATION

- A. Metal Framing: Install in accordance with ASTM C1007/AISI S220 and manufacturer's instructions.
- B. Suspended Ceilings and Soffits: Space framing and furring members as indicated.
- C. Studs: Space studs at 16 inches on center.
 1. Extend partition framing to structure where indicated and to ceiling in other locations.
 2. Partitions Terminating at Ceiling: Attach ceiling runner securely to ceiling track in accordance with manufacturer's instructions.
 3. Partitions Terminating at Structure: Attach extended leg top runner to structure, maintain clearance between top of studs and structure, and brace both flanges of studs with continuous bridging.

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	Gypsum Board Assemblies

3.03 ACOUSTIC ACCESSORIES INSTALLATION

- A. Acoustic Insulation: Place tightly within spaces, around cut openings, behind and around electrical and mechanical items within partitions, and tight to items passing through partitions.
- B. Acoustic Sealant: Install in accordance with manufacturer's instructions.
 - 1. Place one bead continuously on substrate before installation of perimeter framing members.
 - 2. Seal around all penetrations by conduit, pipe, ducts, and rough-in boxes, except where firestopping is provided.

3.04 BOARD INSTALLATION

- A. Comply with ASTM C840, GA-216, and manufacturer's instructions. Install to minimize butt end joints, especially in highly visible locations.

3.05 INSTALLATION OF TRIM AND ACCESSORIES

- A. Control Joints: Place control joints consistent with lines of building spaces and as indicated.
- B. Corner Beads: Install at external corners, using longest practical lengths.
- C. Edge Trim: Install at locations where gypsum board abuts dissimilar materials.

3.06 JOINT TREATMENT

- A. Finish gypsum board in accordance with levels defined in ASTM C840, as follows:
 - 1. Level 3: Walls to receive textured wall finish.
 - 2. Level 1: Fire-resistance-rated wall areas above finished ceilings, whether or not accessible in the completed construction.
- B. Tape, fill, and sand exposed joints, edges, and corners to produce smooth surface ready to receive finishes.
 - 1. Feather coats of joint compound so that camber is maximum 1/32 inch.
- C. Where Level 5 finish is indicated, spray apply high build drywall surfacer over entire surface after joints have been properly treated; achieve a flat and tool mark-free finish.

3.07 TOLERANCES

- A. Maximum Variation of Finished Gypsum Board Surface from True Flatness: 1/8 inch in 10 feet in any direction.

END OF SECTION

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	Gypsum Board Assemblies

SECTION 09 51 00 ACOUSTICAL CEILINGS

PART 1 GENERAL

1.01 REFERENCE STANDARDS

- A. ASCE 7 - Minimum Design Loads and Associated Criteria for Buildings and Other Structures; Most Recent Edition Cited by Referring Code or Reference Standard.
- B. ASTM C635/C635M - Standard Specification for Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings; 2022.
- C. ASTM E1264 - Standard Classification for Acoustical Ceiling Products; 2023.

1.02 ADMINISTRATIVE REQUIREMENTS

- A. Sequence work to ensure acoustical ceilings are not installed until building is enclosed, sufficient heat is provided, dust generating activities have terminated, and overhead work is completed, tested, and approved.
- B. Do not install acoustical units until after interior wet work is dry.

1.03 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide data on suspension system components and acoustical units.
- C. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
 - 1. See Section 01 60 00 - Product Requirements, for additional provisions.
 - 2. Extra Acoustical Units: Quantity equal to 5 percent of total installed.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Acoustic Tiles/Panels:
 - 1. USG Corporation: www.usg.com/ceilings/#sle.
 - 2. Substitutions: See Section 01 60 00 - Product Requirements.
- B. Suspension Systems:
 - 1. Same as for acoustical units.

2.02 PERFORMANCE REQUIREMENTS

- A. Seismic Performance: Ceiling systems designed to withstand the effects of earthquake motions determined according to ASCE 7 for Seismic Design Category D, E, or F and complying with the following:

2.03 ACOUSTICAL UNITS

- A. Acoustical Units - General: ASTM E1264, Class A.
- B. Acoustical Tiles: Painted mineral fiber, with the following characteristics:
 - 1. Classification: ASTM E1264 Type III.
 - a. Form: 2, water felted.
 - 2. Size: 24 by 24 inches.
 - 3. Thickness: 3/4 inch.
 - 4. Light Reflectance: 0.86 percent, determined in accordance with ASTM E1264.
 - 5. Tile Edge: Square.
 - a. Joint: Kerfed and rabbeted.
 - 6. Color: White.
 - 7. Suspension System: Concealed.
 - 8. Products:
 - a. Armstrong World Industries, Inc; Dune: www.armstrongceilings.com/#sle.
 - b. USG Corporation; Pebbled Acoustical Panels: www.usg.com/ceilings/#sle.

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	Acoustical Ceilings

- c. Substitutions: See Section 01 60 00 - Product Requirements.

2.04 SUSPENSION SYSTEM(S)

- A. Metal Suspension Systems - General: Complying with ASTM C635/C635M; die cut and interlocking components, with perimeter moldings, hold down clips, stabilizer bars, clips, and splices as required.
- B. Metal Suspension Systems - General: Complying with ASTM C635/C635M; die cut and interlocking components, with perimeter moldings, hold down clips, stabilizer bars, clips, and splices as required.
- C. Exposed Suspension System: Hot-dipped galvanized steel grid with steel cap.
 - 1. Application(s): Seismic.
 - 2. Structural Classification: Intermediate-duty, when tested in accordance with ASTM C635/C635M.
 - 3. Profile: Tee; 15/16 inch face width.
 - 4. Color: White.
 - 5. Products:
 - a. USG Corporation; Donn Brand ZXLA 15/16 inch Acoustical Suspension System: www.usg.com/ceilings/#sle.
 - b. Substitutions: See Section 01 60 00 - Product Requirements.

2.05 ACCESSORIES

- A. Support Channels and Hangers: Galvanized steel; size and type to suit application, seismic requirements, and ceiling system flatness requirement specified.
- B. Hanger Wire: 12 gauge, 0.08 inch galvanized steel wire.
- C. Hold-Down Clips: Manufacturer's standard clips to suit application.
- D. Perimeter Moldings: Same metal and finish as grid.

PART 3 EXECUTION

3.01 PREPARATION

- A. Install after major above-ceiling work is complete.
- B. Coordinate the location of hangers with other work.

3.02 INSTALLATION - SUSPENSION SYSTEM

- A. Rigidly secure system, including integral mechanical and electrical components, for maximum deflection of 1:360.
- B. Locate system on room axis according to reflected plan.
- C. Perimeter Molding: Install at intersection of ceiling and vertical surfaces and at junctions with other interruptions.
 - 1. Use longest practical lengths.
- D. Suspension System, Non-Seismic: Hang suspension system independent of walls, columns, ducts, pipes and conduit. Where carrying members are spliced, avoid visible displacement of face plane of adjacent members.
- E. Seismic Suspension System, Seismic Design Categories D, E, F: Hang suspension system with grid ends attached to the perimeter molding on two adjacent walls; on opposite walls, maintain a 3/4 inch clearance between grid ends and wall.
- F. Where ducts or other equipment prevent the regular spacing of hangers, reinforce the nearest affected hangers and related carrying channels to span the extra distance.
- G. Do not support components on main runners or cross runners if weight causes total dead load to exceed deflection capability.
- H. Support fixture loads using supplementary hangers located within 6 inches of each corner, or support components independently.

	09 51 00 - 2
	Acoustical Ceilings

- I. Do not eccentrically load system or induce rotation of runners.

3.03 INSTALLATION - ACOUSTICAL UNITS

- A. Install acoustical units in accordance with manufacturer's instructions.
- B. Fit acoustical units in place, free from damaged edges or other defects detrimental to appearance and function.
- C. Lay directional patterned units with pattern parallel to longest room axis.
- D. Fit border trim neatly against abutting surfaces.
- E. Install acoustical units level, in uniform plane, and free from twist, warp, and dents.
- F. Cutting Acoustical Units:
 - 1. Make field cut edges of same profile as factory edges.

3.04 TOLERANCES

- A. Maximum Variation from Flat and Level Surface: 1/8 inch in 10 feet.
- B. Maximum Variation from Plumb of Grid Members Caused by Eccentric Loads: 2 degrees.

END OF SECTION

	09 51 00 - 3
	Acoustical Ceilings

SECTION 09 67 00 FLUID-APPLIED FLOORING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Fluid-applied flooring and base.

1.02 RELATED REQUIREMENTS

- A. Section 07 92 00 - Joint Sealants: Sealing joints between fluid-applied flooring and adjacent construction and fixtures.
- B. Section 22 10 06 - Plumbing Piping Specialties: Recessed plumbing access cover frames.

1.03 REFERENCE STANDARDS

1.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide data on specified products, describing physical and performance characteristics; sizes, patterns and colors available.
- C. Samples: Submit two samples, 4" by 4" inch in size illustrating color and pattern for each floor material for each color specified.
- D. Manufacturer's Installation Instructions: Indicate special procedures, perimeter conditions requiring special attention, and application rate for each coat.
- E. Manufacturer's Qualification Statement.
- F. Applicator's Qualification Statement.
- G. Maintenance Data: Include maintenance procedures, recommended maintenance materials, procedures for stain removal, repairing surface, and suggested schedule for cleaning.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with minimum ten years documented experience.
- B. Applicator Qualifications: Company specializing in performing the work of this section.
 - 1. Minimum three years of experience.
 - 2. Approved by manufacturer.
- C. System shall be in compliance with requirements of United States Department of Agriculture (USDA), Food, Drug Administration (FDA), and local Health Department.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Store resin materials in a dry, secure area and as required by manufacturer.

1.07 FIELD CONDITIONS

- A. Maintain minimum temperature in storage area of 55 degrees F.
- B. Store materials in area of installation for minimum period of 24 hours prior to installation.
- C. Maintain ambient temperature required by manufacturer 72 hours prior to, during, and 24 hours after installation of materials.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Fluid-Applied Flooring:
 - 1. Basis of Design Product: Dur-A-Flex Shop Floor, Epoxy-based seamless flooring system as manufactured by Dur-A-Flex, Inc.
 - 2. Substitutions: See Section 01 60 00 - Product Requirements.

	09 67 00 - 1
	Fluid-Applied Flooring

2.02 FLUID-APPLIED FLOORING SYSTEMS

- A. Fluid-Applied Flooring: Epoxy base coat(s), with broadcast aggregate.
 - 1. Aggregate: Quartz granules.
 - 2. Top Coat: Polyurethane.
 - 3. System Thickness: 1/4 inch, nominal, dry film thickness (DFT).
 - 4. Texture: Smooth.
 - 5. Sheen: High gloss.
 - 6. Color: As selected by Architect.

PART 3 EXECUTION**3.01 EXAMINATION**

- A. Verify that subfloor surfaces are smooth and flat within the tolerances specified for that type of work and are ready to receive flooring.
- B. Verify that wall surfaces are smooth and flat within the tolerances specified for that type of work, are dust-free, and are ready to receive flooring.
- C. Verify that subfloor surfaces are dust-free and free of substances that could impair bonding of materials to subfloor surfaces.
- D. Verify that wood subfloors have 12 percent maximum moisture content.
- E. Verify that required floor-mounted utilities are in correct location.

3.02 PREPARATION

- A. Apply, trowel, and float filler to achieve smooth, flat, hard surface. Grind irregularities above the surface level. Prohibit traffic until filler is cured.
- B. Vacuum clean substrate.
- C. Apply primer to surfaces required by flooring manufacturer.

3.03 INSTALLATION - ACCESSORIES

- A. Install cant strips at base of walls where flooring is to be extended up wall as base.
- B. Install terminating cap strip at top of base; attach securely to wall substrate.

3.04 INSTALLATION - FLOORING

- A. Apply in accordance with manufacturer's instructions.
- B. Apply each coat to minimum thickness required by manufacturer.
- C. Finish to smooth level surface.
- D. Cove at vertical surfaces.

3.05 PROTECTION

- A. Prohibit traffic on floor finish for 48 hours after installation.

END OF SECTION

	09 67 00 - 2
	Fluid-Applied Flooring

SECTION 09 91 13 EXTERIOR PAINTING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Surface preparation.
- B. Field application of paints.
- C. Scope: Finish exterior surfaces exposed to view, unless fully factory-finished and unless otherwise indicated, including the following:
- D. Do Not Paint or Finish the Following Items:
 - 1. Items factory-finished unless otherwise indicated; materials and products having factory-applied primers are not considered factory finished.
 - 2. Items indicated to receive other finishes.
 - 3. Items indicated to remain unfinished.
 - 4. Fire rating labels, equipment serial number and capacity labels, and operating parts of equipment.
 - 5. Floors, unless specifically indicated.
 - 6. Glass.
 - 7. Concealed pipes, ducts, and conduits.

1.02 RELATED REQUIREMENTS

- A. Section 09 91 23 - Interior Painting.

1.03 REFERENCE STANDARDS

- A. ASTM D4442 - Standard Test Methods for Direct Moisture Content Measurement of Wood and Wood-Based Materials; 2020.
- B. MPI (APL) - Master Painters Institute Approved Products List; Master Painters and Decorators Association; Current Edition.
- C. MPI (APSM) - Master Painters Institute Architectural Painting Specification Manual; Current Edition.

1.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide complete list of products to be used, with the following information for each:
 - 1. Manufacturer's name, product name and/or catalog number, and general product category (e.g. "alkyd enamel").
 - 2. MPI product number (e.g. MPI #47).
 - 3. Cross-reference to specified paint system(s) product is to be used in; include description of each system.
- C. Samples: Submit three paper "draw down" samples, 8-1/2 by 11 inches in size, illustrating range of colors available for each finishing product specified.
 - 1. Where sheen is specified, submit samples in only that sheen.
- D. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
 - 1. See Section 01 60 00 - Product Requirements, for additional provisions.
 - 2. Extra Paint and Finish Materials: 1 gallon of each color; from the same product run, store where directed.
 - 3. Label each container with color in addition to the manufacturer's label.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.

	09 91 13 - 1
	Exterior Painting

- B. Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.
- C. Paint Materials: Store at minimum ambient temperature of 45 degrees F and a maximum of 90 degrees F, in ventilated area, and as required by manufacturer's instructions.

1.06 FIELD CONDITIONS

- A. Do not apply materials when surface and ambient temperatures are outside the paint product manufacturer's temperature ranges.
- B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.
- C. Do not apply exterior paint and finishes during rain or snow, or when relative humidity is outside the humidity ranges required by the paint product manufacturer.
- D. Provide lighting level of 80 ft candles measured mid-height at substrate surface.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Provide paints and finishes from the same manufacturer to the greatest extent possible.

2.02 PAINTS AND FINISHES - GENERAL

- A. Paints and Finishes: Ready-mixed, unless required to be a field-catalyzed paint.
 - 1. Where MPI paint numbers are specified, provide products listed in Master Painters Institute Approved Product List, current edition available at www.paintinfo.com, for specified MPI categories, except as otherwise indicated.
 - 2. Provide paints and finishes of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.
 - 3. Supply each paint material in quantity required to complete entire project's work from a single production run.
 - 4. Do not reduce, thin, or dilute paint or finishes or add materials unless such procedure is described explicitly in manufacturer's product instructions.
- B. Sheens: Provide the sheens specified; where sheen is not specified, sheen will be selected later by Architect from the manufacturer's full line.
- C. Colors: As indicated on drawings.

2.03 PAINT SYSTEMS - EXTERIOR

- A. Paint E-OP - Exterior Surfaces to be Painted, Unless Otherwise Indicated: Including concrete, primed wood, and primed metal.
 - 1. Two top coats and one coat primer.
 - 2. Top Coat(s): Exterior Latex; MPI #10, 11, 15, 119, or 214.
 - 3. Top Coat Sheen:
 - a. Semi-Gloss: MPI gloss level 5; use this sheen at all locations.

2.04 PRIMERS

- A. Primers: Provide the following unless other primer is required or recommended by manufacturer of top coats.
 - 1. Anti-Corrosive Alkyd Primer for Metal.
 - 2. Rust-Inhibitive Water Based Primer; MPI #107.
 - 3. Latex Primer for Exterior Wood; MPI #6.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Do not begin application of paints and finishes until substrates have been properly prepared.

	09 91 13 - 2
	Exterior Painting

- B. Verify that surfaces are ready to receive work as instructed by the product manufacturer.
- C. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially affect proper application.
- D. Test shop-applied primer for compatibility with subsequent cover materials.
- E. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces are below the following maximums:
 - 1. Masonry, Concrete, and Concrete Masonry Units: 12 percent.
 - 2. Exterior Wood: 15 percent, measured in accordance with ASTM D4442.

3.02 PREPARATION

- A. Clean surfaces thoroughly and correct defects prior to application.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- C. Remove or mask surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces for finishing.
- D. Seal surfaces that might cause bleed through or staining of topcoat.
- E. Remove mildew from impervious surfaces by scrubbing with solution of tetra-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.
- F. Concrete:
- G. Masonry:
- H. Exterior Wood Surfaces to Receive Opaque Finish: Remove dust, grit, and foreign matter. Seal knots, pitch streaks, and sappy sections. Fill nail holes with tinted exterior calking compound after prime coat has been applied. Back prime concealed surfaces before installation.

3.03 APPLICATION

- A. Exterior Wood to Receive Opaque Finish: If final painting must be delayed more than 2 weeks after installation of woodwork, apply primer within 2 weeks and final coating within 4 weeks.
- B. Apply products in accordance with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual".
- C. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.
- D. Apply each coat to uniform appearance.
- E. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.
- F. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

END OF SECTION

	09 91 13 - 3
	Exterior Painting

SECTION 09 91 23 INTERIOR PAINTING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Surface preparation.
- B. Field application of paints.
- C. Scope: Finish interior surfaces exposed to view, unless fully factory-finished and unless otherwise indicated.
 - 1. Prime surfaces to receive wall coverings.
- D. Do Not Paint or Finish the Following Items:
 - 1. Items factory-finished unless otherwise indicated; materials and products having factory-applied primers are not considered factory finished.
 - 2. Items indicated to receive other finishes.
 - 3. Items indicated to remain unfinished.
 - 4. Fire rating labels, equipment serial number and capacity labels, bar code labels, and operating parts of equipment.
 - 5. Floors, unless specifically indicated.
 - 6. Glass.
 - 7. Concealed pipes, ducts, and conduits.

1.02 RELATED REQUIREMENTS

- A. Section 09 91 13 - Exterior Painting.

1.03 REFERENCE STANDARDS

- A. ASTM D4442 - Standard Test Methods for Direct Moisture Content Measurement of Wood and Wood-Based Materials; 2020.
- B. MPI (APL) - Master Painters Institute Approved Products List; Master Painters and Decorators Association; Current Edition.
- C. MPI (APSM) - Master Painters Institute Architectural Painting Specification Manual; Current Edition.
- D. SSPC-SP 1 - Solvent Cleaning; 2015, with Editorial Revision (2016).
- E. SSPC-SP 6 - Commercial Blast Cleaning; 2007.

1.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide complete list of products to be used, with the following information for each:
 - 1. Manufacturer's name, product name and/or catalog number, and general product category (e.g., "alkyd enamel").
 - 2. MPI product number (e.g., MPI #47).
 - 3. Cross-reference to specified paint system products to be used in project; include description of each system.
- C. Samples: Submit three paper "draw down" samples, 8-1/2 by 11 inches in size, illustrating range of colors available for each finishing product specified.
 - 1. Where sheen is specified, submit samples in only that sheen.
- D. Maintenance Data: Submit data including finish schedule showing where each product/color/finish was used, product technical data sheets, material safety data sheets (MSDS), care and cleaning instructions, touch-up procedures, repair of painted and finished surfaces, and color samples of each color and finish used.
- E. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.

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	Interior Painting

1. See Section 01 60 00 - Product Requirements, for additional provisions.
2. Extra Paint and Finish Materials: 1 gal of each color; from the same product run, store where directed.
3. Label each container with color in addition to the manufacturer's label.

1.05 QUALITY ASSURANCE

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.
- B. Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.
- C. Paint Materials: Store at minimum ambient temperature of 45 degrees F and a maximum of 90 degrees F, in ventilated area, and as required by manufacturer's instructions.

1.07 FIELD CONDITIONS

- A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.
- B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.
- C. Provide lighting level of 80 fc measured mid-height at substrate surface.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Provide paints and finishes from the same manufacturer to the greatest extent possible.

2.02 PAINTS AND FINISHES - GENERAL

- A. Paints and Finishes: Ready-mixed, unless intended to be a field-catalyzed paint.
 1. Where MPI paint numbers are specified, provide products listed in Master Painters Institute Approved Product List, current edition available at www.paintinfo.com, for specified MPI categories, except as otherwise indicated.
 2. Provide paints and finishes of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.
 3. Supply each paint material in quantity required to complete entire project's work from a single production run.
 4. Do not reduce, thin, or dilute paint or finishes or add materials unless such procedure is specifically described in manufacturer's product instructions.
- B. Sheens: Provide the sheens specified; where sheen is not specified, sheen will be selected later by Architect from the manufacturer's full line.
- C. Colors: As indicated on drawings.

2.03 PAINT SYSTEMS - INTERIOR

- A. Paint I-OP - Interior Surfaces to be Painted, Unless Otherwise Indicated: Including gypsum board, wood, uncoated steel, shop primed steel, galvanized steel, aluminum, and acoustical ceilings.
 1. Two top coats and one coat primer.
 2. Top Coat(s): Institutional Low Odor/VOC Interior Latex; MPI #143, 144, 145, 146, 147, or 148.
- B. Paint I-OP-DF - Dry Fall: Metals; exposed structure and overhead-mounted services in utilitarian spaces, including shop primed structural steel, metal fabrications, galvanized ducts, galvanized conduit, and galvanized piping.
 1. Shop primer by others.
 2. One top coat; white.

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	Interior Painting

3. Top Coat: Latex Dry Fall; MPI #118, 155, or 226.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that surfaces are ready to receive work as instructed by the product manufacturer.
- B. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially affect proper application.
- C. Test shop-applied primer for compatibility with subsequent cover materials.
- D. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces is below the following maximums:
 - 1. Gypsum Wallboard: 12 percent.
 - 2. Interior Wood: 15 percent, measured in accordance with ASTM D4442.

3.02 PREPARATION

- A. Clean surfaces thoroughly and correct defects prior to application.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- C. Remove or mask surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces or finishing.
- D. Seal surfaces that might cause bleed through or staining of topcoat.
- E. Gypsum Board: Fill minor defects with filler compound. Spot prime defects after repair.
- F. Aluminum: Remove surface contamination and oils and wash with solvent according to SSPC-SP 1.
- G. Galvanized Surfaces:
- H. Ferrous Metal:
 - 1. Solvent clean according to SSPC-SP 1.
 - 2. Shop-Primed Surfaces: Sand and scrape to remove loose primer and rust. Feather edges to make touch-up patches inconspicuous. Clean surfaces with solvent. Prime bare steel surfaces. Re-prime entire shop-primed item.
 - 3. Remove rust, loose mill scale, and other foreign substances using methods recommended in writing by paint manufacturer and blast cleaning according to SSPC-SP 6 Commercial Blast Cleaning. Protect from corrosion until coated.
- I. Wood Surfaces to Receive Opaque Finish: Wipe off dust and grit prior to priming. Seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes and cracks after primer has dried; sand between coats. Back prime concealed surfaces before installation.

3.03 APPLICATION

- A. Apply products in accordance with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual".
- B. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.
- C. Apply each coat to uniform appearance in thicknesses specified by manufacturer.
- D. Sand wood and metal surfaces lightly between coats to achieve required finish.
- E. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.
- F. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

END OF SECTION

	09 91 23 - 3
	Interior Painting

SECTION 10 28 00
TOILET, BATH, AND LAUNDRY ACCESSORIES

PART 1 GENERAL**1.01 SECTION INCLUDES**

- A. Commercial toilet accessories.
- B. Under-lavatory pipe supply covers.
- C. Utility room accessories.

1.02 RELATED REQUIREMENTS

- A. Section 22 40 00 - Plumbing Fixtures: Under-lavatory pipe and supply covers.

1.03 REFERENCE STANDARDS

- A. ADA Standards - 2010 ADA Standards for Accessible Design; 2010.
- B. ASTM A666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar; 2023.
- C. ASTM C1036 - Standard Specification for Flat Glass; 2021.
- D. ASTM C1503 - Standard Specification for Silvered Flat Glass Mirror; 2024.
- E. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2023d.
- F. ASTM G21 - Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi; 2015, with Editorial Revision (2021).
- G. ICC A117.1 - Accessible and Usable Buildings and Facilities; 2017.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordinate the work with the placement of internal wall reinforcement, concealed ceiling supports, and reinforcement of toilet partitions to receive anchor attachments.

PART 2 PRODUCTS**2.01 MATERIALS**

- A. Accessories - General: Shop assembled, free of dents and scratches and packaged complete with anchors and fittings, steel anchor plates, adapters, and anchor components for installation.
- B. Keys: Provide 3 keys for each accessory to Owner; master key lockable accessories.
- C. Stainless Steel Sheet: ASTM A666, Type 304.
- D. Mirror Glass: Annealed float glass, ASTM C1036 Type I, Class 1, Quality Q2, with silvering, protective and physical characteristics complying with ASTM C1503.

2.02 FINISHES

- A. Stainless Steel: Satin finish, unless otherwise noted.
- B. Baked Enamel: Pretreat to clean condition, apply one coat primer and minimum two coats epoxy baked enamel.

2.03 COMMERCIAL TOILET ACCESSORIES

- A. Toilet Paper Dispenser: Double roll, surface mounted bracket type, stainless steel.
 - 1. Products:
 - a. AJW Architectural Products: UX142-SF www.ajw.com/#sle.
 - b. American Specialties, Inc: www.americanspecialties.com/#sle.
- B. Paper Towel Dispenser: Folded paper type, stainless steel, semi-recessed, with viewing slots on sides as refill indicator and tumbler lock.
 - 1. Capacity: 400 multifold minimum.
 - 2. Products:

	10 28 00 - 1
	Toilet, Bath, and Laundry Accessories

- a. AJW Architectural Products: U180 www.ajw.com/#sle.
- C. Waste Receptacle: Stainless steel, freestanding style with swing top.
 - 1. Liner: Removable seamless stainless steel receptacle.
 - 2. Minimum capacity: 10 gallons.
- D. Soap Dispenser: Liquid soap dispenser, wall-mounted, surface, with ABS cover; push type soap valve, check valve, and window gauge refill indicator, tumbler lock.
 - 1. Minimum Capacity: 48 ounces.
 - 2. Products:
- E. Mirrors: Stainless steel framed, 1/4 inch thick annealed float glass; ASTM C1036.
 - 1. 24 x 36.
 - 2. Frame: 0.05 inch angle shapes, with mitered and welded and ground corners, and tamperproof hanging system; satin finish.
 - 3. Fixed Tilt Mirrors: Minimum 3 inches tilt from top to bottom.
 - 4. Products:
 - a. AJW Architectural Products <https://www.ajw.com/products/series/U7048B-2436/>
 - b. American Specialties, Inc: www.americanspecialties.com/#sle.
- F. Seat Cover Dispenser: Stainless steel, surface-mounted, reloading by concealed opening at base, tumbler lock.
- G. Grab Bars: Stainless steel, smooth surface.
 - 1. Standard Duty Grab Bars:
 - a. Push/Pull Point Load: 250 pound-force, minimum.
 - b. Dimensions: 1-1/4 inch outside diameter, minimum 0.05 inch wall thickness, exposed flange mounting, 1-1/2 inch clearance between wall and inside of grab bar.
 - c. Finish: Satin.
 - d. Length and Configuration: As indicated on drawings.
 - e. Products:

2.04 UNDER-LAVATORY PIPE AND SUPPLY COVERS

- A. Under-Lavatory Pipe and Supply Covers:
 - 1. Insulate exposed drainage piping, including hot, cold, and tempered water supplies under lavatories or sinks to comply with ADA Standards.
 - 2. Exterior Surfaces: Smooth non-absorbent, non-abrasive surfaces.
 - 3. Construction: 1/8 inch flexible PVC.
 - a. Surface Burning Characteristics: Flame spread index of 25 or less and smoke developed index of 450 or less, when tested in accordance with ASTM E84.
 - b. Comply with ICC A117.1.
 - c. Microbial and Fungal Resistance: Comply with ASTM G21.
 - 4. Color: White.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify exact location of accessories for installation.

3.02 PREPARATION

- A. Deliver inserts and rough-in frames to site for timely installation.
- B. Provide templates and rough-in measurements as required.

3.03 INSTALLATION

- A. Mounting Heights: As required by accessibility regulations, unless otherwise indicated.

	10 28 00 - 2
	Toilet, Bath, and Laundry Accessories

3.04 PROTECTION

- A. Protect installed accessories from damage due to subsequent construction operations.

END OF SECTION

	10 28 00 - 3
	Toilet, Bath, and Laundry Accessories

**SECTION 12 31 00
MANUFACTURED METAL CASEWORK**

PART 1 GENERAL**1.01 RELATED REQUIREMENTS**

- A. Section 06 10 00 - Rough Carpentry: Blocking and nailers for anchoring casework.
- B. Section 07 92 00 - Joint Sealants: Sealing joints between casework and countertops and adjacent walls, floors, and ceilings.
- C. Section 08 80 00 - Glazing: Methods for shop-glazing of casework.
- D. Section 09 21 16 - Gypsum Board Assemblies: Reinforcements in metal-framed partitions for anchoring casework.
- E. Section 09 22 16 - Non-Structural Metal Framing: Reinforcements in metal-framed partitions for anchoring casework.
- F. Section 12 36 00 - Countertops.

1.02 REFERENCE STANDARDS

- A. ANSI Z97.1 - American National Standard for Safety Glazing Materials Used in Buildings - Safety Performance Specifications and Methods of Test; 2015 (Reaffirmed 2020).
- B. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2023.
- C. ASTM C1036 - Standard Specification for Flat Glass; 2021.
- D. ASTM C1048 - Standard Specification for Heat-Strengthened and Fully Tempered Flat Glass; 2018.

1.03 DESIGN REQUIREMENTS

- A. Reinforce frame counters in kennel and veterinary area, to safely support a load of 200 lbs concentrated on one square foot in any area with no indentation showing on surface and with permanent set not exceeding 0.005 inch.

1.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Product Data: Component dimensions, configurations, construction details, joint details, and attachments; manufacturer's catalog literature on hardware, accessories, and service fittings, if any.
- C. Shop Drawings: Indicate casework types, sizes, locations, using large scale plans, elevations, cross sections. Include rough-in and anchors, placement dimensions and tolerances and clearances required.
- D. Samples for Finish Selection: Fully finished, for color selection. Minimum sample size: 2 inches by 3 inches.
- E. Installer's qualification statement.

1.05 QUALITY ASSURANCE

- A. Installer Qualifications: Company specializing in performing work of the type specified in this section, with not less than three years of documented experience and approved by manufacturer.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Accept casework on site. Inspect on arrival for damage.

1.07 WARRANTY

- A. See Section 01 78 00 - Closeout Submittals, for additional warranty requirements.

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	Manufactured Metal Casework

- B. Manufacturer Warranty: Provide 5-year warranty against defects. Complete forms in Owner's name and register with manufacturer. Covered defects include, but are not limited to:
1. Ruptured, cracked, or stained finish coating.
 2. Discoloration or lack of finish integrity.
 3. Cracking or peeling of finish.
 4. Failure of hardware.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Metal Casework:
1. Jamestown Metal Products: www.jamestown.com/#sle.
 2. Kewaunee Scientific Corp: www.kewaunee.com/#sle.
 3. MultiLab LLC: www.multilab.net/#sle.
 4. Substitutions: See Section 01 60 00 - Product Requirements.

2.02 FABRICATION

- A. Assembly: Shop assemble casework items for delivery to site in units easily handled and to permit passage through building openings.
- B. Casework: Die-formed metal sheet; each unit self-contained and not dependent on adjacent units or building structure for rigidity; factory-fabricated, factory-assembled, and factory-finished.
1. Style: Flush overlay - square edge.
 2. Primary Cabinet Material: Cold-rolled steel.
 3. Cabinet Nominal Dimensions: Unless otherwise indicated, provide cabinets of widths and heights indicated on drawings, and with the following front-to-back dimensions:
 - a. Base Cabinets: 24 inches.
 - b. Wall Cabinets: 16 inches.
 4. Steel Sheet Metal:
 - a. Gables, Front and Back Panels, Gusset Plates, Aprons, and Rails: 18 gauge, 0.0478 inch minimum thickness.
 - b. Drawers, Cabinet Floors, Shelves, Filler Panels and Drawer Dividers: 20 gauge, 0.0359 inch minimum thickness.
 - c. Backing Sheet to Door and Door Fronts: 22 gauge, 0.0299 inch minimum thickness.
 5. Structural Performance: Provide components that safely support the following minimum loads, without deformation or damage:
 - a. Base Units: 500 pounds per linear foot across the cabinet ends.
 - b. Drawers: 125 pounds.
 - c. Hanging Upper Cases: 300 pounds.
 - d. Shelves: 100 pounds.
 6. Corners and Joints: Without gaps or inaccessible spaces or areas where dirt or moisture could accumulate.
 7. Edges and Seams: Smooth. Form counter tops, shelves, and drain boards from continuous sheets.
 8. Shelf Edges: Turned down 3/4 inch on each side and returned 3/4 inch front and back.
 9. Ends: Close open ends with matching construction.
 10. Welding: Electric spot welded; joints ground smooth and flush.
 11. Drawers and Doors: Fabricate drawer and door fronts of sandwiched sheets of sheet steel welded together and reinforced for hardware.
 - a. Fill with sound-deadening core.
 12. Glazing: Type and thickness standard with manufacturer.
 - a. Framed Doors: Float glass, with gaskets and removable stops; minimize rattling and vibration.

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	Manufactured Metal Casework

13. Filler Panels: Flanged on both sides, of matching construction and finish, for locations where cabinets do not fit tight to adjacent construction.
14. Separation: Use bituminous paint or non-conductive tape to coat metal surfaces in contact with cementitious materials, and to separate dissimilar metals.

2.03 CABINET HARDWARE

- A. Manufacturer's standard types, styles and finishes.

2.04 MATERIALS

- A. General: Manufacturer's standard materials for units specified, unless otherwise indicated.
- B. Sheet Steel: Hot-dipped galvanized steel sheet, ASTM A653/A653M, CS or FS Type B, with G90/Z275 coating; stretcher leveled.
- C. Glass: Fully tempered float; ASTM C1036, Type 1, Quality Q3; ASTM C1048, tempered using horizontal tempering and complying with ANSI Z97.1; 4 mm thick minimum ; exposed edges ground, and cut or drilled to receive hardware; clear.

2.05 FINISHES

- A. Shop finish all components.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install casework, components and accessories in accordance with manufacturer's instructions.
- B. Use anchoring devices to suit conditions and substrate materials encountered.
- C. Set casework items plumb and square, securely anchored to building structure, with no distortion.
 1. Base Cabinets: Examine floor levelness and flatness of installation space. Do not proceed with installation if encountered floor conditions require more than 3/4 inch leveling adjustment. When installation conditions are acceptable, for each space, establish the high point of the floor. Set and make level and plumb first cabinet in relation to this high point.
 2. Wall Cabinets: Examine wall surfaces in installation space. Do not proceed with installation if the following conditions are encountered:
- D. Fasten together cabinets in continuous runs, with joints flush, uniform and tight. Misalignment of adjacent units not to exceed 1/16 inch. In addition, do not exceed the following tolerances:
 1. Variation of tops of Base Cabinets from Level: 1/16 inch in 10 feet.
 2. Variation of Bottoms of Upper Cabinets from Level: 1/8 inch in 10 feet .
 3. Variation of Faces of Cabinets from a True Plane: 1/8 inch in 10 feet.
 4. Variation of Adjacent Surfaces from a True Plane (Lippage): 1/32 inch.
 5. Variation in Alignment of Adjacent Door and Drawer Edges: 1/16 inch.

3.02 ADJUSTING

- A. Adjust operating parts, including doors, drawers, hardware, fixtures to function smoothly.

END OF SECTION

	12 31 00 - 3
	Manufactured Metal Casework

**SECTION 12 32 00
MANUFACTURED WOOD CASEWORK**

PART 1 GENERAL**1.01 SECTION INCLUDES**

- A. Manufactured standard casework, with cabinet hardware.

1.02 REFERENCE STANDARDS

- A. AWI/AWMAC/WI (AWS) - Architectural Woodwork Standards, 2nd Edition; 2014, with Errata (2016).
- B. AWMAC/WI (NAAWS) - North American Architectural Woodwork Standards; 2021, with Errata.
- C. BHMA A156.9 - Cabinet Hardware; 2020.
- D. NEMA LD 3 - High-Pressure Decorative Laminates; 2005.

1.03 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Product Data: Component dimensions, configurations, construction details, joint details, attachments.
- C. Shop Drawings: Indicate casework types, sizes, and locations, using large scale plans, elevations, and cross sections. Include rough-in and anchors and reinforcements, placement dimensions and tolerances, clearances required, and keying information.
- D. Samples for Finish Selection: Fully finished, for color selection. Minimum sample size: 2 inches by 3 inches.
- E. Installer's Qualification Statement.
- F. Maintenance Data: Manufacturer's recommendations for care and cleaning.
- G. Finish touch-up kit for each type and color of materials provided.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Protect items provided by this section, including finished surfaces and hardware items during handling and installation. For metal surfaces, use polyethylene film or other protective material standard with the manufacturer.
- B. Acceptance at Site:
 - 1. Do not deliver or install casework until the conditions specified under Part 3, Examination Article of this section have been met. Products delivered to sites that are not enclosed and/or improperly conditioned will not be accepted if warping or damage due to unsatisfactory conditions occurs.
- C. Storage:
 - 1. Store casework in the area of installation. If necessary, prior to installation, temporarily store in another area, meeting the environmental requirements specified under Part 3, "Site Verification of Conditions" Article of this section.

1.05 WARRANTY

- A. See Section 01 78 00 - Closeout Submittals for additional warranty requirements.
- B. Correct defective Work within a five year period after Date of Substantial Completion, at no additional cost to Owner. Defects include, but are not limited to:
 - 1. Ruptured, cracked, or stained finish coating.
 - 2. Discoloration or lack of finish integrity.
 - 3. Cracking or peeling of finish.
 - 4. Failure of hardware.

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	Manufactured Wood Casework

PART 2 PRODUCTS

2.01 CASEWORK, GENERAL

- A. Quality Standard: AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS), unless noted otherwise.
- B. Plastic Laminate Faced Cabinets: Custom Grade.

2.02 FABRICATION

- A. Assembly: Shop assemble casework items for delivery to site in units easily handled and to permit passage through building openings.
- B. Construction: As required for selected grade.
- C. Edging: Fit shelves, doors, and exposed edges with specified edging. Do not use more than one piece for any single length.
- D. Scribes and Fillers: Panels of matching construction and finish, for locations where cabinets do not fit tight to adjacent construction.

2.03 PLASTIC-LAMINATE-CLAD CASEWORK

- A. Plastic-Laminate-Clad Casework: Solid wood and wood panel construction; each unit self-contained and not dependent on adjacent units or building structure for rigidity; in sizes necessary to avoid field cutting except for scribes and filler panels. Include adjustable levelers for base cabinets.
 - 1. Style: Flush overlay. Ease doors and drawer fronts slightly at edges.
 - 2. Cabinet Nominal Dimensions: Unless otherwise indicated, provide cabinets of widths and heights indicated on drawings, and with following front-to-back dimensions:
 - a. Base Cabinets: 22 inches.
 - b. Tall Cabinets: 22 inches.
 - c. Wall Cabinets: 16 inches.
 - 3. Plastic Laminate: Apply plastic laminate finish in full uninterrupted sheets consistent with manufactured sizes. Fit corners and joints hairline.
 - a. Finish: Matte or suede, gloss rating of 5 to 20.
 - b. Surface Color and Pattern: As selected by Architect from manufacturer's full line.
 - c. Exposed Interior Surfaces: Thermally fused laminate.

2.04 CABINET HARDWARE

- A. Manufacturer's standard types, styles and finishes.
- B. Comply with BHMA A156.9 requirements.

2.05 MATERIALS

- A. Wood-Based Materials:
 - 1. Solid Wood: Air-dried to 4.5 percent moisture content, then tempered to 6 percent moisture content before use.
- B. Concealed Solid Wood or Plywood: Any species and without defects affecting strength or utility.
- C. High Pressure Decorative Laminate (HPDL): NEMA LD 3, types as recommended for specific applications, complying with Grade requirements, and standard with the manufacturer.
- D. Thermally Fused Laminate (TFL): Melamine resin, NEMA LD 3, Type VGL laminate panels.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Site Verification of Environmental Conditions:
 - 1. Do not deliver casework until the following conditions have been met:
 - a. Building has been enclosed (windows and doors sealed and weather-tight).

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	Manufactured Wood Casework

- b. An operational HVAC system that maintains temperature and humidity at occupancy levels has been put in place.
 - c. Ceiling, overhead ductwork, piping, and lighting have been installed.
 - d. Installation areas do not require further "wet work" construction.
- B. Verify adequacy of support framing and anchors.
 - C. Verify that service connections are correctly located and of proper characteristics.

3.02 INSTALLATION

- A. Perform installation in accordance with manufacturer's instructions.
- B. Use anchoring devices to suit conditions and substrate materials encountered. Use concealed fasteners to the greatest degree possible. Use exposed fasteners only where allowed by approved shop drawings, or where concealed fasteners are impracticable.
- C. Set casework items plumb and square, securely anchored to building structure.
- D. Align cabinets to adjoining components, install filler and/or scribe panels where necessary to close gaps.
- E. Fasten together cabinets in continuous runs, with joints flush, uniform and tight. Misalignment of adjacent units not to exceed 1/16 inch. In addition, do not exceed the following tolerances:
 - 1. Variation of Tops of Base Cabinets from Level: 1/16 inch in 10 feet.
 - 2. Variation of Faces of Cabinets from a True Plane: 1/8 inch in 10 feet.
 - 3. Variation of Adjacent Surfaces from a True Plane (Lippage): 1/32 inch.
 - 4. Variation in Alignment of Adjacent Door and Drawer Edges: 1/16 inch.
- F. Base Cabinets: Fasten cabinets to service space framing and/or wall substrates, with fasteners spaced not more than 16 inches on center. Bolt adjacent cabinets together with joints flush, tight, and uniform.
- G. Install hardware uniformly and precisely.
- H. Countertops: Install countertops intended and furnished for field installation in one true plane, with ends abutting at hairline joints, and no raised edges.
- I. Replace units that are damaged, including those that have damaged finishes.

3.03 ADJUSTING

- A. Adjust operating parts, including doors, drawers, hardware, and fixtures to function smoothly.

END OF SECTION

	12 32 00 - 3
	Manufactured Wood Casework

SECTION 12 36 00 COUNTERTOPS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Countertops for manufactured casework.
- B. Wall-hung counters and vanity tops.

1.02 RELATED REQUIREMENTS

- A. Section 12 31 00 - Manufactured Metal Casework.
- B. Section 123200 - Manufactured Wood Casework.

1.03 REFERENCE STANDARDS

- A. ANSI A208.1 - American National Standard for Particleboard; 2022.
- B. ANSI A208.2 - Medium Density Fiberboard (MDF) for Interior Applications; 2022.
- C. ASTM A666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar; 2023.
- D. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2023d.
- E. ISFA 2-01 - Classification and Standards for Solid Surfacing Material; 2013.
- F. NEMA LD 3 - High-Pressure Decorative Laminates; 2005.
- G. PS 1 - Structural Plywood; 2023.

1.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Specimen warranty.
- C. Shop Drawings: Complete details of materials and installation ; combine with shop drawings of cabinets and casework specified in other sections.
- D. Selection Samples: For each finish product specified, color chips representing manufacturer's full range of available colors and patterns.
- E. Verification Samples: For each finish product specified, minimum size 6 inches square, representing actual product, color, and patterns.
- F. Test Reports: Chemical resistance testing, showing compliance with specified requirements.
- G. Installer's qualification statement.

1.05 QUALITY ASSURANCE

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

PART 2 PRODUCTS

2.01 COUNTERTOPS

- A. Solid Surfacing Countertops: Solid surfacing sheet or plastic resin casting over continuous substrate.
 - 1. Flat Sheet Thickness: 1/2 inch, minimum.

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	Countertops

2. Solid Surfacing Sheet and Plastic Resin Castings: Complying with ISFA 2-01 and NEMA LD 3; acrylic or polyester resin, mineral filler, and pigments; homogenous, non-porous and capable of being worked and repaired using standard woodworking tools; no surface coating; color and pattern consistent throughout thickness.
 - a. Surface Burning Characteristics: Flame spread index of 25, maximum; smoke developed index of 450, maximum; when tested in accordance with ASTM E84.
 - b. Finish on Exposed Surfaces: Matte, gloss rating of 5 to 20.
3. Other Components Thickness: 1/2 inch, minimum.
4. Back and End Splashes: Same sheet material, square top; minimum 4 inches high.
- B. Stainless Steel Countertops: , Type 304, stainless steel sheet; 16 gauge, 0.0625 inch nominal sheet thickness.
 1. Finish: 4B satin brushed finish.
 2. Exposed Edge Shape: Straight turndown with return; 1-1/2 inch high face, 1/2 inch return to face of case ; reinforced with hardwood or steel.
 3. Back and End Splashes: Same material; welded 1/4 inch radius coved joint to countertop; square top edge with 1 inch wide top surface and minimum 1/2 inch turndown.
 4. Splash Dimensions: 4 inch high by 1 inch thick, unless otherwise indicated.
 5. Sinks: Same material, same thickness; flush welded to counter; bottom sloped to outlet; radiused interior corners; drain outlet located in back corner.

2.02 MATERIALS

- A. Plywood for Supporting Substrate: PS 1 Exterior Grade, A-C veneer grade, minimum 5-ply; minimum 3/4 inch thick; join lengths using metal splines.
- B. Particleboard for Supporting Substrate: ANSI A208.1 Grade 2-M-2, 45 pcf minimum density; minimum 3/4 inch thick; join lengths using metal splines.
- C. Medium Density Fiberboard for Supporting Substrate: ANSI A208.2.
- D. Adhesives: Chemical resistant waterproof adhesive as recommended by manufacturer of materials being joined.
- E. Joint Sealant: Mildew-resistant silicone sealant, white.

2.03 FABRICATION

- A. Fabricate tops and splashes in the largest sections practicable, with top surface of joints flush.
 1. Join lengths of tops using best method recommended by manufacturer.
 2. Fabricate to overhang fronts and ends of cabinets 1 inch except where top butts against cabinet or wall.
 3. Prepare all cutouts accurately to size; replace tops having improperly dimensioned or unnecessary cutouts or fixture holes.
- B. Provide back/end splash wherever counter edge abuts vertical surface unless otherwise indicated.
 1. Secure to countertop with concealed fasteners and with contact surfaces set in waterproof glue.
 2. Height: 4 inches, unless otherwise indicated.
- C. Stainless Steel: Fabricate tops up to 144 inches long in one piece including nosings and back and end splashes; accurately fitted mechanical field joints in lengths over that dimension are permitted.
 1. Weld joints; grind smooth and polish to match.
 2. Provide stainless steel hat channel stiffeners, welded or soldered to underside, where indicated on drawings.
 3. Provide wall clips for support of back/end splash turndowns.
 4. Sound Deadening: Apply water resistant, fire resistant sound deadening mastic to entire bottom surface.

	12 36 00 - 2
	Countertops

- 5. Integral sinks: Fabricate with corners rounded and coved, double-walls for sink compartment partitions, and drainboards. Factory-punch holes for fittings, and weld sinks to countertops.
- D. Wall-Mounted Counters: Provide skirts, aprons, brackets, and braces as indicated on drawings, finished to match.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Securely attach countertops to cabinets using concealed fasteners. Make flat surfaces level; shim where required.
- B. Attach stainless steel countertops using stainless steel fasteners and clips.
- C. Seal joint between back/end splashes and vertical surfaces.

3.02 TOLERANCES

- A. Variation From Horizontal: 1/8 inch in 10 feet, maximum.
- B. Offset From Wall, Countertops: 1/8 inch maximum; 1/16 inch minimum.
- C. Field Joints: 1/8 inch wide, maximum.

3.03 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Date of Substantial Completion.

END OF SECTION

	12 36 00 - 3
	Countertops

SECTION 22 05 00 COMMON WORK RESULTS FOR PLUMBING

PART 1 - GENERAL

1.01 Summary

- A. Section Includes:
 - 1. Sleeves.
 - 2. Mechanical sleeve seals.
 - 3. Formed steel channel

1.02 Submittals

- A. Shop Drawings: Submit for piping and equipment identification list of wording, symbols, letter size, and color coding for pipe identification and valve chart and schedule, including valve tag number, location, function, and valve manufacturer's name and model number.
- B. Product Data for Pipe and Equipment Identification: Submit for mechanical identification manufacturers catalog literature for each product required.

1.03 Water Quality Maintenance

- A. Provide plumbing fixture fittings in accordance with ASME A112.18.1 that prevent backflow from fixture into water distribution system.
- B. All piping, equipment, and components in contact with potable water, including, but not limited to, tanks, pumps, piping, valves, fittings and instrumentation, shall be ANSI/NSF-61 approved unless otherwise approved by ADEC. Materials in direct contact with drinking water shall be lead free in accordance with the "Reduction of Lead in Drinking Water Act":
 - 1. Not containing more than 0.2 percent lead when used with respect to solder and flux; and
 - 2. Not more than a weighted average of 0.25 percent lead when used with respect to the wetted surfaces of pipes, pipe fittings, plumbing fittings and fixtures.

1.04 Quality Assurance

- A. Perform Work in accordance with the 2018 UPC and State of Alaska Amendments.
- B. Maintain one copy of each document on site.

PART 2 - PRODUCTS

1.01 Sleeves

- A. Sleeves for Pipes Through Non-fire Rated Floors: 18 gage thick galvanized steel.
- B. Sleeves for Pipes Through Non-fire Rated Beams, Walls, Footings, and Potentially Wet Floors: Stainless steel pipe.

C. Sealant: Acrylic

1.02 Mechanical Sleeve Seals

A. Manufacturers:

1. GPT, Link-Seal.
2. Substitutions: Permitted.

B. Product Description: Modular mechanical type, consisting of interlocking synthetic rubber links shaped to continuously fill annular space between object and sleeve, connected with bolts and pressure plates causing rubber sealing elements to expand when tightened, providing watertight seal and electrical insulation.

1.03 Formed Steel Channel

A. Manufacturers:

1. Cooper B-Line
2. Unistrut
3. Substitutions: Permitted.

B. Product Description: Galvanized 12 gage thick steel. With holes 1-1/2 inches on center.

1.04 Firestopping

A. Firestopping Materials: Acrylic based flexible firestop sealant, UL listed and FM approved.

PART 3 - EXECUTION

1.01 Examination

A. Verify openings are ready to receive sleeves.

1.02 Installation - Sleeves

- A. Exterior watertight entries: Seal with mechanical sleeve seals.
- B. Set sleeves in position in forms. Provide reinforcing around sleeves.
- C. Size sleeves large enough to allow for movement due to expansion and contraction. Provide for continuous insulation wrapping.
- D. Extend sleeves through floors 1 inch above finished floor level. Caulk sleeves.
- E. Where piping or ductwork penetrates floor, ceiling, or wall, close off space between pipe or duct and adjacent work with firestopping insulation and caulk airtight. Provide close fitting metal collar or escutcheon covers at both sides of penetration.
- F. Install stainless steel escutcheons at finished surfaces.

1.03 Installation - Firestopping

- A. Firestopping Materials: Use UL or FM approved flexible firestop sealant, installed per manufacturer's instructions.

END OF COMMON WORK RESULTS FOR PLUMBING

SECTION 22 05 29 HANGERS AND SUPPORTS FOR PLUMBING PIPING AND EQUIPMENT

PART 1 - GENERAL

1.01 Summary

A. Section Includes:

1. Pipe hangers and supports.
2. Hanger rods.
3. Flashing.
4. Firestopping
5. Equipment Bases and Supports:

1.02 Submittals

A. Shop Drawings: Indicate system layout with location including critical dimensions, sizes, pipe hanger and support locations, and detail of trapeze hangers.

B. Product Data:

1. Hangers and Supports: Manufacturers catalog data including load capacity.

C. Design Data: Indicate load-carrying capacity of trapeze, multiple pipe, and riser support hangers. Indicate calculations used to determine load carrying capacity of trapeze, multiple pipe, and riser support hangers.

D. Manufacturer's Installation Instructions:

1. Hangers and Supports: Submit special procedures and assembly of components.

E. Manufacturer's Certificate: Certify products meet or exceed specified requirements.

1.03 Quality Assurance

A. Fire-Resistant Joints in Fire-Rated Floor, Roof, and Wall Assemblies: UL 2079 to achieve fire resistant rating as indicated on Drawings for assembly in which joint is installed.

B. Fire-Resistant Joints Between Floor Slabs and Exterior Walls: ASTM E119 with 0.10 inch water gage minimum positive pressure differential to achieve fire resistant rating as indicated on Drawings for floor assembly.

C. Surface Burning Characteristics: Maximum 25/450 flame spread/smoke developed index when tested according to ASTM E84.

D. Perform Work according to AWS D1.1 for welding hanger and support attachments to building structure.

E. Passivate stainless steel welds per ASTM A967. Confirm absence of free iron in heat affected zone using ASTM A967, Copper Sulfate Test, Practice C.

F. Manufacturer: Company specializing in manufacturing products specified in this Section with three years' experience.

G. Installer: Company specializing in performing Work of this Section with three years' experience.

1.04 Field Measurements

A. Verify field measurements prior to fabrication.

PART 2 - PRODUCTS

1.01 Pipe Hangars And Supports

A. Manufacturers:

1. Carpenter & Paterson, Inc.
2. ERICO International Corporation
3. Unitron Product, Inc. / US-Strut
4. Substitutions Permitted

B. Plumbing Piping – DWV & Facility Storm Drainage:

1. Hangars shall be hot-dipped galvanized or stainless steel.
2. Conform to MSS SP69.
3. Hangars for Pipe Sizes 1/2 to 1-1/2 inch: Steel, adjustable swivel, split ring.
4. Hangars for Pipe Sizes 2 inches and Larger: Steel, adjustable clevis.
5. Multiple or Trapeze Hangars: Steel channels with welded spacers and hanger rods.
6. Wall Support for Pipe Sizes 3 inches and Smaller: Cast iron hook.
7. Wall Support for Pipe Sizes 4 inches and Larger: Welded steel bracket and wrought steel clamp.
8. Vertical Support: Steel riser clamp.
9. Floor Support: Cast iron adjustable pipe saddle, lock nut, nipple, floor flange, and concrete pier or steel support.
10. Copper Pipe Support: Vinyl coated, steel adjustable ring.

C. Plumbing Piping - Water:

1. Hangars shall be hot-dipped galvanized or stainless steel.
2. Conform to MSS SP69.
3. Hangars for Pipe Sizes 1/2 to 1-1/2 inch: Steel, adjustable swivel, split ring.
4. Hangars for Cold Pipe Sizes 2 inches and Larger: Steel, adjustable clevis.
5. Hangars for Hot Pipe Sizes 2 to 4 inches: Steel, adjustable clevis.
6. Multiple or Trapeze Hangars: Steel channels with welded spacers and hanger rods.

7. Wall Support for Pipe Sizes 3 inches and Smaller: Cast iron hook.
8. Wall Support for Pipe Sizes 4 inches and Larger: Welded steel bracket and wrought steel clamp.
9. Wall Support for Hot Pipe Sizes 6 inches and Larger: Welded steel bracket and wrought steel clamp with adjustable steel yoke and cast iron roll.
10. Vertical Support: Steel riser clamp.
11. Floor Support for Cold Pipe: Cast iron adjustable pipe saddle, lock nut, nipple, floor flange, and concrete pier or steel support.
12. Floor Support for Hot Pipe Sizes 4 inches and Smaller: Cast iron adjustable pipe saddle, lock nut, nipple, floor flange, and concrete pier or steel support.
13. Floor Support for Hot Pipe Sizes 6 inches and Larger: Adjustable cast iron roll and stand, steel screws, and concrete pier or steel support.
14. Copper Pipe Support: Vinyl coated, Steel ring.

1.02 Accessories

- A. Hanger Rods: Stainless steel threaded both ends, threaded on one end, or continuous threaded.

1.03 Flashing

- A. Metal Flashing: 26 gage stainless steel.
- B. Metal Counterflashing: 22 gage stainless steel.
- C. Lead Flashing:
 1. Waterproofing: 5 lb./sq. ft sheet lead.
 2. Soundproofing: 1 lb./sq. ft sheet lead.
- D. Flexible Flashing: 47 mil thickness sheet butyl; compatible with roofing.
- E. Caps: Stainless steel, 22 gage minimum; 16 gage at fire resistant elements.

1.04 Firestopping

- A. Firestopping Materials: Acrylic based flexible firestop sealant, UL listed and FM approved.

PART 3 - EXECUTION

1.01 Preparation

- A. Obtain permission from Architect/Engineer before using powder-actuated anchors.
- B. Do not drill or cut structural members.

1.02 Installation

- A. Pipe Hangers and Supports: According to MSS SP 69.
- B. Support horizontal piping as scheduled.

- C. Install hangers with minimum 1/2 inch space between finished covering and adjacent work.
- D. Place hangers within 12 inches of each horizontal elbow.
- E. Use hangers with 1-1/2 inch minimum vertical adjustment.
- F. Support horizontal cast iron pipe adjacent to each hub, with 5 feet maximum spacing between hangers.
- G. Support vertical piping at every floor. Support vertical cast iron pipe at each floor at hub.
- H. Where piping is installed in parallel and at same elevation, provide multiple pipe or trapeze hangers.
- I. Support riser piping independently of connected horizontal piping.
- J. Provide vinyl coated hangers and supports in contact with copper piping.
- K. Design hangers for pipe movement without disengagement of supported pipe.
- L. Provide clearance in hangers and from structure and other equipment for installation of insulation. Refer to Section 22 07 00.
- M. Equipment Bases and Supports:
 - 1. Provide housekeeping pads of concrete, minimum 3-1/2 inches thick and extending 6 inches beyond supported equipment. Refer to Section 03 30 00.
 - 2. Using templates furnished with equipment, install anchor bolts, and accessories for mounting and anchoring equipment.
 - 3. Construct supports of steel members or formed steel channel. Brace and fasten with flanges bolted to structure.
 - 4. Provide rigid anchors for pipes after vibration isolation components are installed.
- N. Flashing:
 - 1. Provide flexible flashing and metal counterflashing where piping penetrates weather or waterproofed walls, floors, and roofs.
 - 2. Flash vent and soil pipes projecting 3 inches minimum above finished roof surface with lead worked 1 inch minimum into hub, 8 inches minimum clear on sides with 24 x 24 inches sheet size. For pipes through outside walls, turn flanges back into wall and caulk, metal counter-flash, and seal.
 - 3. Flash floor drains in floors with topping over finished areas with lead, 10 inches clear on sides with minimum 36 x 36 inch sheet size. Fasten flashing to drain clamp device.
 - 4. Seal floor, shower, and mop sink drains watertight to adjacent materials.
- O. Firestopping:
 - 1. Firestopping Materials installation: Install per manufacturer's instructions.

1.03 Schedules

PIPE HANGER SPACING		
PIPE MATERIAL	MAXIMUM HANGER SPACING Feet	HANGER ROD DIAMETER Inches
ABS (All sizes)	4	3/8
Cast Iron (All Sizes)	5	5/8
Cast Iron (All Sizes) with 10 foot length of pipe	10	5/8
CPVC, 1 inch and smaller	3	1/2
CPVC, 1-1/4 inches and larger	4	1/2
Copper Tube, 1-1/4 inches and smaller	6	1/2
Copper Tube, 1-1/2 inches and larger	10	1/2
PP-R, 2 inches and smaller	4	3/8
PP-R, 2-1/2 inches to 4 inches	5	1/2
PP-R, 4 inches and larger	6	1/2
PVC (All Sizes)	4	3/8
Steel, 3 inches and smaller	12	1/2
Steel, 4 inches and larger	12	5/8
Stainless Steel Tubing	4	3/8

END OF HANGARS AND SUPPORTS FOR PLUMBING

SECTION 22 11 00 FACILITY WATER DISTRIBUTION

PART 1 -- GENERAL

1.01 Summary

A. Section Includes:

1. Domestic water piping, above grade.
2. Unions and flanges.
3. Valves.
4. Pipe hangers and supports.
5. Pressure gages.
6. Pressure gage taps.
7. Thermometers.
8. Relief valves.
9. Strainers.
10. Hose bibs.
11. Backflow preventers.
12. Thermostatic Mixing Valves

1.02 Reference Documents

- A. ASTM F2389-07 - Standard Specification for Pressure-rated Polypropylene (PP) Piping Systems
- B. CSA B137.11 - Polypropylene (PP-R) Pipe and Fittings for Pressure Applications
- C. NSF/ANSI 14 – Plastic Piping System Components and Related Materials

1.03 Submittals

A. Product Data:

1. Piping: Materials, fittings, and accessories. Manufacturer's catalog information.
2. Valves: Manufacturers catalog information with valve data and ratings for each service.
3. Domestic Water Specialties: Manufacturers catalog information, component sizes, rough-in requirements, service sizes, and finishes.
4. Pumps: Type, capacity, certified pump curves showing pump performance characteristics with pump and system operating point plotted. NPSH curve. Electrical characteristics and connection requirements.

B. Manufacturer's Installation Instructions: Pumps, valves, and accessories.

C. Manufacturer's Certificate: Products meet or exceed specified requirements.

1.04 Warranty

- A. Manufacturer shall warrant PP-R pipe and fittings for 10 years to be free of defects in materials or manufacturing.
 - 1. Warranty shall cover labor and material costs of repairing and/or replacing defective materials and repairing any incidental damage caused by failure of the piping system due to defects in materials or manufacturing.
 - 2. Warranty shall be in effect only upon submission by the contractor to the manufacturer valid pressure/leak test documentation indicating that the system was tested and passed the manufacturer's pressure/leak test.

1.05 Water Quality Maintenance

- A. All piping, equipment, and components in contact with potable water, including, but not limited to, tanks, pumps, piping, valves, fittings and instrumentation, shall be ANSI/NSF-61 approved unless otherwise approved by ADEC. Materials in direct contact with drinking water shall be lead free in accordance with the "Reduction of Lead in Drinking Water Act":
 - 1. Not containing more than 0.2 percent lead when used with respect to solder and flux; and
 - 2. Not more than a weighted average of 0.25 percent lead when used with respect to the wetted surfaces of pipes, pipe fittings, plumbing fittings and fixtures.

1.06 Quality Assurance

- A. Manufacturer: Company specializing in manufacturing products specified in this Section with three years' experience.
- B. Installer: Company specializing in performing Work of this Section with three years' experience.

PART 2 -- PRODUCTS

2.01 Domestic Water Piping, Above Grade – Mechanical Room

- A. Copper Tubing: ASTM B88, Type L drawn.
 - 1. Fittings: ASME B16.18, cast copper alloy or ASME B16.22, wrought copper and bronze.
 - 2. Joints: ASTM B32, Alloy Grade Sb5 tin-antimony, or Alloy Grade Sn95 tin-silver, lead free solder
- B. PEX: ASTM F876, ASTM F877, AWWA C904-06, Crosslinked polyethylene tubing, rated for 100 PSI @ 180°F.
 - 1. Fittings and Joints: Compression sleeve fittings, ASTM f2080, NSF/ANSI 14, NSF/ANSI 61.

2.02 Domestic Water Piping, Above Grade – Warehouse

- A. PEX: ASTM F876, ASTM F877, AWWA C904-06, Crosslinked polyethylene tubing, rated for 100 PSI @ 180°F.

1. Fittings and Joints: Compression sleeve fittings, ASTM F2080, NSF/ANSI 14, NSF/ANSI 61.
 - B. PP-R: ASTM F2389, NSF/ANSI 61, NSF/ANSI 14., SDR 11. Rated for 140 PSI @ 120°F.
 1. Fittings and Joints: Socket weld fittings, Butt weld fittings, butt weld joints, socket couplings, NSF/ANSI 61, NSF/ANSI 14.
- 2.03 Unions And Flanges
- A. Unions for Pipe 2 inches and Smaller:
 1. Ferrous Piping: Class 150, malleable iron, threaded.
 2. Copper Piping: Class 150, bronze unions with soldered joints.
 3. Dielectric Connections: Union with galvanized or plated steel threaded end, copper solder end, water impervious isolation barrier.
 - B. Flanges for Pipe 2-1/2 inches and Larger:
 1. Ferrous Piping: Class 150, forged steel, slip-on flanges.
 2. Copper Piping: Class 150, slip-on bronze flanges.
 3. Gaskets: 1/16 inch thick preformed neoprene gaskets.
- 2.04 Gate Valves
- A. 2 inches and Smaller: MSS SP 80, class 125, bronze body, bronze trim, threaded bonnet, non-rising stem, hand wheel, inside screw with back-seating stem, solid wedge disc, solder or threaded ends.
 - B. 2-1/2 inches and Larger: MSS SP 70, class 125, cast iron body, bronze trim, bolted bonnet, non-rising stem, hand-wheel, outside screw and yoke, solid wedge disc with bronze seat rings, flanged ends. Furnish chain-wheel operators for valves 6 inches and larger mounted over 8 feet above floor.
- 2.05 Globe Valves
- A. 2 inches and Smaller: MSS SP 80, class 125, bronze body, bronze trim, threaded bonnet, hand wheel, Buna-N composition disc, solder or threaded ends.
 - B. 2-1/2 inches and Larger: MSS SP 85, class 125, cast iron body, bronze trim, hand wheel, outside screw and yoke, flanged ends. Furnish chain-wheel operators for valves 6 inches and larger mounted over 8 feet above floor.
- 2.06 Ball Valves
- A. 2 inches and Smaller: MSS SP 110, class 150, bronze, two-piece body, chrome plated bronze ball, full port, teflon seats, blow-out proof stem, solder ends with union, or threaded ends, lever handle.
- 2.07 Check Valves
- A. Horizontal Swing Check Valves:
 1. 2 inches and Smaller: MSS SP 80, class 150, bronze body and cap, bronze seat, Buna-N disc, solder ends.

2. 2-1/2 inches and Larger: MSS SP 71, class 125, cast iron body, bolted cap, bronze or cast iron disc, renewable disc seal and seat, flanged ends.

B. Spring-Loaded Check Valves:

1. 2 inches and Smaller: MSS SP 80, class 150 bronze body, in-line spring lift check, silent closing, Buna-N disc, integral seat, solder ends.
2. 2-1/2 inches and Larger: MSS SP 71, class 125, wafer style, cast iron body, bronze seat, center guided bronze disc, stainless steel spring and screws, flanged ends.

2.08 Pipe Hangars And Supports

- A. Refer to Section 22 05 29.

2.09 Pressure Gages

- A. Gage: ASME B40.1, UL 393 with bourdon tube, rotary brass movement, brass socket, front calibration adjustment, black scale on white background.
1. Case: Stainless steel.
 2. Bourdon Tube: Brass.
 3. Dial Size: 2 inch diameter.
 4. Mid-Scale Accuracy: 1 percent.
 5. Scale: Psi.

2.010 Pressure Gage Taps

- A. Ball Valve: Brass for 250 psi.
- B. Pulsation Damper: Pressure snubber, brass with 1/4 inch NPT connections.

2.011 Stem Type Thermometers

- A. Thermometer: Adjustable angle, digital display, light powered, cast aluminum case with enamel finish, cast aluminum adjustable joint with positive locking device.
1. Size: 7-inch case.
 2. Power source: Photovoltaic cells requiring 10 lux of illumination for operation.
 3. Display: 9/16 inch LCD, 4 digits, 1/10 degree resolution, switchable between F and C, updated every 10 seconds.
 4. Stem: Aluminum, 3/4 inch NPT, 3-1/2 inch long, with glass passivated thermistor.
 5. Range: Minus 40 to 300 degrees F (minus 40 to 150 degrees C)
 6. Accuracy: 1 percent or 1 degree F, whichever is greater

2.012 Relief Valves

- A. Pressure Relief:
1. Bronze body, Teflon seat, steel stem and springs, automatic, direct pressure actuated at maximum 60 psi, UL listed for fuel oil, capacities ASME certified and labeled.

B. Temperature and Pressure Relief:

1. ANSI Z21.22 certified, bronze body, teflon seat, stainless steel stem and springs, automatic, direct pressure actuated, temperature relief maximum 210 degrees F, capacity ASME certified and labeled.

2.013 Strainers

- A. 2 inch and Smaller: Threaded brass body for 175 psi CWP, Y pattern with 1/32 inch stainless steel perforated screen.
- B. 1-1/2 inch to 4 inch: Class 125, flanged iron body, Y pattern with 1/16-inch stainless steel perforated screen.
- C. 5 inch and Larger: Class 125, flanged iron body, basket pattern with 1/8 inch stainless steel perforated screen.

2.014 Hose Bibs

- A. Interior: Bronze or brass with integral mounting flange, replaceable hexagonal disc, hose thread spout, with hand wheel, integral vacuum breaker in conformance with ASSE 1011.

2.015 Backflow Preventers**A. Reduced Pressure Principle Backflow Preventer:**

1. Comply with ASSE 1013, NSF/ANSI 61.
2. Bronze body, with bronze internal parts and stainless steel springs.
3. Two independently operating, spring loaded check valves; diaphragm type differential pressure relief valve located between check valves; third check valve opening under back pressure in case of diaphragm failure; non-threaded vent outlet; assembled with two gate valves, strainer, and four test cocks.

2.016 Thermostatic Mixing Valves**A. Anti-Scalding Mixing Valve**

1. Comply with ASSE 1071, NSF/ANSI 61
2. Lead free brass body, with integral check valves to prevent cross contamination.

PART 3 -- EXECUTION**3.01 Preparation**

- A. Ream pipe and tube ends. Remove burrs.

3.02 General

- A. Where more than one piping system material is specified, provide compatible system components and joints. Use non-conducting dielectric connections whenever jointing dissimilar metals in open systems.
- B. Provide flanges, union, and couplings at locations requiring servicing. Use unions, flanges, and couplings downstream of valves and at equipment or apparatus connections. Do not use direct welded or threaded connections to valves, equipment or other apparatus.

- C. Use gate, ball, or butterfly valves for shut-off and to isolate equipment, part of systems, or vertical risers.
- D. Use globe valves for throttling, bypass, or manual flow control services.
- E. Use spring loaded check valves on discharge of hot water pumps.
- F. Use butterfly valves in heating water systems interchangeably with gate and globe valves.
- G. Use lug end butterfly valves to isolate equipment.
- H. Use 3/4 inch ball valves with hose end adapter and cap for drains at main shut-off valves, low points of piping, bases of vertical risers, and at equipment.
- I. Flexible Connectors: Use at or near pumps where piping configuration does not absorb vibration.

3.03 Installation

A. Thermometers and Gages:

1. Install one pressure gage for each pump, locate taps before strainers and on suction and discharge of pump; pipe to gage.
2. Install gage taps in piping.
3. Install pressure gages with pulsation dampers. Provide valve to isolate each gage.
4. Install thermometers in piping systems in sockets in short couplings. Enlarge pipes smaller than 2-1/2 inches for installation of thermometer sockets. Allow clearance from insulation.
5. Provide instruments with scale ranges selected according to service with largest appropriate scale.
6. Install gages and thermometers in locations where they are easily read from normal operating level. Install vertical to 45 degrees off vertical.
7. Adjust gages and thermometers to final angle, clean windows and lenses, and calibrate to zero.

B. Hangers and Supports:

1. Install hangers and supports according to Section 22 05 29.

C. Aboveground Piping:

1. Install non-conducting dielectric connections wherever jointing dissimilar metals.
2. Route piping in orderly manner and maintain gradient. Route parallel and perpendicular to walls.
3. Group piping whenever practical at common elevations.
4. Slope piping and arrange systems to drain at low points.
5. Install piping to allow for expansion and contraction without stressing pipe, joints, or connected equipment. Refer to Section 22 05 29.
6. Provide clearance in hangers and from structure and other equipment for installation of insulation and access to valves and fittings. Refer to Section 22 07 00.

7. Provide access where valves and fittings are not accessible.
 8. Where pipe support members are welded to structural building framing, scrape, brush clean, and apply one coat of zinc-rich primer to welding.
 9. Provide support for utility meters according to requirements of utility companies.
 10. Prepare exposed, unfinished pipe, fittings, supports, and accessories ready for finish painting. Refer to Section 09 97 00.
 11. Install domestic and utility water piping according to ASME B31.9.
 12. Sleeve pipes passing through partitions, walls and floors. Refer to Section 22 05 00.
 13. Install firestopping at fire rated construction perimeters and openings containing penetrating sleeves and piping. Use UL or FM approved flexible firestop sealant, installed per manufacturer's instructions.
 14. Install unions downstream of valves and at equipment or apparatus connections.
 15. Install valves with stems upright or horizontal, not inverted.
 16. Install brass male adapters each side of valves in copper piped system. Solder adapters to pipe.
 17. Install gate or ball valves for shut-off and to isolate equipment, part of systems, or vertical risers.
 18. Install globe valves for throttling, bypass, or manual flow control services.
 19. Provide lug end butterfly valves adjacent to equipment when functioning to isolate equipment.
 20. Provide spring-loaded check valves on discharge of water pumps.
 21. Provide flow controls in water circulating systems as indicated on drawings.
 22. Install potable water protection devices on plumbing lines where contamination of domestic water may occur; on boiler feed water lines, janitor rooms, fire sprinkler systems, premise isolation, irrigation systems, flush valves, interior and exterior hose bibs.
 23. Pipe relief from valves, back-flow preventers and drains to nearest floor drain.
 24. Test backflow preventers according to ASSE 5013.
 25. Install water hammer arrestors complete with accessible isolation valve on hot and cold water supply piping to washing machine outlets.
 26. Install air chambers on hot and cold water supply piping to each fixture or group of fixtures (each washroom). Fabricate same size as supply pipe or 3/4 inch minimum, and minimum 18 inches long.
- 3.04 Field Quality Control
- A. Test domestic water piping system according to applicable code
- 3.05 Cleaning
- A. Flush system to remove traces of flux or other materials.

3.06 Disinfection Of Domestic Water System

- A. Prior to starting work, verify system is complete, flushed and clean.
- B. Verify pH of water to be treated is between 7.4 and 7.6 by adding alkali (caustic soda or soda ash) or acid (hydrochloric).
- C. Inject disinfectant, free chlorine in liquid, powder and tablet or gas form, throughout system to obtain residual from 50 to 80 mg/L.
- D. Bleed water from outlets to obtain distribution and test for disinfectant residual at minimum 15 percent of outlets.
- E. Maintain disinfectant in system for 24 hours.
- F. When final disinfectant residual tests less than 25 mg/L, repeat treatment.
- G. Flush disinfectant from system until residual concentration is equal to incoming water or 1.0 mg/L. Neutralize disinfectant and dispose of disinfecting water in accordance with ADEC regulations.
- H. Take samples no sooner than 24 hours after flushing, from 10 percent of outlets and from water entry, and analyze according to AWWA C651.

END OF FACILITY WATER DISTRIBUTION

SECTION 22 13 00 FACILITY SANITARY SEWERAGE

PART 1 - GENERAL

1.01 Summary

A. Section Includes:

1. Sanitary sewer piping buried within 5 feet of building.
2. Sanitary sewer piping above grade.
3. Unions and flanges.
4. Valves.
5. Pipe hangers and supports.
6. Floor drains.
7. Cleanouts.
8. Bedding and cover materials.

1.02 Submittals

A. Product Data:

1. Piping: Pipe materials, fittings, and accessories. Submit manufacturers catalog information.
2. Valves: Manufacturers catalog information with valve data and ratings for each service.
3. Hangers and Supports: Manufacturers catalog information including load capacity.
4. Sanitary Drainage Specialties: Manufacturers catalog information, component sizes, rough-in requirements, service sizes, and finishes.
5. Pumps: Pump type, capacity, certified pump curves showing pump performance characteristics with pump and system operating point plotted. Include NPSH curve. Include electrical characteristics and connection requirements.

B. Manufacturer's Installation Instructions: Material and equipment.

C. Manufacturer's Certificate: Products meet or exceed specified requirements.

1.03 Quality Assurance

A. Manufacturer: Company specializing in manufacturing products specified in this Section with three years' experience.

B. Installer: Company specializing in performing Work of this Section with three years' experience.

1.04 Field Measurements

- A. Verify field measurements prior to fabrication.

PART 2 - PRODUCTS

2.01 Sanitary Sewer Piping, Above Grade

- A. PVC Pipe: ASTM D1784, ASTM D1785.

- 1. Fittings: PVC, ASTM D2466
- 2. Joints: ASTM D2672, solvent weld socket.

- B. ABS Pipe: ASTM D2661 or ASTM F628, cellular core

- 1. Fittings: ABS, ASTM D2661.
- 2. Joints: ASTM D2235, solvent weld.

2.02 Unions And Flanges

- A. Unions for Pipe 2 inches and Smaller:

- 1. Copper Piping: Class 150, bronze unions with soldered joints.
- 2. Dielectric Connections: Union with galvanized or plated steel threaded end, copper solder end, water impervious isolation barrier.
- 3. PVC Piping: PVC.

- B. Flanges for Pipe 2-1/2 inches and Larger:

- 1. Copper Piping: Class 150, slip-on bronze flanges.
- 2. PVC Piping: PVC flanges.
- 3. HDPE Piping: 150# HDPE Flanges
- 4. Gaskets: 1/16 inch thick preformed neoprene gaskets.

- C. PVC Pipe Materials: For connections to equipment and valves with threaded connections, furnish solvent-weld socket to MNPT screwed joint adapters and unions, or ASTM D2464, Schedule 80, threaded, PVC pipe.

2.03 Pipe Hangars And Supports

- A. Refer to Section 22 05 29.

PART 3 - EXECUTION

3.01 Examination

- A. Verify excavations are to required grade, dry, and not over-excavated.

3.02 Preparation

- A. Ream pipe and tube ends. Remove burrs.
- B. Prepare piping connections to equipment with flanges or unions.

- C. Keep open ends of pipe free from scale and dirt. Protect open ends with temporary plugs or caps.

3.03 Installation

A. Aboveground Piping:

1. Establish invert elevations, slopes for drainage to 1/4 inch per foot minimum. Maintain gradients.
2. Extend cleanouts to finished floor or wall surface. Lubricate threaded cleanout plugs with mixture of graphite and linseed oil. Provide clearances at cleanout for snaking drainage system.
3. Encase exterior cleanouts in concrete flush with grade.
4. Install floor cleanouts at elevation to accommodate finished floor.
5. Provide non-conducting dielectric connections wherever jointing dissimilar metals.
6. Route piping in orderly manner and maintain gradient. Route parallel and perpendicular to walls.
7. Install piping to maintain headroom. Do not spread piping, conserve space.
8. Group piping whenever practical at common elevations.
9. Install piping to allow for expansion and contraction without stressing pipe, joints, or connected equipment. Refer to Section 22 05 00.
10. Provide clearance in hangers and from structure and other equipment for installation of insulation. Refer to Section 22 07 00.
11. Provide access where valves and fittings are not accessible.
12. Install piping penetrating roofed areas to maintain integrity of roof assembly.
13. Where pipe support members are welded to structural building framing, scrape, brush clean, and apply one coat of zinc rich primer to welding.
14. Prepare exposed, unfinished pipe, fittings, supports, and accessories ready for finish painting. Refer to Section 09 97 00.
15. Install bell and spigot pipe with bell end upstream.
16. Sleeve pipes passing through partitions, walls and floors.
17. Install firestopping at fire rated construction perimeters and openings containing penetrating sleeves and piping. Use UL or FM approved flexible firestop sealant, installed per manufacturer's instructions.
18. Support cast iron drainage piping at every joint.

3.04 Field Quality Control

- A. Test sanitary waste and vent piping system according to Uniform Plumbing Code.

END OF FACILITY SANITARY SEWERAGE

SECTION 22 30 00
PLUMBING EQUIPMENT

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Indirect Fired water heaters.
 - 2. Thermal Expansion Tank
 - 3. Pressure Tanks
 - 4. Pressure Pump

1.2 SUBMITTALS

- A. Product Data: Submit manufacturer's literature for plumbing equipment.

1.3 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: Submit literature and parts list.

1.4 WATER QUALITY MAINTENANCE

- A. All piping, equipment, and components in contact with potable water, including, but not limited to, tanks, pumps, piping, valves, fittings and instrumentation, shall be ANSI/NSF-61 approved unless otherwise approved by ADEC. Materials in direct contact with drinking water shall be lead free in accordance with the "Reduction of Lead in Drinking Water Act":
 - 1. Not containing more than 0.2 percent lead when used with respect to solder and flux; and
 - 2. Not more than a weighted average of 0.25 percent lead when used with respect to the wetted surfaces of pipes, pipe fittings, plumbing fittings and fixtures.

1.5 QUALITY ASSURANCE

- A. Water Heater Performance Requirements: Equipment efficiency not less than prescribed by ASHRAE 90.1 when tested in accordance with ANSI Z21.10.3.
- B. Perform Work in accordance with State of Alaska standards.

PART 2 - PRODUCTS**2.1 INDIRECT FIRED WATER HEATERS**

- A. Manufacturers:
 - 1. Amtrol.
 - 2. Substitutions: Permitted.
- B. Model: Commercial, heavy-duty rating by manufacturer. 5 year factory warranty.
- C. Tank: Welded 316 stainless steel. Constructed for working pressure of 150 psi, steel support base, taps for accessories, threaded connections of stainless steel.
- D. Exterior Coating: Polyethylene.
- E. Insulation: Urethane foam with heat loss under ½ degree F per hour.
- F. Heat exchanger: Multiple-pass, double wall vented type, IAPMO listed, removable for servicing, copper sweat connections.
- G. Temperature control: Integral thermostat.
- H. ASME rated temperature and pressure relief valve.

2.2 THERMAL EXPANSION TANKS

- A. Manufacturers:
 - 1. Amtrol
 - 2. Substitutions: Permitted
- B. Thermal expansion tanks shall be diaphragm or bladder type, welded steel, construction. Tanks shall be factory pre-charged. Surfaces contacting potable water shall be lead free.

2.3 PRESSURE TANKS

- A. Manufacturers:
 - 1. Amtrol.
 - 2. Substitutions: Permitted.
- B. Model: Commercial, 150 psig working pressure, 7 year factory warranty.
- C. Shell: Steel with steel or composite stand.
- D. Diaphragm: Butyl with antimicrobial covering.

- E. Connection: Stainless steel, threaded.
- F. Air valve: Projection welded.

2.4 PRESSURE PUMP

- A. Manufacturers:
 - 1. Grundfos
 - 2. Substitutions: Permitted.
- B. Packaged skid comprising of four pumps, suction and discharge headers, individual isolation valve and check valves, variable frequency drives, and associated appurtenances.
- C. The entire pumping package shall be NSF/ANSI/NSF-61 certified for potable drinking water and NSF-61 Annex G for a wetted area, weighted average lead content =0.25%.
- D. The control system shall include, as a minimum, the programmable logic station controller, variable frequency drives, a manifold mounted 4-20mA pressure transducer and any additional equipment as specified or as required to properly execute the sequence of operation.
- E. System shall require only suction, discharge and drain connections and single point power connections from a service entrance disconnect.
- F. All components shall be mounted and shipped as a single unit.
- G. The discharge of each pump shall be fitted with a control valve appropriate for station operation. Each pump and discharge valve assembly shall also be equipped with isolation valves so that the pump can be serviced while system is still filled.
- H. Pressure gauges shall be installed on the suction and discharge headers.
- I. Piping shall be sized so that water velocity shall not exceed 10.0 ft/sec in either the branches or manifolds.
- J. Pumps shall be protected from thermal accumulation via individual thermal relief mechanisms.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install equipment in accordance with manufacturer's instructions.

- B. Install water heaters in accordance to UL requirements. Coordinate with plumbing piping and related work to achieve operating system.
- C. Provide strap seismic bracing
 - 1. Tanks.
 - a. Provide one strap within the top third of the tank and a separate strap within the bottom third of tank.
 - b. Provide blocking between tank and wall for tight installation.
 - c. Lag straps and supporting structure to structural members. Do not use toggle bolts or fasteners just to wall panels.
- D. Clean and flush tanks after installation. Keep openings sealed until pipe connections are made.

END OF PLUMBING EQUIPMENT

SECTION 22 40 00 PLUMBING FIXTURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Lavatories
 - 2. Kitchen Sinks
 - 3. Urinals

1.1 SUBMITTALS

- A. Product Data: Submit manufacturer's literature for plumbing fixtures.

1.1 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: Submit literature and parts list.

1.1 WATER QUALITY MAINTENANCE

- A. Provide plumbing fixture fittings in accordance with ASME A112.18.1 that prevent backflow from fixture into water distribution system.
- B. All piping, equipment, and components in contact with potable water, including, but not limited to, tanks, pumps, piping, valves, fittings and instrumentation, shall be ANSI/NSF-61 approved unless otherwise approved by ADEC. Materials in direct contact with drinking water shall be lead free in accordance with the "Reduction of Lead in Drinking Water Act":
 - 1. Not containing more than 0.2 percent lead when used with respect to solder and flux; and
 - 2. Not more than a weighted average of 0.25 percent lead when used with respect to the wetted surfaces of pipes, pipe fittings, plumbing fittings and fixtures.

PART 2 - PRODUCTS

2.1 LAVATORIES

- A. Materials: Vitreous china, drop in lavatory, with drillings on 4-inch centers, round basin with front overflow.
- B. Faucet: Chrome, 4-inch centerset, single level handle, 1.2/1.5 gpm aerator, pop-up drain.
- C. Trim:
 - 1. P-trap: Polypropylene or PVC with threaded adapter
 - 2. Angle Stop: Quarter turn angle stop. Provide wall support.

3. Supply Tube: Corrugated stainless steel hose with single layer of stainless steel exterior braiding.
4. Thermostatic mixing valve: ASSE 1070 rated anti-scald valve

2.1 KITCHEN SINKS

- A. Materials: Stainless steel, double bowl sink, self-rimming, 20 gauge, under spray coating, with three faucet holes. Size 33" x 22", bowl depth of 8 inches.
- B. Faucet: Chrome, 8-inch centerset, 3-hole, single-handle, pull-out spray handle, 1.5 gpm aerator.
- C. Trim:
 1. P-trap: Polypropylene or PVC with threaded adapter
 2. Cup Strainer: Stainless steel body, washers, mounting nut, and slip nut. Stainless steel strainer basket with rotate style sealing.
 3. Angle Stop: Quarter-turn angle stop. Provide wall support.
 4. Supply Tube: Corrugated stainless steel hose with single layer of stainless steel exterior braiding.
 5. Chrome escutcheons for waste and water piping penetrations.
 6. Thermostatic mixing valve: ASSE 1070 rated anti-scald valve

2.1 URINALS

- A. Materials: Vitreous china, wall mount urinal, ¾" top-mount spud.
- B. Flushometer: Manual flush valve, polished chrome finish, ¾" top spud connection, ¾" supply pipe connection, 1 gallon per flush.
- C. Trim:
 1. P-trap: Polypropylene or PVC with threaded adapter

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify adjacent construction is ready to receive rough-in work of this section.
- B. Review millwork shop drawings. Confirm location and size of fixtures and openings before rough in and installation.

3.1 INSTALLATION

- A. Install each fixture with chrome plated rigid or flexible supplies with screwdriver stops, reducers, and escutcheons.
- B. Adjust stops or valves for intended water flow rate to fixtures without splashing, noise, or overflow.

END OF PLUMBING FIXTURES

SECTION 23 05 00 COMMON WORK RESULTS FOR MECHANICAL

PART 1 - GENERAL

1.01 Extent Of Coverage

- A. The requirements of this Section apply to all Division 22, 23 and referenced Sections from Division 43 including, but not limited to the following systems:
 - 1. Water utility transmission systems.
 - 2. Sanitary sewerage utility transmission systems.
 - 3. Heating utility transmission systems.
 - 4. Plumbing systems.
 - 5. Heating systems.
 - 6. Ventilation systems.
 - 7. Fuel systems.
 - 8. Controls systems.
- B. All requirements of Division 0 and 1 apply to these Specifications.

1.02 Work Included

- A. Furnish all labor, materials, equipment, supervision of labor and performance of all operations required to completely install code compliant and satisfactorily operating mechanical and plumbing systems as defined herein and on Plans.
- B. The intent of the Specifications and accompanying Plans is to provide a complete and operational facility with complete systems as shown, specified and required by applicable codes. Include all work specified in the Specifications and shown on the accompanying Plans including controls, fasteners, appurtenances, connections, etc., in the finished job.
- C. The Specifications and the accompanying Plans are complementary, and what is called for by one shall be as binding as if called for by both. Items shown on the Plans are not necessarily included in the Specifications and vice versa.
- D. Imperative language is frequently used in the Specifications. Except as otherwise specified, requirements expressed imperatively are to be performed by the Contractor.
- E. The Plans are diagrammatic and schematic in nature.
 - 1. The Plans do not show every offset, bend, tee, or elbow which may be required to install work in the space provided and avoid conflicts. Follow the Drawing as closely as is practical to do so and install additional offsets, bends, tees, and elbows where required by local conditions and

- measurements taken at the Building, subject to approval, and without additional cost to the Owner.
2. The plans do not show all taps, fittings, valves, and dampers required to integrate in a fully functional controls and process systems. Coordinate all work with the controls system and Sequence of Operation as well as process documents and Functional Narrative.
 3. Do not scale the mechanical drawings. Locations of equipment are approximate unless specifically dimensioned on the Plans. Equipment and fixtures shall be located to maintain code compliance and manufacturer's recommended installation clearances.
 4. The right is reserved to make any reasonable changes in outlet location prior to roughing-in.
- F. Notify Owner's Representative in writing immediately of any identified conditions that will impact the timely and successful installation of the systems in accordance with the Plans and Specifications.

1.03 Definitions:

- A. Definitions provided within this Section shall be superseded by definitions provided in Division 1.
- B. "Provide": Includes the furnishing and installation of all materials, equipment, products, labor, subcontracts, appurtenances, mark-ups, taxes, permits, and any other item which may be required to provide complete operable systems.
- C. "Furnish": Purchase and deliver to the job site, materials or labor as shown on the Plans or specified herein.
- D. "Install": The installation, setting in place, connection to, bolting down, supporting or any operation to make complete and operable.
- E. "Rough In / Connect Only": This means to provide an appropriate system connection such as supplies with stops, continuous wastes with traps, shut-off valves required, and all piping connections, testing, etc.
- F. "Accessible": Means arranged so that an appropriately dressed man 6'2" tall weighing 250 pounds, may approach the area in question with tools and products necessary for the work intended, and may then position himself to properly perform the task to be accomplished, without disassembly or damage to the surrounding installation.
- G. "Serviceable": means arranged so that the component or product in question may be properly removed, and replaced without disassembly, destruction, or damage to the surrounding installation or piece being serviced.
- H. "Streamlining" In many instances, the products, reference standards, and other itemized specifications have been listed without verbiage. In these cases, it is

implied that the Contractor shall provide the products and perform according to the references listed.

- I. “Demolish”: Means the removal of equipment and materials from the project including disposal off-site in compliance with applicable ADEC and other regulations.

1.04 Quality Assurance

A. Regulatory Requirements:

- 1. General: All work and materials shall conform to all local, State, and Federal codes, utility installation requirements, and other applicable laws and regulations. Verify with local Authority Having Jurisdiction for amendments.
- 2. All equipment furnished utilizing electrical or electronic products, shall be certified as complying with the most recent list of accredited electrical testing laboratories approved by the State of Alaska. Equipment not complying shall be replaced with certified equipment at no additional labor or materials cost to the Owner.

B. Permits:

- 1. Contractor shall obtain all required life/safety permits from the Authority Having Jurisdiction which may be State, Borough, and/or local entity.
- 2. All water and wastewater utility services shall be installed, sterilized, and tested in compliance with Alaska Department of Environmental Conservation regulations.
- 3. Contractor shall obtain all utility permits. Systems are to be installed in compliance with utility installation guidelines.
 - a. Contractor shall obtain and install all meters as required by the local utility.
- 4. Unless noted under Division 0 and 1, Contractor shall pay for all permits.

C. Materials and equipment shall be new. Work shall be of good quality, free of faults and defects and in conformance with the Contract Documents.

D. Apparatus shall be built and installed to deliver its full rated capacity at the efficiency for which it was designed.

E. The entire plumbing and mechanical system apparatus shall operate at full capacity without objectionable noise.

F. Materials and Equipment:

- 1. Each piece of equipment furnished shall meet all detailed requirements of the Plans and Specifications and shall be suitable for the installation shown. Notify the Engineer of any shortcomings found during the bid

period. Equipment not meeting all requirements will not be acceptable, even though specified by name along with other manufacturers.

2. Where two or more units of the same class of equipment are furnished, use products of the same manufacturer; component parts of the entire system need not be products of the same manufacturer.
3. Provide all materials and equipment, new and free from defects and of the size, make, type and quality herein specified.

G. Substitutions:

1. Substitutions in materials and equipment shall follow the requirements of Division 1.
2. The Contractor shall ensure that all substitutions have equal or better performance and will fit within the available space. The Contractor shall bear the full costs associated with a substitution including the costs of other trades, additional equipment and materials required for an acceptable installation, as well as any project delays that the substitution may generate.

H. Workmanship:

1. General: All materials shall be installed in a neat and workmanlike manner.
2. Only craftsman skilled in their trade shall be employed.
3. Manufacturer's Instructions: Follow manufacturer's recommendations where they cover points not specifically indicated. If they are in conflict with the Plans and Specifications, obtain clarification from the Owner's Representative before starting work.

I. Cutting and Patching:

1. Cutting, patching, and repairing for the proper installation and completion of the work specified in this Division, including plastering, masonry work, concrete work, carpentry work, and painting, shall be performed by skilled craftsmen of each respective trade in conformance with the appropriate Division of Work.
2. Fill holes which are cut oversize so that a tight fit is obtained around the objects passing through.

1.05 Coordination:

- A. Coordinate work with all trades to avoid conflicts, errors or delays.
- B. Coordinate all wall and floor penetrations/openings, supports, and component interfaces with the module fabrication team.

1. Module fabrication is not to proceed until details and shop drawings showing these points of collaboration have been submitted and reviewed by the design team.
- C. Coordinate the location and access for all operable and maintainable items.
- D. The work is inclusive of all Specifications and Plans. Fully review all contract documents and provide all plumbing and mechanical related work noted in all parts of the documents.

1.06 Scheduling

- A. Contractor shall schedule all work, including but not limited to the ordering of materials, demolition, installation, testing, balancing, and inspections to ensure a timely delivery of the project in accordance with the contract.
- B. Contractor shall schedule their work with all trades in advance to optimize system routing and reduce installation time.
- C. Contractor shall schedule and coordinate all interruptions of utilities or mechanical system operation in writing with the Owner's Representative at least one week in advance or as directed under Division 1.
- D. Coordinate commissioning and close-out testing activities with the Owner's Representative, design team, Commissioning Agent and all trades involved in the process. Coordinate timing of all commissioning activities into the master construction schedule.

1.07 Project Conditions

- A. Contractor shall field measure and verify dimensions prior to the fabrication and ordering of equipment.
- B. Contractor shall verify access routes for equipment and materials to be removed and installed without impacting finishes or the dismantling of equipment unless specifically noted in the Specifications and Plans.
- C. Immediately notify the Owner's Representative if any major damage, defect or deterioration of existing equipment, systems, or structural members is found on items noted to remain that will impact the successful installation and operation of new systems or create an unsafe environment.

1.08 Qualifications

- A. Manufacturers: All equipment and materials shall be provided from a manufacturer who has been in business for a minimum of three years and provides ready access to replacement parts.
- B. Installers: Contractor, subcontractors, and their supervisors shall have a minimum of three documented years of experience installing systems similar in type and size.

1.09 Submittals

- A. Provide submittals in accordance with the requirements of each Specification Section and Division 1.
- B. Submission Requirements:
 - 1. Provide submittals for engineer's review electronically, in PDF format. Provide separate files for each Specification Section.
 - a. Provide Bookmarks for each piece of equipment and/or system.
 - 2. The bulk of the shop drawings and product data, except controls and instrumentation, shall be included with the original submittal. Controls and Instrumentation submittals may be submitted separately, but shall be complete when submitted. Partial submittals will not be accepted.
 - 3. All resubmittals shall include a cover sheet referencing each review comment and how the resubmittal resolves the comment. Changes from the original submittal shall be clearly identified including items that were previously approved.
 - 4. Assure that all deviations from Plans and Specifications are specifically and clearly identified and called to the attention of the Engineer in the submittals. Failure to comply will void review automatically.
- C. Product Data:
 - 1. In general, submit product data for all materials, equipment, and appurtenances required for a complete and operational system. Include manufacturer's detailed shop drawings, specifications, performance information, and data sheets.
 - 2. Clearly identify the model number and all accessories being provided. If the equipment is scheduled in the Plans, clearly show the equipment Tag/Identifier on the first page of that piece of equipment's submittal information.
 - 3. Cross out accessories and options that are not being provided.
 - 4. Indicate equipment dimensions and operating weights including bases and weight distribution at support points.
 - 5. Identify equipment horsepower/watts/amperage, voltage, hertz, phase, and service factor.
 - 6. For commodity items such as piping and ductwork, unless specifically noted otherwise within the specification, a general statement of what materials and joining methods may be provided for each type of system. For example, "Hydronic Heating Piping: Type L Copper, lead-free solder joints."
- D. Shop Drawings:

1. Submit large scale dimensioned shop drawings of any custom equipment or system components.
 - a. Provide shop drawings for all products, systems, system components, and special supports which are not a standard catalog product and which may be fabricated for the Contractor or by the Contractor.
 - b. Items to include, but not limited to:
 - 1). Ventilation hoods.
 - 2). Anti-vortex assemblies.
 2. Include shop drawings of plumbing systems integrated into the module construction. Shop drawing is to note not only how the plumbing device is being installed but also the construction and fastening/sealing system of the adjacent module system. Shop drawing submittal shall include, but not limited to, the following items:
 - a. Floor drains.
 - b. Emergency Shower drain receiver including grating system.
 3. Do not proceed with fabrication of materials until Shop Drawings have been submitted and approved.
- E. Coordination Drawings
1. Prepare and submit Shop Drawings to demonstrate coordination of trades in the proper planning and installation and arrangement of all work as well as permanent access to equipment and maintainable items.
 2. Submit large scale dimensioned shop drawings of the following areas in the project:
 - a. All mechanical and plumbing systems.
 3. Coordination Drawings shall include the following systems overlaid in the same drawing:
 - a. Plumbing Systems
 - b. Water Treatment Systems
 - c. Heating Systems
 - d. Ventilation Systems
 - e. Control System major special components such as panels.
 - f. Electrical Systems as follows:
 - 1) Lights
 - 2) Panels, transfer switches, transformers
 - 3) Disconnects, motor starters, VFDs

- 4) Conduits 3 inches and larger
- 5) Cable trays
- 6) Busways
- 7) Power generation equipment
4. Do not proceed with installation or fabrication of materials until Coordination Drawings have been submitted and approved.
- F. Commissioning:
 1. Coordinate additional submittal and start-up documentation with Commissioning specification sections.

1.010 Closeout Submittals

- A. Provide closeout submittals in accordance with the requirements of each Specification Section and Division 1.
- B. Operation and Maintenance Manual
 1. Provide requirements noted under each Specification Section and in Division 1
 2. The manuals shall be organized the same as under the Submittals section above.
 3. Provide the Owner's Representative hard and electronic copies per Division 1.
 4. Provide an index noting that the beginning of the manual noting each specification section and what materials/pieces of equipment are provided therein.
 - a. For electronic copies, provide Bookmarks for each piece of equipment and/or major system.
 5. Provide a cover sheet for each piece of equipment that includes the following information:
 - a. General Contractor's name, address, and phone number.
 - b. Installing Contractor's name, address, and phone number.
 - c. Manufacturer's warranty contact information.
 - d. Nearest source of spare parts including company's name, address, and phone number.
 6. Submit information on materials/equipment that will require regular maintenance. Items such as lavatory bowls need not be resubmitted. For each included item, provide the following:
 - a. Information noted under Submittals section above. Update information based on final installation.

- b. Manufacturer's Operation and Maintenance manuals.
 - c. Exploded views of equipment.
 - d. Replacement parts list.
 - e. Capacity curves and charts.
 - f. Wiring diagrams.
 - g. Assembly piping diagrams noting valves and system appurtenances.
 - h. Warranty information.
7. Maintenance Schedules: For each piece of equipment or system that requires regular maintenance, provide a chart that includes the following:
- a. Unique equipment identifier.
 - b. Maintenance activity as recommended by the manufacturer.
 - c. Time interval associated with each activity (annually, monthly, weekly, etc.).
 - d. Boxes for service providers to initial when scheduled service is completed.
8. Startup and Shutdown Narratives: For each system and major piece of equipment, provide a written narrative on how to startup and shutdown the system.
- a. Organize the narrative in a bulleted, checklist type format.
 - b. Identify specific valve numbers or equipment tags used in the process.
 - c. Include system schematics, screen shots, and/or photographs as required to convey information and processes.
- C. Record Drawings
- 1. In addition to other requirements, mark up a clean set of Drawings as the work progresses, to show the dimensioned location and routing of all mechanical work which will become permanently concealed. Show routing and location of items cast in concrete or buried underground. Show routing of work in permanently concealed blind spaces within the building. Work located in spaces with access, or above suspended ceilings, is not considered permanently concealed. Show complete routing and sizing of any significant revisions to the systems shown.
 - 2. Make all markups in a color other than black, preferably red, to highlight the change.
 - 3. Show all contract changes including field directives and additional information provided by the design team during construction.

4. Show the location of all valves.
 5. At completion of the project, deliver these drawings to the Owner's Representative and obtain written receipt.
- D. Provide the following items printed with non-fading ink and either framed with plexiglass or laminated and hung in the mechanical room:
1. Valve directory that includes service and normal operating position.
 2. Water treatment system and distribution schematic along with Functional Narrative
 3. Domestic water system schematic along with sequence of operation.
 4. Heating system schematic along with sequence of operation.
 5. Fuel system schematic along with sequence of operation.
 6. Ventilation system schematic along with sequence of operation.
 7. Additional maintenance instructions as noted within the specification section.
- E. Commissioning:
1. Coordinate additional close-out testing and documentation with Commissioning specification sections.

1.011 Electrical Work

- A. Reference the electrical Specifications and Plans for additional requirements.
- B. All electrical work, equipment, wiring, devices, and components shall comply with the requirements of local and national electrical codes and with Division 24, 25, 26, 27, and 28.
- C. Contractor shall verify the voltage and phase that will be available for the project. Bring to the immediate attention of the Engineer if the provided voltage and phase is different from that which is noted on the Plans or Specifications for equipment.
- D. Unless otherwise indicated on the electrical Plans or Specifications, provide all mechanical equipment motors, thermal overload switches, control relays, time clocks, thermostats, valve operators, float controls, damper motors, electric-pneumatic and pneumatic-electric switches, electrical components, wiring, and any other miscellaneous controls for equipment specified under Division 22 and 23.
- E. All electrical equipment, devices, and components that are tested by Underwriters Laboratories, Inc. shall be UL listed and shall bear a UL label.
- F. Starters and Disconnects: Suitable for performing the control functions required, with the exception of self-contained equipment and where the starters and/or disconnects are provided or furnished as part of the control package.

- G. Equipment Wiring: Interconnecting wiring within a piece of mechanical equipment shall be provided with the equipment unless required otherwise. This does not include the wiring of motors, starters, and controllers as provided under electrical Specifications.
- H. Control Wiring: All wiring for mechanical equipment shall be provided under this section.
- I. Mounting and Wiring:
 - 1. All 120 volt and higher wiring shall be installed by a licensed electrician.
 - 2. Coordinate between the mechanical and electrical trades the installation of equipment electrical appurtenances such as starters, disconnects, VFDs, time clocks, controllers, line voltage thermostats and similar items.
 - 3. Coordinate the installation and wiring of fire life-safety devices that impact the mechanical equipment such as duct smoke detectors, smoke dampers, smoke evacuation systems and equipment operation that is based on a signal from the fire alarm panel.

1.012 Use Of Mechanical Systems During Construction

- A. The Contractor shall request in writing to the Owner's Representative for the use of any plumbing or mechanical system during construction that is not limited to startup, testing or balancing.
- B. The use of equipment and systems during construction shall not alter the Warranty requirements of this Section and Division 1. The Contractor shall provide extended warranties as required to fulfill the requirements of the contract.
- C. Contractor shall pay for all utilities and fuel associated with the operation of the systems unless specifically noted otherwise under Division 1 or in writing from the Owner.

1.013 Delivery, Storage, And Handling

- A. Reference Division 1 for additional requirements.
- B. Ordering: Comply with manufacturer's ordering instructions and lead-time requirements to avoid construction delays.
- C. Delivery: Deliver materials free of defect in manufacturer's original, unopened, undamaged containers with identification labels intact.
- D. Storage: Provide adequate storage at the job site for timely access to materials.
 - 1. Provide heated storage for products such as mastics, caulking, and some electronic processors to maintain manufacturer's recommended minimum storage temperature.
 - 2. Store materials to protect from corrosion or warping.
- E. Protection: Protect materials from damage during construction.

- F. Piping, ductwork, and equipment shall have open ends capped or sealed during storage and installation.
- G. Module Delivery
 - 1. All equipment and materials are to be secured for shipment to final destination.
 - 2. Durably seal all openings into piping, ductwork, and modules for shipment.
 - 3. Remove and safely store exterior components such as ventilation hoods and boiler flues for travel.
 - 4. Reinstall all components once modules are installed. Provide new gaskets as required for tight, no-leakage installation.

1.014 Spare Parts And tools

- A. Provide spare parts and tools as noted within each Section and within Division 1.

1.015 INSPECTIONS

- A. Reference Division 1 for additional requirements.
- B. All work and materials shall be available for inspection by the Owner's Representative, the Design Team, and the Authority Having Jurisdiction at all times.

1.016 Warranty

- A. Warranty information shall be provided to the more stringent requirements of this Section, Division 1 and the specific specification Sections.
- B. Provide manufacturers written warranties for material and equipment furnished including parts and labor for a period of one year from the date of Owner acceptance of work.
- C. Correct warranty items promptly upon notification.

PART 2 - PRODUCTS

2.01 Materials And Equipment

- A. All materials and equipment shall be new unless specifically noted in the contract documents.
- B. Provide materials and equipment from major and reputable manufacturers that have the availability of local service providers and expeditious access to spare parts.
- C. Provide all materials that are incidental to the installation of equipment and systems to include, but not limited to fasteners, sealants, mastics, tapes, caulking, gaskets, grout, fluxes and solder, etc.

- D. Provide materials from the same manufacturer where possible.
- E. All materials shall be free of asbestos and other hazardous materials.
- F. All materials in contact with domestic and potable water shall be free of lead and be certified compliant with NSF 61.

2.02 Motors

- A. Reference Division 26 for additional requirements.
- B. Motors shall be furnished as an integral part of driven equipment.
- C. Motors shall be listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to Authorities Having Jurisdiction, and marked for intended use.
- D. Motors shall be built to NEMA standards for the service intended.
- E. Motors shall be rated for the voltage specified, suitable for operation within the range of 10 percent above to 10 percent below the specified voltage.
- F. Service Factor: Motors 1/2 HP and larger to have minimum service factor of 1.15 unless noted otherwise.
- G. Duty: Continuous duty at ambient temperature of 105 deg F and at altitude of 3300 feet above sea level.
- H. Overload Protection: Motors under 1/2 HP shall have internal overload protection.
- I. Provide single speed, 1750 RPM motors unless otherwise noted.
- J. Inverter Ready: All motors over 1/2 HP shall be inverter ready.
- K. Efficiency: Premium Efficiency.
- L. Enclosure: Unless otherwise noted, indoor installations to be Open Drip-Proof (ODP) and outside installations to be Totally Enclosed Fan-Cooled (TEFC). Motors in hazardous (classified) areas shall be rated for the classification.
- M. Insulation: Provide motors with minimum Class F insulation.
- N. Belt Drive Motors: Furnish drives on belt drive equipment of not less than 150 percent of equipment brake horsepower required for performance specified.
- O. Variable Speed Driven Motors:
 - 1. Provide Energy- and Premium Efficient Motors: Minimum Class B temperature rise, Class F insulation.
 - 2. Inverter-Duty Motors: Minimum Class F temperature rise, Class H insulation.
 - 3. Provide integral shaft grounding ring.

PART 3 - EXECUTION

3.01 Examination

- A. Reference Division 1 and 2 for additional requirements.
- B. Site Verification of Conditions: Verify that site conditions are acceptable for installation of materials. Do not proceed with installation until unacceptable conditions are corrected.

3.02 Installation

- A. Install all materials and equipment in accordance with the manufacturer's recommendations and local codes.
- B. All work shall be installed professionally and to industry best practices.

3.03 Painting

- A. Painting shall comply with the requirements of Division 9 Specifications.
- B. Paint equipment, piping, and materials as noted in the Plans and within specific Sections.
- C. Damage and Touchup: Repair marred and damaged factory-painted finishes with materials and procedures to match original factory finish.

3.04 Erection Of Metal Supports And Anchorage

- A. Reference Division 5 for additional requirements.
- B. Cut, fit, and place miscellaneous metal supports accurately in location, alignment, and elevation to support and anchor mechanical materials and equipment.
- C. Field Welding: Comply with AWS D1.1.

3.05 Motor Installation

- A. Remove transportation braces from vibration platforms.
- B. Align motors, bases, and shafts.
- C. Verify motor operation is free of vibration under all conditions.
- D. Verify bearing lubrication prior to operating.
- E. Verify proper motor rotation.
- F. Verify amperage draw for all phases under design conditions is below nameplate rating.
- G. Belt Driven Equipment:
 - 1. Align pulleys and belts.
 - 2. Tension belts according to manufacturer's recommendations.
 - 3. Verify belt guards are in place.

3.06 Startup

- A. Startup shall be provided to the more stringent requirements of this Section, Division 1 and the specific specification Sections.
- B. Startup all equipment in accordance with manufacturer's instructions.
- C. Ensure connected systems are clean of debris and ready for system testing.
- D. Coordinate electrical and other trades work to complete timely startup of all equipment and systems.

3.07 Training

- A. Training shall be provided to the more stringent requirements of this Section, Division 1 and the specific specification Sections.
- B. The Contractor shall provide a minimum of 20 hours of instruction on the operation and maintenance of the installed systems and equipment.
 - 1. Coordinate with the Owner the personnel that are to attend.
 - 2. Training shall be scheduled for the time(s) that best fits the Owner's personnel's time schedule.
- C. The Operation and Maintenance Manual shall be used as a guide during the training.
- D. Equipment training shall be provided by a factory trained representative unless otherwise noted.
- E. Training shall include a classroom portion and a field portion.
 - 1. The classroom portion of the training shall include the following:
 - a. Overview of the systems and their orientation within the facility.
 - b. "Big picture" explanation of the systems as a whole and how they operate.
 - c. Specific equipment training including preventative maintenance activities, using the manufacturer's maintenance guide as a reference.
 - d. Additional training items appropriate for a classroom environment.
 - 2. The field portion shall be onsite and shall include the following:
 - a. Building walk through identifying the locations of all equipment, isolation valves, control/fire dampers, and other items that will be accessed during the operation of the facility. Reference the Plans during the walk through for orientation.
 - b. Step-by-step procedures on how to startup and shutdown the systems and pieces of equipment.

- c. Regular maintenance activities as identified in the Operations Manual's regular Maintenance Schedules.
 - d. Point out specific maintenance appurtenances such as grease fittings, valves, and control panel buttons used during maintenance and daily operation activities.
 - e. Walk through control panel and sensor user interfaces and explain what each screen is showing as well as how to change system setpoints through the interface.
- F. All training shall be digitally video recorded.
 - 1. Videos shall be converted to cross-platform, open source formats such as MP4 or equal.
 - 2. Videos shall be separated by equipment and system. File names shall clearly indicate the training contents.
 - 3. Submit 3 copies of the recorded training to the Owner either via DVD or solid state storage device such as a USB Flash Drive.
- G. Certification: A paper survey shall be provided to each trainee immediately after the end of each training session.
 - 1. The survey shall include scoring on if the training was applicable, helpful, and sufficient.
 - 2. All surveys are to be submitted to the Owner's Representative.
 - 3. If a training session was deemed to be not helpful, applicable, or complete, the Contractor shall provide additional training at no additional cost to the Owner.

3.08 Testing

- A. Testing is to be completed in accordance with the requirements of Division 1 and the specific specification Sections.
- B. Testing is to comply with the minimum requirements of all codes and regulations.

END OF COMMON WORK RESULTS FOR MECHANICAL

SECTION 23 05 29

HANGERS AND SUPPORTS FOR HVAC PIPING AND EQUIPMENT

PART 1 - GENERAL

1.01 Summary

A. Section Includes:

1. Pipe hangers and supports.
2. Hanger rods.
3. Flashing.
4. Sleeves.
5. Mechanical sleeve seals.
6. Formed steel channel.
7. Firestopping
8. Equipment Bases and Supports:

1.02 Submittals

- A. Shop Drawings: Indicate system layout with location including critical dimensions, sizes, and pipe hanger and support locations and detail of trapeze hangers.
- B. Product Data:
 1. Hangers and Supports: Manufacturers catalog data including load capacity.
- C. Design Data: Indicate load-carrying capacity of trapeze, multiple pipe, and riser support hangers. Indicate calculations used to determine load carrying capacity of trapeze, multiple pipe, and riser support hangers.
- D. Manufacturer's Installation Instructions:
 1. Hangers and Supports: Special procedures and assembly of components.
- E. Manufacturer's Certificate: Products meet or exceed specified requirements.

1.03 Quality Assurance

- A. Fire-Resistant Joints in Fire-Rated Floor, Roof, and Wall Assemblies: UL 2079 to achieve fire resistant rating as indicated on Drawings for assembly in which joint is installed.
- B. Fire-Resistant Joints Between Floor Slabs and Exterior Walls: ASTM E119 with 0.10 inch wg minimum positive pressure differential to achieve fire resistant rating as indicated on Drawings for floor assembly.
- C. Surface Burning Characteristics: Maximum 25/450 flame spread/smoke developed index when tested according to ASTM E84.
- D. Perform Work according to AWS D1.1 for welding hanger and support attachments to building structure.

- E. Passivate stainless steel welds per ASTM A967. Confirm absence of free iron in heat affected zone using ASTM A967, Copper Sulfate Test, Practice C.
- F. Manufacturer: Company specializing in manufacturing products specified in this Section with three years' experience.
- G. Installer: Company specializing in performing Work of this Section with three years' experience.

1.04 Field Measurements

- A. Verify field measurements prior to fabrication.

PART 2 - PRODUCTS

1.01 Pipe Hangars And Supports

A. Manufacturers:

1. Carpenter & Paterson, Inc.
2. ERICO International Corporation
3. Unitron Product, Inc. / US-Strut
4. Substitutions: Permitted.

B. Hydronic Piping:

1. Hangars shall be hot-dipped galvanized or stainless steel.
2. Conform to MSS SP69.
3. Hangars for Pipe Sizes 1/2 to 1-1/2 inch: Malleable iron or steel, adjustable swivel, split ring.
4. Hangars for Cold Pipe Sizes 2 inches and Larger: Steel, adjustable, clevis.
5. Hangars for Hot Pipe Sizes 2 to 4 inches: Steel, adjustable, clevis.
6. Hangars for Hot Pipe Sizes 6 inches and Larger: Adjustable steel yoke, cast iron roll, double hanger.
7. Multiple or Trapeze Hangars: Steel channels with welded spacers and hanger rods.
8. Multiple or Trapeze Hangars for Hot Pipe Sizes 6 inches and Larger: Steel channels with welded spacers and hanger rods, cast iron roll.
9. Wall Support for Pipe Sizes 3 inches and Smaller: Cast iron hooks.
10. Wall Support for Pipe Sizes 4 inches and Larger: Welded steel bracket and wrought steel clamp.
11. Wall Support for Hot Pipe Sizes 6 inches and Larger: Welded steel bracket and wrought steel clamp with adjustable steel yoke and cast iron roll.
12. Vertical Support: Steel riser clamp.
13. Floor Support for Cold Pipe: Cast iron adjustable pipe saddle, lock nut, nipple, floor flange, and concrete pier or steel support.

14. Floor Support for Hot Pipe Sizes 4 Inches and Smaller: Cast iron adjustable pipe saddle, lock nut, nipple, floor flange, and concrete pier or steel support.
15. Floor Support for Hot Pipe Sizes 6 inches and Larger: Adjustable cast iron roll and stand, steel screws, and concrete pier or steel support.
16. Copper Pipe Support: Vinyl coated, steel adjustable ring.

1.02 Accessories

- A. Hanger Rods: Stainless steel threaded both ends, threaded on one end, or continuous threaded.

1.03 Flashing

- A. Metal Flashing: 26 gage stainless steel.
- B. Metal Counterflashing: 22 gage stainless steel.
- C. Lead Flashing:
 1. Waterproofing: 5 lb./sq. ft sheet lead.
 2. Soundproofing: 1 lb./sq. ft sheet lead.
- D. Flexible Flashing: 47 mil thickness sheet butyl; compatible with roofing.
- E. Caps: Stainless steel, 22 gage minimum; 16 gage at fire-resistant elements.

1.04 Sleeves

- A. Sleeves for Pipes Through Non-fire Rated Floors: 18 gage galvanized steel.
- B. Sleeves for Pipes Through Non-fire Rated Beams, Walls, Footings, and Potentially Wet Floors: Stainless steel pipe.
- C. Sleeves for Round Ductwork: Galvanized steel.
- D. Sleeves for Rectangular Ductwork: Galvanized steel.
- E. Sealant: Acrylic.

1.05 Mechanical Sleeve Seals

- A. Manufacturers:
 1. Link-Seal
 2. Substitutions: Permitted.
- B. Product Description: Modular mechanical type, consisting of interlocking synthetic rubber links shaped to continuously fill annular space between object and sleeve, connected with bolts and pressure plates causing rubber sealing elements to expand when tightened, providing watertight seal and electrical insulation.

1.06 Formed Steel Chain

- A. Product Description: Galvanized or stainless 12 gage thick steel. With holes 1-1/2 inches on center.

1.07 Firestopping

- A. Firestopping Materials: Acrylic based flexible firestop sealant, UL listed and FM approved.

1.08 Equipment Bases And Support

- A. All floor or floor stand-mounted equipment shall be set on concrete housekeeping pads. The height of the pads shall be as recommended by the equipment manufacturer, as required to connect to piping or as shown on drawings. The height shall be sufficient to accommodate required anchorage devices.
- B. The pads shall extend 3 inches beyond the machine base in all directions unless otherwise indicated on the drawings or by the equipment manufacturer. The top edges of the pads shall be chamfered.
- C. Concrete work shall be in accordance with Division 3.

PART 3 - EXECUTION**1.01 Preparation**

- A. Obtain permission from Architect/Engineer before using powder-actuated anchors.
- B. Do not drill or cut structural members.

1.02 Installation**A. Pipe Hangers and Supports:**

1. Install according to MSS SP 69.
2. Support horizontal piping as scheduled.
3. Install hangers with minimum 1/2 inch space between finished covering and adjacent Work.
4. Place hangers within 12 inches of each horizontal elbow.
5. Use hangers with 1-1/2 inch minimum vertical adjustment.
6. Support vertical piping at every floor.
7. Where piping is installed in parallel and at same elevation, provide multiple pipe or trapeze hangers.
8. Support riser piping independently of connected horizontal piping.
9. Provide vinyl coated hangers and supports in contact with copper piping.
10. Design hangers for pipe movement without disengagement of supported pipe.
11. Provide clearance in hangers and from structure and other equipment for installation of insulation. Refer to Section 22 07 00.

B. Equipment Bases and Supports:

1. Using templates furnished with equipment, install anchor bolts, and accessories for mounting and anchoring equipment.

2. Construct supports of steel members or formed steel channel. Brace and fasten with flanges bolted to structure.
3. Provide rigid anchors for pipes after vibration isolation components are installed.

C. Flashing:

1. Provide flexible flashing and metal Counterflashing where piping and ductwork penetrate weather or waterproofed walls, floors, and roofs.
2. Provide acoustical lead flashing around ducts and pipes penetrating equipment rooms for sound control.
3. Provide curbs for roof installations 14 inches minimum high above roofing surface. Flash and counter-flash with stainless steel sheet metal; seal watertight. Attach Counterflashing to equipment and lap base flashing on roof curbs. Flatten and solder joints.
4. Adjust storm collars tight to pipe with bolts; caulk around top edge. Use storm collars above roof jacks. Screw vertical flange section to face of curb.

D. Sleeves:

1. Exterior watertight entries: Seal with mechanical sleeve seals.
2. Set sleeves in position in forms. Provide reinforcing around sleeves.
3. Size sleeves large enough to allow for movement due to expansion and contraction. Provide for continuous insulation wrapping.
4. Extend sleeves through floors 1 inch above finished floor level. Caulk sleeves.
5. Where piping or ductwork penetrates floor, ceiling, or wall, close off space between pipe or duct and adjacent Work with firestopping insulation and caulk airtight per firestopping manufacturer's instructions. Provide close fitting metal collar or escutcheon covers at both sides of penetration.
6. Install stainless steel escutcheons at finished surfaces.

1.03 Schedules

A. Copper and Steel Pipe Hanger Spacing:

PIPE SIZE INCHES	COPPER TUBING MAXIMUM HANGER SPACING FEET	STEEL PIPE MAXIMUM HANGER SPACING FEET	COPPER TUBING HANGER ROD DIAMETER INCHES	STEEL PIPE HANGER ROD DIAMETER INCHES
1/2	5	7	3/8	3/8
3/4	5	7	3/8	3/8
1	6	7	3/8	3/8
1-1/4	7	7	3/8	3/8

PIPE SIZE INCHES	COPPER TUBING MAXIMUM HANGER SPACING FEET	STEEL PIPE MAXIMUM HANGER SPACING FEET	COPPER TUBING HANGER ROD DIAMETER INCHES	STEEL PIPE HANGER ROD DIAMETER INCHES
1-1/2	8	9	3/8	3/8
2	8	10	3/8	3/8
2-1/2	9	11	1/2	1/2
3	10	12	1/2	1/2
4	12	14	1/2	5/8
5	13	16	1/2	5/8
6	14	17	5/8	3/4
8	16	19	3/4	3/4

B. Plastic and Ductile Iron Pipe Hanger Spacing:

PIPE MATERIAL	MAXIMUM HANGER SPACING FEET	HANGER ROD DIAMETER INCHES
ABS (All sizes)	4	3/8
PP-R (Note 1)		
PVC & CPVC(All Sizes)	4	3/8
Ductile Iron (Note 2)		

C. Note 1: Refer to manufacturer's recommendations.

D. Note 2: 20 feet maximum spacing, minimum of one hanger for each pipe section close to joint behind bell. Provide hanger at each change of direction and each branch connection. For pipe sizes 6 inches and smaller, subjected to loadings other than weight of pipe and contents, limit span to maximum spacing for water service steel pipe.

END OF HANGARS AND SUPPORTS FOR HVAC PIPING AND EQUIPMENT

SECTION 23 05 93

TESTING, ADJUSTING, AND BALANCING FOR HVAC

PART 1 - GENERAL

1.01 Summary

A. Section Includes:

1. Testing, adjusting, and balancing of air systems.
2. Testing, adjusting, and balancing of hydronic systems.

1.02 Submittals

- A. Draft Reports: Submit for review prior to final acceptance of Project.
- B. Test Reports: Submit prior to final acceptance of Project and for inclusion in operating and maintenance manuals. Assemble in soft cover, letter size, 3-ring binder, with table of contents page and tabs, and cover identification. Include reduced scale drawings with air outlets and equipment identified to correspond with data sheets, and indicating thermostat locations.

PART 2 - PRODUCTS

2.01 Not Used.

PART 3 - EXECUTION

3.01 Examination

- A. Before starting work, verify systems are complete and operable.
- B. Report defects, deficiencies, or abnormal conditions in mechanical systems preventing system balance.
- C. Beginning of work means acceptance of existing conditions.

3.02 Installation Tolerances

- A. Air Handling Systems: Adjust to within plus or minus 5 percent of design for supply systems and plus or minus 10 percent of design for return and exhaust systems.
- B. Air Outlets and Inlets: Adjust to within plus or minus 10 percent of design.
- C. Hydronic Systems: Adjust to within plus or minus 10 percent of design.

3.03 Air System Procedure

- A. Adjust air handling and distribution systems to deliver design supply, return, and exhaust air quantities within previously stated tolerances.
- B. Make air flow rate measurements in ducts by traverse of entire cross sectional area of duct.

- C. Measure air quantities at air inlets and outlets.
- D. Use volume control devices to regulate air quantities only to extent those adjustments do not create objectionable air motion or sound levels. Change volume using dampers mounted in ducts.
- E. Vary total system air quantities by adjustment of fan speeds. Provide drive changes to accomplish system air flow. Vary branch air quantities by damper regulation.
- F. Measure static air pressure conditions on air supply units, including filter and coil pressure drops, and total pressure across fan. Allow for pressure drop equivalent to 50 percent loading of filters.
- G. Adjust automatic outside air, return air, and exhaust air dampers for design conditions.
- H. Measure temperature conditions across outside air, return air, and exhaust air dampers to check leakage.
- I. At modulating damper locations, take measurements and balance at extreme conditions.

3.04 Water System Procedure

- A. Adjust water systems after air balancing to deliver design quantities within previously stated tolerances.
- B. Use calibrated fittings or equipment and pressure gages to determine flow rates for system balance. Where not installed, base flow balance on temperature difference across heat transfer elements.
- C. Change system balance with automatic control valves fully open to heat transfer elements.
- D. Change adjustment of water distribution systems by means of balancing cocks, valves, and fittings.

3.05 Field Quality Control

- A. Verify recorded data represents actually measured or observed conditions.
- B. Permanently mark settings of valves, dampers, and other adjustment devices. Set and lock memory stops.

END OF TESTING, ADJUSTING, AND BALANCING FOR HVAC

SECTION 23 10 00 FUEL-OIL SYSTEM

PART 1 - GENERAL

1.01 Summary

- A. Section Includes:
 - 1. Fuel oil piping.
 - 2. Unions and flanges.
 - 3. Valves.
 - 4. Fuel trim accessories
 - 5. Pipe hangers and supports.
 - 6. Flexible connectors.
 - 7. Fuel oil storage tank.

1.02 Submittals

- A. Shop Drawings:
 - 1. Fuel Storage Tank: Indicate tank construction and dimensions, including tappings.
- B. Product Data:
 - 1. Piping: Data on pipe materials, fittings, and accessories. Submit manufacturers catalog information.
 - 2. Valves: Manufacturer's catalog information with valve data and ratings for each service.
 - 3. Hangers and Supports: Manufacturer's catalog information including load capacity.
 - 4. Fuel Piping Specialties: Manufacturer's catalog information including capacity, rough-in requirements, and service sizes.
 - 5. Fuel Oil Storage Tank Appurtenances: Manufacturer's catalog information
- C. Test Reports: Written test results for piping system pressure test.
- D. Welders Certificates: AWS certified within previous 12 months.

1.03 Quality Assurance

- A. Perform Work according to NFPA 30.
- B. List and label flexible connectors and hoses according to UL 536.
- C. Perform Work according to ASME B31.9 code for installation of piping systems and ASME Section IX for welding materials and procedures.

- D. Perform Work according to applicable code for welding hanger and support attachments to building structure.
- E. Perform Work according to State of Alaska standards.
- F. Manufacturer: Company specializing in manufacturing products specified in this Section with three years' experience.
- G. Installer: Company specializing in performing Work of this Section with three years' experience.

1.04 Field Measurements

- A. Verify field measurements prior to fabrication.

1.05 Spare Parts

- A. Provide touch-up primer and paint for fuel tank.
- B. Provide one extra filter for all fuel filter assemblies.

PART 2 - PRODUCTS

2.01 Fuel Oil Piping – Above Ground

- A. Steel Pipe: ASTM A53/A53M or ASME B36.10M Schedule 40 black.
 - 1. Fittings: ASME B16.3, malleable iron, or ASTM A234/A234M wrought carbon steel and alloy steel welding type.
 - 2. Joints: Threaded for pipe 2 inch and smaller; welded for pipe 2-1/2 inches and larger.
- B. Copper Tube: ASTM B88, Type K annealed seamless copper tubing
 - 1. Fittings and joints: ASME B16.26 flared fittings

2.02 Unions And Flanges

- A. Unions for Pipe 2 inches and Smaller:
 - 1. Ferrous Piping: Class 150, malleable iron, threaded.
 - 2. Copper Tubing: ASME B16.22, wrought copper alloy body, solder joint and threaded ends.

2.03 Ball Valves

- A. Manufacturer: Anderson Brass, “Kantleak” or equal.
- B. MSS SP 110, Class 125, two piece, full port, threaded ends, bronze or brass body, chrome plated bronze ball, Viton or Buna-N double o-rings, lever handle, UL 842 listed for flammable liquids and LPG, full port.

2.04 Check Valves

- A. Horizontal Swing Check Valves:

1. MSS SP 80, Class 150, bronze body and cap, bronze seat, Buna-N disc, threaded ends.

2.05 Fuel Trim Accessories

A. Oil De-aerator

1. Basis of Design: Westwood Products Tigerloop Ultra, model S220-8 or approved equal.
2. De-aerator: UL listed oil de-aerator with glass bulb and 1/4 NPTF connections. Rated for maximum nozzle capacity of 20 GPH, inlet pressure of 8 PSI, operating temperature of 20 to 105 degrees F.
3. Filter: Spin on, 10 micron filter element, inside epoxy lined canister.

B. Fusible Valve

1. Manufacturer: Firomatic or approved equal.
2. UL 842 listed, brass, gate type, viton seals, with spring and replaceable fusible element, manually operable, flare connections.

C. Oil Safety Valve

1. Manufacturer: Webster or approved equal.
2. UL listed, 1/2 inch NPTF connections.

D. Oil Filter

1. Manufacturer: General Filter Model 2A-700 or approved equal.
2. UL listed, 12 psi working pressure, 25 GPH firing rate, 25 micron wool felt filtering media with 83 square inch filtering surface, and 3/4 inch threaded connections.

2.06 Pipe Hangars And Supports

- A. Conform to MSS SP 69 and MSS-SP 89.
- B. Hangers for Pipe Sizes 1/2 to 1-1/2 inch: Carbon steel, adjustable swivel, split ring.
- C. Hangers for Pipe Sizes 2 inches and Larger: Carbon steel, adjustable, clevis.
- D. Multiple or Trapeze Hangers: Steel channels with welded spacers and hanger rods.
- E. Wall Support for Pipe 3 inches and Smaller: Cast iron hook.
- F. Vertical Support: Steel riser clamp.
- G. Floor Support: Cast iron adjustable pipe saddle, lock nut, nipple, floor flange, and concrete pier or steel support.

2.07 Flexible Connectors

- A. Interior 2 inches and Smaller: UL Listed, corrugated stainless steel inner hose with single layer of Type 304 stainless steel exterior braiding, with threaded ends.
 - 1. Boilers: 24 inches long
 - 2. All other connections: Min 16 inches long
- B. Exterior Applications, 2 inches and Smaller: UL536 Listed, 321 stainless steel annual closed pitch corrugated hose, 304 stainless steel braid, 300 stainless steel ferrule, beveled weld ends.
 - 1. Length: Minimum 18 inches.
 - 2. Offset: Minimum 1" with 60 degree angular deflection.
 - 3. Basis of Design, Flex-Hose model UFFWN-UL or approved equal.

2.08 Fuel Oil Storage Tank

- A. Product Description: Aboveground, double wall, steel storage tank. Manufactured according to UL 142 and labeled.
- B. Storage Tank: Welded steel, horizontal cylindrical, with steel support saddles on steel skids.
- C. Tank Exterior Finish: Salt-spray corrosion resistant system. Material thicknesses per manufacturer's Technical Data Sheet (TDS) recommendations.
 - 1. Manufacturer: Devoe
 - 2. Primer: Cathacoat 302H
 - 3. Epoxy mid-coat: Bar-Rust 236
 - 4. Polyurethane: Devthane 389
- D. Storage Tank: Fabricated with following:
 - 1. Threaded connections as shown on the drawings. Furnish thread protectors inserted in threaded openings prior to shipment.
- E. Accessories:
 - 1. OSHA approved external ladder, galvanized steel or aluminum, rated for 300 pounds.
 - 2. Lifting Lugs: For handling and installation.
 - 3. Tank Decals: Furnish warning and tank identification signs located prominently on tank following local fire code requirements.
 - 4. Fill container: 7-1/2 gallon overfill containment chamber with hinged cover, stainless steel hinges, handle, safety chain, and lock hasp. Provide 2" male threads for installation of overfill prevention valve below tank. Morrison Bros. 518M-0200 AC or equal.

5. Overfill Valve: 2 inch, float type overfill prevention valve, stainless steel cam and dust plug/cap. Minimum 5 psi flow requirement. Morrison Bros. Model 9095AA or equal.
 - a. Provide drop fill tube.
6. Aluminum T-type screened vent caps for normal vents for primary tank and secondary containment. Morrison Bros. model 155 or equal.
 - a. Provide aluminum risers.
7. Emergency Vents: Furnish for each compartment emergency vent sized in accordance with NFPA 30 and UL 142. Height to exceed top of fill container. OPW 301 Series or equal.
8. Level Gauge: Mechanical float activated level gauge capable of indicating approximate fluid level in the tank, read in feet and inches. OPW model 200TG or approved equal.
9. Anti-siphon valve for supply line to daytank, OPW 199ASV or equal, 5 feet to 10 feet of head hydrostatic head pressure.
10. Leak Gauge: HDPE plastic housing assembly with aluminum bushing. Aluminum internal rods and HDPE float. Krueger Sentry Gauge, Type K or equal.
 - a. Provide gauge guard.
11. Suction tube with foot valve.
12. Fuel return and fill drop tube to within 6 inches of bottom of tank.
 - a. Return pipe to have holes drilled within 6 inches of the top of the tank.

PART 3 - EXECUTION

3.01 Preparation

- A. Ream pipe and tube ends. Remove burrs. Bevel plain end ferrous pipe.
- B. Prepare piping connections to equipment with flanges or unions.
- C. Fuel storage tank finishes are to be applied at the tank manufacturing facility under environmental conditions approved by the finish manufacturer's recommendations.

3.02 Installation

- A. Pipe Hangers and Supports:
 1. Install hangers and supports according to ASME B31.9, and MSS SP 89.
 2. Support horizontal piping hangers maximum 6 feet.
 3. Install hangers to provide minimum 1/2 inch space between finished covering and adjacent Work.

4. Place hangers within 12 inches of each horizontal elbow.
5. Install hangers to allow 1-1/2 inch minimum vertical adjustment. Design hangers for pipe movement without disengagement of supported pipe.
6. Where installing several pipes in parallel and at same elevation, provide multiple pipe hangers or trapeze hangers.
7. Finish paint exposed steel hangers and supports according to Section 099000.
8. Provide clearance in hangers and from structure and other equipment for installation of insulation and access to valves and fittings.

B. Aboveground Piping:

1. Install fuel oil piping according to NFPA 31.
2. Provide non-conducting dielectric connections wherever jointing dissimilar metals. Install according to NACE RP-01-69.
3. Route piping in orderly manner and maintain gradient.
4. Install piping to conserve building space and not interfere with use of space.
5. Group piping whenever practical at common elevations.
6. Install piping to allow for expansion and contraction without stressing pipe, joints, or connected equipment.
7. Sleeve pipe passing through partitions, walls and floors.
8. Prepare pipe, fittings, supports, and accessories not pre-finished, ready for finish painting. Refer to Section 099000.
9. Finish paint interior and exterior fuel oil pipe, fittings, supports, and accessories in bright yellow. Refer to Section 099000.
10. Install valves with stems upright or horizontal, not inverted.
11. Protect piping systems from entry of foreign materials by temporary covers, completing Sections of Work, and isolating parts of completed system.

C. Fuel Oil Storage Tank Installation

1. Install tank on level surface.
2. Install tank per NFPA 30, NFPA 31, and STI R912 requirements.
3. Install normal vent caps at 12 feet above grade.
4. Resurface any blemishes and scrapes by applying primer, mid-coat, and polyurethane coatings to maximize corrosion resistance.

3.03 Field Quality Control

- A. Pressure-test fuel oil piping according to NFPA 31.

END OF FUEL OIL SYSTEM

SECTION 23 20 00 HVAC PIPING AND PUMPS

PART 1 - GENERAL

1.01 Summary

- A. Section Includes:
 - 1. Pipe and pipe fittings.
 - 2. Pipe hangers and supports.
 - 3. Valves.
 - 4. Piping specialties.
 - 5. HVAC piping specialties.
 - 6. HVAC pumps.
 - 7. Glycol makeup system
 - 8. Glycol solution.

1.02 Submittals

- A. Product Data:
 - 1. Pipe Hangers and Supports: Submit manufacturers catalog data including load carrying capacity.
 - 2. Valves: Submit Manufacturers catalog information with valve data and ratings for each service.
 - 3. Piping Specialties: Submit product description, model, dimensions, component sizes, rough-in requirements, service sizes, and finishes. Submit schedule indicating manufacturer, model number, size, location, rated capacity, load served, and features for each specialty.
 - 4. Pipe Expansion Products: Indicate maximum temperature and pressure rating, and maximum expansion compensation.
 - 5. Pumps: Submit pump type, capacity, certified pump curves showing pump performance characteristics with pump and system operating point plotted. Include NPSH curve when applicable. Include electrical characteristics and connection requirements. Include manufacturer's catalogue information.
- B. Shop Drawings: Reference Section 230500, Common Work Results for Mechanical.
 - 1. Provide shop drawings of floor and wall based pipe support systems including weight ratings for each connection point. Reference 220548, Vibration and Seismic Controls.

- C. Manufacturer's Certificate: Certify products meet or exceed specified requirements.

1.03 Quality Assurance

- A. Perform Work in accordance with of State of Alaska standards.

1.04 Maintenance Service

- A. Furnish the following spare parts:
 - 1. One extra set of mechanical seals for pumps.

PART 2 - PRODUCTS

2.01 Pipes and Tubes

- A. Heating Water Piping:
 - 1. Copper Tubing: ASTM B88, Type L drawn, cast brass, wrought copper, or mechanically extracted fittings, lead free solder joints.
- B. Equipment Drains and Overflows:
 - 1. Steel Pipe: ASTM A53/A53M, Grade B, Schedule 40 black steel, malleable iron or forged steel fittings, threaded or welded joints.
 - 2. Copper Tubing: ASTM B88, Type L, drawn, cast brass, wrought copper fittings, lead free solder joints.
 - 3. PVC Pipe: ASTM D1785, Schedule 40, or ASTM D2241, SDR 21 or 26, PVC fittings, solvent weld joints.

2.02 Pipe Hangars And Supports

- A. Conform to MSS SP 69.
- B. Hangers for Pipe Sizes 1/2 to 1-1/2 inch: Carbon steel, adjustable swivel, split ring.
- C. Hangers for Cold Pipe Sizes 2 inches and Over: Carbon steel, adjustable, clevis.
- D. Hangers for Hot Pipe Sizes 2 to 4 inches: Carbon steel, adjustable, clevis.
- E. Multiple or Trapeze Hangers for Pipe Sizes to 4 inches: Steel channels with welded spacers and hanger rods.
- F. Wall Support for Pipe Sizes to 3 inches: Cast iron hooks.
- G. Floor Support for Hot Pipe Sizes to 4 Inches: Cast iron adjustable pipe saddle, lock nut, nipple, floor flange, and concrete pier or steel support.
- H. Copper Pipe Support: Copper-plated, carbon steel ring.

2.03 Valves

- A. Ball Valves:

1. Bronze or stainless steel one piece body, chrome plated brass ball, Teflon seats and stuffing box ring, lever handle, solder or threaded ends.
- B. Butterfly Valves:
 1. Bronze body, stainless steel disc, resilient replaceable seat, threaded ends, extended neck, lever handle.
- C. Swing Check Valves:
 1. Bronze body and swing disc, solder or threaded ends.
- D. Relief Valves:
 1. Bronze body, Teflon seat, stainless steel stem and springs, automatic, direct pressure actuated capacities ASME certified and labeled.

2.04 Piping Specialties

- A. Flanges, Unions, and Couplings:
 1. Malleable iron unions for threaded ferrous piping; bronze unions for copper pipe, soldered joints.
 2. Dielectric Connections: Provide dielectric nipples or flanges. Dielectric unions are not allowed.
- B. Strainers:
 1. All strainers to be able to receive blow-down ball valve connections.
 2. Threaded brass or iron body for 175 psig working pressure, Y pattern with 1/32 inch stainless steel perforated screen.
- C. Flexible Connectors:
 1. Corrugated stainless steel hose with single layer of stainless steel exterior braiding, minimum 9 inches long with copper tube ends; for maximum working pressure 300 psig.
- D. Air Vents:
 1. Manual Type: Short vertical sections of 2 inch diameter pipe to form air chamber, with 1/8 inch brass needle valve at top of chamber.
 2. Float Type: Brass or semi-steel body, copper, polypropylene, or solid non-metallic float, stainless steel valve and valve seat; suitable for system operating temperature and pressure; with isolating valve.
- E. Pressure Gages:
 1. Gage: ASME B40.1, UL 393 with bourdon tube, rotary brass movement, brass socket, front calibration adjustment, black scale on white background.
 - a. Case: Steel.
 - b. Bourdon Tube: Phosphor bronze.

- c. Dial Size: 3-1/2 inch diameter.
- d. Mid-Scale Accuracy: One percent.
- e. Scale: Psi.
- f. Range: Selected for mid-range at normal operating conditions for the application.

F. Thermometers:

- 1. Adjustable angle, digital display, light powered, ABS case with enamel finish, cast aluminum adjustable joint with positive locking device.
 - a. Size: 7-inch case
 - b. Power source: Photovoltaic cells requiring 10 lux of illumination for operation.
 - c. Display: 9/16 inch LCD, 4 digits, 1/10 degree resolution. switchable between F and C, updated every 10 seconds.
 - d. Stem: Aluminum, 3/4 inch NPT, 3-1/2 inch long, with glass passivated thermistor.
 - e. Range: Minus 40 to 300 degrees F (minus 40 to 150 degrees C)
 - f. Accuracy: 1 percent or 1 degree F, whichever is greater

2.05 HVAC Piping Specialties

A. Diaphragm-Type Expansion Tanks

- 1. Manufacturers:
 - a. Amtrol.
 - b. Taco.
 - c. Substitutions: Permitted.
- 2. Construction: Welded steel, rated for working pressure of 100 psig, with flexible butyl/EPDM diaphragm sealed into tank and steel support stand.
- 3. Accessories: Pressure gage and air-charging fitting, tank drain; pre-charge to 12 psig.

B. Air Separators:

- 1. Manufacturers:
 - a. Spirotherm.
 - b. Substitutions: Permitted.
- 2. In-line Air Separators: Welded Steel; designed and constructed for 150 psig working pressure.
 - a. Woven copper wire and copper tube internal element to remove entrained air and to coalesce and remove microbubbles.

2.06 HVAC Pumps

- A. Manufacturers:
 - 1. Grundfos.
 - 2. Taco.
 - 3. Substitutions: Permitted.
- B. System Lubricated Circulators
 - 1. Type: Horizontal shaft, single stage, direct connected with multiple speed wet rotor motor for in-line mounting, for 140 psig maximum working pressure, 230 degrees F maximum water temperature.
 - 2. Construction: Cast iron casing flanged pump connections, stainless steel impeller, shaft, and rotor, impedance protected motor.
- C. Variable Speed Wet Rotor Circulators
 - 1. Type: In-line wet rotor design. The pump, motor, and variable speed drive shall be an integral product.
 - 2. The pump shall be labeled on the nameplate as having an Energy Efficiency Index (EEI) of no greater than 0.20.
 - 3. Construction: Cast iron housing, stainless steel impellers and shaft, carbon graphite thrust bearing, EPDM O-rings.,
 - 4. Motor: 4-pole permanent-magnet motor, cooled by the fluid, self-ventilating, Minimum Class F insulation.
 - 5. Operating Modes:
 - a. Back-Up Operation: Two pumps, operated in a primary/back-up configuration shall communicate wirelessly to one another. One pump shall operate at a time with the other pump turning on automatically if the primary pump fails.
 - 6. Controls: Operator interface, integral sensor, one analog input, three digital inputs, two outlet relays.
 - 7. Add-On Modules:
 - a. Modbus

2.07 Glycol Makeup System

- A. Packaged glycol makeup system: Polyethylene solution container sized as noted on the drawings, complete with lid, glycol charging pump, strainer and shut-off valve. Removable lid shall have a hole to accommodate system safety relief valve discharge pipe in such a way that lid remains removable for filling and mixing without modifying the piping.
- B. Pumping Assembly: The pressurization assembly shall consist of a pressurization pump with pressure controls, a pre-pressurized storage tank, a PRV, and pressure

gauge to continuously monitor PRV outlet pressure. Pump shall be set to maintain glycol system pressure of 12 psig, adjustable between 8 psig and 25 psig.

2.08 Glycol Solution

- A. Manufacturers:
 - 1. Dow Chemical Co.
 - 2. Substitutions: Permitted.
- B. Inhibited propylene glycol and water solution mixed 50 percent glycol / 50 percent water, suitable for operating temperatures from minus 40 degrees F to 250 degrees F.

PART 3 - EXECUTION

3.01 Examination

- A. Verify excavations are to required grade, dry, and not over-excavate.

3.02 Preparation

- A. Ream pipe and tube ends. Remove burrs. Bevel plain end ferrous pipe.
- B. Remove scale and dirt, on inside and outside piping before assembly.
- C. Prepare piping connections to equipment with flanges or unions.

3.03 Installation – Piping System

- A. Install heating water piping in accordance with ASME B31.9.
- B. Install dielectric connections wherever jointing dissimilar metals.
- C. Install unions downstream of valves and at equipment or apparatus connections.
- D. Route piping parallel to building structure and maintain gradient.
- E. Install piping to maintain headroom. Group piping to conserve space. Group piping whenever practical at common elevations.
- F. Slope piping and arrange systems to drain at low points.
- G. Install piping to allow for expansion and contraction without stressing pipe, joints, or connected equipment.
- H. Provide clearance in hangers and from structure and other equipment for installation of insulation and access to valves and fittings.
- I. Sleeve pipe passing through partitions, walls and floors.
- J. Install piping system allowing clearance for installation of insulation and access to valves and fittings.
- K. Protect piping systems from entry of foreign materials by temporary covers, completing sections of the work, and isolating parts of completed system.

3.04 Installation – Module Construction

- A. Provide removable pipe sections at module seams with unions or flanges.
 - 1. Pipe sections to be installed during initial testing.
 - 2. Pipe sections are then to be removed, drained, sealed, and packaged for shipment. Label the pipe sections to identify exact location for field reinstallation.
 - 3. Piping is then to be reinstalled after field assembly of the modules.
 - 4. Final installation is then to be tested, sterilized, and final insulation and pipe identifications added as needed.

3.05 Installation – Pipes And Supports

- A. Support horizontal piping as scheduled.
- B. Install hangers with minimum 1/2 inch space between finished covering and adjacent work.
- C. Place hangers within 12 inches of each horizontal elbow.
- D. Use hangers with 1-1/2 inch minimum vertical adjustment.
- E. Support horizontal cast iron pipe adjacent to each hub, with 5 feet maximum spacing between hangers.
- F. Support vertical piping at every other floor. Support vertical cast iron pipe at each floor at hub.
- G. Where piping is installed in parallel and at same elevation, provide multiple pipe or trapeze hangers.
- H. Support riser piping independently of connected horizontal piping.
- I. Provide copper plated hangers and supports for copper piping.
- J. Design hangers for pipe movement without disengagement of supported pipe.

3.06 Installation - Valves

- A. Install valves with stems upright or horizontal, not inverted.
- B. Install gate, ball or butterfly valves for shut-off and to isolate equipment, part of systems, or vertical risers.
- C. Install globe, ball or butterfly valves for throttling, bypass, or manual flow control services.
- D. Provide lug end butterfly valves adjacent to equipment when functioning to isolate equipment.
- E. Install 3/4 inch ball drain valves with hose thread adapter and cap at low points of piping, and at equipment.

3.07 Installation – Piping Specialties

- A. Install one pressure gage for each pump, locate taps before strainers and on suction and discharge of pump; pipe to gage.
- B. Install pressure gages with pulsation dampers. Provide needle valve or ball valve to isolate each gage. Extend nipples to allow clearance from insulation.
- C. Install thermometers in piping systems in sockets in short couplings. Enlarge pipes smaller than 2-1/2 inches for installation of thermometer sockets. Allow clearance from insulation.
- D. Install gages and thermometers in locations where they are easily read from normal operating level. Install vertical to 45 degrees off vertical.
- E. Adjust gages and thermometers to final angle, clean windows and lenses, and calibrate to zero.
- F. Install manual air vents at system high points.
- G. Provide drain and hose connection with valve on strainer blow down connection.
- H. Select system relief valve capacity greater than make-up pressure reducing valve capacity. Select equipment relief valve capacity to exceed rating of connected equipment. Install piping from relief valve outlet to nearest floor drain.
- I. Pipe relief valve outlet to nearest floor drain, or to glycol fill system as shown.
- J. Support piping adjacent to pump so no weight is carried on pump casings. For close coupled or base mounted pumps, install supports under elbows on pump suction and discharge line sizes 4 inches and over.
- K. Support tanks inside building from building structure.

3.08 Field Quality Control

- A. Pressure test piping in accordance with the International Mechanical Code.
 - 1. Piping to be tested at 50% above operating pressure or 50 psi at a minimum.
 - 2. Do not install pressure gauges until after the test.
 - 3. Isolate sensitive equipment, such as the boilers, when completing the test.

3.09 Cleaning – Heating Piping

- A. Prior to starting work, verify system is complete, flushed and clean.
- B. Add to the hydronic system one pound of Trisodium Phosphate for each sixty gallons of system capacity.
- C. Boil out system for four hours at a minimum temperature of 195 degrees F.
- D. After boil out, completely drain and flush system including low points.
- E. Clean strainers and remove construction strainers.

- F. Fill system with glycol where indicated.
- G. Test for strength of glycol and water solution and submit written test results.

3.010 Schedules

- A. Adjust hanger spacing based on module roof loading.
- B. Copper and Steel Pipe Hanger Spacing:

PIPE SIZE Inches	COPPER TUBING MAXIMUM HANGER SPACING Feet	STEEL PIPE MAXIMUM HANGER SPACING Feet	COPPER TUBING HANGER ROD DIAMETER Inches	STEEL PIPE HANGER ROD DIAMETER Inches
1/2	5	7	3/8	3/8
3/4	5	7	3/8	3/8
1	6	7	1/2	1/2
1-1/4	7	7	1/2	1/2
1-1/2	8	9	1/2	1/2
2	8	10	1/2	1/2

END OF HVAC PIPING AND PUMPS

SECTION 23 31 00 HVAC DUCTS AND CASINGS

PART 1 - GENERAL

1.01 Summary

A. Section Includes:

1. Duct Materials.
2. Ductwork fabrication.
3. Ductwork accessories.

1.02 Performance Requirements

- A. Variation of duct configuration or sizes other than those of equivalent or lower loss coefficient is not permitted except by written permission.

1.03 Submittals

- A. Shop Drawings: Duct fabrication drawings, drawn to scale not smaller than 1/4 inch equals 1 foot, on drawing sheets same size as Contract Documents, indicating:

1. Fabrication, assembly, and installation details, including plans, elevations, sections, details of components, and attachments to other Work.
2. Duct layout, indicating pressure classifications and sizes in plan view. For exhaust duct systems, indicate classification of materials handled as defined in this Section.
3. Fittings.
4. Reinforcing details and spacing.
5. Seam and joint construction details.
6. Hangers and supports, including methods for building attachment, vibration isolation, and duct attachment.

- B. Product Data: Duct materials.

1.04 Closeout Submittals

- A. Project Record Documents: Record actual locations of ducts and duct fittings. Record changes in fitting location and type. Show additional fittings used.

1.05 Quality Assurance

- A. Perform Work according to SMACNA - HVAC Duct Construction Standards - Metal and flexible.
- B. Construct ductwork to NFPA 90A and NFPA 90B standards.
- C. Passivate stainless steel welds per ASTM A967. Confirm absence of free iron in heat affected zone using ASTM A967, Copper Sulfate Test, Practice C.

1.06 Environmental Requirements

- A. Do not install duct sealant when temperatures are less than those recommended by sealant manufacturers.
- B. Maintain temperatures during and after installation of duct sealant.

1.07 Field Measurements

- A. Verify field measurements prior to fabrication.

PART 2 - PRODUCTS

2.01 Duct Materials

- A. Galvanized Steel Ducts: ASTM A653/A653M galvanized steel sheet, lock-forming quality, having G90 zinc coating in conformance with ASTM A90/A90M.
- B. Stainless Steel Ducts: ASTM A240, Type 304 or ASTM A666, Type 304L where fabrication is by welding.
- C. Fasteners: Stainless steel bolts, or stainless steel sheet metal screws.
- D. Hanger Rod: ASTM F593; stainless steel, threaded both ends, threaded one end, or continuously threaded. Zinc plated hardware will not be accepted.

2.02 Ductwork Fabrication

A. General:

- 1. Fabricate and support rectangular ducts according to SMACNA HVAC Duct Construction Standards - Metal and Flexible. Provide duct material, gages, reinforcing, and sealing for operating pressures indicated.
- 2. Construct T's, bends, and elbows with minimum radius 1-1/2 times centerline duct width. Where not possible and where rectangular elbows are used, provide turning vanes. Where acoustical lining is indicated, furnish turning vanes of perforated metal with glass fiber insulation.
- 3. Seal joints between duct sections and duct seams with welds, gaskets, mastic adhesives, mastic plus embedded fabric systems, or tape.
 - a. Sealants, Mastics and Tapes: Conform to UL 181A. Provide products bearing appropriate UL 181A markings.
 - b. Do not provide sealing products not bearing UL approval markings.

2.03 Flexible Duct Connections

- A. Fabricate according to SMACNA HVAC Duct Construction Standards - Metal and Flexible.
- B. Connector: Fabric crimped into metal edging strip.
 - 1. Fabric: UL listed fire-retardant neoprene coated woven glass fiber fabric conforming to NFPA 90A, minimum density 30 oz per sq yd.
 - 2. Net Fabric Width: Approximately 4 inches wide.

3. Metal: 3 inch wide, 24 gage galvanized steel.

2.04 Balancing Dampers

- A. Fabricate according to SMACNA HVAC Duct Construction Standards - Metal and Flexible.
- B. Single Blade Dampers: Fabricate for duct sizes up to 6 x 30 inch.
 1. Material: Same gage as duct to 24 inches size in both dimensions, and two gages heavier for sizes over 24 inches.
 2. End Bearings: Except in round ductwork 12 inches and smaller, furnish end bearings.
 3. Quadrants:
 - a. Furnish locking, indicating quadrant regulators.
 - b. On insulated ducts mount quadrant regulators on standoff mounting brackets, bases, or adapters.

PART 3 - EXECUTION

3.01 Examination

- A. Verify sizes of equipment connections before fabricating transitions.

3.02 Installation

- A. Install and seal ducts according to SMACNA HVAC Duct Construction Standards - Metal and Flexible.
- B. During construction, install temporary closures of metal or taped polyethylene on open ductwork to prevent construction dust from entering ductwork system.
- C. Install duct hangers and supports as required.
- D. Use double nuts and lock washers on threaded rod supports.
- E. Exhaust Outlet Locations:
 1. Minimum Distance from Building Openings: 3 feet.
 2. Minimum Distance from Outside Air Intakes: 10 feet.

END OF HVAC DUCTS AND CASINGS

SECTION 23 33 00 AIR DUCT ACCESSORIES

PART 1 - GENERAL

1.01 Summary

A. Section Includes:

1. Back-draft dampers.
2. Combination fire-and-smoke dampers.
3. Duct access doors.
4. Dynamic fire dampers.
5. Static fire dampers.
6. Ceiling fire dampers.
7. Smoke dampers.
8. Volume control dampers.
9. Flexible duct connections.
10. Duct test holes.
11. Dial thermometers.
12. Static pressure gages.

1.02 Submittals

A. Product Data:

1. Shop-fabricated assemblies and hardware used.
2. Electrical characteristics and connection requirements.
3. Fire dampers including locations and ratings.
4. Smoke dampers including locations and ratings.
5. Backdraft dampers.
6. Flexible duct connections.
7. Volume control dampers.
8. Duct access doors.
9. Duct test holes.
10. Product Data: For fire dampers:
 - a. Include UL ratings, dynamic ratings, leakage, pressure drop, and maximum pressure data.
 - b. Indicate materials, construction, dimensions, and installation details.

- c. Damper pressure drop ratings based on tests and procedures performed according to AMCA 500.
- B. Manufacturer's Installation Instructions: Fire and combination smoke and fire dampers.
- C. Manufacturer's Certificate: Products meet or exceed specified requirements.
- 1.03 Quality Assurance
 - A. Test, rate, and label dampers according to latest UL requirements.
 - B. Damper pressure drop ratings based on tests and procedures performed according to AMCA 500.
 - C. Perform Work according to SMACNA standards.
 - D. Manufacturer: Company specializing in manufacturing products specified in this Section with three years' experience.
- 1.04 Field Measurements
 - A. Verify field measurements prior to fabrication.
- 1.05 Coordination
 - A. Coordinate Work with building control Work.
- 1.06 Warranty
 - A. Furnish five-year manufacturer warranty for duct accessories.
- 1.07 Extra Materials
 - A. Furnish two of each size and type of fusible link.

PART 2 - PRODUCTS

- 2.01 Dampers
 - A. Back-Draft Dampers:
 - 1. Product Description: Multi-Blade, back-draft dampers: Parallel-action, gravity-balanced, Galvanized 16 gage thick steel, or extruded aluminum. Blades, maximum 6 inch width, with felt or flexible vinyl sealed edges. Blades linked together in rattle-free manner with 90-degree stop, steel ball bearings, and plated steel pivot pin. Furnish dampers with adjustment device to permit setting for varying differential static pressure.
 - B. Dynamic Fire Dampers:
 - 1. Fabricate according to NFPA 90A and UL 555.
 - 2. Fire Resistance: 1-1/2 hours

3. Dynamic Closure Rating: Dampers classified for dynamic closure to 2,000 fpm and 4 inches w.g. static pressure.
 4. Construction:
 - a. Integral Sleeve Frame: Minimum 20 gage roll formed galvanized steel.
 - b. Action: Spring or gravity closure upon fusible link release.
 - c. Material: Minimum 24 gage roll formed, galvanized steel.
 - d. Closure Springs: Type 301 stainless steel, constant force type, if required.
 5. Fusible Link Release Temperature: 212 degrees F
 6. Mounting: Vertical or horizontal
 7. Duct Transition Connection, Damper Style:
 - a. A style - rectangular connection, frame and blades in air stream.
 - b. B style - rectangular connection, blades out of air stream, high free area.
 - c. G style - A style connection, grille mounting tabs at end of sleeve for grille.
 - d. CR style - round connection, sealed.
 - e. CO style - oval connection, sealed.
 - f. R style - round connection, blades in air stream, non-sealed.
 - g. LR style - round connection, blades out of air stream, non-sealed.
 - h. LO style - oval connection, non-sealed.
 8. Finish: Mill galvanized.
- C. Static Fire Dampers:
1. Fire Rating: UL 555 classified and labeled as a 1-1/2 hour static fire damper.
 2. Air Flow Rating: UL approved for dual directional air flow.
 3. Integral Sleeve Frame: Minimum 20 gage by 12 inches roll formed, galvanized steel.
 - a. Factory Sealant: Apply to dampers in HVAC systems with pressures to maximum 4 inches w.g.
 4. Blades:
 - a. Style: Curtain type, in airstream.
 - b. Action: Spring or gravity closure upon fusible link release.
 - c. Orientation: Horizontal.
 - d. Material: Minimum 24 gage roll formed, galvanized steel.

5. Closure Springs: Type 301 stainless steel, constant force type, if required.
 6. Temperature Release Device:
 - a. Fusible link 212 degrees F.
 - b. Mounting: Horizontal.
 7. Duct Transition Connection, Damper Style:
 - a. A style - rectangular connection, frame and blades in air stream.
 - b. B style - rectangular connection, blades out of air stream, high free area.
 - c. G style - A style connection, grille mounting tabs at end of sleeve for grille.
 - d. R style - round connection, blades in air stream, non-sealed.
 - e. RA style - round connection, frame and blades in air stream.
 - f. LR style - round connection, blades out of air stream, non-sealed.
 - g. LO style - oval connection, non-sealed.
 8. Finish: Mill galvanized.
 9. Picture Frame Mounting Angles:
 - a. One-piece, roll formed retaining angles.
 - b. Factory matched and shipped attached to damper.
- D. Ceiling Fire Dampers:
1. Fire Rating: UL 555C classified and labeled as a 1-1/2 hour ceiling damper.
 2. Air Flow Rating: UL approved for dual directional air flow.
 3. Frame: minimum 3 inches by minimum 20 gage galvanized steel with roll formed ridge for blade stop.
 4. Blades:
 - a. Style: Two piece, single thickness with blade insulation, hinged in center, and held open with fusible link.
 - b. Action: Butterfly.
 - c. Orientation: Horizontal.
 - d. Material: Minimum 20 gage galvanized steel.
 5. Hinge: Spring stainless steel, mechanically attached to blades.
 6. Mounting: Horizontal.
 7. Temperature Release Device: Fusible link, 212 degrees F.
 8. Finish: Mill galvanized.
 9. Performance Data:

- a. Pressure Drop: Maximum 0.1 inches w.g. at 500 fpm across 18 x 18 inch damper.

10. Fusible Volume Adjust: UL classified.

11. Extended Frame:

- a. Rectangular Dampers: 6 inches
- b. Round Dampers: 6-1/2 inches

E. Volume Control Dampers:

1. Fabricate according to SMACNA HVAC Duct Construction Standards - Metal and Flexible[, and as indicated].
2. Splitter Dampers:
 - a. Material: Same gage as duct to 24 inches size in both dimensions, and two gages heavier for sizes over 24 inches.
 - b. Blade: Fabricate of single thickness sheet metal to streamline shape, secured with continuous hinge or rod.
 - c. Operator: Minimum 1/4 inch diameter rod in self aligning, universal joint action, flanged bushing with set screw.
 - d. Single Blade Dampers: Fabricate for duct sizes up to 6 x 30 inch.
3. Multi-Blade Damper: Fabricate of opposed blade pattern with maximum blade sizes 8 x 72 inch. Assemble center and edge crimped blades in prime coated or galvanized frame channel with suitable hardware.
4. End Bearings: Except in round ductwork 12 inches and smaller, furnish end bearings. On multiple blade dampers, furnish oil-impregnated nylon or sintered bronze bearings. Furnish closed end bearings on ducts having pressure classification over 2 inches w.g.
5. Quadrants:
 - a. Furnish locking, indicating quadrant regulators on single and multi-blade dampers.
 - b. On insulated ducts mount quadrant regulators on standoff mounting brackets, bases, or adapters.
 - c. Where rod lengths exceed 30 inches furnish regulator at both ends.

2.02 Duct Access Doors

- A. Fabricate according to SMACNA HVAC Duct Construction Standards - Metal and Flexible.
- B. Fabrication: Rigid and close fitting of galvanized steel with sealing gaskets and quick fastening locking devices. For insulated ductwork, furnish minimum 1 inch thick insulation with sheet metal cover.
 1. Less than 12 inches square, secure with sash locks.

2. Up to 18 inches Square: Furnish two hinges and two sash locks.
3. Larger Sizes: Furnish additional hinge.
4. Access panels with sheet metal screw fasteners are not acceptable.

2.03 Flexible Duct Connections

- A. Fabricate according to SMACNA HVAC Duct Construction Standards - Metal and Flexible.
- B. Connector: Fabric crimped into metal edging strip.
 1. Fabric: UL listed fire-retardant neoprene coated woven glass fiber fabric conforming to NFPA 90A, minimum density 30 oz per sq yd.
 2. Net Fabric Width: Approximately 2.
 3. Metal: 3 inch, 24 gage galvanized steel.
- C. Lead Vinyl Sheet: Minimum 0.55 inch thick, 0.87 lb per sq ft , 10 dB attenuation in 10 to 10,000 Hz range.

2.04 Duct Test Holes

- A. Permanent Test Holes: Factory fabricated, air tight flanged fittings with screw cap. Furnish extended neck fittings to clear insulation.

2.05 Dial Thermometers

- A. Thermometer: ASTM E1, stainless steel case, bimetallic helix actuated with silicone fluid damping, white with black markings and black pointer hermetically sealed lens, stainless steel stem.
 1. Size: 2 inch diameter dial.
 2. Lens: Clear Lexan.
 3. Accuracy: 1 percent.
 4. Calibration: Degrees F.

2.06 STATIC PRESSURE GAGES

- A. Dial Gages: 3-1/2 inch diameter dial in metal case, diaphragm actuated, black figures on white background, front calibration adjustment, 2 percent of full scale accuracy.
- B. Inclined Manometer: Plastic with red liquid on white background with black figures, front calibration adjustment, 3 percent of full scale accuracy.
- C. Accessories: Static pressure tips with compression fittings for bulkhead mounting, 1/4 inch diameter tubing.

PART 3 - EXECUTION**3.01 Installation**

- A. Install according to NFPA 90A, and follow SMACNA HVAC Duct Construction Standards - Metal and Flexible.
- B. Install back-draft dampers on exhaust fans or exhaust ducts nearest to outside.
- C. Access Doors: Install access doors at following locations:
 - 1. Spaced every 50 feet of straight duct.
 - 2. Before and after each duct mounted filter.
 - 3. Before and after each duct mounted coil.
 - 4. Before and after each duct mounted fan.
 - 5. Before and after each fire damper
- D. Access Door Sizes: Install minimum 8 x 8 inch (200 x 200 mm) size for hand access, 18 x 18 inch (450 x 450 mm) size for shoulder access. Review locations prior to fabrication.
 - 1. Mark access doors for fire and smoke dampers on outside surface, with minimum 1/2 inch high letters reading: FIRE/SMOKE DAMPER, SMOKE DAMPER, OR FIRE DAMPER.
- E. Install permanent duct test holes as required for testing and balancing purposes.
- F. Install fire dampers at locations as indicated. Install with required perimeter mounting angles, sleeves, breakaway duct connections, corrosion resistant springs, bearings, bushings and hinges.
 - 1. Install smoke dampers and combination smoke and fire dampers according to NFPA 92A.
 - 2. Install dampers square and free from racking with blades running horizontally.
 - 3. Do not compress or stretch damper frame into duct or opening.
 - 4. Handle damper using sleeve or frame. Do not lift damper using blades, actuator, or jack shaft.
 - 5. Install bracing for multiple section assemblies to support assembly weight and to hold against system pressure. Install bracing as needed.
- G. Thermometers:
 - 1. Install thermometers in air duct systems on flanges.
 - 2. Where thermometers are provided on local panels, duct mounted thermometers are not required.
 - 3. Locate duct-mounted thermometers minimum 10 feet downstream of mixing-dampers, coils, or other devices causing air turbulence.

4. Install static pressure gages to measure across filters and filter banks, (inlet to outlet). On multiple banks, provide manifold and single gage.
5. Provide instruments with scale ranges selected according to service with largest appropriate scale.
6. Install thermometers in locations where they are easily read from normal operating level. Install vertical to 45 degrees off vertical.
7. Adjust thermometers to final angle, clean windows and lenses, and calibrate to zero.

3.02 Demonstration

- A. Demonstrate re-setting of fire dampers to Owner's representative.

3.03 Schedules

A. Dial Thermometer Location:

1. Each supply air zone.
2. Outside air.
3. Return air.
4. Mixed air.

B. Static Pressure and Filter Gages:

1. Built up filter banks.
 - a. Location:
 - b. Scale range:
2. Unitary filter sections.
 - a. Location:
 - b. Scale range:
3. Supply fan discharge.
 - a. Location:
 - b. Scale range:
4. Building static.
 - a. Location:
 - b. Scale range:

END OF AIR DUCT ACCESSORIES

SECTION 23 37 00

AIR OUTLETS AND INLETS

PART 1 - GENERAL

1.01 Summary

A. Section Includes:

1. Diffusers.
2. Registers
3. Grilles.
4. Door grilles.
5. Louvers.
6. Louvered penthouses.
7. Roof hoods.
8. Goosenecks.

1.02 Submittals

- A. Product Data: Sizes, finish, and type of mounting. Submit schedule of outlets and inlets showing type, size, location, application, and noise level.
- B. Test Reports: Rating of air outlet and inlet performance.
- C. Manufacturer's Certificate: Products meet or exceed specified requirements.

1.03 Closeout Submittals

- A. Project Record Documents: Record actual locations of air outlets and inlets.

1.04 Quality Assurance

- A. Test and rate diffuser, register, and grille performance according to ASHRAE 70.
- B. Test and rate louver performance according to AMCA 500.
- C. Perform Work according to SMACNA standards.
- D. Manufacturer: Company specializing in manufacturing products specified in this Section with three years' experience.

1.05 Warranty

- A. Furnish five-year manufacturer's warranty for air outlets and inlets.

PART 2 - PRODUCTS**2.01 Rectangular Ceiling Diffusers**

- A. Type: Square and rectangular, multi-louvered diffuser to discharge air in three-way and four-way pattern.
- B. Frame: Surface mount.
- C. Fabrication: Steel or Aluminum with baked enamel finish.
- D. Accessories: Radial opposed-blade damper and multi-louvered equalizing grid with damper adjustable from diffuser face.

2.02 Modified Light Troffer Diffusers

- A. Type: Single plenum constructed independent of light troffer with volume and pattern controllers, round or oval top or side. Match diffusers to light troffer for airtight connection without tools.
- B. Fabrication: Galvanized steel with welded or soldered joints and finish matte black inside.

2.03 Ceiling Linear Exhaust And Return Registers/Grilles

- A. Type: Streamlined blades with 90 degree two-way deflection, 1/8 x 3/4 inch on 1/2 inch o.c.
- B. Frame: 1 inch margin with concealed mounting.
- C. Fabrication: Steel with 20 gage minimum frames and 22 gage minimum blades, steel and aluminum with 20 gage minimum frame, or aluminum extrusions, with factory baked enamel finish.
- D. Damper: Integral, gang-operated, opposed blade type with removable key operator, operable from face.

2.04 Wall Exhaust And Return Registers/Grilles

- A. Type: Streamlined blades, 3/4 inch minimum depth, 3/4 inch maximum spacing, with spring or other device to set blades, horizontal face.
- B. Frame: 1 inch margin with concealed mounting.
- C. Fabrication: Steel and aluminum with 20 gage (0.90 mm) minimum frame, with factory baked enamel finish.
- D. Damper: Integral, gang-operated, opposed-blade type with removable key operator, operable from face.
- E. Gymnasiums: Furnish front pivoted or welded in place blades, securely fastened to be immobile.

PART 3 - EXECUTION

3.01 Examination

- A. Verify inlet and outlet locations.
- B. Verify systems are ready for installation.

3.02 Installation

- A. Install diffusers to ductwork with airtight connection.
- B. Install balancing dampers on duct take-off to diffusers, grilles, and registers, whether or not dampers are furnished as part of diffuser, grille, and register assembly.
- C. Do not locate air registers, diffusers or grilles in floors of toilet or bathing rooms.

3.03 Interface With Other Products

- A. Check location of outlets and inlets and make necessary adjustments in position to conform to architectural features, symmetry, and lighting arrangement.

END OF AIR OUTLETS AND INLETS

SECTION 23 52 23 CAST IRON BOILERS & ACCESSORIES

PART 1 - GENERAL

1.01 Summary

A. Section Includes:

1. Cast-iron boilers.
2. Boiler controls.
3. Fuel oil fired burner.
4. Breeching and chimneys.

1.02 Submittals

- A. Product Data: Capacities and accessories included with boiler. Include general layout, dimensions, size and location of water, fuel, electric and vent connections, electrical characteristics, weight and mounting loads.
- B. Test Reports: Indicate boilers meet or exceed specified performance and efficiency. Submit results of combustion test.
- C. Manufacturer's Installation Instructions: Assembly, support details, connection requirements, and include start-up instructions.
- D. Manufacturers Field Reports: Indicate condition of equipment after start-up including control settings and performance chart of control system.

1.03 Closeout Submittals

- A. Operation and Maintenance Data: Include manufacturer's descriptive literature, operating instructions, cleaning procedures, replacement parts list, and maintenance and repair data.
- B. Provide combustion test results of final installation.

1.04 Quality Assurance

- A. Conform to ASME Section IV and UL 726 for construction of boilers. Provide boilers registered with National Board of Boiler and Pressure Vessel Inspectors.
- B. Unit Certification: UL certified.
- C. Conform to applicable code for internal wiring of factory-wired equipment.
- D. Products Requiring Electrical Connection: Listed and classified by testing firm acceptable to authority having jurisdiction as suitable for purpose specified and indicated.
- E. Manufacturer: Company specializing in manufacturing products specified in this Section with ten years' experience, and with service facilities within the State of Alaska.

- F. Installer: Company specializing in performing Work of this Section with three years' experience.

1.05 Field Measurements

- A. Verify field measurements prior to fabrication and indicate on Shop Drawings.

PART 2 - PRODUCTS

2.01 Cast-Iron Boilers

A. Manufacturers:

1. Weil McLain
2. Burnham
3. DeDietrich
4. Substitutions: Permitted.

- B. Product Description: Cast-iron boilers with natural draft, insulated jacket, sectional cast iron heat exchanger, fuel oil burning system, refractory, controls and boiler trim.

- C. Furnish water wall design consisting of water backed combustion area with water circulating around firebox. Refractory chamber or separate base not required.

D. Boiler Fabrication:

1. Assembly:
 - a. Cast iron sections.
 - b. ASME Section IV rating.
 - c. Factory assembled with push nipples or gaskets and draw rods.
 - d. Manufacturer's steel skid.
 - e. Fire Tested prior to shipping from the factory.
2. Furnish access for flue passages for cleaning and flame observation ports.
3. Jacket: Glass fiber insulated steel jacket, finished with factory applied baked enamel.

E. Boiler Fuel Burning System:

1. Burner Operation: ON - OFF with low fire position for ignition.
2. Oil Burner: High pressure atomizing type for No. 2 fuel oil with combustion air blower, fuel pump, hinged flame inspection port, cadmium sulfide flame sensor, electrodes, ignition transformer, and oil nozzle, fuel filter.
3. Oil Burner Safety Controls: Energize burner motor and electric ignition, limit time for establishment of main flame, monitor flame continuously during burner operation and stop burner on flame failure with manual reset

necessary, solenoid oil delay valve opens after burner motor energized and closes when de-energized.

4. Controls: Pre-wired, factory assembled electronic controls in control cabinet with flame scanner or detector, programming control, relays, and switches. Furnish pre-purge and post-purge ignition and shut down of burner in event of ignition pilot and main flame failure with manual reset.

F. Boiler Performance: As scheduled on the drawings.

2.02 Breeching

A. Fabricate of ASTM A569 carbon steel. Weld longitudinal seams. Fabricate joints by welding, lapping and bolting, or with companion flanges.

2.03 Double Wall Metal Stacks

A. Manufacturers:

1. Selkirk Corporation, Ultra-Temp HT
2. Substitutions: Permitted.

B. Tested and UL listed to UL103HT.

C. One inch insulation between walls:

1. Inner Jacket: Type 304 stainless steel.
2. Outer Jacket: Type 304 stainless steel.

D. Clearance from combustibles: 2 inches.

E. Accessories:

1. Note drawings for all accessories.
2. Barometric damper.
3. Famco, stainless steel wind directional cap.

PART 3 - EXECUTION

3.01 Installation

A. Provide factory assembled boiler. Perform pressure test on boiler after installation according to following:

1. Pressure test before connecting fuel oil piping, electrical connections, and controls.
2. Install boiler drain and pressure gage.
3. Plug remaining openings.
4. Fill boiler with water and vent air.
5. Pressure test to 1-1/2 times working pressure for 10 minutes with no leaks.

6. Repair leaks and retest.
 7. After successful test, drain and remove plugs from openings to be used for piping connections and controls.
- B. Install boilers plumb and level, to plus or minus 1/16 inch over boiler base.
 - C. Maintain manufacturer's recommended clearances around and over boilers.
 - D. Lag bolt boiler skid securely to structural floor members. Provide attachments in accordance with the seismic restraint specification Section 01 88 15.
 - E. Connect fuel oil piping according to NFPA 31.
 - F. Connect fuel oil piping to boiler. Arrange piping with clearances for burner removal and service.
 - G. Connect hot water piping to supply and return boiler connections.
 - H. Install discharge piping from relief valves full size of valve outlet routed to glycol mix tank with a maximum of 4 elbows and pitched down to outlet. Install hose thread adapter and cap on drain valves.
 - I. Install boiler trim and accessories furnished loose for field mounting.
 - J. Install electrical devices furnished loose for field mounting.
 - K. Coordinate wiring with emergency boiler shut-off switches.
 - L. Install control wiring between boiler control panel and field mounted control devices.
 - M. Connect flue to boiler outlet, full size of outlet.

3.02 Field Quality Control

- A. Perform combustion test including boiler firing rate, over fire draft, gas flow rate, heat input, burner manifold gas pressure, percent carbon monoxide, percent oxygen, percent excess air, flue gas temperature at outlet, ambient temperature, net stack temperature, percent stack loss, percent combustion efficiency, and heat output. Perform test at minimum, and high fire.
- B. Arrange with local authorities having jurisdiction for inspection of boiler, piping, and for certificate of operation.

3.03 Manufacturer's Field Service

- A. Start-up boilers according to manufacturer's start-up instructions and in presence of boiler manufacturer's representative or factory trained personnel.
- B. Test controls and demonstrate compliance with requirements.
- C. Replace damaged or malfunctioning controls and equipment.

3.04 Adjusting

- A. Complete combustion testing and adjust burner for maximum burning efficiency.

1. Combustion tests and adjustments to be completed at final installation location.

B. Submit combustion test results with Close-Out Documents.

3.05 Cleaning

- A. Flush and clean boilers upon completion of installation, according to manufacturer's start-up instructions.

3.06 Demonstration

- A. Demonstrate operation and maintenance procedures.
- B. Furnish services for manufacturer's technical representative for one day to instruct Owner's personnel in operation and maintenance of boilers. Schedule training with Owner, and provide at least seven days' notice to Engineer of training date.

END OF CAST-IRON BOILERS & ACCESSORIES

SECTION 23 73 00

INDOOR CENTRAL-STATION AIR-HANDLING UNITS

PART 1 - GENERAL

1.01 Summary

- A. Section includes modular factory fabricated air-handling units and accessories.

1.02 Submittals

- A. Shop Drawings: Indicate assembly, unit dimensions, weight loading, required clearances, construction details, field connection details, electrical characteristics, and connection requirements.
- B. Product Data: Submit following:
1. Published Literature: Indicate capacities, ratings, gages and finishes of materials, electrical characteristics, and connection requirements.
 2. Filters: Data for filter media, filter performance data, filter assembly, and filter frames.
 3. Fans: Performance and fan curves with specified operating point plotted, power, RPM.
 4. Sound Power Level Data: Fan outlet and casing radiation at rated capacity.
 5. Dampers: Include leakage, pressure drop, and sample calibration curves. Indicate materials, construction, dimensions, and installation details.
 6. Electrical Requirements: Power supply wiring including wiring diagrams for interlock and control wiring. Indicate factory installed and field installed wiring.
- C. Samples: Submit two of each type of replacement filter media with frame.
- D. Manufacturer's Installation Instructions: Submit.
- E. Manufacturer's Certificate: Certify products meet or exceed specified requirements.

1.03 Closeout Submittals

- A. Operation and Maintenance Data: Submit instructions for lubrication, filter replacement, motor and drive replacement, spare parts lists, and wiring diagrams.

1.04 Quality Assurance

- A. Outside Damper Leakage: Test according to AMCA 500.
- B. Maintain one copy of each document on Site.

1.05 Delivery, Storage, And Handling

- A. Accept units and components on Site in factory protective containers, with factory shipping skids and lifting lugs. Inspect for damage.

- B. Protect units from weather and construction traffic by storing in dry, roofed location.

1.06 Warranty

- A. Furnish five-year manufacturer warranty for air handling units.

PART 2 - PRODUCTS

2.01 Air Handling Units

- A. Configuration: Fan section and coil section plus accessories, including:

- 1. Heating coil.
- 2. Filter section.

- B. Performance Base: Sea level pressure or altitude.

- C. Fabrication: Conform to AMCA 99.

2.02 Casing

- A. Channel base of welded steel. Assemble sections with gaskets and bolts.

- B. Outside Casing:

- 1. Aluminum: 0.063 inch thick.

- C. Inside Casing:

- 1. Aluminum: Solid 0.32 inch thick.

- D. Insulation: Neoprene coated, glass fiber, applied to internal surfaces with adhesive with exposed edges of insulation coated with adhesive.

- E. Finish: Baked enamel.

- F. Inspection Doors: 10 by 10 inches of galvanized steel for flush mounting, with gasket, latch, and handle assembly.

2.03 Fans

- A. Type: Forward curved type fan.

- B. Performance Ratings: Conform to AMCA 210 and label with AMCA Certified Rating Seal.

- C. Sound Ratings: AMCA 301, tested to AMCA 300 and label with AMCA Certified Sound Rating Seal.

- D. Bearings: Self-aligning, grease lubricated, ball or roller bearings with lubrication fittings extended to exterior of casing with aluminum tube and grease fitting rigidly attached to casing.

- E. Mounting: Locate fan and motor internally on welded steel base coated with corrosion resistant paint. Factory mount motor on slide rails. Furnish access to motor, drive, and bearings through removable casing panels or hinged access doors.

F. Flexible Connection: Separate unit from connecting ductwork.

2.04 MOTORS

A. Motor Type: NEMA MG 1 Type 1

2.05 Bearings And Drives

A. Bearings: Pillow block type, self-aligning, grease-lubricated ball bearings.

B. Shafts: Solid, hot-rolled steel, ground and polished, with key-way, and protectively coated with lubricating oil.

C. V-Belt Drive: Cast iron or steel sheaves, dynamically balanced, bored to fit shafts, and keyed. Variable and adjustable pitch sheaves for motors 15 hp and under selected so required rpm is obtained with sheaves set at mid-position; fixed sheave for 20 hp and over, matched belts, and drive rated as recommended by manufacturer or minimum 1.5 times nameplate rating of motor.

D. Belt Guard: Fabricate to SMACNA Standard; 0.106 inch (2.6 mm) thick, 3/4 inch (20 mm) diamond mesh wire screen welded to steel angle frame or equivalent, prime coated. Secure to fan or fan supports without short circuiting vibration isolation, with provision for adjustment of belt tension, lubrication, and use of tachometer with guard in place.

2.06 Coils

A. Casing with access to both sides of coils. Enclose coils with headers and return bends fully contained within casing. Slide coils into casing through removable end panel.

B. Air Coils: Certify capacities, pressure drops, and selection procedures according to ARI 410.

C. Fabrication:

1. Tubes: 5/8 inch (16 mm) OD seamless copper expanded into fins, brazed joints.

2. Fins: Aluminum.

3. Casing: Die formed channel frame of galvanized steel.

D. Water Heating Coils:

1. Headers: Cast iron, seamless copper tube, or prime coated steel pipe with brazed joints.

2. Configuration: Drainable, with threaded plugs for drain and vent; serpentine type with return bends on smaller sizes and return headers on larger sizes.

2.07 Filters

A. Filter Box: Section with filter guides, access doors from both sides, for face loading with gaskets and blank-off plates.

B. Filter Media: UL 900 listed, Class I.

- C. Angle: 2 inches deep disposable panel filters.
- D. Filter Gauges: 2-inch diameter diaphragm actuated dial in metal case with static pressure tips.

2.08 Dampers

- A. Face and Bypass Dampers: Factory mount in casing with access doors, of galvanized steel blades, galvanized steel frame, and axles in self-lubricating nylon bearings. Arrange to match coil face with top bypass, blank-off and division sheets, internal linkage, access doors, and adjustable resistance plate.

PART 3 - EXECUTION

3.01 Installation

- A. Install according to ARI 430.
- B. Install flexible connections between unit and inlet and discharge ductwork. Install metal bands of connectors parallel with minimum 1 inch (25 mm) flex between ductwork and fan while running. Refer to Section 233000.
- C. Install assembled units with vibration isolators. Install isolated fans with resilient mountings and flexible electrical leads. Install restraining snubbers as required..
- D. Install floor mounted units on concrete housekeeping pads at least 3-1/2 inches high and 6 inches (150 mm) wider than unit.
- E. Provide sheaves required for final air balance.
- F. Insulate coil headers located outside airflow as specified for piping. Refer to Section 230700.
- G. Connect humidifiers to water supply. Install gate valve on water supply piping. Install 3/4 inch (20 mm) hose bibb accessible from interior. Pipe drain and overflow to nearest floor drain.

3.02 Installation Hot Water Heating Coils

- A. Make connections to coils with unions or flanges.
- B. Connect water supply to leaving airside of coil (counter flow arrangement).
- C. Locate water supply at bottom of supply header and return water connection at top.
- D. Install water coils to allow draining and install drain connection at low points.
- E. Install following piping accessories on hot water piping connections.
 - 1. On Supply:
 - a. Thermometer well and thermometer.
 - b. Shutoff valve.
 - c. Strainer.

- d. Control valve.
 - e. Pressure gage.
- 2. On Return:
 - a. Thermometer well and thermometer.
 - b. Well for control system temperature sensor.
 - c. Pressure gage.
 - d. Shutoff valve.
 - e. Balancing valve.
- F. Install automatic air vents at high points complete with shutoff valve.

END OF INDOOR CENTRAL-STATION AIR-HANDLING UNITS

SECTION 26 00 00 ELECTRICAL WORK, GENERAL

PART 1 - GENERAL

1.01 The Requirement

- A. The CONTRACTOR shall provide electrical work, complete and operable, in accordance with the Contract Documents.
- B. The provisions of this Section apply to all sections in Division 26 and Division 40, except as indicated otherwise.
- C. The WORK of this Section is required for operation of electrically-driven equipment provided under specifications in other Divisions. The CONTRACTOR's attention is directed to the requirement for proper coordination of the WORK of this Section with the WORK of equipment specifications, and the WORK of instrumentation sections.
- D. Concrete, excavation, backfill, and steel reinforcement required for encasement, installation, or construction of the WORK of the various sections of Division 26 is included as a part of the WORK under the respective sections, including duct banks, manholes, handholes, equipment housekeeping pads, and light pole bases.
- E. The CONTRACTOR shall coordinate with the OWNER and serving utility as necessary for all work to be done in modification of the existing electrical service. The CONTRACTOR shall coordinate with United Utilities, Inc., for disconnection and reconnection of electrical service; application and permit requirements are part of the WORK.
- F. All required utility fees shall be paid for by the CONTRACTOR including connect/disconnect fees and new service charges. Contract adjustment will be made based on actual charges.

1.02 Reference Standards

- A. The WORK of this Section and all sections in Division 26 shall comply with the following, as applicable:

NEC (NFPA 70)	National Electrical Code – latest adopted version
NETA	International Electrical Testing Association
NEMA 250	Enclosure for Electrical Equipment (1000 Volts Maximum)
ANSI	American National Standards Institute
UL	Underwriters Laboratories (UL-508A or 913 for intrinsically safe)

- B. All electrical equipment shall be listed by and shall bear the label of Underwriters' Laboratories, Inc. (UL) or other State of Alaska recognized testing laboratory.
- C. Installation of electrical equipment and materials shall comply with OSHA Safety and Health Standards, state building standards, and applicable local codes and regulations.
- D. Where the requirements of the specifications conflict with UL, NEMA, NFPA, or other applicable standards, the more stringent requirements shall govern.

1.03 Signage

- A. Local Disconnect Switches:
 - 1. Each local disconnect switch for motors and equipment shall be legibly marked to indicate its purpose, unless the purpose is indicated by the location and arrangement.
- B. Isolating Switches: Isolating switches not interlocked with an approved circuit interrupting device shall be provided with a sign warning against opening them under load.

1.04 Public Utilities Requirements

- A. The Public Electrical Utility associated with this project is Alaska Village Electric Cooperative (AVEC). The CONTRACTOR shall coordinate all requirements with the Utility as required.
- B. The CONTRACTOR shall contact the serving utility and verify compliance with requirements before construction. The CONTRACTOR shall coordinate schedules and payments for work by all utilities.
- C. Electrical service shall be as indicated and be as required by the serving utility.
- D. The CONTRACTOR shall verify and provide all service conduits, fittings, grounding devices, and all service wires not provided by the serving utility.
- E. The CONTRACTOR shall verify with the utility the exact location of each service point, type of service, and shall pay all charges levied by the serving utilities as part of the WORK.

1.05 Permits And Inspection

- A. All electrical permits shall be obtained and inspection fees shall be paid by the CONTRACTOR.
- B. The CONTRACTOR shall pay all electrical utility line extension, service upgrade, equipment, connection and turn-on service charges required by the utility company.

1.06 Contractor Submittals

- A. Furnish submittals in accordance with Section 01 33 00 Submittals Procedure.
- B. Shop Drawings: Include the following:

1. Complete material lists stating manufacturer and brand name of each item or class of material.
 2. Shop Drawings for all grounding WORK not specifically indicated.
 3. Front, side, rear elevations, and top views with dimensional data.
 4. Location of conduit entrances and access plates.
 5. Component data.
 6. Connection diagrams, terminal numbers, internal wiring diagrams, conductor size, and cable numbers.
 7. Method of anchoring, seismic requirements, weight.
 8. Types of materials and finish.
 9. Nameplates.
 10. Temperature limitations, as applicable.
 11. Voltage requirement, phase, and current, as applicable.
 12. Front and rear access requirements.
 13. Test reports.
 14. Grounding requirements.
- C. Catalog cuts of applicable pages of bulletins or brochures for mass produced, non-custom manufactured material. Catalog data sheets shall be stamped to indicate the project name, applicable Section and paragraph; and shall be clearly marked to indicate exact model number, and options being provided.
- D. Shop Drawings shall be custom prepared. Drawings or data indicating "optional" or "as required" equipment are not acceptable. Options not proposed shall be crossed out or deleted from Shop Drawings.
- E. Materials and Equipment Schedules: The CONTRACTOR shall deliver to the ENGINEER within 30 days of the commencement date in the Notice to Proceed, a complete list of all materials, equipment, apparatus, and fixtures proposed for use. The list shall include type, sizes, names of manufacturers, catalog numbers, and other such information required to identify the items.
- F. Owner's Manuals: Complete information in accordance with Section 01 33 00.
- G. Record Drawings: The CONTRACTOR shall show invert and top elevations and routing of all duct banks and concealed below-grade electrical installations. Record Drawings shall be prepared, be available to the ENGINEER, and be submitted according to Section 01 33 00.

1.07 Area Designations

- A. General:
1. Raceway system enclosures shall comply with Section 26 05 33 – Electrical Raceway Systems.

2. Electrical WORK specifically indicated in sections within any of the Specifications shall comply with those requirements.
3. Electrical WORK in above ground indoor areas shall be NEMA 1 unless otherwise indicated.
4. Electrical WORK in damp or wet locations shall be NEMA 3R unless otherwise indicated.
5. Electrical WORK in below ground facilities and outdoors shall be NEMA 4X unless otherwise indicated.
6. Installations in hazardous locations shall conform strictly to the requirements of the Class, Group, and Division required.

B. Material Requirements:

1. NEMA 4X enclosures shall be stainless steel, Type 304 or 316.

1.08 TESTS

- A. The CONTRACTOR shall be responsible for factory and field tests required by specifications in Division 26 and by the ENGINEER or authority having jurisdiction. The CONTRACTOR shall furnish necessary testing equipment and pay costs of tests, including all replacement parts and labor, due to damage resulting from damaged equipment or from testing and correction of faulty installation.
- B. Where test reports are indicated, proof of design test reports for mass-produced equipment shall be submitted with the Shop Drawings, and factory performance test reports for custom-manufactured equipment shall be submitted and be approved prior to shipment. Field test reports shall be submitted for review prior to Substantial Completion.
- C. Equipment or material which fails a test shall be removed and replaced.
- D. Cable Testing: Cables and conductors shall be tested in accordance with Section 26 05 19.
- E. Test Ground Fault Interrupter (GFI) receptacles and circuit breakers for proper operation by methods sanctioned by the receptacle manufacturer.
- F. A functional test and check of all electrical components is required prior to performing subsystem testing and commissioning. Compartments and equipment shall be cleaned as required by other provisions of these Specifications before commencement of functional testing. Functional testing shall comprise:
 1. Visual and physical check of cables, circuit breakers, transformers and connections associated with each item of new and modified equipment.
 2. Circuit breakers that have adjustable time or pick-up settings for ground current, instantaneous overcurrent, short-time overcurrent, or long-time overcurrent, shall be field-adjusted by a representative of the circuit breaker manufacturer. Setting shall be tabulated and proven for each

circuit breaker in its installed position. Test results shall be certified by the person performing the tests and be transmitted to the ENGINEER.

- G. Complete ground testing of grounding electrodes per requirements prior to operating the equipment.
- H. Subsystem testing shall occur after the proper operation of alarm and status contacts has been demonstrated or otherwise accepted by the ENGINEER and after process control devices have been adjusted as accurately as possible. It is intended that the CONTRACTOR will adjust instruments to their operating points prior to testing and will set pressure switches, flow switches, and timing relays as dictated by operating results.
- I. After initial settings have been completed, each subsystem shall be operated in the manual mode and it shall be demonstrated that operation is in compliance with the Contract Documents. Once the manual mode of operation has been proven, automatic operation shall be demonstrated through coordination with the Owner to verify such items as proper start and stop sequence of pumps, proper operation of valves, proper speed control, etc.

1.09 Demolition And Related Work

- A. The CONTRACTOR shall perform electrical demolition WORK as indicated on the electrical drawings and in parts of this Specification Section. The CONTRACTOR is cautioned that demolition WORK may also be indicated on non-electrical drawings and other Specification Sections. Coordinate electrical de-energization, disconnection, and removal with all trades and the overall sequence of construction.

1.010 Construction Sequencing

- A. The CONTRACTOR shall carefully examine all work to be done in, on, or adjacent to existing equipment. Work shall be scheduled, subject to the OWNER's approval, to minimize equipment shutdown time. The CONTRACTOR shall submit a written request including sequence and duration of activities to be performed prior to any facility shutdown.
- B. All switching, safety tagging, etc., required for process or equipment shutdown or to isolate existing equipment shall be performed by the CONTRACTOR. In no case shall the CONTRACTOR begin any work in, on, or adjacent to existing facility without written authorization by the OWNER or the ENGINEER.
- C. Extreme caution shall be exercised by the CONTRACTOR in order not to damage existing utilities. Cost of repairs of damages caused during construction shall be the CONTRACTOR's responsibility without any additional compensation from the OWNER.

1.011 Installation Of New Equipment:

- A. The CONTRACTOR will install and terminate the new panelboards, control panels, junction boxes, conduits, cables, and instruments, etc. in accordance with the agreed schedule. The CONTRACTOR shall provide a list, daily, of the points that are ready for service as they are connected, calibrated, and tested. The CONTRACTOR shall only connect to equipment that is new or is out of service, unless otherwise directed by the ENGINEER or OWNER.

PART 2 - PRODUCTS

2.01 General

- A. Equipment and materials shall be new, shall be listed by UL, and shall bear the UL label where UL requirements apply; other Nationally Recognized Testing Agencies recognized by state of Alaska Mechanical Inspections Division will be considered equivalent to UL. Equipment and materials shall be the products of experienced and reputable manufacturers in the industry. Similar items in the WORK shall be products of the same manufacturer. Equipment and materials shall be of industrial grade standard of construction.
- B. Where a NEMA enclosure type is indicated in a non-hazardous location, the CONTRACTOR shall utilize that type of enclosure, despite the fact that certain modifications, such as cutouts for control devices, may negate the NEMA rating.
- C. On devices indicated to display dates, the year shall be displayed as 4 digits.

2.02 Mounting Hardware

- A. Miscellaneous Hardware:
 - 1. Hot-dipped galvanized nuts, bolts and washers may be used with galvanized rigid conduit (GRC) and enclosures.
 - 2. Hot-dipped galvanized hardware may be used with GRC.
 - 3. Strut for mounting of raceways and equipment shall be galvanized or stainless steel as required by the area classification. Where contact with concrete or dissimilar metals may cause galvanic corrosion, suitable non-metallic insulators shall be utilized to prevent such corrosion. Strut shall be as manufactured by Unistrut, B-Line, or equal.
 - 4. Anchors for attaching equipment to concrete walls, floors and ceilings shall be stainless steel expansion anchors, such as "Rawl-Bolt," "Rawl-Stud" or "Lok-Bolt" as manufactured by Rawl; similar by Star, or equal. Wood plugs shall not be used.

2.03 Electrical Identification

- A. Nameplates: Nameplates shall be fabricated from white-letter, black-face laminated plastic engraving stock, Formica type ES-1, or equal. Each shall be fastened securely, using fasteners of brass, cadmium-plated steel, or stainless steel, screwed into inserts or tapped holes, as required. Engraved characters shall

be block style, with no characters smaller than 1/8-inch in height, unless otherwise noted.

- B. Conductor and Equipment Identification: Conductor and equipment identification devices shall be heat-shrink plastic tubing with machine printing. Lettering shall read from left to right and shall face toward the front of the panel.

PART 3 - EXECUTION

3.01 General

- A. Incidentals: The CONTRACTOR shall provide all materials and incidentals required for a complete and operable system, even if not required explicitly by the contract documents. Typical incidentals are terminal lugs not furnished with vendor-supplied equipment, compression connectors for cables, splices, junction and terminal boxes, and control wiring required by vendor-furnished equipment to connect with other equipment indicated in the Contract Documents.
- B. Field Control of Location and Arrangement: The Drawings diagrammatically indicate the desired location and arrangement of outlets, conduit runs, equipment, and other items. Exact locations shall be determined by the CONTRACTOR in the field, based on the physical size and arrangement of equipment, finished elevations, and other obstructions. Locations on the Drawings, however, shall be followed as closely as possible.
 - 1. Where raceway development drawings, or "home runs," are shown, the CONTRACTOR shall route the raceways in accordance with the indicated installation requirements.
 - 2. Conduit and equipment shall be installed in such a manner as to avoid all obstructions and to preserve headroom and keep openings and passageways clear. Lighting fixtures, switches, convenience outlets, and similar items shall be located within finished rooms as indicated. Where the Drawings do not indicate exact locations, the ENGINEER shall determine such locations. If equipment is installed without instruction and must be moved, it shall be moved without additional cost to the OWNER. Lighting fixture locations shall be adjusted slightly to avoid obstructions and to minimize shadows.
 - 3. Wherever raceways and wiring for lighting and receptacles are not indicated, it shall be the CONTRACTOR's responsibility to provide all lighting and receptacle-related conduits and wiring as required, based on the actual installed fixture layout and the circuit designations as indicated. Wiring shall be #12 AWG minimum, and conduits shall be 3/4-inch minimum, unless otherwise indicated. Where circuits are combined in the same raceway, the CONTRACTOR shall de-rate conductor ampacities in accordance with NEC requirements.
- C. Workmanship: Materials and equipment shall be installed in strict accordance with printed recommendations of the manufacturer. Installation shall be

accomplished by workers skilled in the work. Installation shall be coordinated in the field with other trades to avoid interferences.

- D. Protection of Equipment and Materials: The CONTRACTOR shall fully protect materials and equipment against damage from any cause. Materials and equipment, both in storage and during construction, shall be covered in such a manner that no finished surfaces will be damaged, marred, or splattered with water, foam, plaster, or paint. Moving parts shall be kept clean and dry. The CONTRACTOR shall replace or refinish damaged materials or equipment, including faceplates of panels and switchboard sections, as part of the WORK.
- E. Incoming utility power equipment shall be provided in conformance with the utility's requirements.

3.02 Core Drilling

- A. The CONTRACTOR shall perform core drilling required for installation of raceways through concrete walls, floors and handholes. Locations of floor penetrations, as may be required, shall be based on field conditions. Verify all exact core drilling locations based on equipment actually furnished, as well as exact field placement. To the extent possible, identify the existence and locations of encased raceways and other piping in existing walls and floors with the OWNER prior to any core drilling activities. Damage to any encased conduits, wiring, and piping shall be repaired as part of the WORK.
- B. All penetrations required to extend raceways through concrete walls, roofs, and floors or masonry walls shall be core drilled.

3.03 Equipment Anchoring

- A. Floor supported, wall-, or ceiling-hung equipment and conductors shall be anchored in place by methods that will meet seismic requirements in the area where the project is located. Wall-mounted panels that weigh more than 500 pounds, or which are within 18 inches of the floor, shall be provided with fabricated steel (stainless steel in designated areas) support pedestals. If the supported equipment is a panel or cabinet enclosed within removable side plates, it shall match supported equipment in physical appearance and dimensions. Transformers hung from 4-inch stud walls and weighing more than 300 pounds shall have auxiliary floor supports.
- B. Anchoring methods and leveling criteria in the printed recommendations of the equipment manufacturers are a part of the WORK of this Contract. Such recommendations shall be submitted as Shop Drawings under Section 01 33 00.
- C. Panels, raceways, and other equipment shall be anchored and supported for Seismic requirements.

3.04 Equipment Identification

- A. General: Equipment and devices shall be identified as follows:

1. Nameplates shall be provided for all switchboards, panelboards, control and instrumentation panels, starters, switches, and pushbutton stations. In addition to nameplates, control devices shall be equipped with standard collar-type legend plates.
2. Control devices within enclosures shall be identified as indicated. Identification shall be similar to the subparagraph above.
3. Equipment names and tag numbers, where indicated on the Drawings, shall be utilized on all nameplates.
4. The CONTRACTOR shall furnish typewritten circuit directories for panelboards; circuit directory shall accurately reflect the equipment connected to each circuit.

3.05 Cleaning

- A. Before final acceptance, the electrical WORK shall be thoroughly cleaned. Exposed parts shall be thoroughly clean of cement, plaster, and other materials. Oil and grease spots shall be removed with a non-flammable cleaning solvent. Such surfaces shall be carefully wiped and all cracks and corners cleaned out. Touch-up paint shall be applied to scratches on panels and cabinets. Electrical cabinets or enclosures shall be vacuum-cleaned.
- B. CONTRACTOR shall group, coil, and tie wrap all spare cables at the bottom of the Local Control Panels. The wires shall be grouped according to the device, control panel, or MCC section they originate from. Cable groups shall be tagged according to their point of origin.
- C. All debris shall be removed from the void below the panels.

END OF ELECTRICAL WORK, GENERAL

SECTION 26 05 19 WIRE AND CABLES

PART 1 -- GENERAL

1.01 The Requirement

- A. The CONTRACTOR shall provide wires and cable, complete and operable, in accordance with the Contract Documents.

1.02 Contractor Submittals

- A. The CONTRACTOR shall submit Shop Drawings in accordance with Section 01 33 00 and 26 00 00 – Electrical Work, General.

PART 2 -- PRODUCTS

2.01 General

- A. Conductors, including grounding conductors, shall be copper. Aluminum conductor wire and cable will not be permitted. Insulation shall bear the label of Underwriters' Laboratories, Inc. (UL), the manufacturer's trademark, and identify the type, voltage, and conductor size. All conductors except flexible cords and cables, fixture wires, and conductors that form an integral part of equipment, such as motors and controllers, shall conform to the requirements of Article 310 of the National Electrical Code, latest edition, for current carrying capacity. Flexible cords and cables shall conform to Article 400, and fixture wires shall conform to Article 402. Wiring shall have wire markers at each end.

2.02 Low Voltage Wire And Cable

A. Power and Lighting Wire

1. Power and lighting wire shall be No. 12 copper AWG minimum size.
2. Wire rated for 600 volts in duct or conduit for all power shall be:
 - a. In above grade interior locations: Type THWN-2
 - b. In exterior, underground, and below grade installations: Type XHHW-2
3. Wiring for 600 volt class power and lighting shall be as manufactured by General Cable, Okonite, Rome Cable or equal.

B. Control Wire

1. Control wire in duct or conduit shall be the same type as power and lighting wire indicated above.
2. Control wiring shall be: No.14, 19-strand copper AWG.

C. Instrumentation Cable

1. Instrumentation cable shall be rated at 600 volts.
 2. Individual conductors shall be No. 18 AWG stranded, tinned copper. Insulation shall be color-coded polyethylene: black-red for two-conductor cable, and black-red-white for three-conductor cable.
 3. Instrumentation cables shall be composed of the individual conductors, an aluminum polyester foil shield, a No. 18 AWG stranded, tinned copper drain wire, and a PVC outer jacket with a thickness of 0.048-inches.
 4. Single pair, No. 18 AWG, twisted, shielded cable shall be Belden Part No. 9341, or equal.
 5. Single triad, No. 16 AWG, twisted, shielded cable shall be Belden Part No. 1119A, or equal.
- D. Multi-pair Control Cable – Multi-pair control cable shall be 6-pair, 600V, No. 16 AWG, twisted, shielded, direct burial rated Belden Part No. 1040A, or equal.
- E. Cat 6 Cable: Cat 6 patch cable shall be 4-pair 24-gauge twisted pair rated to TIA/EIA 568-C.2 Category 6 and UL-listed. The CONTRACTOR shall install RJ-45 connectors as required.
- F. Fire Alarm Cable: Fire Alarm Cable shall be as recommended by the Fire Alarm Control Panel manufacturer or the Fire Alarm Device manufacturer.

2.03 Cable Terminations

- A. Pre-insulated, pressure type, twist-on connectors for conductors #10 AWG and smaller shall be 3M Company "Scotchlok" or Ideal Industries, Inc. "Super Nut" or equal.
- B. Compression connectors shall be Burndy "Hi Lug", Thomas & Betts "Sta-Kon," or equal. Threaded connectors shall be split bolt type of high strength copper alloy.
- C. Pre-insulated fork tongue lugs shall be Thomas & Betts, Burndy, or equal.
- D. General purpose insulating tape shall be Scotch No. 33, Plymouth "Slip-knot," or equal. High temperature tape shall be polyvinyl as manufactured by Plymouth, 3M, or equal.
- E. Labels for coding 600-volt wiring shall be heat-shrink plastic tubing type with machine print. Lettering shall read from left to right and face the front of the panel. Field wires terminating at a Control Panel shall be labeled with the wire number shown on the Control Panel wiring diagrams. The CONTRACTOR shall mark all as-built drawings with wire labels.

PART 3 -- EXECUTION

3.01 General

- A. The CONTRACTOR shall provide and terminate all power, control, and instrumentation conductors, except where indicated.

3.02 Installation

- A. Conductors for feeders as defined in Article 100 of the NEC shall be sized to prevent a voltage drop exceeding 2 percent at the farthest point of power distribution, and where the maximum total voltage drop on both feeders and branch circuits to the farthest connected load does not exceed 5 percent.
- B. Conductors for branch circuits as defined in Article 100 of the NEC, shall be sized to prevent a voltage drop exceeding 3 percent at the farthest connected load or combinations of such loads, and where the maximum total voltage drop on both feeders and branch circuits to the farthest connected load does not exceed 5 percent.
- C. Conductors shall not be pulled into raceway until raceway has been cleared of moisture and debris.
- D. Pulling tensions on raceway cables shall be within the limits recommended by the cable manufacturer. Wire pulling lubricant, where needed, shall be UL-approved for the cables/wires being pulled.
- E. The following wiring shall be run in separate raceways:
 - 1. 24 VDC discrete signal and instrument power supply.
 - 2. 4-20 mA analog signal.
 - 3. All AC circuits.
 - 4. Intrinsically safe circuits.
 - 5. Fire alarm signaling line circuits
- F. Wire in panels, cabinets, and wireways shall be neatly grouped using nylon tie straps and shall be fanned out to terminals.

3.03 Splices And Terminations

- A. General
 - 1. No splicing or taps will be permitted in either feeder or branch circuits except at outlet or accessible junction boxes. Utilize compression type solderless connectors when making splices or taps in conductors # 8 AWG or larger. Utilize pre-insulated connectors, 3M Company "Scotchlok" or Ideal Industries, Inc. "Super Nut" for splices and taps in conductors # 10 AWG and smaller. Tape all splices and joints with Scotch #88 plastic tape to secure insulation strength equal to that of the conductors joined.
 - 2. There shall be no cable splices in underground conduits, manholes or pullboxes.
 - 3. Stranded conductors shall be terminated directly on equipment box lugs, making sure that all conductor strands are confined within the lug. Use forked-tongue lugs where equipment box lugs have not been provided.

4. Excess control and instrumentation wire shall be properly taped and terminated as spares.
 - B. Control Wire and Cable
 1. Control conductors shall be spliced or terminated only on terminal strips in panels or vendor-furnished equipment.
 2. In terminal cabinets, junction boxes, motor control centers, and control panels, control wire and spare wire shall be terminated to terminal strips.
 - C. Instrumentation Wire and Cable
 1. Shielded instrumentation cables shall be grounded at one end only, the receiving end (i.e., in the control panel) on a 4-20 mA system.
 - D. Power Wire and Cable
 1. No branch circuit conductors may be spliced unless the CONTRACTOR can convince the ENGINEER that they are essential, and the ENGINEER gives written permission.
- 3.04 Cable Identification
- A. General: Wires and cables shall be identified for proper control of circuits and equipment and to reduce maintenance effort.
 - B. Identification Numbers: The CONTRACTOR shall assign to each control and instrumentation wire and cable a unique identification number. Numbers shall be assigned to all conductors having common terminals and shall be shown on "as built" drawings. Identification numbers shall appear within 3 inches of conductor terminals. "Control Conductor" shall be defined as any conductor used for alarm, annunciator, or signal purposes.
 1. Multiconductor cable:
 - a. Assign a number that shall be attached to the cable at intermediate pull boxes and at stub-up locations beneath freestanding equipment.
 - b. Cable number shall form a part of the individual wire number.
 - c. Individual control conductors and instrumentation cable shall be identified at pull points as described above.
 - d. The instrumentation cable numbers shall incorporate the loop numbers assigned in the Contract Documents.
 2. All 120/240-volt system feeder cables and branch circuit conductors shall be color-coded as follows:
 3. The 120/240-volt system conductors shall be color-coded as follows:
 - a. Line 1 - Black
 - b. Line 2 - Red

- c. Neutral - White
- 4. Color-coding tape shall be used where colored insulation is not available.
 - a. Branch circuit switch leg shall be Yellow.
 - b. Insulated ground wire shall be Green.
 - c. Neutral shall be White or Gray as indicated above.
- 5. Color coding and phasing shall be consistent throughout the Site, bus bars at panelboards, switchboards, and motor control centers shall be connected Phase A-B-C, top to bottom, or left to right, facing connecting lugs.
- 6. General purpose AC control cables shall be Red.
- 7. General purpose DC control cables shall be Blue.
- 8. Spare cable shall be terminated on terminal screws and shall be identified with a unique number as well as with destination.
- 9. Terminal strips shall be identified by computer-printable, cloth, self-sticking marker strips attached under the terminal strip.

3.05 Testing

- A. Cable Assembly and Testing: Cable assembly and testing shall comply with applicable requirements of ICEA Publication No. S-68-516 - Ethylene-Propylene-Rubber Insulated Wire and Cable for the Transmission and Distribution of Electrical Energy. Factory test results shall be submitted in accordance with Section 013000 – Contractor Submittals, prior to shipment of cable. The following field tests shall be the minimum requirements:
 - 1. Power cable rated at 600 volts shall be tested with a 1000-volt megohm meter for insulation resistance between phases and from each phase to a ground using a megohmmeter. Tests shall be performed on all feeders as well as branch circuits serving motors or major pieces of equipment.
 - 2. Field testing shall be done after cables are installed in the raceways.
 - 3. Field tests shall be performed by a certified test organization acceptable to the cable manufacturer. Test results shall be submitted to the ENGINEER for review and acceptance.
 - 4. Cables showing less than 100 megohm resistance shall be replaced with a new cable or be repaired. Repair methods shall be as recommended by the cable manufacturer and shall be performed by persons certified by the industry.
- B. Continuity Test: Control and instrumentation cables shall be tested for continuity, polarity, undesirable ground, and origination. Such tests shall be performed after installation and prior to placing all wires and cables in service.

END OF WIRES AND CABLES

SECTION 26 05 26 GROUNDING

PART 1 - GENERAL

1.01 The Requirement

- A. The CONTRACTOR shall provide the electrical grounding system, complete and operable, in accordance with the Contract Documents.
- B. The requirements of Section 26 00 00 – Electrical Work, General apply to this Section.
- C. Single Manufacturer: Like products shall be the end product of one manufacturer in order to achieve standardization of appearance, operation, maintenance, spare parts and manufacturer's services.

1.02 Contractor Submittals

- A. Furnish submittals in accordance with Section 01 33 00 and Section 26 00 00 – Electrical Work, General.
- B. Shop Drawings: Manufacturer's product information for connections, clamps, and grounding system components, showing compliance with the requirements of this Section.

PART 2 - PRODUCTS

2.01 General

- A. Components of the grounding electrode system shall be manufactured in accordance with ANSI/UL 467 - Standard for Safety Grounding and Bonding Equipment, and shall conform to the applicable requirements of National Electrical Code Article 250 and local codes.

2.02 Grounding System

- A. Grounding loop conductors shall be bare annealed copper conductors suitable for direct burial. Conductors shall be No. 2/0 for 100A services, or No. 4/0 for all other service sizes, unless indicated otherwise.
- B. Ground Rods
 - 1. Unless indicated otherwise, ground rods shall be a minimum of 3/4-inch in diameter, 10 feet long, and have a uniform covering of electrolytic copper metallically bonded to a rigid steel core. The copper to steel bond shall be corrosion resistant.
 - 2. Conform to ANSI/UL 467.
 - 3. Sectional type joined by threaded copper alloy couplings.
- C. Buried cable-to-cable and cable-to-ground rod connections shall be made using exothermic welds by Cadweld, Enrico Products, or equal.

- D. Exposed grounding connectors shall be of the compression type (connector to cable), made of high copper alloy, and be manufactured specifically for the particular grounding application. The connectors shall be Burndy, O.Z. Gedney, or equal.
- E. Grounding clamps shall be used to bond each separately derived system to the grounding electrode conductors.
- F. Equipment Grounding Circuit Conductors
 - 1. These conductors shall be the same type and insulation as the load circuit conductors. The minimum size shall be as outlined in Table 250.122 of the National Electrical Code, unless indicated otherwise.
 - 2. Metallic conduit systems shall have equipment grounding wires as well as being equipment grounding conductors themselves.
- G. Ground clamps in concrete shall be rated for use with rebar and embedded in concrete.
- H. Manufacturers of grounding materials shall be Copperweld, Blackburn, Burndy, or equal.

PART 3 - EXECUTION

3.01 Grounding

- A. Provide a separate grounding conductor, securely grounded in each raceway independent of raceway material.
- B. Provide a separate grounding conductor for each motor and connect at motor box. Do not use bolts securing motor box to frame or cover for grounding connectors.
- C. Size in accordance with the NEC-Article 250 and local amendments.
- D. Route conductors inside raceway.
- E. Provide a green insulated wire as grounding jumper from the ground screw to a box grounding screw and, for grounding type devices, to equipment grounding conductor.
- F. Provide a separate grounding conductor in each individual raceway for parallel feeders.
- G. Bond metallic cold water pipe systems and metallic building structure per NEC. Bond ALL metallic water pipe penetrations.
- H. Measure ground impedance in accordance with IEEE STD 81 after installation but before connecting the electrode to the remaining grounding system.
- I. Low Voltage Grounded System (600-volt or less): A low voltage grounded system is a system where the local power supply is a transformer with the transformer secondary grounded.
 - 1. Grounding system connections for a premises wired system supplied by a grounded AC service shall have a grounding electrode connector

connected to the grounded service conductor at each service, in accordance with the NEC.

2. The grounded circuit conductor shall not be used for grounding non-current carrying parts of equipment, raceways, and other enclosures except where specifically listed and permitted by the NEC.

J. Embedded Ground Connections

1. Underground and grounding connections embedded in concrete shall be UL listed compression type ground grid connectors.
2. The connection shall be made in accordance with the manufacturer's instructions.
3. The CONTRACTOR shall not conceal or cover any ground connections until the ENGINEER or authorized representative has established that every grounding connection conforms to the Contract Documents and has given the CONTRACTOR written confirmation.

K. Ground Rods

1. Locations shall be as determined in the field.
2. Rods forming an individual ground array shall be equal in length.
3. Rod spacing shall be a minimum of the rod length.

L. Shield Grounding

1. Shielded instrumentation cable shall have its shield grounded at one end only unless Shop Drawings indicate the shield will be grounded at both ends.
2. The grounding point shall be at the control panel or otherwise at the receiving end of the signal carried by the cable.
3. Termination of shield drain wire shall be on its own terminal screw.
4. Terminal screws shall be jumpered together using manufactured terminal block jumpers.
5. Connection to the ground bus shall be via a minimum green No. 12 conductor to the main ground bus for the panel.

END OF GROUNDING

SECTION 26 05 33 ELECTRICAL RACEWAY SYSTEMS

PART 1 -- GENERAL

1.01 The Requirement

- A. The CONTRACTOR shall provide electrical raceway systems, complete and in place, in accordance with the Contract Documents.
- B. In addition to NEC requirements, provide an equipment grounding conductor run with or enclosing the circuit conductors in all raceways. The equipment grounding conductor shall be one or more or a combination of the following:
 - 1. A copper, or copper-clad aluminum conductor.
 - 2. This conductor shall be solid or stranded; insulated, covered, or bare; and in the form of a wire or a bus bar of any shape.

1.02 DEFINITIONS

- A. Raceway System – raceway system consists of conduits, wireways, fittings, junction and pull boxes, supports and labels complete and ready for conductors.

PART 2 -- PRODUCTS

2.01 General

- A. Conduits, wireways, fittings, supports, labels, junction and pull boxes, and other indicated enclosures which are dedicated to the raceway system, shall comply with the requirements of this Section.

2.02 Conduit

- A. Galvanized Rigid Steel Conduit (GRC)
 - 1. Rigid steel conduit shall be mild steel, hot-dip galvanized inside and out.
 - 2. Rigid steel conduit shall be manufactured in accordance with ANSI C80.1 - Rigid Steel Conduit, Zinc Coated, and UL-6.
 - 3. Manufacturers, or Equal
 - a. LTV Steel;
 - b. Triangle;
 - c. Wheatland Tube.
 - 4. GRC shall be used in damp, wet or exterior exposed locations and in process areas.
- B. Liquidtight Flexible Conduit (LFMC)
 - 1. Liquidtight flexible conduit (LFMC) shall be constructed of a flexible galvanized metal core with a sunlight-resistant thermoplastic outer jacket.

2. LFMC shall be manufactured in accordance with UL-360 - Steel Conduits, Liquid-Tight Flexible.
 3. Manufacturers, or Equal
 4. Anaconda, "Sealtite";
 5. Electriflex, "Liquatite".
- C. Electrical Metallic Tubing (EMT)
1. Electrical metallic tubing shall be mild steel, hot-dip galvanized tubing complying with ANSI C80.3 and Fed.Spec. WWC-563 and shall be UL listed.
 2. Elbows, bends, and fittings shall be made from full weight materials complying with the above and shall be coated the same as electrical metallic tubing.
 3. EMT connectors and couplings shall be compression type with insulated throat. Set screw type not allowed. Fittings shall comply with UL514B.
 4. Electrical metallic tubing shall be manufactured by Allied Tube and Conduit Corp., Triangle PWC, Inc., or approved equal.
 5. EMT conduit may be used in dry interior, non-process locations only.

2.03 Fitting And Boxes

- A. General:
1. Pressed or stamped steel boxes shall be used with EMT.
 2. Cast and malleable iron fittings for use with metallic conduit shall be the threaded type with 5 full threads.
 3. Fittings and boxes shall have neoprene gaskets and non-magnetic stainless steel screws. All covers shall be attached by means of holes tapped into the body of the fitting. Covers for fittings attached by means of clips or clamps will not be acceptable.
 4. Boxes larger than standard cast or malleable types shall be 304 stainless steel, NEMA 4X.
 5. In outdoor areas, raceways shall be terminated in raintight hubs as manufactured by Myers, O.Z. Gedney, or equal. In other than outdoor areas, sealed locknuts and bushings shall be used.
 6. Fittings and boxes in hazardous locations shall be suitable for the Class and Division indicated or required by code.
- B. Cast Aluminum Fittings and Boxes
1. Cast aluminum boxes and fittings shall have less than 0.40 percent copper content.
 2. Manufacturers, or Equal

3. O.Z. Gedney;
 4. Appleton;
 5. Crouse-Hinds.
- C. Malleable Iron Fittings and Boxes
1. Fittings and boxes for use with galvanized steel conduit shall be of malleable iron or gray-iron alloy with zinc plating with same finish as the conduit.
 2. Manufacturers, or Equal
 - a. O.Z. Gedney;
 - b. Crouse-Hinds;
 - c. Appleton.
- D. Stainless Steel Boxes
1. Stainless steel boxes shall be NEMA 4X, Type 304.
 2. Stainless steel shall be a minimum 14-gauge thickness, with a brushed finish.
 3. Doors shall have full-length stainless steel piano hinges. Non-hinged boxes are not acceptable.
 4. Manufacturers, or Equal
 - a. Hoffman;
 - b. Rohn;
 - c. Hammond.

2.04 Cable Trays

- A. Cable trays are not to be used.

PART 3 -- EXECUTION

3.01 General

- A. All wiring shall be run in raceway unless indicated otherwise.
- B. Raceways shall be installed between equipment as indicated. Raceway systems shall be electrically and mechanically complete before conductors are installed. Bends and offsets shall be smooth and symmetrical, and shall be accomplished with tools designed for this purpose. Field bends are required on conduits up to 2". Factory elbows may be utilized on raceways over 2". All fittings and connections shall be made tight.
- C. Separate raceway systems shall be provided for:
1. Signal wiring

- 2. 120 VAC and higher wiring
- 3. Intrinsically safe wiring
- D. Where raceway routings are indicated on plan views, follow those routings to the extent possible.
- E. Routings shall be adjusted to avoid obstructions. Coordinate between trades prior to installation of raceways. Lack of such coordination shall not be justification for extra compensation, and removal and re-installation to resolve conflicts shall be by the CONTRACTOR as part of the WORK.
- F. Support rod attachment for ceiling-hung trapeze installations shall meet the seismic requirements.
- G. Exposed raceways shall be installed parallel or perpendicular to structural beams.
- H. Install expansion fittings with bonding jumpers wherever raceways cross building expansion joints.
- I. Exposed raceways shall be installed at least 1/2-inch from walls or ceilings except that at locations above finished grade where damp conditions do not prevail, exposed raceways shall be installed 1/4-inch minimum from the face of walls or ceilings by the use of clamp backs or struts.
- J. In underground facilities or NEMA 4X areas, all raceway penetrations in panels shall be bottom entry.
- K. Wherever contact with concrete or dissimilar metals can produce galvanic corrosion of equipment, suitable insulating means shall be provided to prevent such corrosion.
- L. To facilitate future expansion, boxes and fittings are to be installed when indicated on the drawings. Unused hubs are to be plugged with proprietary devices. Raceways that include future expansion provision are to be sized to accommodate any such specified wiring without exceeding the requirements of this specification.

3.02 Raceways

- A. Exposed raceway systems shall be of the type specified for the area installed as identified herein.
- B. Raceways concealed, or encased in concrete shall be PVC-Coated GRC. Conduit shall emerge from the concrete perpendicular to the surface whenever possible.
- C. Exposed conduit shall be 3/4-inch minimum trade size. Supports shall be installed at distances required by the NEC.
- D. Conduit shall not be encased in the bottom floor slab below grade.
- E. Concrete cover for conduit and fittings shall not be less than 1-1/2 inches for concrete exposed to earth or weather, or less than 3/4-inch for concrete not exposed to weather or in contact with the ground.

- F. Raceways passing through a slab, wall, or beam shall not impair significantly the strength of the construction.
- G. Raceways embedded within a slab, wall, or beam (other than those merely passing through) shall satisfy the following:
 - 1. Conduits with their fittings embedded within a column shall not displace more than 4 percent of the gross area of cross section.
 - 2. Conduits shall not be larger in outside dimension than one third the overall thickness of slab, wall, or beam in which embedded.
 - 3. Raceways shall not be spaced closer than 3 outside diameters on centers.
- H. Raceways shall be placed so that cutting, bending, or displacing reinforcement from its proper location will not be required.
- I. Threads shall be coated with a conductive lubricant before assembly.
- J. Joints shall be tight, thoroughly grounded, secure, and free of obstructions in the pipe. Conduit shall be adequately reamed to prevent damage to the wires and cables inside. Strap wrenches and vises shall be used to install conduit to prevent wrench marks on conduit. Conduit with wrench marks shall be replaced.
- K. Wherever raceways enter substructures below grade, the raceways shall be sloped to drain water away from the structure. Extreme care shall be taken to avoid pockets or depressions in raceways.
- L. Connections to motors and other equipment subject to vibration shall be made with LFMC not exceeding 36 inches in length. Equipment subject to vibration that is normally provided with wiring leads shall be provided with a cast junction box for the make-up of connections. The junction box is to be independently supported and not left free to hang from the equipment.
- M. Raceways passing through walls or floors shall have plastic sleeves. Core drilling shall be performed in accordance with Section 26 00 00.
- N. Conduit, fittings, and boxes required in hazardous classified areas shall be suitably rated for the area and shall be provided in strict accordance with NEC requirements.
- O. Empty raceways shall be tagged at both ends to indicate the final destination. Where it is not possible to tag the raceway, destination shall be identified by a durable marking on an adjacent surface. A pull-cord shall also be installed in each empty conduit. This shall apply to conduits in floors, panels, manholes, equipment, etc.
- P. Where an underground raceway enters a structure through a concrete roof or a membrane waterproofed wall or floor, core-drill the entrance and provide a Link-Seal, or equal, sealing device. The sealing device shall be utilized with PVC-coated GRC/rigid steel conduit.

- Q. Final connections to heaters, instruments, motors, limit switches, and any equipment subject to vibration shall be made with LFMC and approved fittings. Maximum length of LFMC shall be 36 inches.
- R. Connections to solenoid valves, pilot actuators, etc. shall be made with LFMC and approved fittings to a cast box with screw cover (GUA type), independently and securely supported. In no case is the device to support the cast box.

3.03 Cable Trays

- A. Cable trays are not to be used.

END OF ELECTRICAL RACEWAY SYSTEMS

SECTION 26 24 16 PANELBOARDS

PART 1 - GENERAL

1.01 The Requirement

- A. The CONTRACTOR shall provide panelboards complete and operable, in accordance with the Contract Documents.
- B. Single Manufacturer: Like products shall be the end product of one manufacturer in order to achieve standardization of appearance, operation, maintenance, spare parts, and manufacturer's services.

1.02 Contractor Submittals

- A. General: Submittals shall be in accordance with Division 01 specification requirements and Section 26 00 00 – Electrical Work, General.
- B. Shop Drawings
 - 1. Breaker layout drawings with dimensions and nameplate designations
 - 2. Component list
 - 3. Drawings of conduit entry/exit locations
 - 4. Assembly ratings including:
 - a. Trip
 - b. Interrupting
 - c. Voltage
 - d. Continuous current
 - 5. Cable terminal sizes
 - 6. Descriptive bulletins
 - 7. Product sheets
 - 8. Installation information
 - 9. Seismic certification and equipment anchorage details

PART 2 - PRODUCTS

2.01 Panelboards

- A. Panelboards shall be dead front factory assembled. Panelboards shall comply with NEMA PB-1-Panelboards, as well as the provisions of UL 50 – Safety Enclosures for Electrical Equipment and UL 67 – Safety Panelboards. Panelboards used for service equipment shall be UL labeled for such use.

Panelboards shall be rated for 120/208-volt, 3-phase operation or 120/240-volt for single phase operation as indicated.

- B. The manufacturer of the panelboard shall be the manufacturer of the major components within the assembly, including circuit breakers.
- C. Ratings
 - 1. Panelboards rated 240 VAC or less shall have short circuit ratings not less than 10,000 amps RMS symmetrical or as indicated on the plans.
 - 2. Panelboards shall be labeled with a UL ampere interrupting rating. Series ratings are not acceptable.
 - 3. Service entrance panelboards (panels connected to transfer switches or power meters) rated 240 VAC or less shall have short-circuit rating not less than 22,000 amps RMS symmetrical.
 - 4. The VFD circuit breakers shall be time-delay units, shall be UL-listed for VFD loads, and approved by the VFD manufacturer for protection of their drives.
- D. Construction
 - 1. All lighting and power distribution panels shall have copper bus bars.
 - 2. Breakers shall be one, two, or three pole as indicated, with ampere trip ratings as required by the equipment. Breakers shall be quick-make and quick-break, inverse time trip characteristics, to trip free on overload or short circuit, and to indicate trip condition by the handle position. Breakers shall be of the bolt-on type.
 - 3. The panels shall have hinged doors with combination catch and latch. The front panels shall be so arranged that when the plates are removed, the gutters, terminals and wiring will be exposed and accessible. The doors shall have inner doors within the plates to have only the breaker operating mechanism exposed when they are opened. Live conductors and terminals shall be concealed behind the plates.
 - 4. All panelboards shall be rated for the intended voltage.
 - 5. All circuit breakers shall be interchangeable and capable of being operated in any position as well as being removable from the front of the panelboard without disturbing adjacent units. No plug-in circuit breakers will be acceptable.
 - 6. Lighting and power distribution panels which are not part of a motor control center shall be constructed in accordance with Section 26 05 00 – Electrical Work, General. Panels shall have the necessary barriers, supports, and liberal wiring gutters. Trim screws shall be stainless steel. All panelboard parts of metal other than copper, aluminum, or stainless steel shall be cadmium plated. Panelboards shall be manufactured by **Square D / Schneider Electric or equal.**

7. Panelboards shall be UL listed except for special enclosures which are not available with UL listing.
8. Panelboards shall be suitable for use as service entrance as indicated or as otherwise required by the NEC.

PART 3 - EXECUTION

3.01 General

- A. All WORK of this Section shall be installed as indicated in Section 26 00 00 – Electrical Work, General.

END OF PANELBOARDS

SECTION 26 27 26 WIRING DEVICES

PART 1 - GENERAL

1.01 The requirement

- A. The CONTRACTOR shall provide all wiring devices, plates, and nameplates in accordance with the Contract Documents.
- B. The requirements of Section 26 00 00 – Electrical General Requirements apply to this Section.
- C. Single Manufacturer: Like products shall be the end product of one manufacturer in order to achieve standardization of appearance, operation, maintenance, spare parts, and manufacturer's services.

1.02 Contractor Submittals

- A. Furnish submittals in accordance with Section 01 33 00.
- B. Shop Drawings
 - 1. Complete catalog cuts of switches, receptacles, enclosures, covers, and appurtenances, marked to clearly identify proposed materials.
 - 2. Documentation showing that proposed materials comply with the requirements of NEC and UL.
 - 3. Documentation of the manufacturer's qualifications.

PART 2 - PRODUCTS

2.01 General

- A. All devices shall carry the UL label.
- B. General purpose duplex receptacles and toggle switch handles shall be brown everywhere except in finished rooms where they shall be ivory. Special purpose receptacles shall have a body color as indicated. Receptacles and switches shall conform to Federal Specifications W-C-596E and W-S-896E, respectively.

2.02 Lighting Switches

- A. Local branch switches shall be toggle type, rated at 20 amps, 120-277 VAC, and shall be General Electric Cat. No. GE-5951-1 for single pole, GE-5953-1 for 3-way and GE-5954-1 for 4-way, or similar types as manufactured by Hubbell, or equal.

2.03 General Purpose Receptacles

- A. Duplex receptacles rated 120-volt, 20 amps shall be polarized 3-wire type for use with 3-wire cord with grounded lead and 1 designated stud shall be permanently grounded to the conduit system (NEMA 5-20R). Duplex 120-volt receptacles

shall be G.E. 5362, Hubbell 5362, or equal. Simplex receptacles shall be G.E. 4102, Hubbell 4102, or equal.

- B. Ground-fault circuit interrupting receptacles (GFCI's) shall be installed at the locations indicated. GFCI's shall be rated 125-volt, 20 amps and shall be Hubbell GFTR20, or equal. Downstream GFCI protection through the use of feed-thru receptacles is not acceptable.

2.04 Special Receptacles

- A. Dryer receptacle (NEMA 14-30R), 30 amp. 250VAC, 3-pole, 4-wire. Verify requirements with installed equipment.

2.05 Enclosures And Covers

- A. Interior mounted switches and receptacles shall have steel device covers of the size required.
- B. In exterior or wet location areas, FS or FD type cast boxes shall be used, switch and receptacle covers shall be Crouse-Hinds, Hubbel or equal.
- C. Receptacles in exterior locations shall be provided with cover/enclosure marked "Suitable for Wet Locations when in use" and "UL Listed." There shall be a gasket between the enclosure and the mounting surface and between the hinged cover and mounting plate/base. The cover shall be weatherproof and of 'While-In-Use' type, specification grade, of metallic construction. TayMac or equal.

2.06 Nameplates

- A. Provide nameplates or equivalent markings on switch enclosures to indicate ON and OFF positions of each switch. ON and OFF for 3-way or 4-way switches is not acceptable. Provide receptacles for special purposes with nameplates indicating their use. Conform to requirements of Section 26 00 00 – Electrical Work, General.

PART 3 - EXECUTION

3.01 Connection

- A. Securely fasten nameplates using stainless steel screws, bolts, or rivets centered under or on the device, unless otherwise indicated.

3.02 Grounding

- A. Ground all devices, including switches and receptacles, in accordance with NEC Article 250 and Section 26 05 26 – Grounding.
- B. Ground switches and associated metal plates through switch mounting yoke, outlet box, and raceway system.

- C. Ground flush receptacles and their metal plates through positive ground connections to outlet box and grounding system. Maintain ground to each receptacle by spring-loaded grounding contact to mounting screw or by grounding jumper, each making positive connection to outlet box and grounding system at all times.

3.03 Field Testing

- A. Provide checkout, field, and functional testing of wiring devices in accordance with Section 26 00 00 – Electrical Work General Requirements.
- B. Test each receptacle for polarity and ground integrity with a standard receptacle tester.

END OF WIRING DEVICES

SECTION 26 28 16

SWITCHES AND CIRCUIT BREAKERS

PART 1 - GENERAL

1.01 Summary

- A. This Section describes general requirements, products, and methods of execution relating to overcurrent protective devices approved for use on this project. Type, duty rating and characteristics, fault interrupting capability and coordination requirements shall be determined from the plans.

1.02 Related Work

- A. The work of the following Sections is related to the work of this Section. Other Sections, not referenced below, may also be related to this work. It is the Contractor's responsibility to perform all the work required by the Contract Documents.

- 1. Division 26 00 00 – Electrical General Requirements

1.03 Submittals

- A. In accordance with the requirements of Section 01 33 00, submit the following Project Data:

- 1. Descriptive literature bulletins, and catalog cuts of the equipment.
 - 2. Materials of construction.
 - 3. Complete wiring diagrams.
 - 4. Complete installation instructions, with points of electrical connection requirements clearly shown.
 - 5. Performance curves.

1.04 Quality Assurance

- A. Devices shall be the latest approved design as manufactured by a nationally recognized manufacturer and in conformity with applicable standards and UL listed.

PART 2 - PRODUCTS

2.01 Molded Case Circuit Breakers

- A. Molded case circuit breakers shall be suitable for individual as well as panelboard mounting. They shall be bolt-on type, unless "plug-on" type specifically allowed.
- B. The breakers shall meet NEMA and/or UL specifications as applicable to frame and size, standard rating and interrupting capability. Breakers installed in panelboards shall have short circuit interrupt ratings that match those of the panelboard.
- C. The breakers shall be one-, two-, or three-pole as scheduled, operate manually for normal ON-OFF switching and automatically under overload and short circuit conditions.

- D. Operating handle shall open and close all poles simultaneously on a multi-pole breaker. Operating mechanism shall be trip-free so that contacts cannot be held closed against abnormal overcurrent or short circuit condition.

2.02 Acceptable Manufacturer's

- A. Square D / Schneider Electric
- B. Or approved equal

PART 3 - EXECUTION

3.01 Installation

- A. Size devices as required by the load being served or as shown on the drawings.

END OF SWITCHES AND CIRCUIT BREAKERS

SECTION 26 36 05 HEAVY-DUTY SAFETY SWITCHES

PART 1 - GENERAL

1.01 The Requirement

- A. Furnish and install heavy-duty, double-throw safety switches for manual transfer of loads between alternate sources of supply and single-throw safety switches for motor disconnect.

1.02 Codes And Standards

- A. The heavy-duty safety switches shall conform to the requirements of:
 - 1. UL 98 – Enclosed Switches

1.03 Submittals

- A. Provide outline drawings with dimensions, and equipment ratings for voltage, amperage, and short circuit in accordance with Section 01 33 00 and Section 26 00 00 – Electrical Work, General.

PART 2 - PRODUCTS

2.01 Safety Switch

- A. The safety switches used as transfer switches shall be heavy-duty, manually operated, single-throw or double-throw switches, full load make or break rated. Switches shall include a normally open contact that is made in the A and B position.
- B. Switch shall be UL listed for use as service equipment and is to be labeled for this application.
- C. Switch shall have switch blades which are visible when the switch is OFF and the cover is open.
- D. Lugs shall be front removable and UL listed for aluminum or copper.
- E. All current carrying parts shall be plated to resist corrosion.
- F. The UL listed short circuit current rating of the double throw switch shall be suitable for the available short-circuit current at the location installed.
- G. Provisions for padlocking the switch in the OFF position shall be provided.

2.02 Enclosure

- A. The safety switch shall be furnished in a NEMA Type 1 enclosure with gray baked enamel paint which is electrodeposited on cleaned, phosphate pre-treated galvanized steel.

- B. The enclosure shall be supplied with a metal nameplate which includes ON-OFF-ON markings.

2.03 Manufacturers

- A. Safety switches shall be manufactured by Square D, Allen-Bradley, or equal.

PART 3 - EXECUTION

3.01 Installation

- A. The safety switch shall be installed in accordance with the Manufacturer's requirements and recommendations.

END OF HEAVY-DUTY SAFETY SWITCHES

SECTION 26 50 00 LIGHTING

PART 1 - GENERAL

1.01 The Requirement

- A. The CONTRACTOR shall provide lighting fixtures, supports, lamps, and accessories, complete and operable, in accordance with the Contract Documents.

1.02 Contractor Submittals

- A. If the CONTRACTOR proposes to install equivalent equipment to that suggested, then he shall furnish the following product information in accordance with Division 01.

1. Interior luminaires

- a. Catalog data sheets and pictures.
- b. Luminaire finish and metal gauge.
- c. Lens material, pattern, and thickness.
- d. Candle power distribution curves in two or more planes.
- e. Candle power chart 0 to 90 degrees.
- f. Lumen output chart.
- g. Average maximum brightness data in foot lamberts.
- h. Coefficients of utilization for zonal cavity calculations.
- i. Mounting or suspension details.
- j. Heat exchange and air handling data.

2. Exterior luminaires

- a. Catalog data sheets and pictures.
- b. Luminaire finish and metal gauge.
- c. Lens material, pattern, and thickness.
- d. IES lighting classification and isolux diagram.
- e. Fastening details to wall or pole.
- f. Ballast type, location, and method of fastening.
- g. For light poles, submit wind loading, complete dimensions, and finish.

3. Lamps

- a. Voltages.
- b. Colors.

- c. Approximate life (in hours).
 - d. Approximate initial lumens.
 - e. Lumen maintenance curve.
 - f. Lamp type and base.
- 4. Ballasts/Drivers
 - a. Type.
 - b. Wiring diagram
 - c. Nominal watts and input watts.
 - d. Input voltage and power factor.
 - e. Starting current, line current, and restrike current values.
 - f. Sound rating.
 - g. Temperature rating.
 - h. Efficiency ratings.
 - i. Low temperature characteristics.
 - j. Emergency ballasts/drivers rating and capacity data.

PART 2 - PRODUCTS

2.01 Fixtures - General

- A. Luminaires: Specific requirements relative to execution of WORK of this Section are located in the Luminaire Schedule on Contract Drawings.
- B. All fixtures shall be pre-wired with leads of 18-AWG, minimum, for connection to building circuits.

2.02 Exterior Fixtures

- A. Exterior fixtures in combination with their mounting pole and bracket shall be capable of withstanding 100 MPH winds without damage. Exterior fixtures shall have corrosion-resistant hardware and hinged doors or lens retainer. Fixtures specified to be furnished with integral photo-electrical control shall be of the fixture manufacturer's standard design.

2.03 Interior Fixtures

- A. Interior fixtures without diffusers shall be furnished with end plates. Where diffusers are required, they shall be of high molecular strength acrylic. Minimum thickness of the acrylic shall be 0.125 inches for all diffusers, except that those on 4-foot square fixtures shall be 0.187 inches thick.
- B. Interior fixtures within the chemical room shall be suitable for installation in this area.

C. Emergency Exit Signs

1. Internally illuminated.
2. Universal mounting type.
3. Internal 6-volt nickel cadmium battery, 90 minutes capacity to emergency lamps.
4. Two-rate regulated battery charger to minimize energy consumption. Filtered charger output to minimize voltage ripple and extend battery life. Thermal protection and current-limiting charger circuitry to prevent overheating and charger failure.
5. 19,000 hours expected lamp life.
6. Press to test button.
7. Directional arrows.
8. Red letters on a white panel, 6 inches high.

2.04 Photo-Electric Cells

- A. Photoelectric cells for control of multiple fixtures shall be self-contained, weatherproof type, rated for 1800 va 120-volt, single pole, single throw, and shall be provided with time-delay features. Photoelectric cell shall be **Tork Model 2101**, or equal.

2.05 Light Fixture Control Relays

- A. Relays for light fixtures control shall be mechanically held. Such relays shall be based-mounted, single-purpose units, i.e., not attachments to a multi-purpose solenoid operation.
- B. If not indicated otherwise, coil voltage shall be 115 VAC with contacts rated at 20 amps. Relays shall be **ASCO Series 166, Zenith Series MSC**, or equal.

2.06 Fixture Types

- A. Specific requirements are located in the Lighting Fixture Schedule on the Contract Drawings.

PART 3 - EXECUTION

3.01 Luminaires

- A. Install in accordance with manufacturer's recommendations.
- B. Provide necessary hangers, pendants, and canopies.
- C. Provide additional ceiling bracing, hanger supports, and other structural reinforcements to building required to safely mount.
- D. Install plumb and level.

- E. Locate luminaires to avoid both conflict with other building systems and blockage of luminaire light output.

3.02 Cleaning Following Installation

- A. Remove all labels and other markings, except UL listing mark.
- B. Wipe luminaires inside and out to remove construction dust.
- C. Clean luminaire plastic lenses with antistatic cleaners only.
- D. Touch up all painted surfaces of luminaires and poles with matching paint ordered from manufacturer.
- E. Replace all defective light sources at time of Substantial Completion.

END OF LIGHTING

SECTION 31 20 00 EARTH MOVING

PART 1 - GENERAL

1.01 Summary

- A. This section covers the furnishing of materials, labor, equipment, and supervision required to complete the site earthwork construction including roadway, walkway, parking lot, and building excavation, fill, backfill, site grading, and drainage as shown on the contract Drawings.

1.02 Testing

- A. Where compaction requirements are specified, the maximum soil density shall be determined by one of the laboratory procedures listed below. The particle size distribution of the soil dictates which laboratory procedure should be used.
1. Soils meeting the following gradation requirement and having cohesionless, free-draining characteristics should be tested in accordance with ASTM D 4253 "Maximum Index Density and Unit Weight of Soils Using a Vibratory Table."

<u>U.S. Std. Sieve Size</u>	<u>Percent Passing by Weight</u>
3"	100*
1-1/2"	70-100
No. 200	0-15

2. Soils which do not meet the gradation requirement presented in Item 1 above and which do meet the following gradation requirement should be tested in accordance with ASTM D 1557 "Laboratory Compaction Characteristics of Soil Using Modified Effort [56,000 ft-lb/ft³ (2,700 kN-m/m³)]."

The oversize fraction (retained on the No. 4, three-eighth inch, or three-fourth inch sieve, as appropriate) should not be used in performing the D 1557 compaction test. The modified maximum dry unit weight of soils that contain more than five percent oversize should be corrected in accordance with ASTM D 4718, "Correction of Unit Weight and Water Content for Soils Containing Oversize Particles."

<u>U.S. Std. Sieve Size</u>	<u>Cumulative Percent Passing by Weight</u>
3"	100*
3/4"	70-100

3. Soils that do not meet the gradation requirements presented in Items 1 and 2 above should be tested in accordance with one of the methods listed above that have been modified with the concurrence of the project geotechnical engineer.

* The field sample may contain up to 10% cobbles, which should be discarded prior to testing.

- B. The in-place soil density shall be determined in accordance with:

ASTM D 6938 In-place Density and Water Content of Soil and Soil Aggregate by Nuclear Methods (Shallow Depth).

- C. In-place density tests shall be taken on each lift of fill or backfill at the rate of one test per 5,000 square feet of compacted work area. Failing test areas shall be recompact and retested until the compaction requirements are met. The Contractor shall perform a new gradation and hydrometer test for each 2,000 cubic yards of furnished material and each time the furnished material changes from that which was previously approved.

1.03 Submittals

- A. Contractor shall submit a gradation test in accordance with ASTM D 422 on each type and source of material used in fills and backfills. If material is to be non-frost susceptible (NFS), hydrometer tests shall be performed in accordance with ASTM D 422.

- B. Contractor shall submit a circuit and wiring diagram for each thaw wire installation.

1.04 Definitions

- A. NFS Material: NFS material is sand, gravel, crushed stone, or mixtures thereof, which contains no more than three percent particles finer than 0.02 mm by weight.
- B. Structural Fill: Structural fill is defined as load-bearing fill placed under footings, building foundations, structural slabs, roads, and parking areas. All structural fill should consist of NFS material and contain no lumps, frozen material, organic matter, or other deleterious matter. Structural fill shall meet the following gradation requirements. Other fill material, which does not meet this gradation requirement, may be acceptable for use. However, the gradation of such material should be evaluated by the project geotechnical engineer prior to its use.

<u>U.S. Std. Sieve Size</u>	<u>Cumulative Percent Passing by Weight</u>
3"	100*
1-1/2"	70-100
3/4"	30-100
1/2"	25-100
#4	20-49
#40	0-25
#200	0-6
0.02mm	0-3

* The field sample may contain up to 10% cobbles, which should be discarded prior to testing.

- C. D-1 Base Course: NFS, unfrozen, inorganic soils meeting the following gradation requirements for the minus three-inch fraction.

<u>U.S. Std. Sieve Size</u>	<u>Cumulative Percent Passing by Weight</u>
1"	100
3/4"	70-100
3/8"	50-80
No. 4	35-65
No. 8	20-50
No. 50	6-30
No. 200	0-6

- D. Classified Material: NFS, unfrozen, inorganic soils meeting the following gradation requirements for the minus three-inch fraction.

<u>Sieve Size</u>	<u>Cumulative Percent Passing by Weight</u>
3"	100*
1-1/2"	70-100
3/4"	30-100
1/2"	25-100
No. 4	20-49
No. 40	0-25
No. 200	0-6
0.02 mm	0-3

- E. Pipe Bedding Material: The coarse aggregate material conforming to the requirements specified below shall have a percentage of wear not to exceed thirty (30) after five hundred (500) revolutions, as determined by the current requirements of ASTM C-131.

<u>U.S. Std. Sieve Size</u>	<u>Cumulative Percent Passing by Weight</u>
2"	100
1/2"	40-100
#4	20-75
#10	12-60
#40	2-30
#200	0-6

In addition to the grading limits listed above, the fraction of material passing the #200 sieve shall not be greater than twenty (20%) percent of that fraction passing the #4 sieve. The bedding material shall not include mechanically fractured materials.

* The field sample may contain up to 10% cobbles, which should be discarded prior to testing.

- F. Unclassified Material: Inorganic soils free of trash, peat, volcanic ash, debris, or frozen clods, which are capable of being satisfactorily compacted as required by the plans and these specifications.
- G. Unsuitable Material: Soil materials that do not qualify as “classified” or “unclassified” materials.
- H. General Excavation: Any excavation of any type of material, including rock and frozen material, within the limits of excavation as shown on the Drawings or called for in the specifications.
- I. Over-Excavation: Any excavation beyond limits of the contract that has been done without the written authorization of the Owner’s Representative.
- J. Subgrade: The surface upon which classified or unclassified material is placed.
- K. Area Grading: Area grading consists of the excavation and fill work along the perimeter of the site necessary for a smooth transition from the design site grades to the grade(s) of the adjacent properties. This work is also commonly called “site grading” or “overlot grading.”
- L. Work Area: For purposes of determining the number of required in-place density tests, work area is defined as the location where fill is being actively placed at any one time. The work area could be the entire site or a small fraction of the site depending on how the earthwork is performed.

PART 2 - PRODUCTS

2.01 Material Source and Handling

- A. When the quantity of classified and unclassified soils required for the work exceeds that available from excavated materials, the additional material shall be from Contractor-furnished borrow areas. The Contractor shall locate, obtain, develop, and process classified and unclassified materials to complete the requirements of work.
 - 1. No soils materials that have ever been contaminated with petroleum or hazardous substances shall be *incorporated* into the work without prior written approval of the Owner. The Contractor shall furnish evidence that the borrow source(s) has been evaluated for the presence of petroleum or hazardous substances as defined in EPA Publication 9345.00-01A, *Guidance for Performing Preliminary Assessments Under CERCLA*, dated September 1991. An Abbreviated Report of Preliminary Assessment, as defined in EPA Publication 9345.0-01A, shall be submitted to the Owner for each proposed borrow site. The report shall identify any petroleum or hazardous substance, currently or previously at the site, that presents a potential threat to the environment whether or not a release has occurred. Where a release of hazardous substances has occurred, the use of the borrow source will not be allowed. The Preliminary Assessment shall be performed independent of the Contractor, under the direct supervision of a person actively practicing environmental science or engineering, geology, hydrology or a related environmental field and having a minimum of three years experience in performing Preliminary Assessments. The qualifications of the independent person performing the Preliminary Assessment shall be included with the report.

The Preliminary Assessment Report shall be submitted a minimum 30 days prior to use of the borrow material in the work. The Owner reserves the right to independently sample and test the borrow material for conformance with this specification prior to delivery to the site and during placement of the borrow material at the site.

2. Borrow material previously contaminated with a petroleum substance that has been processed or recycled to remove the petroleum contamination may be used only with written approval of the Owner. A request for approval to use processed or recycled material shall be submitted a minimum 30 days prior to use of the material in the work and shall include a detailed description of the history of the material, analytical results of sampling of the material conducted before and after processing or recycling, and a Quality Control Plan describing a program to ensure that the material is transported and placed on the site in an environmentally safe manner. The Quality Control Plan shall include the location(s) on the site the material will be used, the quantity of material proposed to be used at each location, any mixing of the processed or recycled material that may occur, and any safeguard used to protect the environment from being impacted by the material. The request to use processed or recycled material must also show the economic benefit to the Owner for allowing the use of the processed or recycled material.
- B. When the soils into which the excavation will penetrate and/or when the backfill soils are sensitive to erosion, sloughing under seepage forces, softening during soaking, and/or repeated loading of heavy equipment, the Contractor shall take all necessary steps to protect the work at no expense to the Owner. This may include, but is not limited to:
1. Sloping the excavation to drain and/or dewatering from inside the excavation with sumps and/or pumps or from outside the excavation with well-points or other means;
 2. Limiting construction traffic to designated and maintained construction roads and placing additional temporary fill as necessary to support the traffic loads;
 3. Developing alternate access routes; and,
 4. Excavating with a backhoe with a smooth blade from outside the excavation.
- C. If the subgrade or backfill soils are disturbed by surface runoff, ponding, seepage, and/or construction traffic, the disturbed soils shall be regraded and densified to the density requirements specified herein or completely removed and replaced with classified materials compacted to the density requirements specified herein. The Contractor shall perform corrective work at no expense to the Owner.

PART 3 - EXECUTION

3.01 Construction Staking

- A. The Contractor shall furnish the following surveys for construction staking:

1. Grade stakes shall be placed to show cuts or fills to finish grade. These may be preserved or referenced by the Contractor to serve for both excavation and subsequent backfill operations.
2. Areas to be excavated under a cubic yard pay unit shall be cross-sectioned after clearing and before any earthwork has commenced. Large areas shall be sectioned on a 50-foot or closer grid and streets and parking lots shall be sectioned at 50-foot stations or closer. After each predetermined area of earthwork is excavated to subgrade or to bottom of organics, the area shall be cross-sectioned again to determine excavation quantities. When possible, measurements shall be made on the same lines or grids used in the previous cross-section. The work shall be scheduled to allow sufficient time for the survey crew to take measurements before additional earthwork takes place.
3. If utilities such as storm drains, sanitary sewers, and water systems are to be constructed as part of the project, areas to be excavated shall be cross-sectioned after utilities are installed and trenches backfilled and compacted to subgrade elevation. After each predetermined area of earthwork is excavated to subgrade or bottom of organics, the area shall be cross-sectioned again to determine excavation quantities.

3.02 Excavation

A. General

1. Excavation consists of the removal and reuse or disposal of all materials encountered to obtain the required subgrade elevations and to remove organics.
2. Classified and unclassified excavated materials shall not be removed from the site unless they are surplus to the requirements of the work and then only with the written approval of the Owner's Representative. Excess material not incorporated in the work and unsuitable material shall be transported to the Contractor's off-site disposal area. The Drawings indicate the extent of the excavation required.
3. The Contractor shall conform to the elevations and dimensions shown on the Drawings, within a tolerance of 0.10 feet for roads, parking areas, walkways, and 0.05 for building areas. Over excavation for the purpose of obtaining materials for use elsewhere in the work is not permitted without written approval.
4. The excavation shall be shaped to drain and shall be maintained in a dry condition, free of puddles or holes where water may accumulate. The Contractor shall plan his operation in a sequence that will provide drainage at all times. Any areas that cannot be so drained shall be kept free of standing water by pumping, if necessary.
5. Excavation shall be performed in a manner that will not endanger adjacent structures or improvements.
6. If hazardous materials of any kind are encountered in the excavation, Contractor shall immediately notify the Owner's Representative and stop excavation until the Owner has determined how to deal with it.

7. When permanently frozen soils are encountered, place fill or backfill materials in a timely manner, as directed, to minimize degradation of the foundation material. Do not place fill or backfill over seasonally frozen ground unless authorized in writing.
8. Thaw and drain frozen material deemed acceptable for fill before placing in the embankment. Frozen cuts may require stage excavation: remove thawed material and allow the cut to thaw while work continues on some other portions of the project. After the material in the cut has thawed to a sufficient depth, remove the thawed material. Repeat this operation until all frozen material is removed or the cut is excavated to grade.

B. Roadways, Parking Areas, Walkways

1. Excavation shall be carried to the subgrade elevations required for the placement of classified material and to such additional depths as required to remove all unsuitable material as directed by the Engineer.

C. Over Excavation

1. Over excavation shall be restored by the Contractor by backfilling with classified material and compacting to 95 percent of the maximum density at no cost to the Owner.

D. Stability of Sides

1. The Contractor shall slope the sides of excavations to the angle required for safety or shore and brace where sloping is not possible either because of space restrictions or stability of material excavated. Maintain sides and slopes of excavations in a safe condition until completion of backfilling by scaling, benching, shelving, or bracing. Take precautions to prevent slides or cave-ins when excavations are made in locations adjacent to backfilled excavations and when sides of excavations are subjected to vibrations from vehicular traffic or the operation of machinery or any other source. In all cases the sides of all excavations shall be constructed to satisfy the requirements set forth in the local, state, and federal safety regulations regarding shoring and slope angle.

E. Cold Weather Protection

1. The subgrade must be kept from freezing from the time earthwork begins until final acceptance of the work, unless specified otherwise in writing by the Owner's Representative.
2. All subgrade that is allowed to freeze shall be thawed and redensified to 95 percent of the maximum density by the Contractor at no expense to the Owner, unless specified otherwise in writing by the Owner's Representative.

3.03 Fill and Backfill

A. General

1. Fill and backfill consists of the placement of classified and/or unclassified material in layers to the required elevations.

2. All excavated materials meeting the requirements for classified and unclassified materials shall be incorporated into the work unless they are surplus to the requirements of the work and the Owner's Representative has given written approval not to use the material.
3. The Contractor shall keep all fills and backfill well shaped, drained, and maintained.

B. Roads, Parking Areas, Walkways

1. Fills and backfills shall be constructed of classified materials in all areas except as indicated on the Project Drawings.
2. The top six inches shall have a maximum particle size of 3 inches.
3. Fills and backfills shall be constructed in lifts of 12-inch maximum thickness, [six-inch maximum thickness if hand-operated compactors are used] and compacted to not less than 95 percent of maximum density. The finished surface of fills and backfills shall be smooth with no soft or yielding areas and shall be graded to not more than 0.05 feet above or below the design grade.
4. The Contractor shall backfill excavations as promptly as the work permits, but not until completion of the following:
 - a. Owner's acceptance of construction below finish grade such as culverts, subdrains, and other utilities.
 - b. Inspection, testing, approval, and recording locations of underground utilities.
 - c. Removal of shoring and bracing and backfilling of any resulting voids with satisfactory materials. Cut off temporary sheet piling driven below the bottom of structures and remove in a manner to prevent settlement of the structure or utilities; or leave in-place if required.
 - d. Removal of trash and debris.
 - e. Placement of permanent or temporary horizontal bracing on earth retaining walls.

C. Cold Weather Protection

1. The fill and backfill must be kept from freezing from the time earthwork begins until final acceptance of the work, unless specified otherwise in writing by the Owner's Representative.
2. All fill and backfill which is allowed to freeze shall be thawed and redensified to 95 percent of the maximum density by the Contractor at no expense to the Owner, unless specified otherwise in writing by the Owner's Representative.

3.04 Area Grading

- A. The top six inches shall have a maximum particle size of six inches. The fill material shall be placed in lifts of [12-inch maximum thickness][six-inch maximum thickness if hand-operated compactors are used] and shall be compacted to not less than 90

percent of maximum density. The finished surface of the fill shall be smooth with no soft or yielding areas and shall be graded to not more than 0.10 feet above or below the design finish grade. In those areas where the grade at the limit of grading is above or below the elevation of the adjoining natural surface, the design finish grade shall be maintained to the limit of grading and the edge of the cut or fill feathered off to make a smooth transition to the adjoining natural surface.

3.05 Measurement and Payment

- A. All work included under this section is incidental and shall not be measured separately.

END OF EARTH MOVING

SECTION 31 62 16
HELICAL ANCHORS

PART 1 - GENERAL

1.01 SCOPE OF WORK

- A. Helical piers shall be screw anchors manufactured from steel pipe specifically for foundation applications, with helical bearing plates welded to them, installed by being advanced into the soil using a rotating motion, and are used to resist applied axial (compression or tension), lateral loading and overturning moments from structures, within designed settlement, uplift, or deformation tolerances. All materials, labor equipment and tools necessary to furnish and install the helical piers shall be provided by the Contractor.
- B. Contractor shall be prepared to handle on-site soil conditions, including but not limited to organic silt, silt, and sand, in all of which permafrost can be present throughout the Project area. Contractor shall perform such work as necessary to accommodate soil conditions. No additional payment shall be allowed for such work.

1.02 SUBMITTALS

- A. Contractor shall submit a helical pier installation plan detailing equipment and methodology for installation of the helical piers.
- B. Pier installation torque measurement and calibration records shall be submitted to Engineer within 24 hours of each completed piers.

PART 2 - PRODUCTS

2.01 ROUND PIPE SHAFT HELICAL ANCHOR ASSEMBLIES

- A. Anchor Length:
 - 1. The minimum installed length of the pier from the helix to top of helical pier shall be such that the required installation depth is achieved and such that the tops of the installed helical piers extend to the height above the ground surface as shown in the Plans for the specific application.
 - 2. Helical piers leads shall be a minimum 7 feet long from the pointed to the end of the upper coupling with the upper helix a minimum of 3.5 feet from the upper coupling.
 - 3. Helical extensions shall be a minimum of 7 feet long.
- B. Piling Capacity: Helical piers shall provide a minimum axial load-carrying capacity of 45,000 pounds each.
- C. Helical Pier Shaft:
 - 1. Cold formed, welded, or seamless steel pipe conforming to ASTM A53.
 - 2. Minimum Yield Strength: 35 ksi
 - 3. Shaft end connections between sections shall be via square shaped coupling weld to each end.
- D. Helices:
 - 1. Helices shall have a minimum thickness of 3/8-inch and provide a 3-inch pitch.

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2. Steel shall conform to ASTM A1018 with 55 ksi minimum yield strength.
 3. Helices shall be welded to pipe sections using a continuous fillet weld on both sides of the helix-to-pipe connection. Leading edge of helices shall be sharpened to minimize soil disturbance during installation.
 4. For dense or frozen soils, the contractor can use a reduced area helix plate on the lead section such as a V-Style plate manufactured by Supportworks or a Seashell plate manufactured by Chance/Atlas Pier.
- E. Connection Hardware:
1. Bolts: ASTM A325 Grade L-7 or approved equal.
 2. Nuts: ASTM A563
- F. Finish
1. All helical pier anchor surfaces (exterior, interior of pipe, etc.), adaptors, extensions, couplings, fittings, bolts, attachment assemblies and all other appurtenances shall be hot-dipped galvanized in accordance with ASTM A123, and ASTM A153.
 2. No substitutions of protective coating shall be considered.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Installation Damage: Helical pier that are damaged as a result of exceeding the maximum allowable torque rating during installation or helical pile that is suspected of being damaged as a result of poor workmanship or improper installation techniques shall be removed and replaced at Contractor's expense. Contractor shall repair damage to ground surfaces and vegetation caused as a result of construction activities.
- B. Equipment:
1. Helical pier installation equipment shall be of a rotary type, either truck or track mounted, with forward and reverse capability, electric or hydraulic powered and equipped with a torque monitoring device able to provide installation torque reading on a continuous basis.
 2. The equipment shall be capable of positioning and maintaining the helical pier at the designed angle, with minimum drive equipment rating to equal or exceed the maximum torque rating of the specified helical pile.
 3. All the required equipment shall be supplied by Contractor.
- C. Measure installation torque using torque monitoring instrumentation as part of the installation unit or as a separate in-line device. Calibrated torque monitoring data shall be submitted for review by Engineer. Torque shall be monitored and logged during the entire installation for each helical pier at increments outlined below in "Pier Installation Records." Engineer will not be on-site for all installations and will require installation records.
- D. Position helical piers as indicated in the Plans. Establish the proper alignment at station of installation.

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- E. Helical pier shall be constructed and installed round, plumb, and true to the required location. Helical piers shall be installed in a manner that does not destroy the soil strength characteristics as they are installed. The helices shall be advanced so that the helix screws or threads into the soil matrix rather than augering through the soil matrix, which would result in heavily damaged auger cuttings around the helix.
 - F. Helical piers shall be held securely and accurately in position while installing to ensure they are within specified tolerances. Safe and secure connections shall be provided to helical piles and extensions at all times.
 - G. Sufficient downward pressure shall be applied as to advance helical piers. Under no circumstances shall the helical pier be pushed directly into the soil.
 - H. Installation shall be executed in a smooth, continuous threading manner, at the rate of advancement equal to one pitch per revolution as to minimize disturbance to the soil during installation. The maximum rate of rotation shall not exceed 20 revolutions per minute.
 - I. Engineer shall be notified in the event that any obstructions are encountered during installation. The encountered obstructions shall be removed, or the helical and adjacent helical piers relocated as directed by the Engineer.
 - J. Installation Tolerances of Helical Piers:
 - 1. Maximum Variation from True Location at Ground Surface: ½-inch after installation is completed, non-cumulative.
 - 2. Maximum Variation from Plumb: ½-inch per 10 feet, non-cumulative.
 - 3. Pier caps shall be installed level.
 - 4. In final position, helical piling joints and any other protruding features of the pier assembly shall not be located within the seasonal active layer of the ground.
 - 5. Required Installation Depth: The horizontal centerline of the lower helix of each pier shall be embedded to the minimum depths below the existing ground surface as shown in the Plans.
 - 6. Contractor may need to pilot drill prior to pile installation if permafrost is encountered before required embedment is reached. Hole cut by pilot drill shall not exceed the shaft diameter of the helical pile.
 - 7. Based on torque readings provided by Contractor, Engineer will provide direction to Contractor in the event that sufficient installation torque is not attained at the design embedment depth. Engineer may request field load testing or deeper helical pile installation on any helical pile which, if required, will be negotiated as separate cost items with the Contractor.
 - K. At no additional cost to Owner, Contractor shall withdraw damaged or defective piles and piles driven outside of the specified tolerances, install new piles within driving tolerances and fill holes left by withdrawn piles as directed by Engineer. Engineer reserves the right to accept or reject questionable installation of helical piles.
 - L. Pier Installation Records: Maintain accurate installation records of each pier, compiled and attested to by a qualified professional engineer. Include the following data:
 - 1. Project name and number.
-

2. Name of Contractor.
 3. Pier dimensions.
 4. Pier identification number.
 5. Date and time of installation.
 6. Weather conditions and ambient air temperature.
 7. Depth of pre-drilling, auger diameter, and if other methods such as heat are used.
 8. Final pier embedment depth.
 9. Installation torque measurements shall be recorded for each 3 feet of each helical pier embedment from the ground surface. At deepest 3-feet of embedment, torque measurements shall be recorded for every 1-foot of embedment depth.
- M. Helical piers installed with a separation greater than ½-inch but less than 1-inch between the riser shaft and the soil require backfilling and densification with a sand and potable water slurry. The slurry shall be a thawed mineral sand mixed with potable water to a fully saturated state. The slurry shall be placed in fully thawed state in the annular space in nominal 12-inch lifts and hand densified. Hand densification shall be conducted until the slurry no longer settles within the annular space and the slurry is dense and firm. Hand densification may include rod tamping, vibrating the helical anchor riser shaft, ground surface vibration adjacent to the helical pier riser or other means developed by the Contractor. The Engineer shall approve the slurry, slurry placement, and densification methods proposed by the Contractor prior to use.

3.02 QUALITY ASSURANCE

- A. All helical pier installations are subject to the Approval of the Engineer. Contractor shall use a Differential Pressure Torque Indicator, Mechanical Dial Torque Indicator, Shear Pin Torque Limiter, or another Approved device for measuring torque. Owner's Representative will not be on-site for all installations and shall approve reports based on the torque recorded by the approved device.
- B. Contractor shall prepare a form for each installation which shows depth and torque. Spreadsheet shall show each installation meets the specifications and details. Each installation will be reviewed and Approved by the Engineer. At the request of the Contractor, the Engineer may furnish a pre-approved form.

3.03 CLEAN UP

- A. The construction site shall be restored to its original condition. All underbrush or trees damaged during the drilling operation shall be completely removed and properly disposed of. All drill tailings shall be removed from the site or buried, and the surface profile shall be restored to its original grade.

END OF SECTION 31 62 16

SECTION 32 31 13 CHAIN LINK FENCES AND GATES

PART 1 - GENERAL

1.01 Description

- A. This section covers all plant, labor, equipment and material, and performing all operations in connection with the construction of chain link fencing as shown on the Drawings and covered by this Specification.

1.02 Submittals

- A. The Contractor shall submit for approval manufacturer's specifications, drawings, and recommendations for all materials incorporated into the project. The submittal shall include manufacturer's published data, engineering data, letter of certification or certified test laboratory report indicating that each material complies with specified standards and other requirements. Shop drawings shall be submitted for all fabricated work.

PART 2 - PRODUCTS

2.01 Fencing Materials

- A. Materials used in the construction of chain link fencing shall be in accordance with the requirements of "Chain Link Fence Manufacturers Institute", as described below:
 - 1. General: Posts, gate frames, braces, rails, stretcher bars, and truss rods shall be of steel; reinforcing wires shall be of high carbon steel; and gate hinges, post caps, barbed wire supporting arms, stretcher bar bands, and other parts shall be of steel, malleable iron, ductile iron or equal except ties and clips may be aluminum.
 - a. Workmanship shall be good quality. Parts shall be formed accurately to dimension. Zinc-coated surfaces shall be free from imperfectly coated spots, bruised or scaled coating, drops of zinc, and sal ammoniac spots.
 - b. Posts, gate frames, rails, and braces shall conform to dimensions and weights shown in Table No. 1.
 - 2. Zinc Coating: All steel and iron parts shall be zinc-coated after fabrication, using zinc grade "E" in accordance with Federal Specification QQ-7-351. Weight of zinc coating per square foot of actual surface shall average not less than 1.2 ounces and no individual specimen shall show less than 1.0 ounce.
 - 3. Gates: Shall be swing, sliding or truss cantilever, single or double, as specified complete with latches, stops, keepers and hinges, roller assemblies and roller tracks with provisions for three strands of barbed wire above is specified.
 - a. Gate frames shall be constructed of tubular members, such as to provide a rigid frame of ample strength free from sag and twist.
 - b. Fabric shall be zinc coated by hot-dip process after fabrication. Coating shall be commercially uniform. It shall not have less than 1.2 ounces per square foot when tested. The fabric shall be attached securely to the gate frame at intervals not exceeding 15 inches. Fabric shall be nine-gauge two-inch mesh.

**Table No. 1: Dimensions and Weights
Posts-Rails-Braces**

Use	Section	Outside Diameter or Dimensions, Nominal (inches)	Weight Per Foot, Nominal (pounds)
End, corner, and pull posts (tubular) for fabric heights:			
less than 6 feet	Round	2.375	3.65
6 feet or over	Round	2.875	5.79
Gate posts for nominal width of gate, single, or one leaf of double:			
4 feet and less	Round	2.875	5.79
4 feet to 10 feet	Round	4.000	9.10
10 feet to 15 feet	Round	6.625	18.97
over 15 feet	Round	8.625	24.70
Gates - exterior frames for fabric heights:			
6 feet and less	Round	1.660	1.806
over 6 feet	Round	1.900	2.805
Interior bracing (tubular) for fabric heights:			
less than 6 feet	Round	1.315	1.055
6 feet and over	Round	1.660	1.806
Rails and post braces (tubular):	Round	1.660	1.806
Intermediate posts for fabric heights:			
less than 6 feet (tubular)	Round	1.900	2.72
6 feet and over (tubular)	Round	2.375	3.65

- c. Hinges shall be heavy pattern, of adequate strength for gate, with large bearing surfaces for clamping them in position. They shall not twist or turn under the action of the gate. Gates shall be capable of being opened and closed by one person.
- d. Latches, stops, and keepers shall be provided on all gates. Latches shall be the ice-free type shown on the Drawings, except for single gates with openings less than 10-feet wide, a forked latch may be provided. Latches shall be arranged for locking, keepers shall consist of a mechanical device for securing the free end of gate when in the full open position.
4. Posts shall be of the lengths specified and shall be tubular.
5. Post braces shall be provided for each gate, corner, pull, and end post for use with fabric five feet or more in height, and consist of a round tubular brace extending to each adjacent line post at mid-height of the fabric, and a truss consisting of a rod not less than three-eighths inch nominal diameter from line post back to gate, corner, pull, or end post, with a turnbuckle or other equivalent provision for adjustment.
6. Post tops shall consist of ornamental tops. Tops shall be provided with a hole suitable for through passage of the top rail. Post tops shall fit over the outside of the posts and shall exclude moisture.
7. Top rails shall be round (tubular), in lengths not less than 18 feet and fitted with couplings for connecting lengths into a continuous run. Couplings shall not be less than six inches long, provide a substantial connection, and shall allow for expansion and contraction of rail.

8. Tension bars shall not be less than three-sixteenths of an inch by three-fourths inch and of lengths one-inch less than the full heights of the fabric with which they are to be used. The tension bars shall be arranged for attaching the fabric to all terminal posts by threading through the fabric, by bands, or by other positive mechanical means. One tension bar shall be provided for each gate, and post, and two for each corner and pull post.
9. Ties or clips of adequate strength shall be provided in sufficient number for attaching the fabric to all line posts at intervals not exceeding 15 inches.
10. Bands or clips of adequate strength shall be provided in sufficient number for attaching the fabric and stretcher bars to all terminal posts at intervals not exceeding 15 inches.
11. Tension wire shall be galvanized seven-gauge coil spring steel.
12. Barbed wire shall consist of 12-gauge minimum galvanized steel wire, double strand, twisted, with four point barbs closely spaced. Barbs should be placed staggered from adjacent wires.
13. Support arms shall face outward at a 45-degree angle. The overhanging supporting arms of the top guard will be of sufficient length to increase the overall height of the fence by at least one-foot and provide support for three evenly barbed wires. The arm shall be provided with a hole suitable for through passage of the top rail. The supports shall fit over the end of the posts and shall preclude the entry of moisture.
14. Fabric shall be zinc coated by hot-dip process after fabrication. Coating shall be commercially uniform. It shall not have less than 1.2 ounces per square foot when tested. The fabric shall be attached securely to the gate frame at intervals not exceeding 15 inches. Fabric shall be nine-gauge two-inch mesh.

PART 3 - EXECUTION

3.01 Fence Construction

- A. All posts shall be set in 3,000 psi Portland Cement Concrete footings unless posts are in areas where peat is three feet or deeper. Tops of the footings shall be level with ground, crowned to provide drainage and shall be troweled smooth. Dimensions of footings shall be as shown on Drawings. Footings shall be allowed to cure for at least seven days before attaching fabric. In peat areas (over three feet deep), posts shall be driven to one-foot below bottom of peat or a maximum of 10 feet.
- B. Posts shall be set vertical and of uniform and equal heights above ground with a maximum horizontal spacing of 10 feet center to center.
- C. The posts shall be set at grade breaks as required to allow fabric to be attached without creating a gap greater than four inches between fabric and grade.
- D. Fabric shall be stretched taut and securely fastened to end, corner, or gate posts at the following intervals:

Top Rail	24 inches maximum on center
Posts	14 inches maximum on center
Tension Wire	24 inches maximum on center
- E. Top edge of fabric shall be fastened to top rail, lower edge of fabric shall be fastened to bottom tension wire. Sharp fabric ends shall project above the top rail on security

fencing and below tension wire on other fencing. Fabric shall be attached to posts in an even and uniform manner to follow the grade of the land. The bottom clearance of the fabric above the ground shall be two inches plus or minus.

1. All runs of fence shall present the same appearance. The product of one manufacturer only will be accepted, except for items that do not influence the appearance of completed fence. The fence shall be the product of a manufacturer who has demonstrated by actual installations of a similar nature that its product is of the type required. No used, rerolled, or open-seam steel will be permitted in posts, gate frames, rails or braces.
2. Tension bands shall be used to attach the tension bars to posts. Tension bands shall be spaced 14 inches on center.

END CHAIN LINK FENCES AND GATES

SECTION 33 07 00 HDPE PIPE AND FITTINGS

PART 1 - SUMMARY

1.01 Summary

- A. Utility piping shall be supplied as insulated pipe and fittings with heat trace channels and glycol heat trace piping as indicated on the Drawings for use in pressure pipe applications. The minimum service temperature range of all individual components and final products shall be -20 to 140°F unless otherwise specified. All pipe and fittings shall be capable of withstanding the cyclic freezing of water under its rated service pressure without breaks, leaks, gross deformities, or impaired service characteristics. The core pipe shall be factory insulated with polyurethane insulation and protected with an outer jacket of HDPE.
- B. This section covers HDPE piping and fittings used in the arctic piping system in the following services:
 - 1. Hot glycol designed for 50% to 60% propylene glycol in water. Verify compatibility of any new heat transfer fluids with existing fluids currently in use by the Owner prior to their use.
 - 2. Potable water.
 - 3. Sanitary sewer.
 - 4. Flushing and testing.
- C. All piping is above grade supported on either treated timber sleepers or helical pile supported steel framing except for short, buried sections used in road crossings, which are either direct bury crossings or are to be installed in a casing pipe. Locations where each type of support is used are shown in the Drawings.
- D. With the exception of owner procured materials, all additional HDPE pipe and fittings shall be from a single manufacturer who is fully experienced, reputable, and qualified in the manufacture of the HDPE pipe to be furnished. The pipe shall be designed, constructed, and installed in accordance with the best practices and methods standard to the industry and shall be in accordance with these specifications.

1.02 References

- A. The following specifications (current edition) are referenced in this document and shall be considered integral to this specification:

ASTM C177	Thermal transmission (guarded hot-plate apparatus)
ASTM C273	Shear properties of sandwich-core materials
ASTM C518	Thermal transmission (heat flow meter apparatus)
ASTM D1621	Compressive properties of rigid cellular plastics
ASTM D1622	Apparent density of rigid cellular plastics
ASTM D2126	Response of rigid cellular plastics to thermal humid aging (thermal dimensional stability)

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|------------|--|
| ASTM D2837 | Obtaining pressure design basis for thermoplastic pipe products |
| ASTM D2842 | Water absorption of rigid cellular plastics |
| ASTM D3350 | Specification for Polyethylene Plastic Pipe and Fittings Materials |
| ASTM E398 | Water vapor transmission rate of sheet materials (dynamic relative humidity measurement) |
| ASTM E96 | Water vapor transmission of rigid cellular plastics |
| ASTM F2164 | Standard Practice for Field Leak Testing of Polyethylene (PE) Pressure Piping Systems using Hydrostatic Pressure |
| ASTM F2620 | Standard Practice for Heat Fusion Joining of Polyethylene Pipe and Fittings |
| ASTM F714 | Polyethylene (PE) plastic pipe (SDR-PR) – based on outside diameter |
- B. American Water Works Association:
- | | |
|-----------|---|
| AWWA C651 | Disinfecting Water Mains |
| AWWA C653 | Disinfection of Water Treatment Plants |
| AWWA C901 | Service Polyethylene Pressure Pipe and Tubing, 1/2-inch through 3-inch for Water |
| AWWA C906 | Polyethylene Pressure Pipe and Fittings, 4-inch through 63-inch for Water Distribution and Transmission |
- C. National Sanitation Foundation:
- NSF/ANSI 14 – Plastic Piping System Components and Related Materials
- NSF/ANSI 61 – Drinking Water System Components – Health Effects
- D. Plastic Pipe Institute
- TR-33 – Generic Butt Fusion Joining Procedure for Field Joining of Polyethylene Pipe
- Plastic Pipe Institute (PPI) Handbook of Polyethylene Pipe, Chapter 2 – Inspections, Tests, and Safety Considerations
- E. Unless otherwise noted herein or on the drawings, all fittings shall be constructed utilizing core pipe of the same material, resin, and dimensions as that used for the core pipe of the straight lengths.
- 1.03 Submittals
- A. The Contractor shall furnish to the Engineer for approval one (1) electronic copy in PDF format of the submittals indicated below. No work shall commence on any item until the required shop drawing submittals have been approved. The submittals shall include:
1. Product Data: Submit manufacturer's standard printed information and literature for all materials to be incorporated in the work.

2. Shop Drawings: Submit dimensionally correct (scaled) shop drawings for all items to be fabricated prior to beginning fabrication.
3. Fabrication Procedures: Submit a written description of the methods/procedures to be used in fabricating the pipe and fitting.
4. HDPE Fusion Procedure Certifications (Butt Fusion and Electrofusion) for all personnel performing butt fusion and/or installing electrofusion couplings in the field on HDPE pipe. Contractor shall also submit evidence of experience for the installers of Fusions and Electrofusion Couplings.
5. Inspections and Testing of Pipe and Fittings:
 - a. Submit proposed hydrostatic testing procedure in compliance with ASTM F2164 for review and approval before any testing is undertaken.
 - b. Submit results of foam density tests on daily basis for all specified inspections and testing of pipe and fittings.
6. Quality Assurance program in accordance with section 1.04.
7. Laboratory Testing Results:
 - a. K-factor testing of insulation.
 - b. Core pipe/insulation bond
 - c. Density of insulation
 - d. Testing frequency shall be a minimum of one set of tests per 400 linear feet of pipe.

1.04 QUALITY ASSURANCE

- A. The manufacturer shall be experienced and regularly engaged in the production of pre-insulated piping systems. The manufacturer shall understand the system design and its intent and shall produce components suitable to accomplish that intent. Any deficiencies in the Drawings or these Specifications which may jeopardize the performance of the system shall be brought to the immediate attention of the Engineer, prior to submittal of product description and information for acceptance, whenever possible.
- B. Engineer shall have open access to the fabrication facility and any sub-tier suppliers to assure conformance with the Specifications and quality of workmanship.
- C. The Contractor shall submit to the Engineer for approval a Quality Assurance program which incorporates as a minimum the following:
 1. A description of the method of manufacture.
 2. A description of the methodology for the quality assurance program.
- D. The Contractor shall implement the Quality Assurance program to assure compliance with all requirements of this Specification.
- E. A record of all tests which were performed shall be provided to the Engineer as required. (As a minimum, all test reports shall be submitted to the Engineer upon completion of work).

- F. Where a method of testing has not been specified, the Contractor shall submit detailed test procedures for approval by the Engineer.
- G. Any deficiency found in a stick of pipe shall be cause for rejection of the entire stick of pipe. All rejected pipe shall be replaced by the Contractor at no additional cost to the Owner.
- H. All insulated pipe and fittings supplied under this specification shall utilize the same manufacturer of core pipe. Contractor shall identify the core pipe manufacturer with his submittal. Additionally, since the City of Bethel procured pipe materials ahead of the construction project, the pipe material and fittings purchased by the Contractor must be compatible with the already acquired pipe.

PART 2 - PRODUCTS

2.01 No Lead Rule

- A. All pipe, fittings, and brass components in contact with potable water are to comply with Public Law 111-380 (No Lead Rule).

2.02 Core Pipe (Water Main, Low Pressure Sewer Main, Glycol Main):

- A. All core pipe shall be made of high-density polyethylene (HDPE) that conforms to all applicable provisions and requirements of the latest revision of AWWA C901 and AWWA C906 and, by inclusion, all appropriate standards referenced therein.
- B. HDPE Plastic Pipe shall possess the following characteristics unless otherwise specified, shown, or approved by the Engineer.
 - 1. Shall have a cell classification of 345434C per ASTM D 3350.
 - 2. Nominal pipe dimensions as given on the drawings shall have actual diameter dimensions in accordance with ASTM F714. All dimensions are Iron Pipe Size (IPS).
 - 3. Shall have a maximum standard dimension ratio (SDR) of 11.0 and a minimum pressure rating of 160 psi.
 - 4. Shall maintain a pressure rating equal or above 100 psig at 140 °F.
- C. All HDPE pipe used on the project shall have the same trade name. Additionally, the manufacturer shall certify that all HDPE pipe materials are compatible.
- D. All HDPE pipe and fittings shall be fabricated from virgin PE4710 resin.
- E. All HDPE pipe mains shall be butt fusion welded per ASTM F2620. Electrofusion joints are allowed for side taps or areas where butt fusion welding is physically impossible. All planned electrofusion joints shall be identified, and a list presented to the engineer for final approval prior to fusion.

2.03 Pipe Insulation

- A. Insulation between core pipe and outer jacket of all pipe and fittings shall be low-density rigid closed-cell polyurethane insulation with a nominal thickness as shown on the drawings. It shall be applied and cured in strict accordance with the manufacturer's recommendations and good commercial practices such that the

- resulting insulation completely fills the annular space between core pipe and outer jacket and is free of defects affecting its intended purpose.
- B. Polyurethane insulation shall exhibit the following properties and characteristics specified by the referenced ASTM tests below.
- ASTM C518 or C177, Maximum K-factor, as produced: 0.22 btu·in/hr·ft²·°F
- ASTM D1622, Core Density Range: 2.0 to 4.0 lbs/ft³
- ASTM D1621, Minimum Compressive Strength: 40 psi (parallel and perpendicular to pipe axis)
- ASTM D272, Maximum Water Absorption: 2%
- ASTM D2126, Dimensional Stability: 2% (Maximum Linear Change)
- C. Exposed polyurethane insulation faces at pipe and fitting ends shall be coated to protect against physical damage, UV exposure during shipping and storage, and against water intrusion in service. The elastomeric coating shall be suitable for direct application over polyurethane insulation with no deleterious effects to the insulation or coating. The elastomeric coating shall be formulated for long-term service and retained flexibility over extended periods of exposure to sunlight, harsh weather, and saltwater spray. The strength of the adhesive bond of the coating to the insulation shall be greater than the tensile strength of the coating. In the event the coating is nicked or an edge is rolled up in handling, the coating that has been dislodged shall tear free from the coating still adhering to the insulation rather than pull the balance of the coating off as a sheet.
- D. All Federal and State regulations applicable to the type of insulation and its use shall be strictly adhered to.
- E. Insulation shall be placed into the pipe jacket by a single injection application. Fittings may be manufactured using one insulation injection for each open end of the fitting. In no case shall the jacket be drilled to perform, monitor, or inspect the injection. Pre-manufactured 4" arctic foam half-shells with rigid HDPE wrap, as described in 2.14, are the preferred method for joints and fittings.
- F. The maximum allowable void size is 0.05 in³ (for reference, a 3/8-inch cube is .05 in³).
- G. Insulation and chemicals shall not contact the end or inside of the exposed core pipe.
- H. The electric element heat trace channel shall be secured to the outside of the core pipe, parallel to the pipe axis, prior to insulating. The channel shall be flush with the insulation faces at each end of the pipe or fitting, be free of insulation residue and foreign substances, and open to the minimum cross section specified.
- I. The elastomeric coating shall be applied and cured in strict accordance with the manufacturer's recommendations and good commercial practice such that the finished product is free of defects affecting its intended purpose.

- J. The elastomeric coating material shall exhibit the following properties and characteristics:

ASTEM E398 or E 96 Maximum Water Vapor Permeance: 1.0 perm
Dry Film Thickness Range: 15 to 63 mils

2.04 Core Pipe/Insulation Bond

- A. Core pipe and fittings shall be bonded to the insulation with a minimum shear bond strength of 15 psi, or in such a manner as to produce insulation-to-insulation separation when a sample is tested in shear.
- B. The core pipe surface preparation will be performed in a manner that does not leave foreign material imbedded in the plastic. Gouges or scratches in the pipe surface that exceed the tolerance specified by the pipe manufacturer for the pipe pressure rating shall be cause for rejection.

2.05 Pipe Insulation Jacket

- A. Outer jackets for pipe and fittings shall be constructed of HDPE.
- B. The Contractor shall provide company name and production date (month and year) on the outer jacket of each pipe and fitting. Information shall be stamped onto the jacket with 1/8- inch to 1/4-inch-high lettering, within 8" of one end of the jacket.
- C. All surfaces of the outer jacket, including end-cuts and welds, shall be finished such that no jagged edges exist that could cause personal injury.
- D. The interior of the jacket shall be free of oils, grease, or other residue that could interfere with the adhesion of insulation to the outer jacket.

2.06 Electric Heat Trace Channel

- A. Electric heat trace channels shall be provided at a 45-degree angle from the bottom of the sewer service pipe, as indicated in the drawings.
- B. Heat trace channels shall be fully enclosed, in direct contact with the core pipe for its entire length, and there shall be no intrusion of insulation between the heat trace channel and the core pipe unless otherwise specified.
- C. Heat trace channels for all straight lengths of pipe shall be made of the same material as the pipe and shall be a semi-circle shape with inside dimensions of 1.5 inches and installed as shown on the drawings. The heat trace channel shall extend 2-inches past the insulation face of the pipe, with ends cleanly cut, square, smooth, and free from burrs or other protrusions that could interfere with installing the heat trace in the field.
- D. Heat trace channels installed along angular bends of fittings shall be constructed with 1.5-inch diameter flexible, liquid-tight PVC non-metallic conduit. Conduit material shall be nonconductive and non-corrosive, with a smooth interior surface that will maintain the internal diameter in tight radius bends. Conduit material shall be UL listed for outdoor use. A transition fitting shall be installed on all ends of heat trace channel that results in a channel protruding from the insulation face as specified for straight pipe channel. All transition fittings shall be constructed with smooth interiors, free from burrs or other protrusions that could interfere with installing the heat trace in the field, as shown in the drawings.

- E. Pieces of heat trace channel to fit within the joint area (jumpers) shall be provided with each piece of pipe and with each fitting. The jumpers must be sized to slip snugly over the outside of the specified straight pipe heat trace channel with an overlap of not less than 1 ½- inches on each side after a typical field fusion of individual lengths of pipe.

2.07 Glycol Heat Trace Channel

- A. Glycol heat trace channels shall be provided on the bottom of the main pipe.
- B. Channels shall be constructed of virgin PE4710 and shall be in direct contact with the core pipe for its entire length with no intrusion of insulation between the channel and the core pipe unless otherwise specified.
- C. Channels shall be sized as shown in the drawings. Alternate shapes can be submitted to Engineer for approval.

2.08 Service Pipe (Water, Sewer and Glycol)

- A. Service pipes are placed in arctic insulated carrier pipe. See drawings for sizes and configuration for the different water, sewer, and glycol service sizes and carrier pipe sizes.
- B. HDPE pipe shall be constructed of virgin PE4710 resin. All design drawings are based on DR11 HDPE piping.
- C. For gravity sewer service pipe only, PE3408 HDPE DR17 with Harco fitting shall be allowed.

2.09 Fittings

- A. Fittings
 - 1. All molded fittings and fabricated fittings shall be fully pressure rated to match the pipe DR pressure rating to which they are made. All fittings shall be molded or fabricated by the manufacturer. No Contractor fabricated fittings shall be used unless approved by the Engineer.
 - 2. Fittings and specials shall have the same trade name or be manufactured by the same manufacturer as the HDPE pipe being supplied. The manufacturer shall certify that the fitting material is compatible with the pipe material.
 - 3. Heat Fusion Joints shall comply with ASTM F2620.
 - 4. Transition Fittings (change in pipe materials) for fittings larger than 2" shall be Victaulic (or Engineer approved equal) style clamp couplings. The style number shall be appropriate for the service using pipe manufacturer's recommended fitting for the pipe materials and sizes being used. Style 904 HDPE to Flanged, style 907 HDPE to steel, and series 2971 HDPE to PVC are all pre-approved.
 - 5. All nuts and bolts shall be Type 316 stainless steel.
 - 6. All transitions from HDPE pipe to other pipe materials and valves shall be made per the HDPE pipe manufacturer's recommendations and specifications. A molded flange connector adapter with 316 stainless steel back-up ring assembly or Victaulic (or Engineer approved equal) style 907 adaptor shall be used for pipe

type transitions. No solid sleeves shall be allowed between material transitions. Flanges shall be ANSI Class 125.

B. Fabricated Fittings

1. All fusion joints used in fabricated fittings shall be documented by a computer that records pressure and temperature applied at each fused joint. Computer printouts and electronic data for each fitting shall be made available to the owner upon request. The Contractor shall ensure that each joint is fused at the temperature and pressure recommended by the pipe manufacturer in order to achieve the maximum pressure rating for that joint.
2. All fittings for each project shall be labeled with a unique identifier that corresponds with the fusion computer printouts for each fitting.

2.10 HDPE Pipe and Fitting Manufacturing and Dimensional Tolerances

- A. Allowable offset of the centerline of the outer jacket and core pipe shall be not more than 1/4- inch at the pipe ends. Elsewhere along pipe lengths the centerline offset shall not be greater than 3/8-inch.
- B. The minimum temperature of all components used to manufacture pipe and fittings shall be 50 °F at the start of fabrication. The fabricated pipe shall be placed in a facility maintained at a temperature of 50 °F or greater for a minimum of 12 hours after fabrication.
- C. All elbows shall have a bend radius as specified in the drawings with a tolerance of + 2 degrees without reversion. All elbows must maintain normal outside diameters along their entire length without tolerance as per ASTM-F714.
- D. All branches of fabricated fittings must lie in a single plane with a maximum deviation of + 2 degrees.
- E. The length of core pipe protruding from the insulation on the ends shall be 12 inches + 1/4 -inch. The core pipe ends shall be smooth and oriented perpendicularly to the core pipe longitudinal axis + 1/8-inch.
- F. The outer jacket shall be cut in one pass perpendicular to the length of the jacket + 1 degree. The heat trace channels shall be flush with the insulation and outer jacket. The insulation profile of the coated ends shall not exceed a relief deviance of + 1/4-inch across the face.

2.11 HDPE Pipe and Fitting Production and Inspection

- A. Only finished pipe lengths and fittings that meet the requirements of these specifications and drawings shall be used for destructive testing. Should any product fail to meet the visual quality control specifications listed below, that product shall be either re-built to meet the specifications or rejected. Only those products that meet all visual quality control specifications shall be considered final products suitable for receipt by the Owner or for laboratory or other destructive testing.
 1. Visual Quality Control:
 - a. Dimensional Tolerance: Each length of pipe and each fitting will be examined by the Contractor for off-set tolerances, insulation cut-back distances, exposed

insulation face alignment and relief profile, and alignment and smoothness of core pipe ends.

- b. Insulation Integrity: Completed pipe and fitting ends shall be inspected for voids in excess of 0.05 in³ or discontinuities by the Contractor prior to coating. Any glazing left on the uncoated pipe end from the forms used during the insulating operation shall be removed before coating.

2. Laboratory Testing

- a. The density and K-factor shall be measured on insulation specimens of the appropriate size and under the specified conditions as set forth in the applicable ASTM test. Insulation specimens shall be retrieved by cutting a 12-inch section of insulated pipe from a production sample. The remaining length shall be trimmed to the dimensional tolerances of this specification to allow Owner use of that pipe section.
- b. Should the Contractor choose to test the "K" factor as outlined in ASTM C518, the testing apparatus shall be calibrated within 24 hours of the test using a calibration standard certified accurate by the National Bureau of Standards (NBS). The "K" factor test sample shall be removed from the insulated pipe, prepared for testing, and left open to the atmosphere at 70°F for a minimum of 24 hours prior to testing.
- c. In addition to the testing identified above, the following tests shall be performed to verify the quality of the finished product:
 - 1) Core pipe/insulation bond:
 - a) Two 6-inch lengths of cured insulated pipe shall be cut from one uncoated insulation face end of completed pipe length. The remaining length shall be trimmed according to the dimensional tolerances of this specification and coated to allow Owner use of that pipe section.
 - b) One specimen shall be tested at +70°F. The other specimen shall be brought to -20°F in 4 hours or less and remain there for at least 24 hours before testing. Acceptance will be indicated by a minimum shear bond strength of 15 psi and insulation-to-insulation (or insulation-to-insulation pipe surface film) separation or tearing.

2.12 HDPE Pipe and Fitting Packing

- A. The core pipe ends of all pipe and fittings shall be capped with PE pipe caps (Caplugs or approved equal) and the plugs taped to the pipe with black electrical tape (such as 3M #33+) or other approved tape after final inspection and prior to shipment. Duct tape shall not be used to secure the PE pipe caps to the pipe spigot ends.
- B. Pre-insulated pipe shall be packed in bundles with a maximum gross weight of 4,000 pounds per bundle unless otherwise specified by the Owner. The end geometry of each bundle shall be rectangular. Each layer of pipe within the bundle including the bottom layer shall rest upon a minimum of 3 each 4-inch x 4-inch cross cleats banded to that individual layer using 1 1/4-inch steel strapping. All cleats shall feature a 45-degree stop block at least nominal 4-inches high by 4-inches long fastened securely

to both ends of the cleats to prevent the pipe from rolling off the cleat when the banding is cut. The outer cross cleats shall be installed between 1 to 2-feet from the insulation face of the pipe ends with the middle cleat centered on the bundle. In addition, 1 1/4-inch steel straps shall securely fasten all the layers together to form a complete bundle. Bundles 5 pipes wide by 5 pipes high are recommended.

- C. All fittings and couplings shall be packaged in crates sheathed with minimum 1/2-inch sheathing not to exceed 4 ft x 4 ft x 8 ft. Minimum nominal 2-inch x 3-inch framing members shall be installed in all corners of the crate and fastened securely to the sheathing. On crates longer than 6- feet, framing members shall be installed along the shorter centerline of all the 4 long panels. The framing members shall be securely fastened to each other and to the sheathing. For crates 4-feet long or less, 2 each 4-inch x 4-inch cleats shall be installed on the bottom edges of the crate to provide for forklift handling. For crates longer than 4-feet, 3 cleats shall be installed, with the middle cleat centered on the crate. These cleats shall be fastened through the bottom sheathing and also banded to the crate with 1 1/4-inch-wide steel bands that wrap around the entire crate. The crates shall be designed to stack 3 crates high, provide protection to the contents during rough ocean, air freight transport, and on-site handling without damage.

2.13 HDPE Pipe and Fitting Final Inspection

- A. After completion of the quantity of pipe and fittings contracted for, the Owner may perform a final inspection at the fabrication point. The certified results of all required laboratory tests made during production by the Contractor shall be made available in report form at this time. During the final inspection, the product packing will be inspected to see that all specifications listed in section 2.11 have been met. Should any of the packing fail to meet the specifications, the Contractor shall re-pack the pipe to meet the specifications.

2.14 Joint Insulation Kit

- A. Joints between segments of insulated pipe and fittings shall be installed using 4" thick foam half-shells.
- B. After installing, foam half shells shall be covered by a protective HDPE sleeve. Where an owner-provided metal-jacketed pipe joins an HDPE-jacketed pipe, heat shrinkable sleeve specifically designed for pipes made of HDPE, Canusa K-60 or approved equal is acceptable.
- C. Joint kits shall include half shell foam insulation and rigid wrap or heat shrink to field fabricate the pipe joint.
- D. Joint kits shall be sized for 16-inch cut back (8 inches for each pipe) and 8-inch jacket overlap (4 inches for each pipe) for a total joint sleeve length of 24 inches.
- E. Manufacture to fit the fitting or the pipe joint.

2.15 Pipe Identification

- A. The following shall be continuously indent printed on the pipe or spaced at intervals not exceeding 5-feetca.
 - 1. Name and/or trademark of the pipe manufacturer.

2. Nominal pipe size.
3. Dimension ratio.
4. The letters PE followed by the polyethylene grade in accordance with ASTM D1248 followed by the hydrostatic design basis of the piping.
5. NSF-61 for all NSF-61 certified piping.
6. A production code from which the date and place of manufacture can be determined.

2.16 Electrofusion Couplings

- A. Electrofusion couplings should be avoided for fusion of HDPE pipe mains. Electrofusion couplings are allowed for branch service lines or where required in the 3" glycol circulation main in cases where butt fusion is not physically possible. Where required, couplings shall be installed by a certified technician. Electrofusion couplings shall be approved by pipe manufacturer to which they will be bonded.
- B. One-piece construction, tubular, and same material as the adjacent HDPE pipe.
- C. Couplings shall have attached around the circumference at each end a fusion wire which when energized shall provide a complete watertight fusion weld.
- D. Fusion weld wires are factory attached and with sufficient lead for connection to factory supplied power converter.
- E. Couplings shall be capable of sustaining test pressure without damage. Contractor shall supply one extra coupling per four installed for future use by Owner.
- F. Electrofusion couplings shall not be used for outer jacket sleeves or to repair damaged piping.
- G. Installation of coupling shall be in accordance with manufacturer's written instructions and using manufacturer's recommended tools and materials.

2.17 Valves

- A. Water Circulation Loop In-Line Isolation Ball Valves
 1. Valves for HDPE water mains shall be polyethylene ball valves suitable for use with piping complying with AWWA C901 and AWWA C906 as applicable.
 - a. Valves 2-inches and smaller shall have an integral stainless-steel valve stem. Valves larger than 2-inches shall have polyethylene valve stem.
 - b. Valve body shall be fully fused with no metal internal parts.
 - c. Valve shall provide full port through opening, with no flow obstructions, when in open position.
 - d. Valves shall be rated for full pressure rating of connecting pipe, 160 psi minimum.
 - e. Valves 8" and larger shall have gear operators.
 - f. Install valves using butt-fusion.
 2. Valves shall be NSF/ANSI 61 certified for use with potable water.

3. Install in main loop only for isolation as shown on plans.
 4. Manufacturer: Polyvalve, Poly-Water Valves or approved equal.
- B. Water Circulation Loop Gate Valves
1. Gate valves shall be iron body, fully bronze-mounted, double disc, parallel seat valves as manufactured by Mueller Company or approved equal and in accordance with AWWA Specification C-500-93 or C509-01. All valves shall have non-rising stem, an O-ring seal, a handwheel operator, and open counterclockwise. Valves shall have welded flanges.
 2. Gate valves are required at fire hydrants for isolation. See drawing details for location and quantity.
- C. Sewer Lateral Valves
1. Valves for HDPE sewer laterals shall be polyethylene ball valves suitable for use with piping complying with AWWA C901 and AWWA C906 as applicable.
- D. Sewer Main Isolation Ball Valves
1. Valves for HDPE sewer mains shall be polyethylene ball valves suitable for use with piping complying with AWWA C901 and AWWA C906 as applicable.
 2. Valves 2-inches and smaller shall have an integral stainless-steel valve stem. Valves larger than 2-inches shall have polyethylene valve stem.
 3. Valve body shall be fully fused with no metal internal parts.
 4. Valve shall provide full port through opening, with no flow obstructions, when in open position.
 5. Valves shall be rated for full pressure rating of connecting pipe, 160 psi minimum.
 6. Valves 8" and larger shall have gear operators.
 7. Install valves using butt-fusion or flanged connections.
 8. Install in sewer main only for isolation as shown on plans.
 9. Manufacturer: Polyvalve, Poly-Water Valves or approved equal.

2.18 Hydrants

- A. Fire hydrants shall be as shown on Construction Drawings or Approved Equal and shall conform to AWWA Specification C-502-94, "Dry Barrel Fire Hydrants." All connections shall be mechanical joint unless otherwise approved by Owner's Representative.
- B. All "single pumper" hydrants shall have two, two- and one-half inch hose connections and one four and one-half inch pumper connections. All "double pumper" hydrants shall have one, two- and one-half inch hose connection and two four and one-half inch pumper connections. All hose threads shall be National Standard threads. The working parts of all fire hydrants shall be bronze or non-corrodible metal.

- C. Painting and coating shall be in accordance with the cited AWWA specifications for dry barrel fire hydrants Section 4, Article 4.2 (Paint). Color of paint shall be red.
- D. The adjustment of hydrant barrel and valve box to the required finish grade will be at the expense of the Contractor.
- E. All hydrants shall have drain outlets at the base of the barrel. Plugs shall be removed prior to installation.
- F. Fittings for hydrants shall be Ebba Iron Megalug, Victaulic Style 907, flanged class 125, or Engineer Approved Equal. Fittings shall be fully restrained.
- G. Gate valve(s) shall be provided for isolation. Handwheels shall be provided for all gate valves.

PART 3 - EXECUTION

3.01 General

- A. Connections to the Bethel Heights Water Treatment Plant shall be coordinated with the Owner's Representative and the Owning Utility before any shutdown of existing water facilities. Maximum allowable shutdown time shall be four hours. All shutdowns shall be approved and coordinated with the City of Bethel. Public notice (if required) shall be given a minimum of 24 hours before shutting down.

3.02 Construction Staking

- A. The Contractor shall furnish the construction staking.
- B. Horizontal distances are from center to center of fitting or appurtenances unless otherwise noted.
- C. Contractor furnished survey shall be done by a qualified and registered surveyor. The Contractor shall provide a competent surveyor to maintain line and grade during all pipe-laying operations with a transit and engineer's level at no additional cost to the Owner. Accurate survey notes shall be kept in accordance with accepted survey practice. A copy of these notes shall be given to the Owner's Representative as part of the record drawing submittal.

3.03 Water Removal

- A. During any required excavation for road or access crossings, the Contractor shall remove by pumping or other approved means all water above the bottom of the trench. Contractor shall obtain all permits necessary for dewatering.

3.04 Utility Mains

- A. Install water mains on helical pile supported steel foundations or proposed timber foundation supports unless in casing pipe or direct bury.
- B. For casing pipes and in direct bury applications, minimum cover shall be as shown on the plans to the outside diameter of the pipe. The excavation and backfill as specified in Section 31 20 00 Earth Moving.
 - 1. Backfill Material shall be two inches maximum size within one foot surrounding the pipe. The Contractor shall carefully place and thoroughly compact backfill around and above pipe to minimum 95 percent density.

2. After the lines have been inspected, the trenches shall be backfilled. Backfill may be accomplished prior to testing at the Contractor's risk.
 3. Restore surface to its original elevation or finished grade as shown on the Plans.
 4. Marking tape 12" above main shall be installed in direct bury installation.
- C. Contractor shall work around, support and protect existing water and sewer mains and services as required to complete the Work.
- D. Contamination Prevention:
1. Contractor shall take particular care to keep potential sources of contamination from collecting around water mains and services.
 2. Adequate provisions shall be made to direct surface flows and other sources of potential contamination away from the work area during construction.

3.05 Core Pipe Fusion

- A. Pipe shall be protected during handling against impact shocks and free fall, and the pipe interior shall be free of extraneous material.
- B. Each pipe shall be laid accurately to the line and grade shown on the Drawings. Pipe shall be laid and centered so that the sewer has a uniformly sloping invert. As the work progresses, the interior of the water or sewer shall be cleared of all superfluous materials.
- C. Before making pipe joints, all surfaces of the portions of the pipe(s) to be joined shall be clean and dry. Lubricants, primers, and adhesives shall be used as recommended by the pipe manufacturer. The joints shall then be placed, fitted, joined, and adjusted so as to obtain the degree of water tightness required.
- D. Pipe cutting, where necessary, shall be done in a neat and workmanlike manner without damage to the pipe. Unless otherwise authorized, cutting shall be done by means of an approved type of mechanical cutter. Wheel cutters shall be used when practicable.
- E. Polyethylene Pipe: Installations and cutting of polyethylene pipe shall be in accordance with ASTM F2620, thermal butt-fusion, in strict conformance with the manufacturer's recommendations, and as detailed hereinafter.
1. Butt-fusion joining of pipe and fittings shall be performed in accordance with the procedures established by the pipe manufacturer. Joining must be conducted by personnel possessing the qualifications and certifications specified below.
 2. Butt-fusion joining of pipe and fittings shall be performed on fusion machinery approved by the pipe manufacturer. Fusion pressures, temperatures, and cycle times shall be according to pipe manufacturer's recommendations. No pipe or fittings shall be joined by any individual, unless they are adequately trained and qualified in the technique involved.
 3. Joining sites shall be cleared and graded, if necessary, to provide enough space for pipe storage and fusion. The site shall be free of rocks, stumps, and debris

which would cut, scar or gouge the pipe. The fusion machine must be mounted on a level, stable base (e.g. three- fourth inch-plywood secured on level ground) or on a sled of a design approved by the pipe manufacturer. To allow the joining operation to continue in adverse weather conditions, a shelter shall be built for the joining machine.

4. When joining new HDPE pipe to the existing sewer piping which consists of various undetermined materials, the Contractor shall use the adapters, connectors, couplings, etc. recommended by the HDPE pipe manufacturer as submitted to the Owner's Representative 30 days prior to installation.
 5. Where polyethylene is installed below grade, a detectable underground marking tape shall be installed in the pipe trench parallel and two feet above the top of the pipe.
 6. All joints shall be labeled with a unique identifier that corresponds with the fusion computer printouts for each fitting. The joint number and location shall be recorded on the record drawings
 7. Each joint shall be documented by a computer that records pressure and temperature applied at each fused joint. Computer printouts and electronic data for each joint shall be made available to the owner or inspector upon request. The Contractor shall ensure that each joint is fused at the temperature and pressure recommended by the pipe manufacturer in order to achieve the maximum pressure rating for that joint.
- F. Polyethylene Fusion Technician Qualification: The Contractor is responsible for the butt-fusion joints done by his organization and shall provide for the instruction, testing, and installation training sessions as required to obtain for his personnel, including quality control personnel, a polyethylene fusion certification and authorization issued by the manufacturer of the supplied polyethylene piping. Only certified and authorized personnel will be allowed to perform the installation, supervision or inspection of polyethylene-fusion joints. All Contractor personnel performing installation, supervision or inspection of polyethylene fusion joints shall undergo training and certification or recertification prior to beginning work on HDPE pipe. The certificate and authorization for polyethylene fusion shall be submitted to the Owner's Representative prior to any installation or work on HDPE pipe. The Contractor shall make all training sessions available to Government inspectors and quality assurance personnel at no charge to the Government and shall schedule the training sessions at a date and time agreeable to the Owner's Representative's representative.
- G. Training: The manufacturer shall assist the Contractor by training and instructing the Contractor's personnel in proper polyethylene pipe installation procedures and fusion techniques. Certification will be required in writing from the manufacturer or manufacturer's representative listing the names of those persons so qualified. The manufacturer's representative shall be a person regularly engaged in such service and shall be certified in writing by the manufacturer to be technically qualified and experienced to supervise and conduct the training. The training shall include a classroom/lab type of instruction in which personnel being certified are instructed in properties of HDPE Pipe and the proper procedures for jointing, fusion, and

installation. All personnel shall be required to operate fusion equipment and become proficient at joining HDPE pipe of the various wall thicknesses and diameters being installed on this project.

- H. Inspections: All new lines shall be left fully exposed and accessible until inspected and approved by the Owner's Representative.

3.06 Joint Insulation Kits

- A. Construct all piping, heat trace channels, and glycol heat trace before installing joint insulation kits.
- B. The City procured pipe may have damage to the insulation at the ends of the pipe. Contractor is to spray foam the damaged ends to make insulation seamless when joint kits are installed.
- C. Joint insulation kits shall only be installed on piping that has passed hydrostatic pressure test in this specification.
- D. 4" wide half shells with engineer-approved rigid HDPE sleeve are preferred by the City. Heat shrink wrap is acceptable with engineer's approval.

3.07 Glycol Pipe Installation

- A. Installation shall conform to all manufacturers' instructions and the Plastic Pipe Institute Handbook of Polyethylene Pipe, latest edition.
- B. Two-inch glycol HDPE pipes shall be installed in an arctic piping system as indicated on the Plans. The installation will be complex, and the Contractor is instructed to review the plans carefully and plan out the work in advance to ensure all required materials and tools are available at the time of construction. The 2" glycol main transitions between the water and sanitary sewer mains at multiple points in the loop.
- C. Installer shall be trained and certified by the manufacturer for fusion of HDPE pipe as previously described.
- D. Contractor to fill glycol loop with Dowfrost 50% propylene glycol per manufacturer's recommendations. Coordinate with plant operators.

3.08 Flushing

- A. The Contractor shall submit his plan for flushing to the Engineer for review and approval at least 10 days before starting flushing.
- B. The Contractor shall notify the Engineer a minimum of 48 hours before actually beginning the field flushing.
- C. A representative of the Owner and Contractor shall be present for all flushing and testing.
- D. Before the pressure or leakage tests are performed and before the system is sterilized, all newly laid mains shall be thoroughly flushed to remove all foreign materials. The Contractor shall provide for "open bore" flushing at each end of the system so that all parts will be cleaned. Flushing times shall be at the discretion of the Owner and utility. The Contractor will use the method in AWWA C651-14 "Disinfecting Water

Mains". Hydrants shall be flushed after the full bore flush to remove debris from the hydrant runs.

- E. In the event repeated flushing is necessary to approve and certify the system, such flushing shall be done at the expense of the Contractor.

3.09 Testing

- A. Pressure testing shall be conducted per Manufacturer's recommendations and as approved by the Engineer.
- B. The Contractor shall submit his plan for testing to the Engineer for review and approval at least 10 days before starting testing.
- C. The Contractor shall notify the Engineer a minimum of 48 hours before actually beginning field testing.
- D. All HDPE mains shall be field-tested. Contractor shall supply all labor, equipment, material, gages, pumps, meters, and incidentals required for testing. Pressure testing shall be completed once all service connection boxes have been assembled and with all water and sewer service isolation valves fully closed.
- E. Water Main
 - 1. All water mains shall be tested to 120 psi with 73°F or lower water unless otherwise approved by the Engineer.
 - a. Should a leak be found in a section of existing piping that was not modified during Contractor's operations, coordinate with Engineer to determine method for repairing the damaged piping. Owner will pay for cost of repairs.
 - b. Should a leak be found in a section of new piping or at a new joint in a section of existing piping the damaged piping shall be repaired at the Contractor's expense.
 - 2. Pressure testing procedure shall be as follows:
 - a. Restrain pipeline against movement in event of catastrophic failure. Leave joints exposed for leakage examination.
 - b. Isolate section of piping to be tested.
 - c. Fill line slowly with water. Maintain flow velocity less than 2 feet per second.
 - d. Expel air completely from the line during filling and again before applying test pressure. Air should be expelled by air release valves.
 - e. Pressurize pipeline to test pressure and add make-up test water as required to maintain maximum test pressure of 120 psi for four hours.
 - f. After four-hour expansion phase, reduce pressure by 10 psi to target test pressure of 110 psi.
 - g. The final test pressure shall be within 5% of the target pressure at the end of one hour.
 - h. Upon completion of the test, the pressure shall be bled off from a location other than the point where the pressure is monitored. The pressure drop shall

be witnessed by the Engineer at the point where the pressure is being monitored.

3. If the final test pressure is within 5% of the target test pressure at the end of the test period and there are no visual leaks the installed pipe shall be considered to have passed.
4. All visible leaks are to be repaired regardless of the amount of leakage.

F. Glycol Heating Loop

1. All glycol mains shall be tested to 100 psi with 80-90°F water or glycol solution unless otherwise approved by the Engineer.
 - a. Should a leak be found in a section of new piping or at a new joint in a section of existing piping the damaged piping shall be repaired at the Contractor's expense.
2. Pressure testing procedure shall be as follows:
 - a. Leave joints exposed for leakage examination. Pipe shall be tested after inserting into glycol heat trace channel.
 - b. Isolate section of piping to be tested.
 - c. Fill line slowly with water. Maintain flow velocity less than 2 feet per second.
 - d. Expel air completely from the line during filling and again before applying test pressure. Air should be expelled by air release valves.
 - e. Pressurize pipeline to test pressure and add make-up test water or glycol solution as required to maintain maximum test pressure of 100 psi for four hours.
 - f. The final test pressure shall be within 5% of the target pressure at the end of one hour.
 - g. Upon completion of the test, the pressure shall be bled off from a location other than the point where the pressure is monitored. The pressure drop shall be witnessed by the Engineer at the point where the pressure is being monitored.
3. If the final test pressure is within 5% of the target test pressure at the end of the test period and there are no visual leaks the installed pipe shall be considered to have passed.
4. All visible leaks are to be repaired regardless of the amount of leakage.

G. Sewer Main

1. All sewer mains shall be tested to 45 psi unless otherwise approved by the Engineer.
 - a. Should a leak be found in a section of existing piping that was not modified during Contractor's operations, coordinate with Engineer to determine method for repairing the damaged piping. Owner will pay for cost of repairs.
 - b. Should a leak be found in a section of new piping or at a new joint in a section

of existing piping the damaged piping shall be repaired at the Contractor's expense.

2. Pressure testing procedure shall be as follows:
 - a. Restrain pipeline against movement in event of catastrophic failure. Leave joints exposed for leakage examination.
 - b. Isolate section of piping to be tested.
 - c. Fill line slowly with water. Maintain flow velocity less than 2 feet per second.
 - d. Expel air completely from the line during filling and again before applying test pressure. Air should be expelled by air release valves.
 - e. Pressurize pipeline to test pressure and add make-up test water as required to maintain maximum test pressure of 45 psi for one hour.
 - f. The final test pressure shall be within 5% of the target pressure at the end of one hour.
 - g. Upon completion of the test, the pressure shall be bled off from a location other than the point where the pressure is monitored. The pressure drop shall be witnessed by the Engineer at the point where the pressure is being monitored.
3. If the final test pressure is within 5% of the target test pressure at the end of the test period and there are no visual leaks the installed pipe shall be considered to have passed.
4. All visible leaks are to be repaired regardless of the amount of leakage.

3.10 Disinfection and Testing

- A. Refer to Section 33 13 00 for water main disinfection procedures.

3.11 Existing Utilities

- A. Contractor is responsible for the protection of all existing underground, surface and overhead utilities, and for the protection of adjacent structures. Plan locations of existing underground facilities are to be considered approximate only and shall be verified with the owning utility by the Contractor. The methods used to protect existing utilities, appurtenances, structures, etc. shall be subject to the approval of the Owner. Any damage to existing utilities should result in a stop-work and immediate repair completed to the satisfaction of the Owner and the Utility, at the expense of the Contractor.

3.12 Record Drawings

- A. Contractor shall provide staking notes and a redlined drawing prior to final payment showing record information on the following:
 1. Horizontal location and elevation at least every 50 feet along the pipe and of all tees, bends, changes in grade, and end of the dead-end runs.
 2. Horizontal location for all valves and change in pipe size or class. In addition to stationing, location of valves shall also be shown by three swing ties from each valve to appropriate prominent features. Swing ties shall not exceed 100 feet in

length without the written consent of the Owner's Representative.

3. Horizontal and vertical location of electrofusion couplings, air releases, drain valves, repairs to leaks during testing or damaged section of pipe, and hydrants.
4. Accurate detail and location of any unique tie-ins, special combination of fittings, etc.
5. On service pit orifices, show station on mainline for corporation stop, length and size of service line, location of pit orifices by two and more swing ties and station and offset to terminus. Swing ties to be as close to 90 degrees to one another as possible and shall not exceed 100 feet in length. Swing Ties will be made to prominent permanent features such as building corners.
6. If adequate record data is not provided as defined above, the Owner may perform an as-built survey and deduct the cost from monies due the Contractor.

END OF HDPE INSULATED PIPE AND FITTINGS

SIGNATURE AND VERIFICATION OF ANTI-COLLUSION

By signing below, I hereby acknowledge the following:

1. Bidder, nor any of their representatives or third party mandated by Bidder, has attempted to contact City representatives or members of the selection committee for the purpose of influencing their choice, judgment or recommendation relating to the contract, or with members of the City Council to influence their decision.
2. Bidder has produced the bid package without collusion, communication, agreement or arrangement with a competitor with regards to price, methods, factors or formulas for setting prices, to the decision to submit a bid package or to present a bid package that does not comply, directly or indirectly, with specifications contained in the Request for Bids.
3. Neither the Bidder nor any of its representatives engaged in discrimination, intimidating measures, influence peddling or corruption or entered into any form of collusion, communication, agreement or arrangement with other suppliers or third parties relating to a contract with the City of Bethel.
4. If selected, neither Bidder nor any of its representatives will engage in discriminating against any person because of race, color, religion (creed), gender, gender expression or identity, age, national origin (ancestry), disability, marital status, sexual orientation, military status, political affiliation, or any other status protected by law.
5. Failure to complete and attach this sworn declaration shall result in automatic rejection of the bid.
6. In the event that the Bidder, or a representative or third party mandated by them, has violated any of the statements above, the Bidder's proposal shall be automatically rejected.
7. The City may cancel a contract that has been awarded if the City becomes aware, during the course of the contract, of a situation contravening any sworn statement required by this section.

Signature Date

Printed Name

ACKNOWLEDGEMENT

STATE OF ALASKA

Before me, a Notary Public, personally appeared the above named and swore that the statements contained in the foregoing document are true and correct.

Subscribed and sworn to me this _____ day of _____, 20____.

Notary Public Signature: _____
Commission Expires: _____

Anti-Collusion

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LEGEND

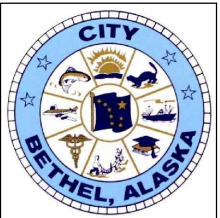
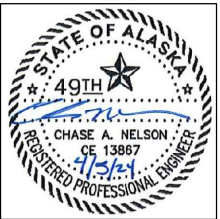
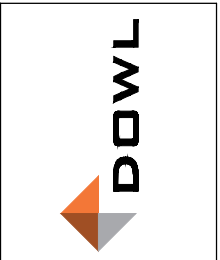
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		EASEMENT LINE
		CONTROL POINT NUMBER
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		ALCAP
		TEMPORARY BENCH MARK
		SURVEY MONUMENT
		BUILDING
		CONCRETE
		EDGE OF PAVEMENT
		WATER LINE
		VALVE / KEYBOX
		FIREHYDRANT
		CAP
		SEWER LINE
		SEWER MANHOLE
		AIR RELEASE VALVE
		SEWER PLUG VALVE
		YARD DRAIN
		COMMUNICATION LINE
		COMMUNICATIONS PEDESTAL
		OVERHEAD ELECTRIC LINE
		UNDERGROUND ELECTRIC LINE
		POWER POLE / UTILITY POLE
		LIGHTPOLE
		ANCHOR
		ELECTRIC PEDESTAL
		ELECTRIC METER
		JUNCTION BOX
		BOLLARD
		MAIL BOX
		TRANSFORMER
		FENCE
		SIGN
		SHRUB
		BOULDER
		VEGETATION
		GEOTECHNICAL BORING LOCATION
		SECTION INDICATOR
		DETAIL BUBBLE
		BREAK LINE
		REVISION INDICATOR
		DEMOLITION LIMITS

GENERAL NOTES

- TOGETHER THE DRAWINGS AND CONSTRUCTION SPECIFICATIONS CONSTITUTE A COMPLETE AND INSEPARABLE SET OF CONSTRUCTION DOCUMENTS, INCLUDING ALL NECESSARY CONSTRUCTION AND MATERIALS SPECIFICATIONS TO ENSURE THE PROJECT AS CONSTRUCTED MEETS THE DESIGN INTENT. ANY CHANGES TO CONSTRUCTION MATERIALS SHALL BE APPROVED IN WRITING IN ADVANCE BY THE RESPONSIBLE REGISTERED PROFESSIONAL.
- THIS IS A STANDARD SHEET OF SYMBOLOGY AND NOT ALL SYMBOLS MAY HAVE BEEN USED IN THIS PLANSET.
- EXISTING GROUND CONTOURS ARE FOR REFERENCE ONLY. CONTRACTOR SHALL VERIFY SITE CONDITIONS.
- LOCATIONS OF UTILITIES ARE APPROXIMATE. THE CONTRACTOR SHALL FIELD VERIFY LOCATIONS PRIOR TO CONSTRUCTION. EXERCISE CAUTION DURING EXCAVATION TO EXPOSE UTILITIES WITHOUT DAMAGE. CONTRACTOR SHALL CALL ALASKA DIG LINE (811) FOR UTILITY LOCATES BEFORE DIGGING PER A.S. 42.30.410.
- VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF ALL UTILITIES ENCOUNTERED PRIOR TO CONSTRUCTION. REPORT DISCREPANCIES FROM PLANS IMMEDIATELY TO ENGINEER. RECORD LOCATIONS AND CHANGES TO UTILITIES IN SURVEY NOTES AND ON AS-BUILT DRAWINGS.
- RESTORE ALL DISTURBED PROPERTY OUTSIDE OF WORK LIMITS TO ORIGINAL CONDITIONS.
- THE PLAN DRAWINGS DO NOT SHOW ALL LANDSCAPING AND VEGETATION TO BE ENCOUNTERED DURING CONSTRUCTION. CONTRACTOR SHOULD HAVE A PLAN TO REMOVE AND REPLACE OR WORK AROUND ANY VEGETATION. LITTLE OR NO VEGETATION IS ANTICIPATED WITHIN THE WORK AREA.
- ALL DESIGNATED ITEMS TO BE REMOVED OR DEMOLISHED SHALL BE DISPOSED OF AT AN OFF-SITE, PERMITTED LOCATION UNLESS OTHERWISE NOTED ON THE CONTRACT DOCUMENTS.
- THE CONTRACTOR SHALL FOLLOW ALL CITY OF BETHEL REGULATIONS FOR NOISE, HOURS OF OPERATIONS, AND DUST CONTROL.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR EROSION AND SEDIMENT CONTROLS AS NECESSARY TO COMPLY WITH FEDERAL, STATE, AND MUNICIPAL LAWS THAT PROHIBIT UNPERMITTED DISCHARGE OF POLLUTANTS, INCLUDING SEDIMENTS, THAT ARE A RESULT OF EROSION AND OTHER CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL CONDUCT ALL WORK SO SEDIMENT IS NOT TRANSPORTED ONTO THE ROADWAY OR ADJACENT PROPERTY
- CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE NECESSARY DEWATERING PERMITS PRIOR TO EXCAVATION. CONTRACTOR IS RESPONSIBLE FOR THE QUALITY OF EFFLUENT FROM DEWATERING PROCESSES AND ANY CONSTRUCTION RUNOFF.
- ALL COMPACTION SHALL BE IN ACCORDANCE WITH PROJECT SPECIFICATIONS.
- WHERE ENCOUNTERED CONDITIONS DIFFER FROM THOSE INDICATED ON THE PLANS OR IN THE SPECIFICATIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO THE PERFORMANCE OF WORK.
- CONSTRUCTION SAFETY AND SANITATION FACILITIES SHALL BE PROVIDED AND MAINTAINED BY THE CONTRACTOR.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL WORK IN THE AREA WITH THE PROJECT ENGINEER AND COB STAFF PRIOR TO BEGINNING WORK ON THE PROJECT.
- THE CONTRACTOR MUST COMPLY WITH ALL PERMIT CONDITIONS AND RESTRICTIONS.
- THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING A SAFE SITE DURING BOTH WORKING AND NON-WORKING HOURS.
- REFER TO THE PROJECT SPECIFICATION FOR FACILITY SHUTDOWN ALLOWANCES AND CONSTRUCTION CONSTRAINTS.
- EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURERS INSTALLATION AND STARTUP REQUIREMENTS. CONTRACTOR SHALL BE RESPONSIBLE FOR MODIFICATIONS REQUIRED, IF ANY, TO ACCOMMODATE ALTERNATE EQUIPMENT.

ABBREVIATIONS

ACP	ASPHALT CONCRETE PAVEMENT	LF	LINEAR FEET
ADA	AMERICANS WITH DISABILITIES ACT	LT	LEFT
ARFS	AS REQUIRED FOR SAFETY	MAX	MAXIMUM
ASTM	AMERICAN SOCIETY OF TESTING MATERIALS	MCL	MATERIALS CERTIFICATION LIST
ATM	ALASKA TRAFFIC MANUAL	ME	MATCH EXISTING
AVAP	AS VERTICAL AS POSSIBLE	MIN	MINIMUM
AWWA	AMERICAN WATER WORKS ASSOCIATION	MJ	MECHANICAL JOINT
BLVD	BOULEVARD	N	NORTH
BOP	BOTTOM OF PIPE	NFS	NON FROST SUSCEPTIBLE
BV	BUTTERFLY VALVE	NO	NUMBER
CI	CAST IRON	NSF	NATIONAL SANITATION FOUNDATION
CL	CLASS	NTS	NOT TO SCALE
CMP	CORRUGATED METAL PIPE	O&M	OPERATION & MAINTENANCE
CO	CLEANOUT	OC	ON CENTER
COB	CITY OF BETHEL	OH	OVERHEAD
CONC	CONCRETE	OSHA	OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION
CTE	CONNECT TO EXISTING	PCC	PORTLAND CEMENT CONCRETE
CU	COPPER	PE	PLAIN END
CY	CUBIC YARD	PI	POINT OF INTERSECTION
ø	DIAMETER	PPI	PLASTIC PIPE INSTITUTE
DIA	DIAMETER	PSI	POUNDS PER SQUARE INCH
DEC	DEPARTMENT OF ENVIRONMENTAL CONSERVATION	PVC	POLYVINYL CHLORIDE
DIP	DUCTILE IRON PIPE	R	RADIUS
DR	DIMENSION RATIO	R&R	REMOVE & REPLACE
EA	EACH	ROW	RIGHT-OF-WAY
EG	EXISTING GRADE	RT	RIGHT
ELEV	ELEVATION	S	SOUTH
E	EXISTING	SCH	SCHEDULE
FF	FINISH FLOOR	SS	SANITARY SEWER
F&I	FURNISH & INSTALL	STA	STATION
FL	FLANGE	STD	STANDARD
FT	FEET	T	TELEPHONE
G	GAS	TB	TEST BORING
GB	GRADE BREAK	TBD	TO BE DETERMINED
GV	GATE VALVE	TYP	TYPICAL
HDPE	HIGH DENSITY POLYETHYLENE	UG	UNDERGROUND
ID	INSIDE DIAMETER	VB	VALVE BOX
INV	INVERT	W	WEST
LB	POUNDS	W/O	WITHOUT
LC	LEVELING COURSE	WT	WEIGHT



CITY OF BETHEL
DOG POUND FACILITY
BETHEL, ALASKA

Revisions		
No.	Description	Date

Drawn by BRM	Date 4/5/2024
Checked CAN	Job No. 50109.16

Sheet Contents
LEGEND, GENERAL NOTES
AND ABBREVIATIONS

Sheet No.
C100

BID DOCUMENTS
ISSUED FOR AGENCY REVIEW

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RIDGECREST DRIVE VICINITY

HORIZONTAL CONTROL

Coordinate System
This project is located entirely within the Kuskokwim River 2015 Low Distortion Projection (LDP) coordinate system. This LDP was developed in 2015 by the State of Alaska DOT&PF Central Region Survey Section. This LDP covers communities on and around the lower Kuskokwim River from the river's mouth to the community of Chuathbaluk. Bering Sea coastal communities from Chefnorak to Kongiganak are also included.

Basis of Coordinates
The Basis of Coordinates is NGS Station BET C (PID:DF3624). Said station is located within the fenced area of the Bethel Airport and has a NAD 83(2011) Position of Latitude 60°47'03.11084" N, Longitude 161°50'08.36533" W, Ellipsoid Height 42.527 meters. BET C has project coordinates of N 1034266.0567, E 582894.7332 U.S. Feet.

Basis of Bearings
The Basis of Bearings is a local plane bearing between NGS Station BET C (PID: DF3624) and NGS Station BET B (PID: DF3623). NGS Station BET B bears S 25°34'22.5" W a distance of 2672.876 feet from NGS Station BET C, all as determined by static GNSS techniques. NGS Station BET B has project coordinates of N 1031855.0249, E 581740.9608 U.S. Feet.

Kuskokwim River 2015 LDP Parameters
Linear Unit: U.S. Survey Feet
Datum: NAD83
Ellipsoid: GRS80
Projection: Hotine Oblique Mercator
Latitude of Center: 60°40'00" N
Longitude of Center: 162°00'00" W
Azimuth: 50°00'00"
False Northing: -15,500,000.0'
False Easting: -19,100,000.0'
Grid Scale Factor: 1.000002 (exact)

VERTICAL CONTROL

Basis of Vertical is Local Mean Tide Level, as determined from levels performed by Alaska DOT&PF between Tidal Benchmark No.6 (1970) and Tidal Benchmark No.7 (1970). A datum adjustment of -1.55 feet was applied to the published MLLW elevations per NOAA/NOS publication of 1/22/71, to arrive at project mean tide values.

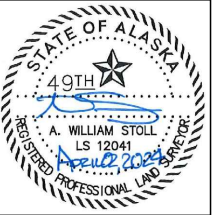
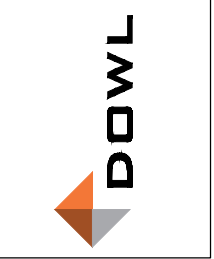
Benchmark No.6 (1970): a brass disk on copper coated rod, encased in a 4" concrete pipe broken off at cap level, is located +/-400 feet westerly along Third Avenue (Hoffman Highway) from its intersection with Main Street, +/-53 feet south of centerline, +/-20 feet south of utility pole #L1P70 and +/-15 feet north of the middle of a 2-story wood building. Project Elevation = 19.97'

Benchmark No.7 (1970): a brass disk on a copper coated rod, encased in a 4" concrete pipe broken off 0.4' below cap level, is located +/-750 feet westerly along Fourth Avenue from its intersection with Main Street and +/-8 feet north of the southeast corner of the bottom step leading to the main entrance of the National Guard Armory (under an elevated, metal grate walkway). Project Elevation = 25.57'

SURVEY CONTROL POINTS

POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	1042970.82	594484.60	36.51	ALCAP_BE-1
2	1043278.46	595742.67	39.89	ALCAP_BE-2

BID DOCUMENTS
ISSUED FOR AGENCY REVIEW



CITY OF BETHEL
DOG POUND FACILITY
BETHEL, ALASKA

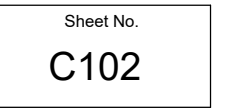
Revisions		
No.	Description	Date

Drawn by	Date 4/5/2024
Checked CAN	Job No. 50109.16

Sheet Contents
SURVEY CONTROL SHEET

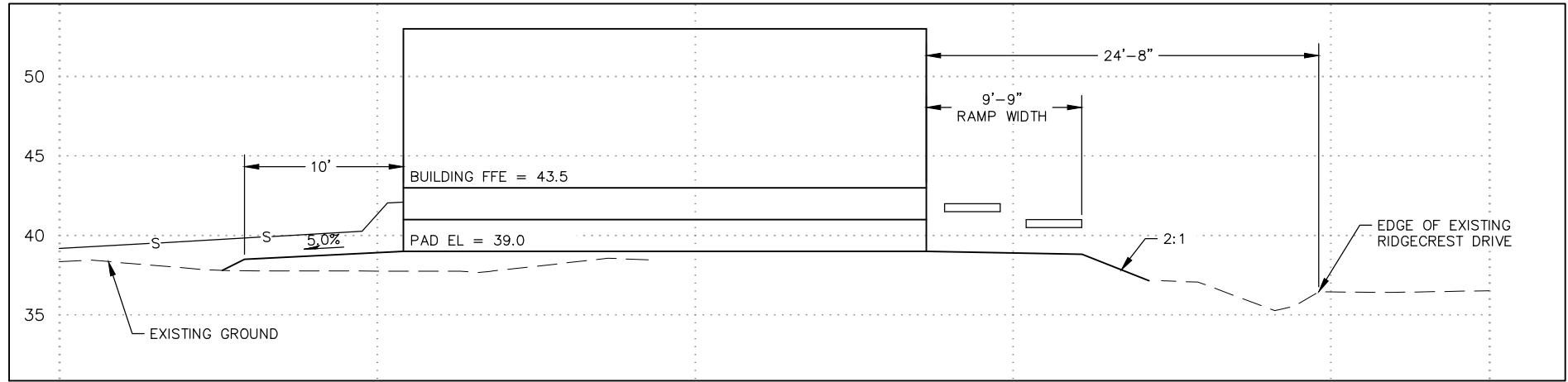
Sheet No.
C101

- INSTALL CONCRETE FILLED BOLLARD
SEE DETAIL 3, SHEET C501

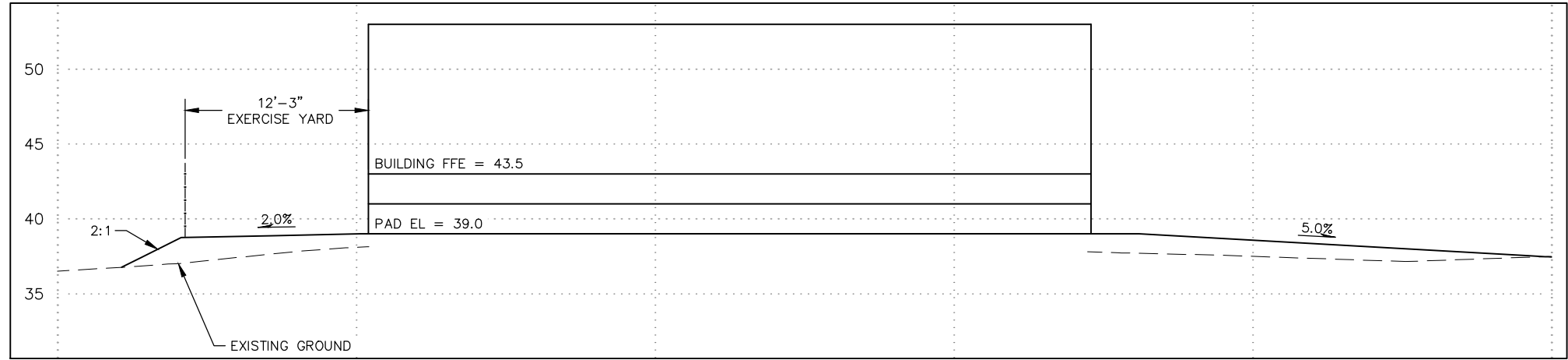


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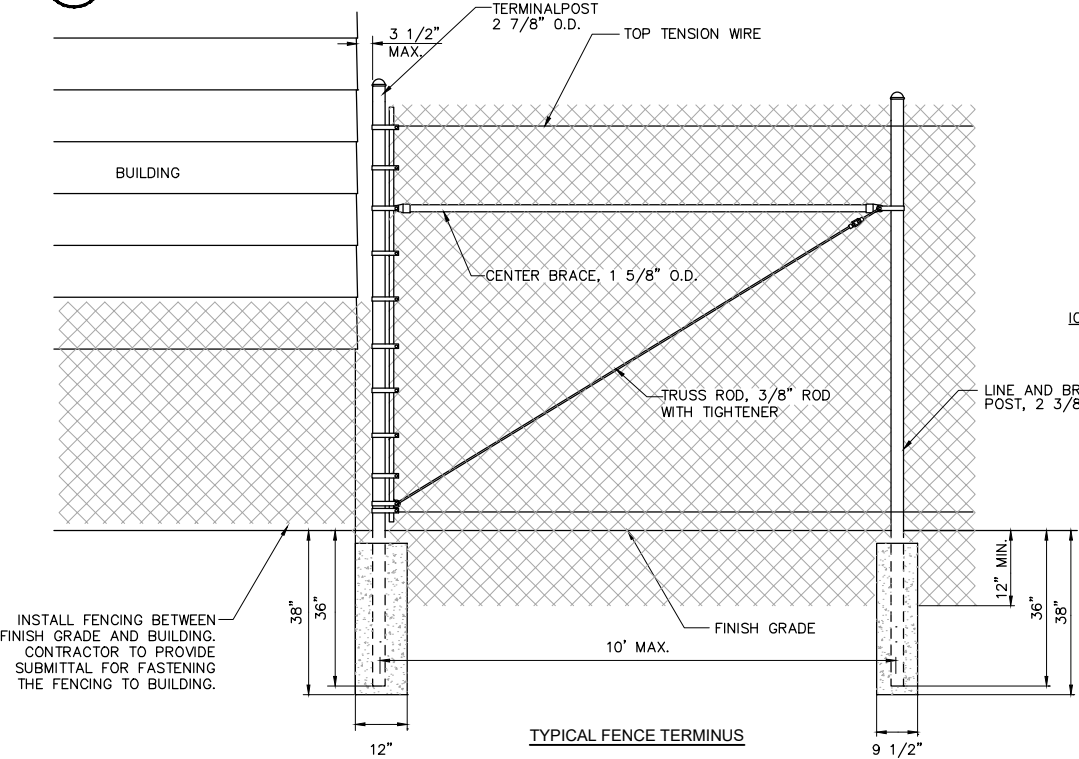
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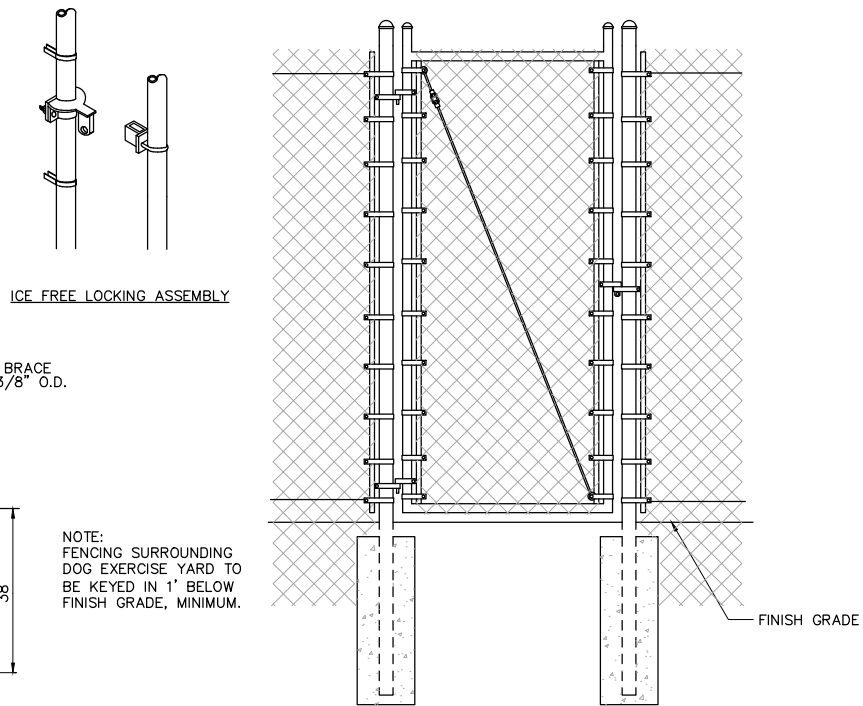
1 TYPICAL SECTION 1
C501 SCALE: 1" = 5'



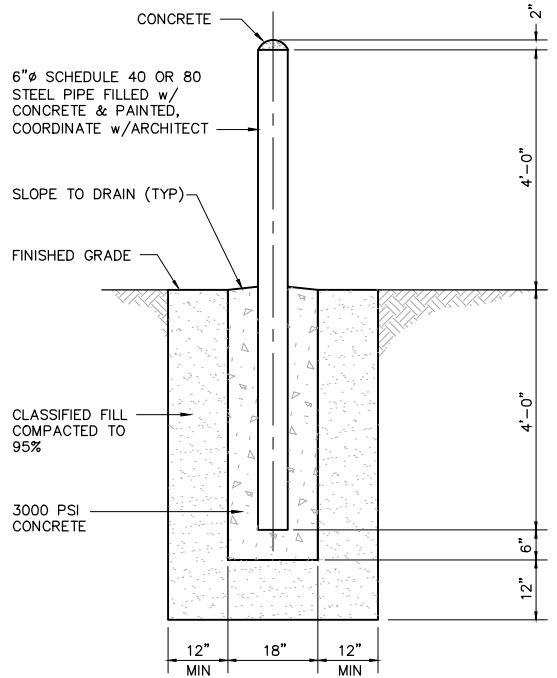
2 TYPICAL SECTION 2
C501 SCALE: 1" = 5'



4 FENCE DETAIL
C501 NTS

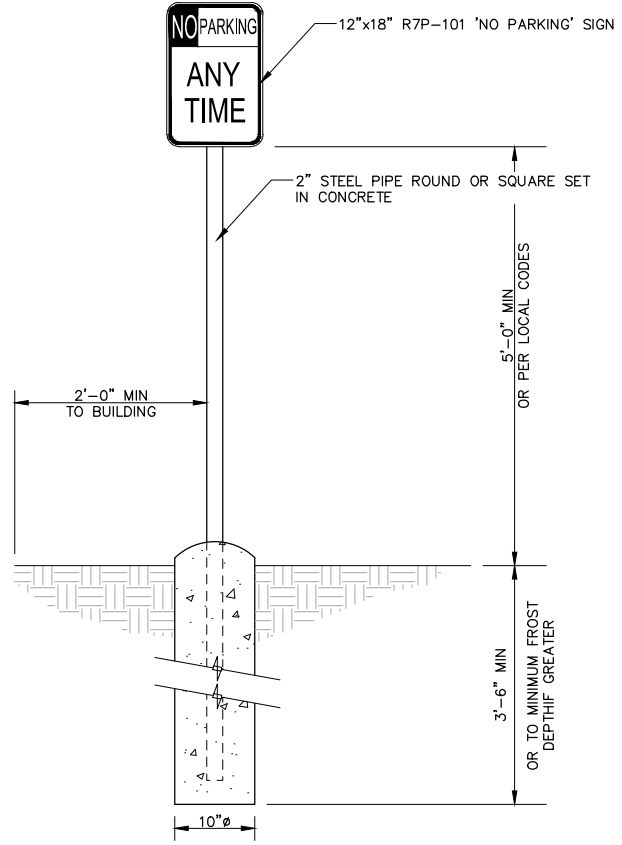


5 PEDESTRIAN GATE DETAIL
C501 NTS



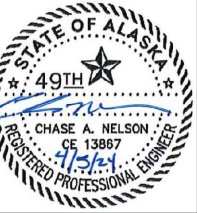
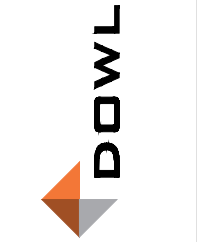
NOTE: POSTS SHALL BE PRIMED AND RECEIVE TWO COATS MINIMUM OF PAINT IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. COORDINATE COLOR WITH ARCHITECT.

3 CONCRETE BOLLARD DETAIL
C501 NTS



6 NO PARKING SIGN FOUNDATION
C501 NTS

BID DOCUMENTS
ISSUED FOR AGENCY REVIEW



CITY OF BETHEL
DOG POUND FACILITY
BETHEL, ALASKA

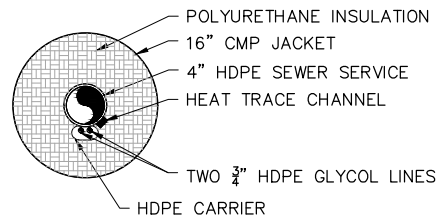
Revisions		
No.	Description	Date

Drawn by MC	Date 4/5/2024
Checked CAN	Job No. 50109.16

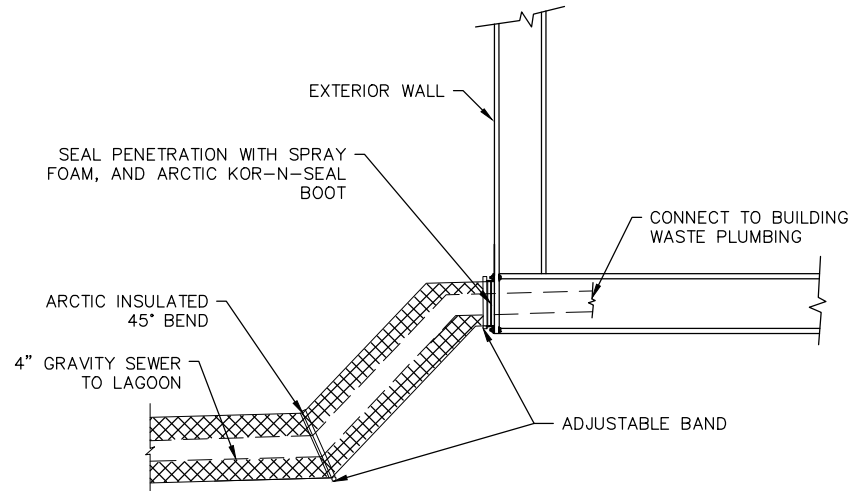
Sheet Contents
SITE SECTIONS AND
DETAILS SHEET

Sheet No.
C501

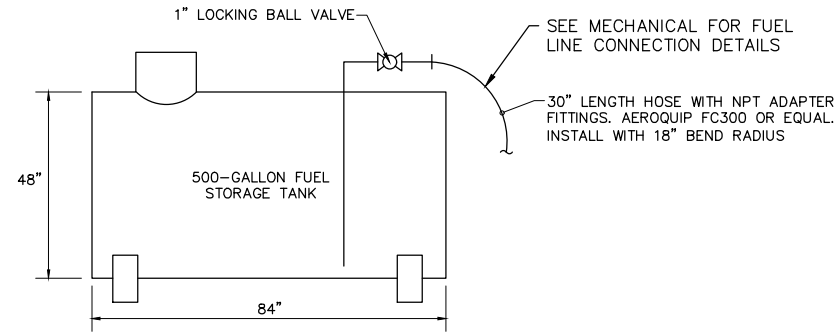
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1 GRAVITY SEWER SERVICE
C502 NTS

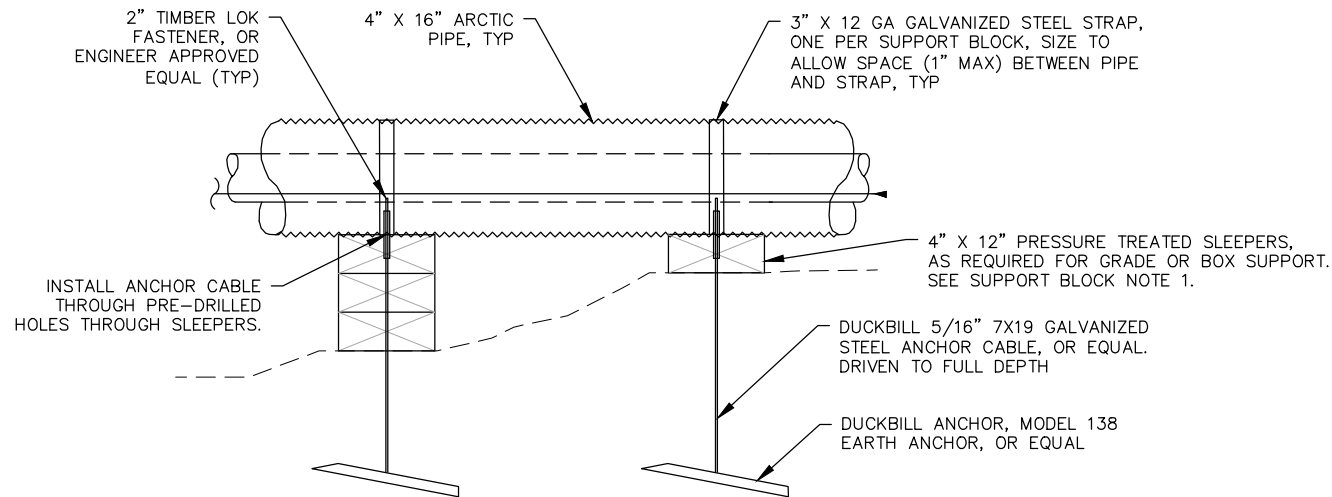


2 SEWER SERVICE CONNECTION TO BUILDING
C502 NTS

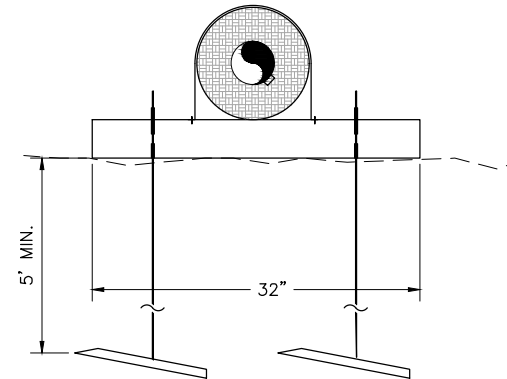


FUEL STORAGE TANK: 500 GALLON NOMINAL CAPACITY, DOUBLE-WALL, SKID-MOUNTED, UL142 LISTED. PROVIDE TAPPINGS FOR 4" FILL, NORMAL AND EMERGENCY VENTS (FOR BOTH INNER AND OUTER TANKS), AND TOP MOUNTED OUTLET AND RETURN. PROVIDE OUTLET DRAW PIPE, LOCKABLE FILL CAP, FILL CONTAINMENT BOX, FILL RISER WITH OVERFILL PROTECTION VALVE, SCREENED NORMAL VENTS, EMERGENCY VENTS, AND LOCKABLE OUTLET BALL VALVE.
TANK FOOTPRINT: 84" NOMINAL LENGTH 48" NOMINAL WIDTH

4 500-GALLON FUEL TANK
C502 NTS



3 TIMBER SUPPORT BLOCK DETAILS
C502 NTS

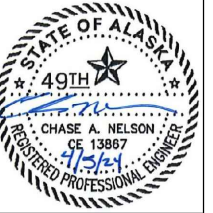


GENERAL NOTES

1. ALL METAL PARTS AND FASTENERS SHALL BE HOT DIPPED GALVANIZED. FIELD CUTS SHALL BE FIELD-TREATED WITH AN APPROVED COLD GALVANIZING PRODUCT.

SUPPORT BLOCK NOTES

1. AT THE CONTRACTOR'S OPTION, THE TOP 4"x12" PRESSURE TREATED TIMBER MAY BE PLACED ON IMPORTED GRAVEL WITH A 3:1 SLOPE ON GEOTEXTILE FABRIC, IN LIEU OF ADDITIONAL PRESSURE TREATED TIMBER SLEEPERS. PRESSURE TREATED TIMBER SLEEPERS MUST BE SECURED WITH AN ANCHOR AS SHOWN IN DETAIL 6.
2. INSTALL SUPPORT BLOCKS EVERY 10 FEET MAX. UNLESS INDICATED OTHERWISE IN NOTES.
3. SUPPORT BLOCKS SHALL BE PLACED BENEATH EACH HORIZONTAL BEND.



CITY OF BETHEL
DOG POUND FACILITY
BETHEL, ALASKA

Revisions		
No.	Description	Date

Drawn by BRM	Date 4/5/2024
Checked CAN	Job No. 50109.16

Sheet Contents
UTILITY DETAILS SHEET

BID DOCUMENTS
ISSUED FOR AGENCY REVIEW

Sheet No.
C502

Autodesk Docs://18020.11 Bethel Dog Pound Blug Replacement/18020.11 Bethel Dog Pound Blug ReplacementLvt

Plot Date Time: 4/5/2024 3:45:26 PM

ARCHITECTURAL ABBREVIATIONS					
& < @ CL o #	AND	F.O.S.	FACE OF STUD	PLYWD	PLYWOOD
	ANGLE	F.O.	FACE OF (Conc. etc.)	PR	PAIR
	AT	F.R.P.	FIBER REINFORCED PANEL	PREFAB	PREFABRICATED
	CENTERLINE	FRPF	FIREPROOFING	PRMA	PROTECTED MEMBRANE ROOF ASSEMBLY
	DEGREE	FT	FIRE-RETARDENT TREATED	PROJ	PROJECT
	NUMBER	FT	FOOT OR FEET	PT	POINT AND PAINT
		FTG	FOOTING	P.T.	PRESERVATIVE TREATED
		FURR	FURRING	PTD	PAPER TOWEL DISPENSER
		FUT	FUTURE	PVC	POLYVINYL CHLORIDE
D	ABV	GA	GAUGE	R	RISER OR RADIUS
	AC	GAL	GALLON	R.D.	ROOF DRAIN
	ACP	GALV	GALVANIZED	REF	REFERENCE
	ACT	G.B.	GRAB BAR	REFR	REFRIGERATOR
	ACOUS	G.I.	GALVANIZED IRON	REINF	REINFORCING
	ACOUS	GL	GLASS	REQ	REQUIRED
	ADD	GT	GLASS TYPE	R.H.	RIGHT HAND
	AFF	GWB	GYPSUM WALL BOARD	R.L.	RAIN LEADER
	AHU	GYM	GYMNASIUM	RM	ROOM
	ALT	GYP.	GYPSUM	R.O.	ROUGH OPENING
C	ALUM	H.B.	HOSE BIB	R.O.W.	RIGHT OF WAY
	APPROX	H.C.	HOLLOW CORE	RTU	ROOF TOP UNIT
	ARCH	HDWD	HARDWOOD		
	ASPH	HDWR	HARDWARE	S	SOUTH
	AVG	H.M.	HOLLOW METAL	SAN	SANITARY
		H.M.F.	HOLLOW METAL FRAME	S.C.	SOLID CORE
		HORIZ	HORIZONTAL	SCHED	SCHEDULE
		H.P.	HIGH POINT	SE	SOUTHEAST
		HR	HOUR	SECT	SECTION
		HT	HEIGHT	SHEATH	SHEATHING
B	BD	HW	HOT WATER	SHT	SHEET
	BLDG	HWY	HIGHWAY	SIM	SIMILAR
	BLKG			SND	SANITARY NAPKIN DISPENSER
	BLW	I.D.	INSIDE DIAMETER	SPEC	SPECIFICATIONS
	BM	(") OR IN	INCHES	SQ	SQUARE
	B.O.	IHM	INSULATED HOLLOW METAL	S.S.	SANITARY SEWER
	B.O.	INSUL	INSULATION	S.ST.	STAINLESS STEEL
	B.S.	INT	INTERIOR	STD	STANDARD
	BTU	JAN	JANITOR	STL	STEEL
	BUR	JT	JOINT	STOR	STORAGE
A	CAB	KIT	KITCHEN	STRUCT	STRUCTURAL
	C.B.	LAB	LABORATORY	ST.S	STORM SEWER
	CEM	LAM	LAMINATE OR LAMINATED	SUSP	SUSPENDED
	C.I.	LAV	LAVATORY	SV	SHEET VINYL
	CLG	LB	POUND	SW	SOUTHWEST
	CLR	LH	LEFT HAND	SYM	SYMMETRICAL
	C.M.P.	LH	LEFT HAND	TB	TACKBOARD
	CMU	LL	LIVE LOAD	TBHM	THERMALLY- BROKEN HOLLOW METAL
	COL	LL	LIMITS OF WORK	TEL	TELEPHONE
	COMP	L.P.	LOW POINT	TEMP	TEMPORARY
C	CONC	MAT'L	MATERIAL	TERR	TERRAZZO
	CONSTR	MAX	MAXIMUM	T&G	TONGUE AND GROOVE
	CONT	MECH	MECHANICAL	THRU	THROUGH
	COOR	MET OR MTL	METAL	T.O.	TOP OF (eg CONCRETE)
	CORR	MFR	MANUFACTURER	T.O.S.	TOP OF STEEL
	C.R.	MH	MANHOLE	TV	TELEVISION
	C.R.C.	MIN	MINIMUM OR MINUTE	TYP	TYPICAL
	C.T.	MISC	MISCELLANEOUS	UAA	UNIVERSITY OF ALASKA ANCHORAGE
	CTR	M.O.	MASONRY OPENING	UL	UNDERWRITERS LABORATORY
		MULL	MULLION	UNFIN	UNFINISHED
B	DBL	N	NORTH	UNO	UNLESS NOTED OTHERWISE
	DEPT	NE	NORTHEAST	VCT	VINYL COMPOSITION TILE
	D.F.	NIC	NOT IN CONTRACT	VERT	VERTICAL
	DET	NO	NUMBER	VEST	VESTIBULE
	DIA	NOM	NOMINAL	VR	VAPOR RETARDER
	DIA	NTS	NOT TO SCALE	VTR	VENT THROUGH ROOF
	DIM	NW	NORTHWEST	W	WEST
	DISP	O	OVER	W/	WITH
	DL	O.C.	ON CENTER	WC	WATER CLOSET
	DN.	O.D.	OUTSIDE DIAMETER	WD	WOOD
A	DS	OFD	OVERFLOW DRAIN	W/O	WITHOUT
	DWG	OFF	OFFICE	WP	WATERPROOF
		OFCl	OWNER FURNISHED,	WT	WEIGHT
			CONTRACTOR INSTALLED		
			OWNER FURNISHED,		
			OWNER INSTALLED		
		OH	OVERHEAD		
		OPNG	OPENING		
		OPP	OPPOSITE		
A	F.B.	PARA	PARALLEL		
	F.D.	PART	PARTITION		
	FDN	PERF	PERFORATED		
	F.E.	PERM	PERMANENT		
	F.E.C.	PERP	PERPENDICULAR		
	FIN	P.I.C.	PRECAST INSULATED CONCRETE		
	FF	PL	PLATE		
	FF	P.LAM	PLASTIC LAMINATE		
	FLUOR	PLAST	PLASTER		
	F.O.B.				
A	F.O.F.				

PROJECT DESCRIPTION

CONSTRUCTION OF A NEW _____ S.F. DOG POUND SERVING THE CITY OF BETHEL, ALASKA. THIS FACILITY WILL BE USED FOR THE TEMPORARY HOUSING OF ANIMALS. IT INCLUDES A SMALL PUBLIC LOBBY FOR

STATE MAP

VICINITY MAP

KENNEL EQUIPMENT SCHEDULE								
Type Mark	Manufactu rer	Family	Model	Count	Comments	Depth	Width	Height
1	Mason Company	3R_UltraBase_Gate Single Front	Sani-Kennel ULTRA BASE	5	SEE MECHANICAL DRAWINGS FOR PLUMBING	7'-0"	3'-0"	7'-1"
2	Mason Company	3R_UltraBase_Gate Single Front	Sani-Kennel	1	SEE MECHANICAL DRAWINGS FOR PLUMBING	6'-0"	3'-0"	7'-1"
3	Mason Company	3R_UltraBase_Gate Single Front	Sani-Kennel	4	SEE MECHANICAL DRAWINGS FOR PLUMBING	4'-0"	3'-0"	7'-1"
4	Mason Company	Shelter Cat Condo - 3'x3' - Double on Casters	Shelter Cat Condo	2		2'-4"	3'-0"	6'-0"
5	MIDMARK	Midmark - Run Side Panel	181-0002-61 & 610-0427-22	1		1"	4' - 0"	4' - 10"
6	MIDMARK	Midmark - Standard Run Door Assembly, 35in W	181-0001-01	2	PROVIDE ALL HARDWARD FOR COMPLETE DOOR OPERATION, WITH NO GAPS GREATER THAN 1"	1"	2' - 11"	6' - 0"
7	MIDMARK	Midmark - 48in L Adjustable Height Grooming Tub with Backsplash	105-0346-11	1	SEE MECHANICAL DRAWINGS FOR PLUMBING	1' - 7"	4' - 0"	4' - 10 1/2"
TA-04		enMotion SOAP dispenser		1				

ARCHITECTURAL DRAWING CONVENTIONS						
NORTH ARROW	GRID LINES	PARTITION TYPE	BLDG./WALL SECTION	DISCIPLINE	DETAIL	EXTERIOR ELEVATION
REVISIONS	DOOR NUMBER	EQUIPMENT TAG	VERT. CONTROL POINT	WINDOW TYPE	ROOM TAG	INTERIOR ELEVATION

GENERAL PROJECT NOTES

- ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE PROVISIONS OF THE BUILDING CODES OUTLINED ON THE LIFE SAFETY PLAN, AND ALL OTHER STATE AND LOCAL CODES, INCLUDING ALL AMENDMENTS.
- ALL WORK SHALL CONFORM TO THE AMERICAN DISABILITIES ACT (A.D.A.) ACCESSIBILITY GUIDELINES FOR BUILDING AND FACILITIES (A.D.D.A.G.) AND A.N.S.I. 117.1 UNLESS NOTED OTHERWISE.
- ALL DIMENSIONS ARE TO FACE OF STUD, FACE OF CONCRETE, FACE OF C.M.U., TO CENTERLINE OF STRUCTURAL COLUMN, OR TO STRUCTURAL GRID-LINE UNLESS NOTED OTHERWISE.
- DIMENSIONS NOTED AS 'CLEAR' (OR CLR) SHALL BE TO FINISHED FACE.
- DO NOT SCALE THE DRAWINGS TO OBTAIN CONSTRUCTION DIMENSIONS.

Revisions

No.	Description	Date

Drawn by
Author

Date
12.5.22

Checked
Checker

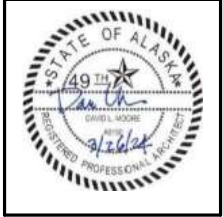
Job No.
18020.11

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GENERAL NOTES, ABBREVIATIONS,
LOCATION MAP AND SHEET INDEX

Sheet No.

A100

ARCHITECTS ALASKA
AK Corp. Authorization AECC561
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www.architectsalaska.com

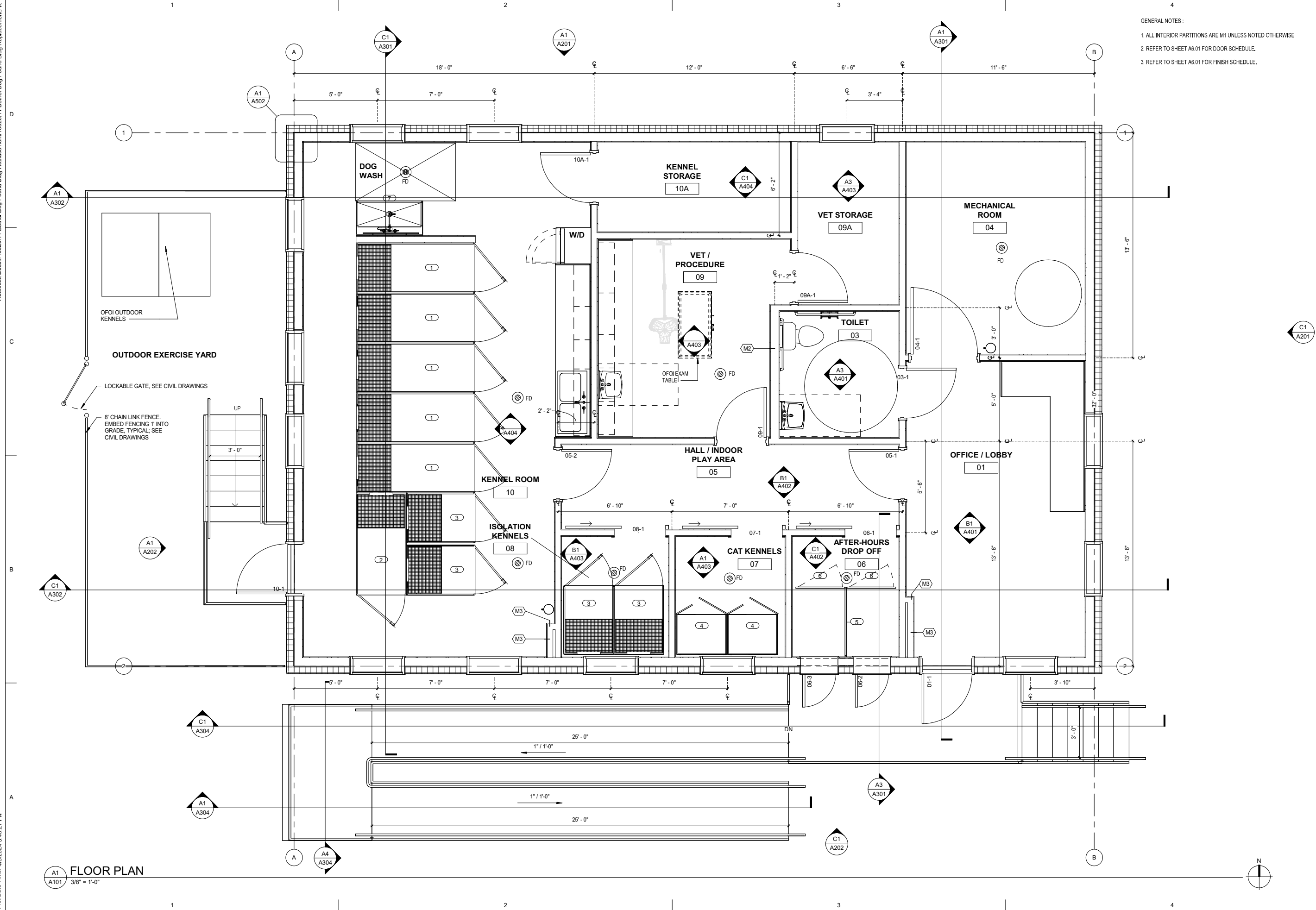


CITY OF BETHEL / DOWL ENGINEERS

DOG POUND REPLACEMENT

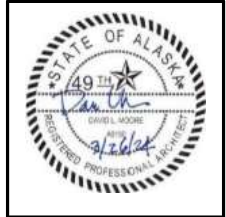
BETHEL, ALASKA

Autodesk Docs://18020.11 Bethel Dog Pound Replacement/18020.11 Bethel Dog Pound Bldg Replacement.rvt
Plot Date Time: 4/5/2024 3:45:27 PM



- GENERAL NOTES:
1. ALL INTERIOR PARTITIONS ARE M1 UNLESS NOTED OTHERWISE
 2. REFER TO SHEET A6.01 FOR DOOR SCHEDULE.
 3. REFER TO SHEET A6.01 FOR FINISH SCHEDULE.

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BETHEL, ALASKA

Revisions		
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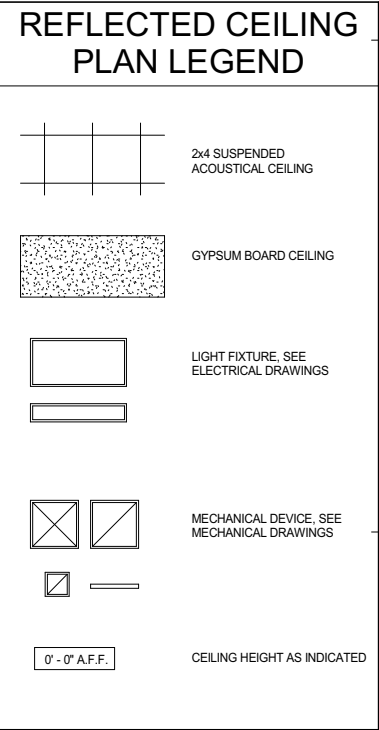
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Checked DLM	Job No. 18020.11

Sheet Contents FLOOR PLAN

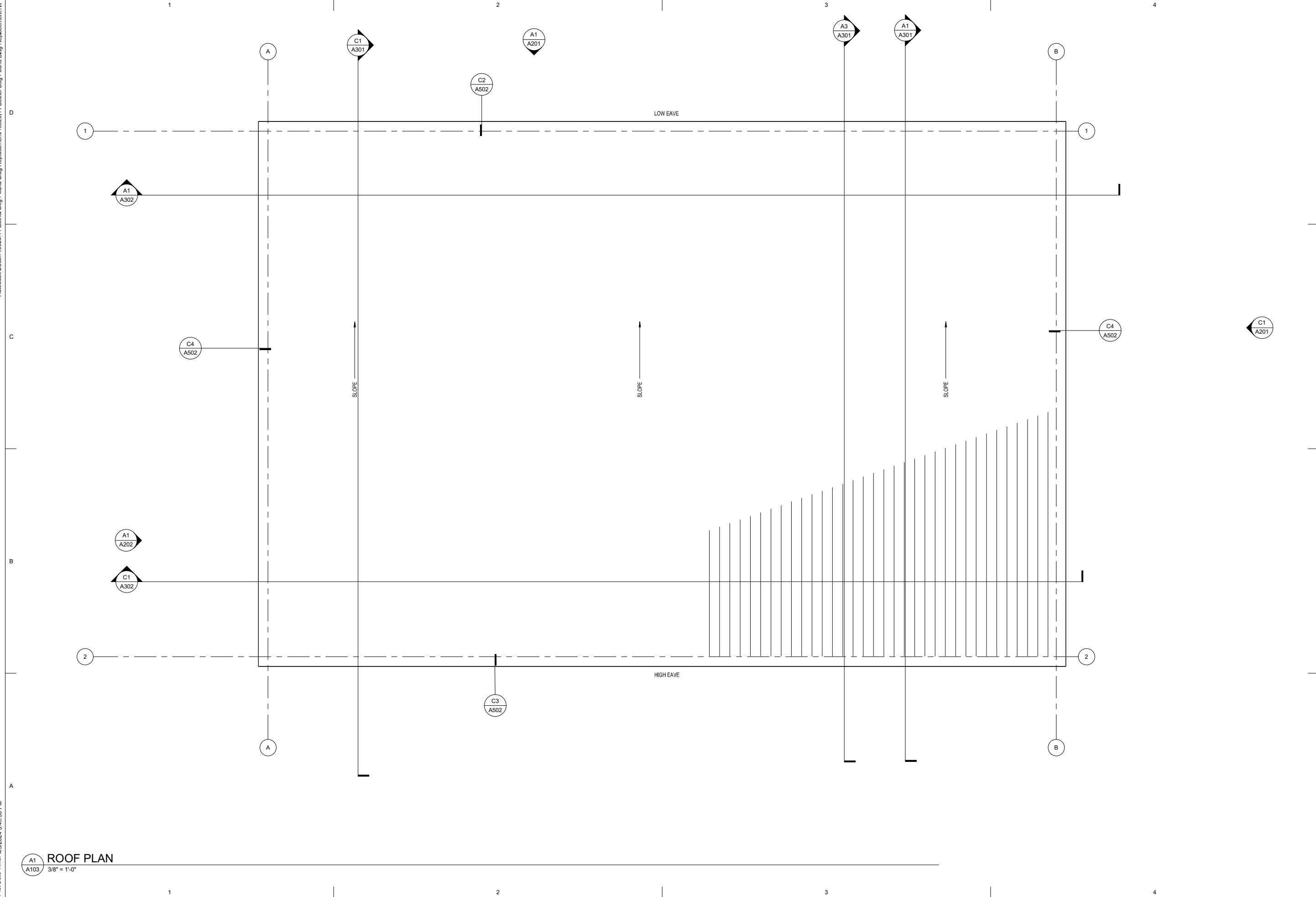
Sheet No.
A101

Sheet No.

A102

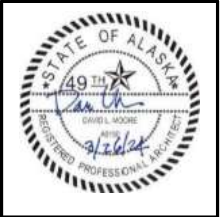


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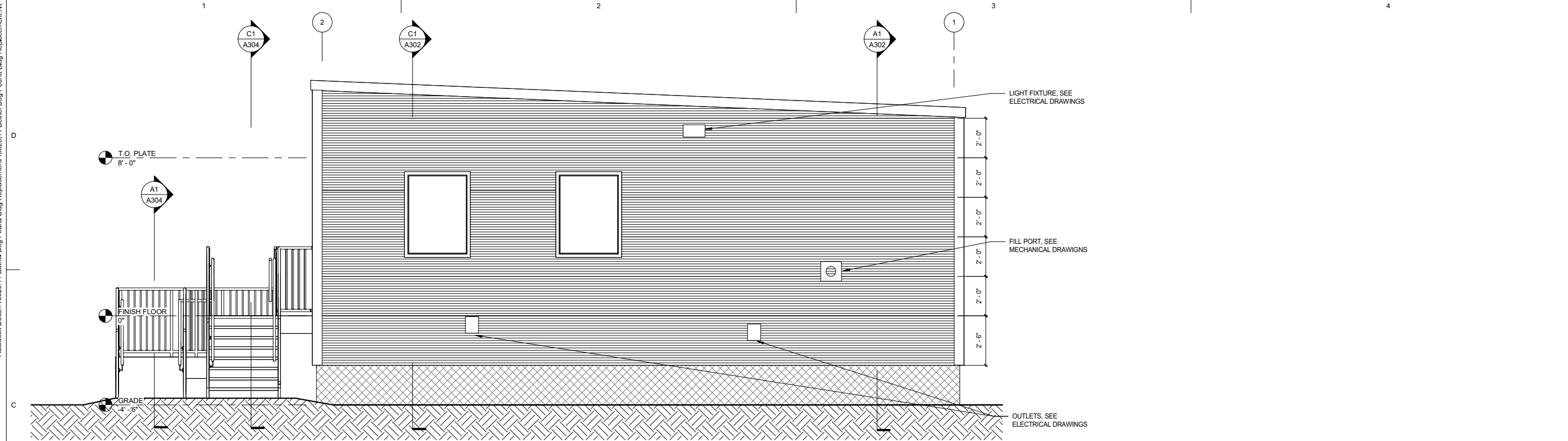
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Sheet Contents ROOF PLAN

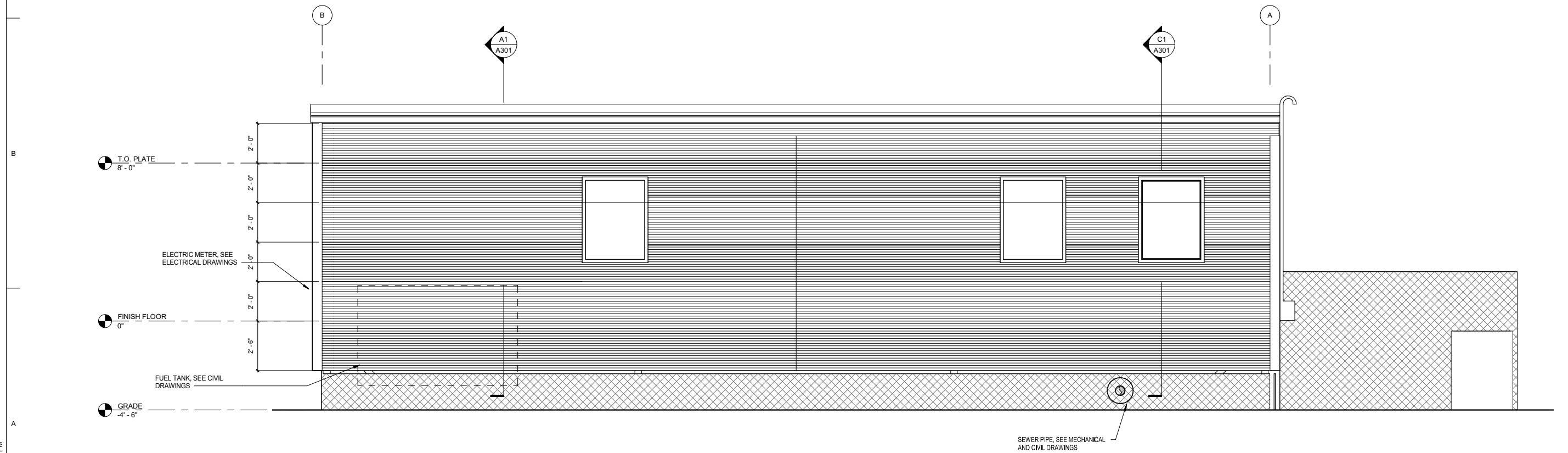
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C1 A201 EAST ELEVATION
3/8" = 1'-0"



A1 A201 NORTH ELEVATION
3/8" = 1'-0"



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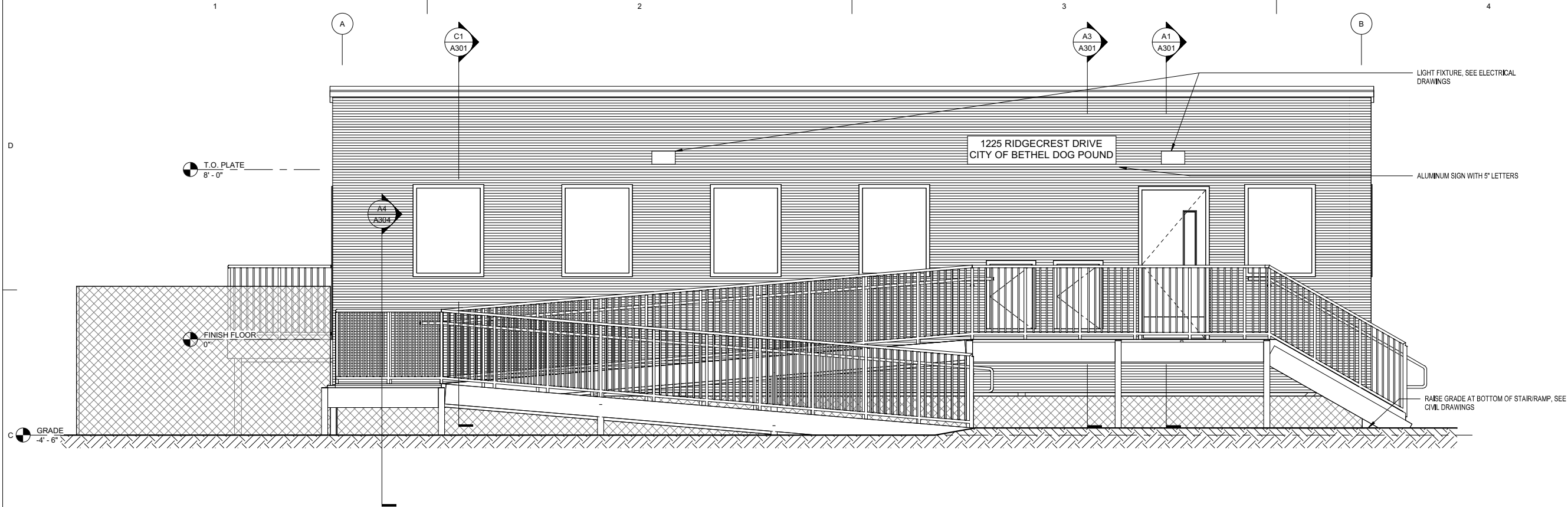
Revisions		
No.	Description	Date

Drawn by Author	Date 12.5.22
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Sheet Contents EXTERIOR ELEVATIONS

Sheet No.
A201

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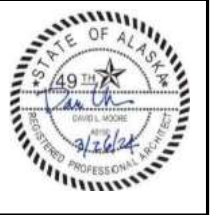


C1
A202
SOUTH ELEVATION
3/8" = 1'-0"



A1
A202
WEST ELEVATION
3/8" = 1'-0"

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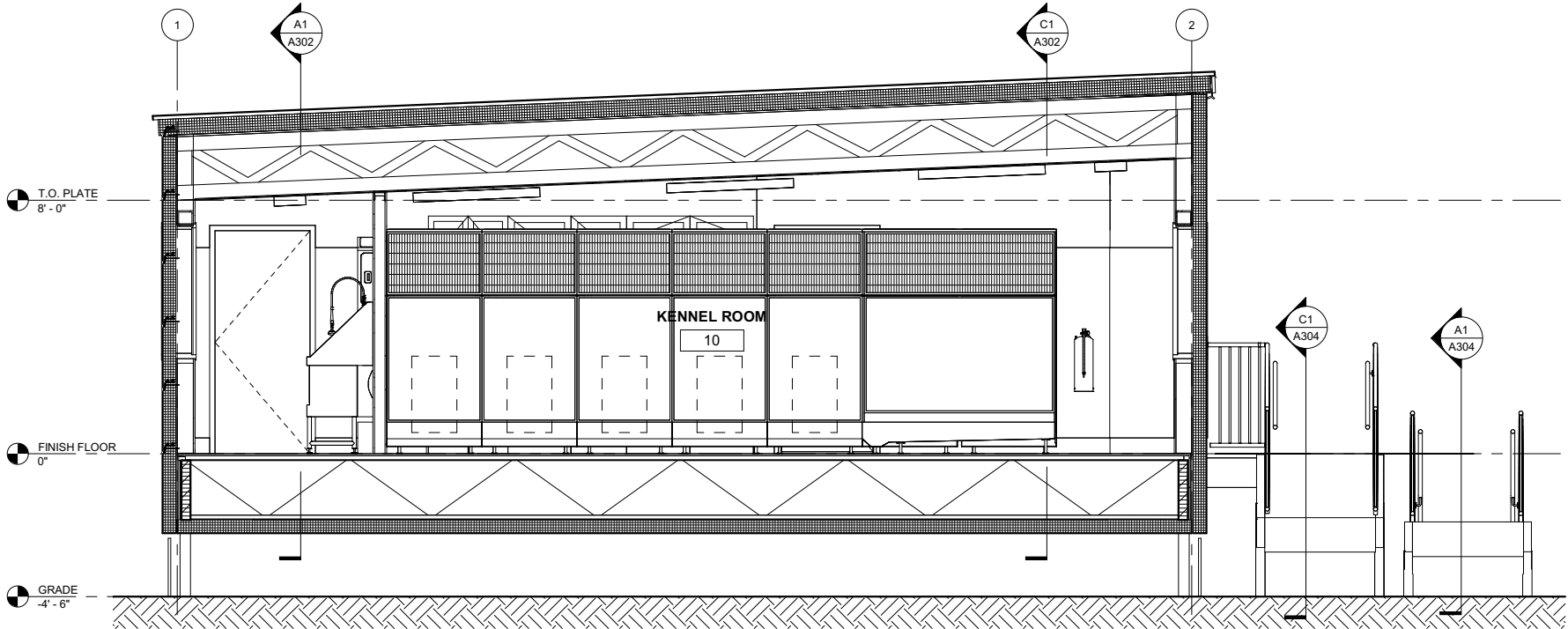
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No.	Description	Date

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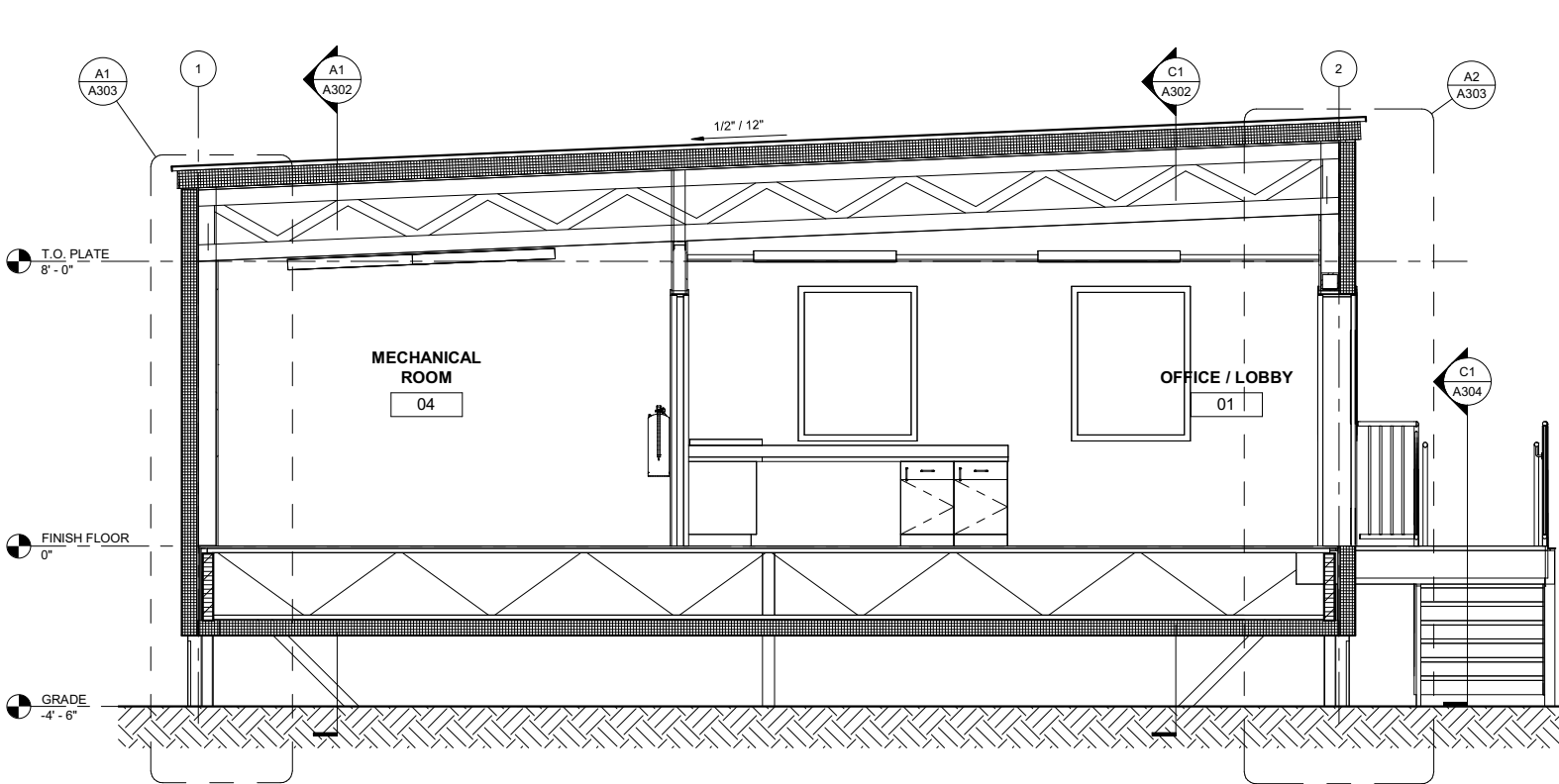
Sheet Contents EXTERIOR ELEVATIONS

Sheet No.
A202

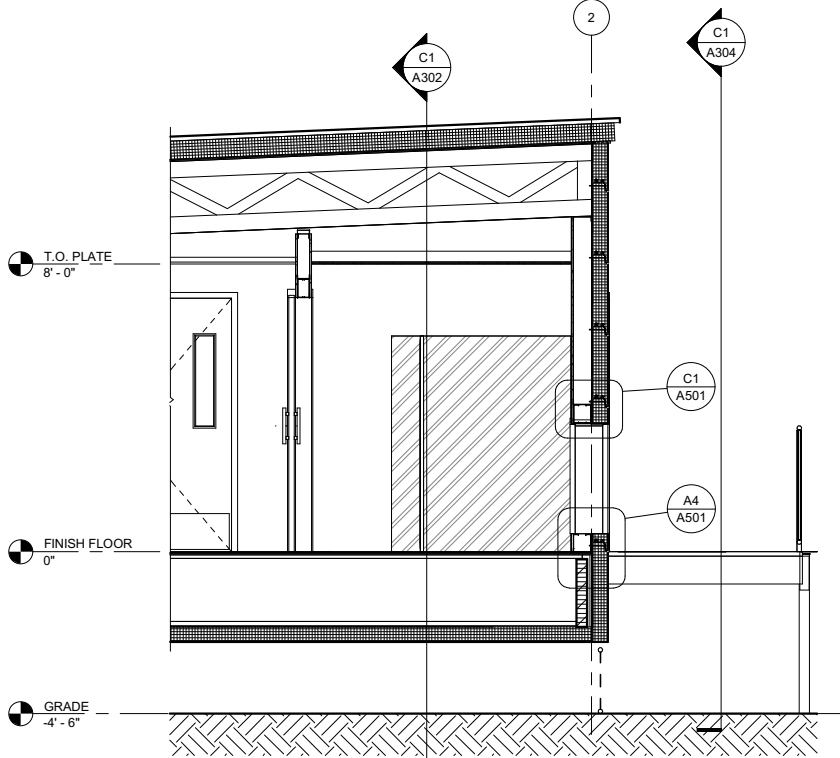
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Plot Date Time: 4/5/2024 3:45:36 PM



C1
A301
N/S SECTION2
3/8" = 1'-0"

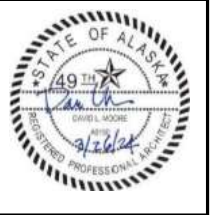


A1
A301
N/S SECTION
3/8" = 1'-0"



A3
A301
WALL SECTION AT AFTER-HOUR DROP OFF
3/8" = 1'-0"

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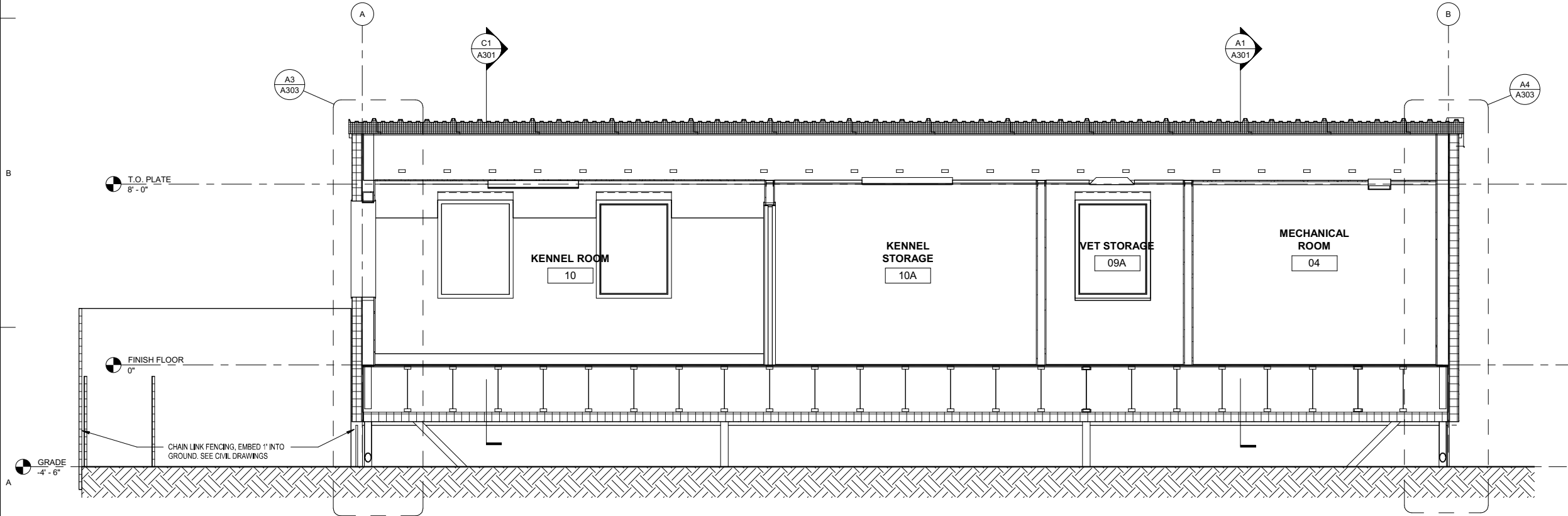
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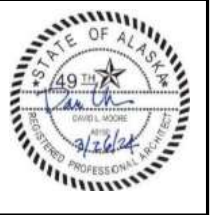


C1 A302
E/W SECTION1
3/8" = 1'-0"



A1 A302
E/W SECTION
3/8" = 1'-0"

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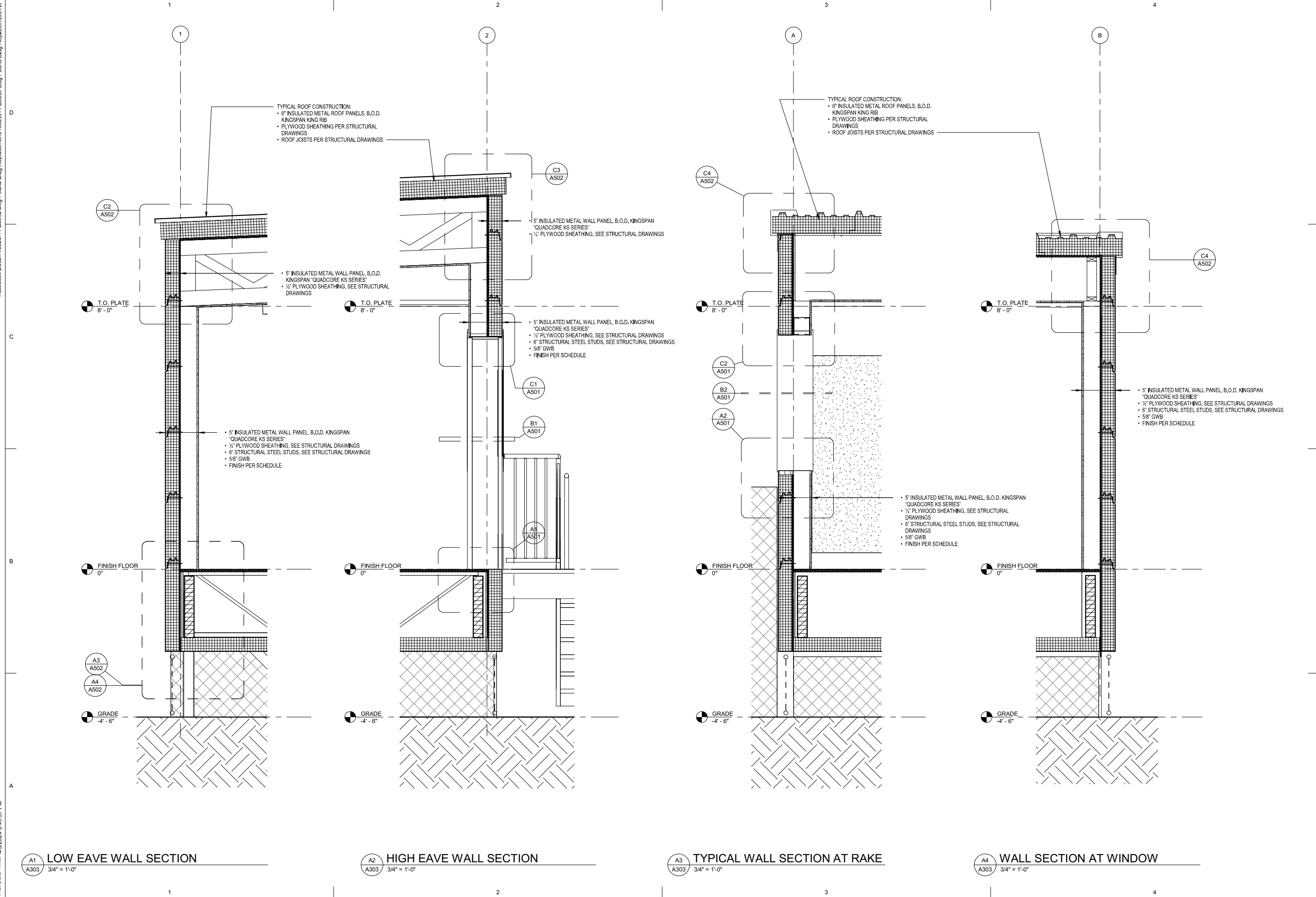
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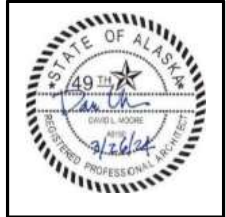
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Sheet No.
A302

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Sheet Contents
WALL SECTIONS

Sheet No.
A303

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BETHEL, ALASKA

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No.	Description	Date

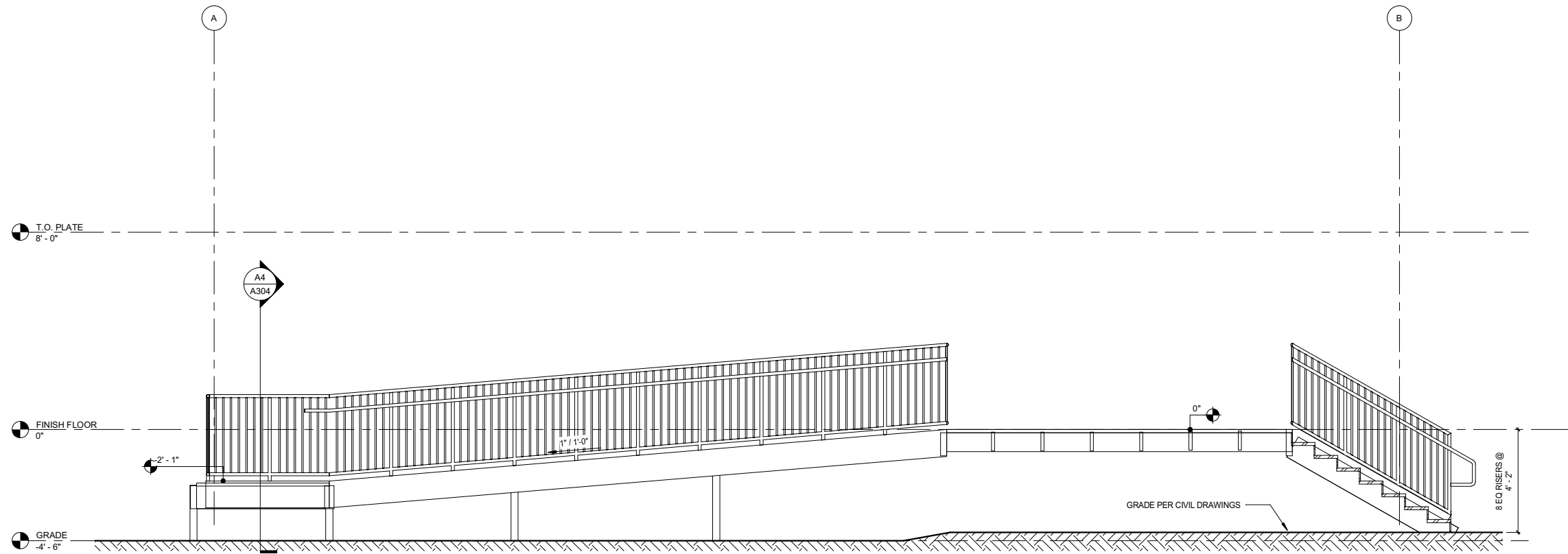
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Sheet Contents

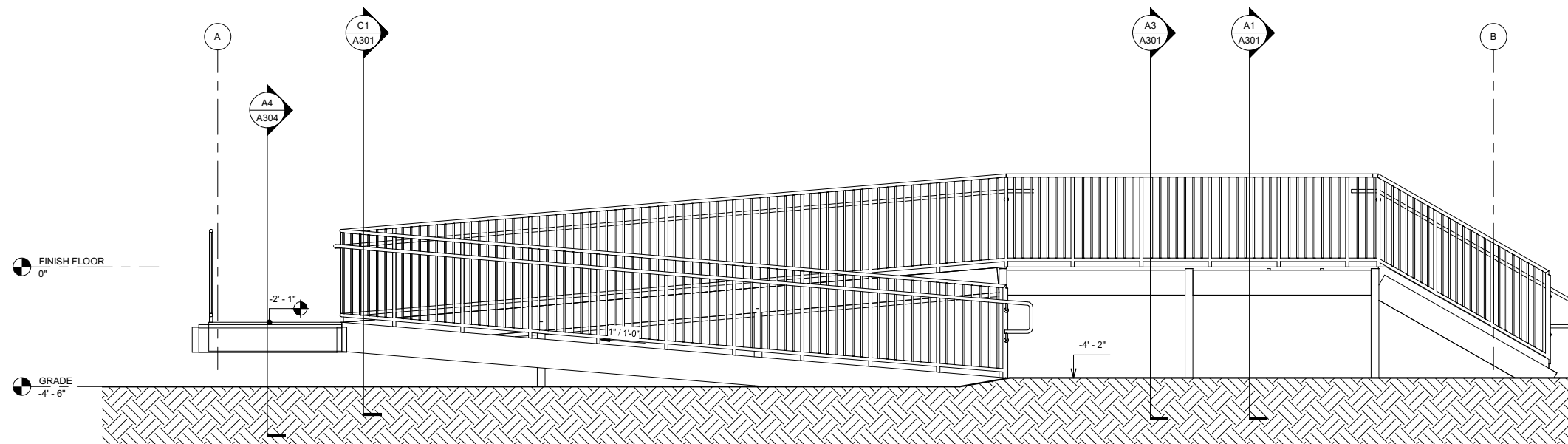
RAMP AND STAIR SECTIONS

Sheet No.

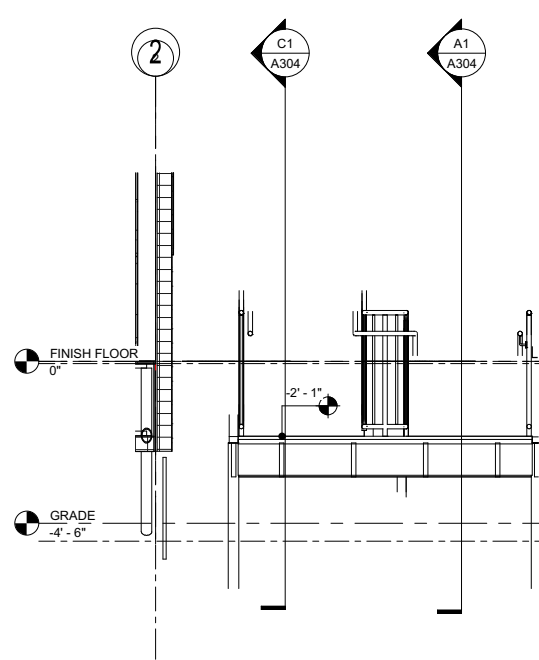
A304



C1 RAMP RUN 2/2
A304 3/8" = 1'-0"

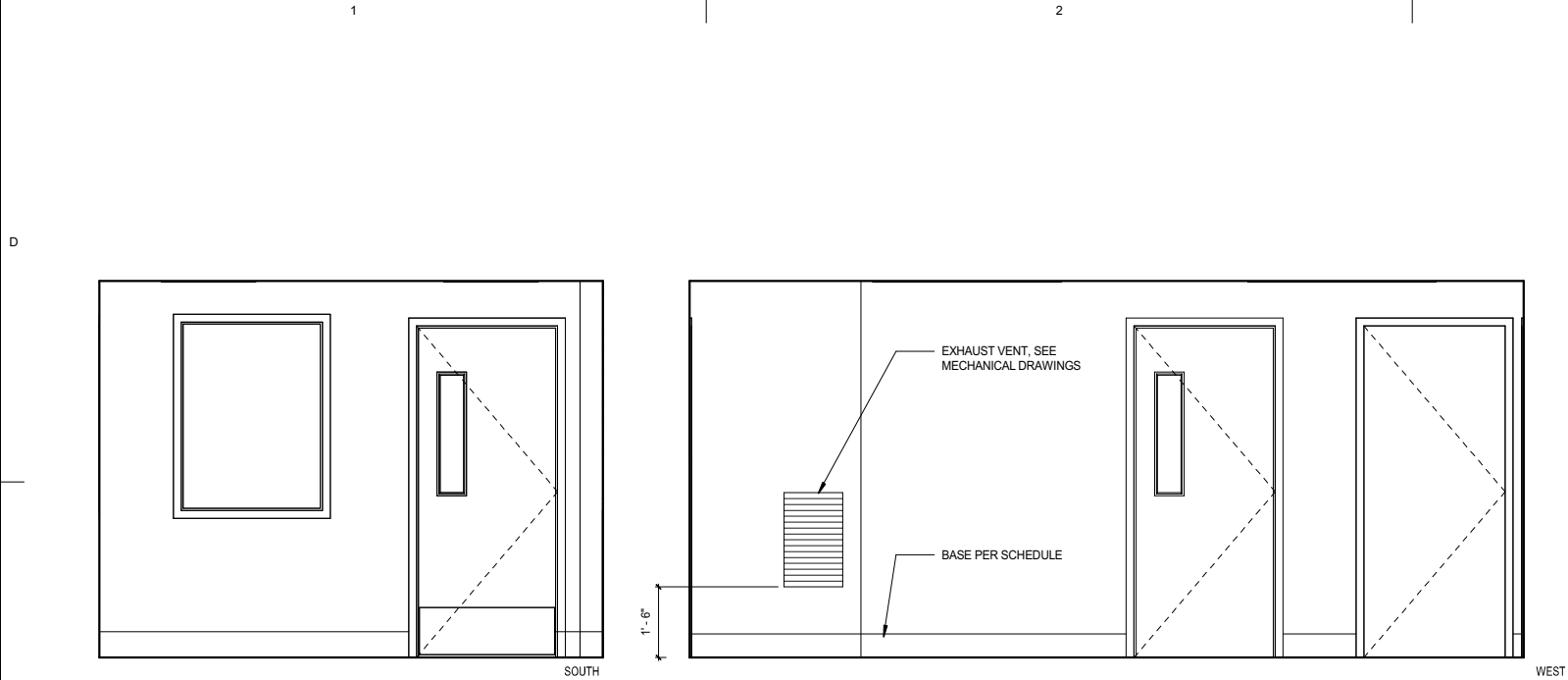


 RAMP RUN 1/2
3/8" = 1'-0"

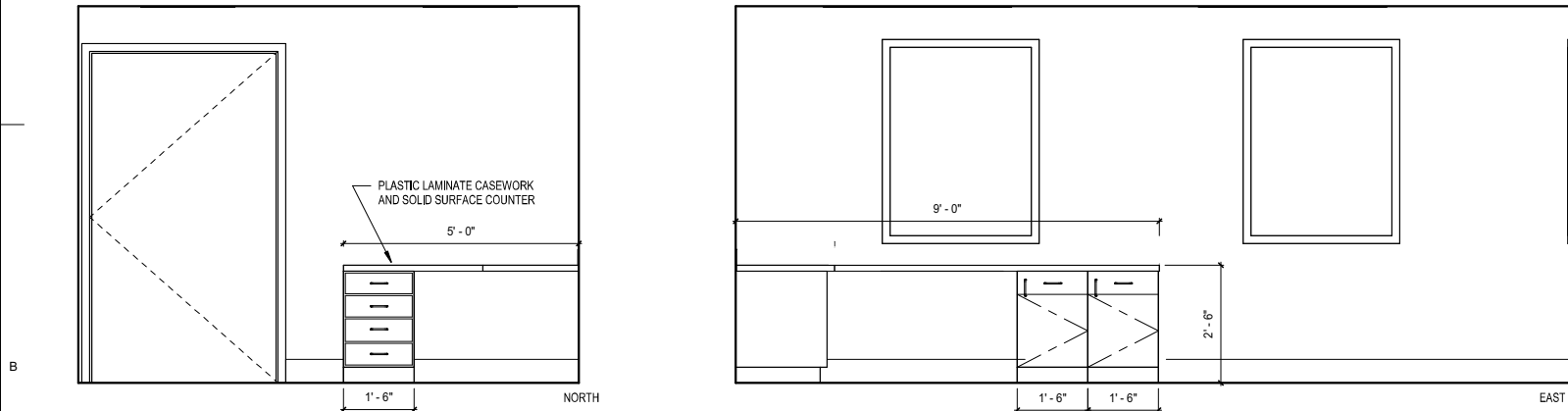


RAMP LANDING
3/8" = 1'-0"

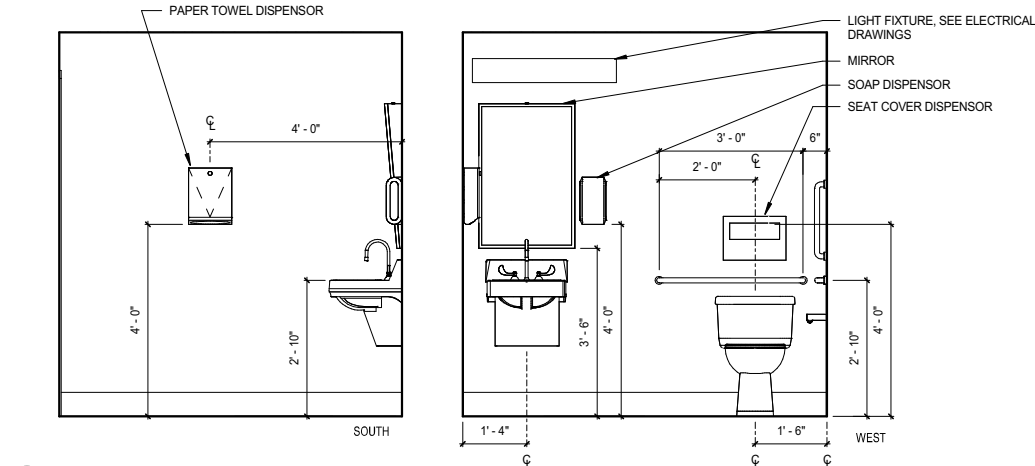
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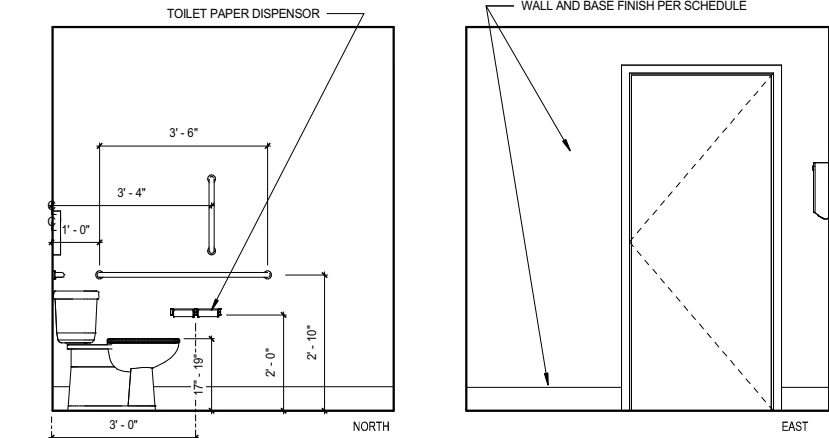
C1 LOBBY AND OFFICE ELEVATIONS
A401 1/2" = 1'-0"



B1 LOBBY AND OFFICE ELEVATIONS
A401 1/2" = 1'-0"

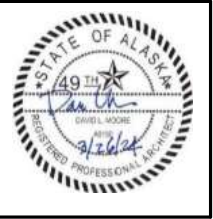


B3 TOILET ELEVATIONS
A401 1/2" = 1'-0"



A3 TOILET ELEVATIONS
A401 1/2" = 1'-0"

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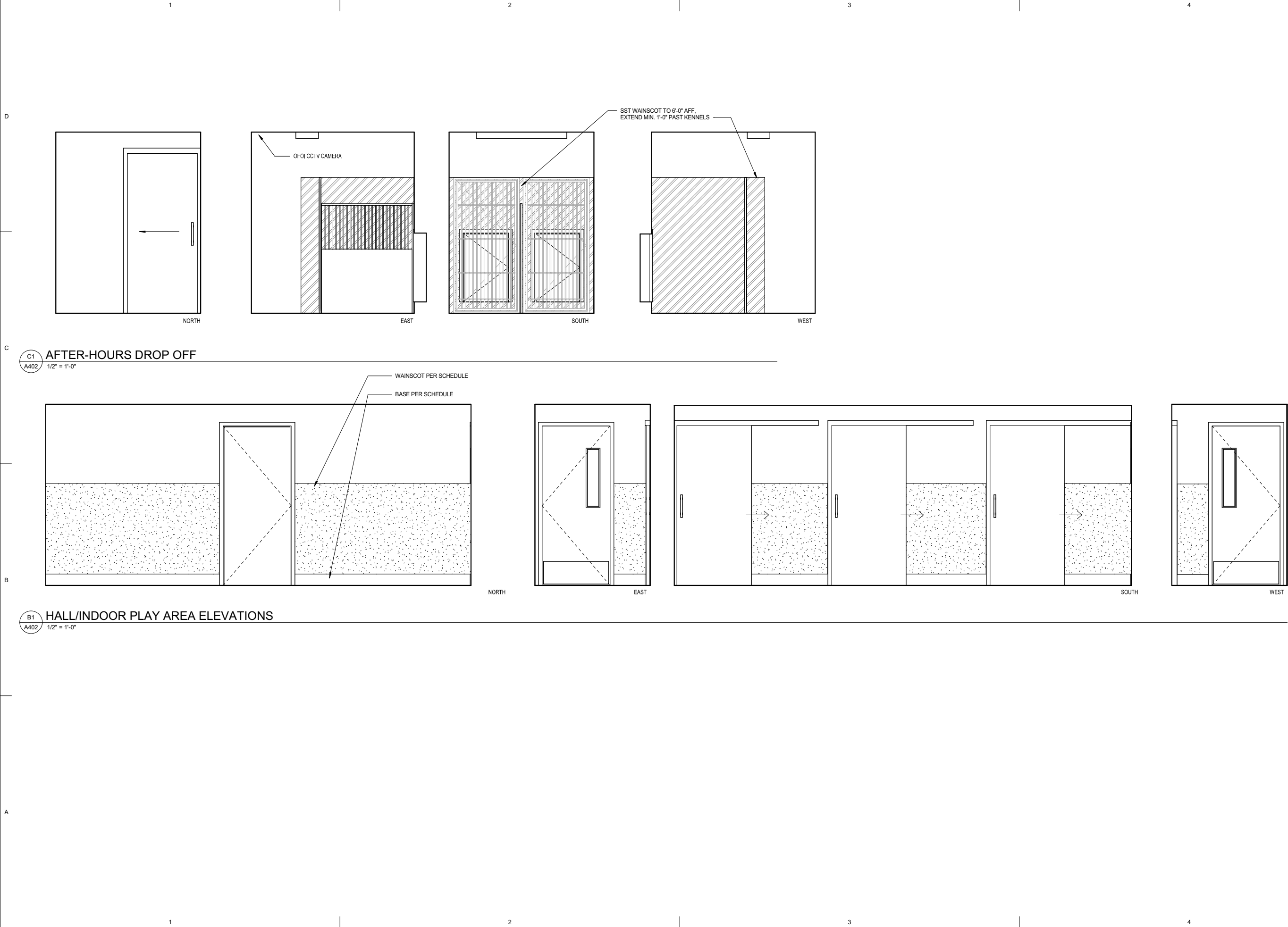
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No.	Description	Date

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Sheet Contents INTERIOR ELEVATIONS

Sheet No.
A401

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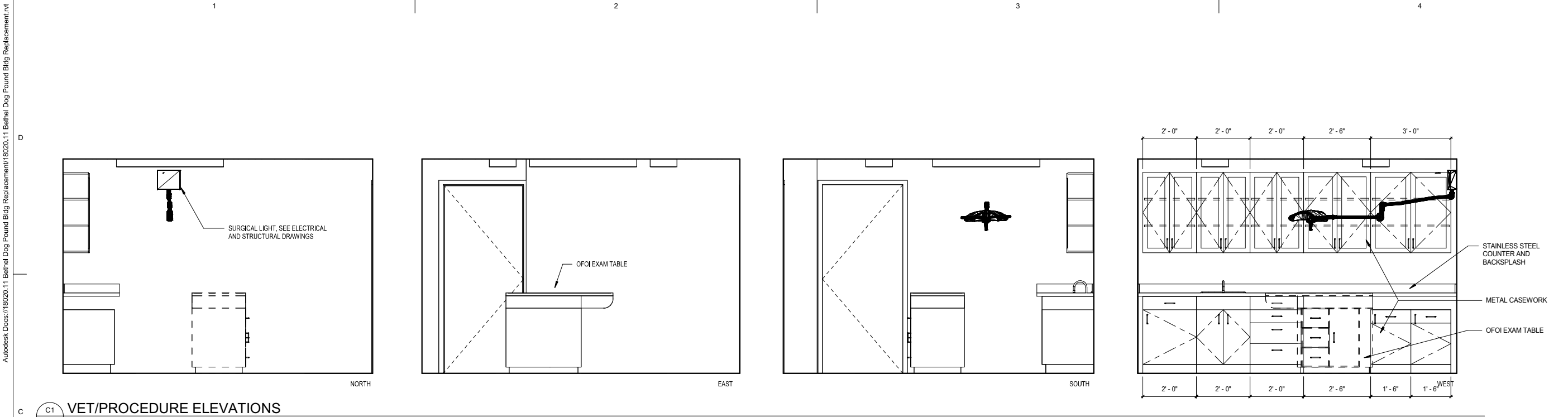
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Checked Checker	Job No. 18020.11

Sheet Contents INTERIOR ELEVATIONS

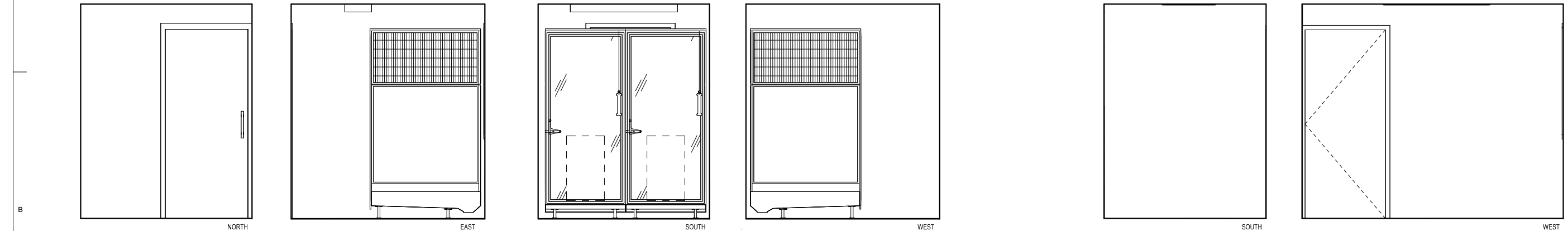
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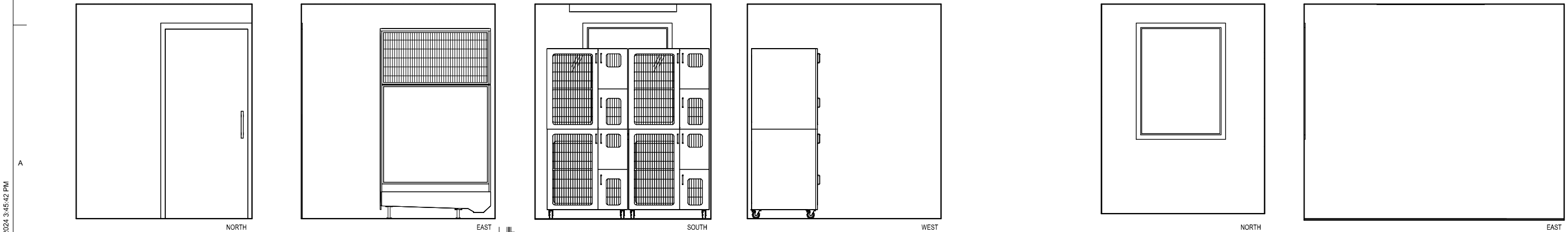
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C1 VET/PROCEDURE ELEVATIONS
A403 1/2" = 1'-0"



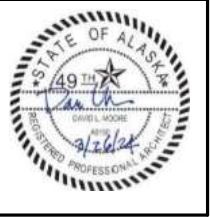
B1 ISOLATION KENNEL ELEVATIONS
A403 1/2" = 1'-0"



A1 CAT KENNELS ELEVATIONS
A403 1/2" = 1'-0"

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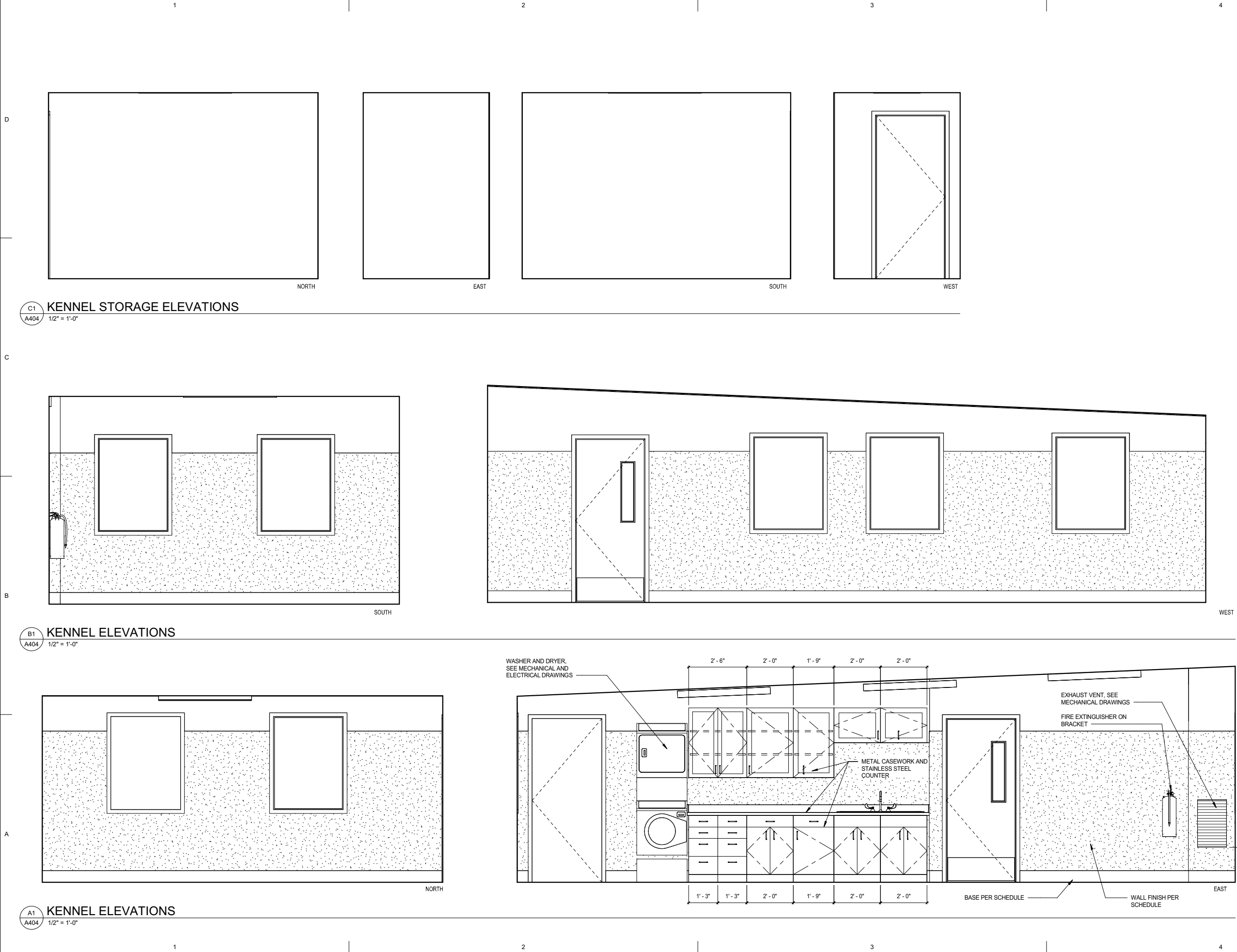
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No.	Description	Date

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Sheet Contents INTERIOR ELEVATIONS

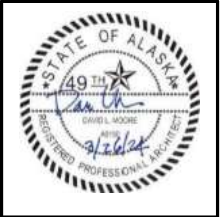
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Sheet Contents
INTERIOR ELEVATIONS

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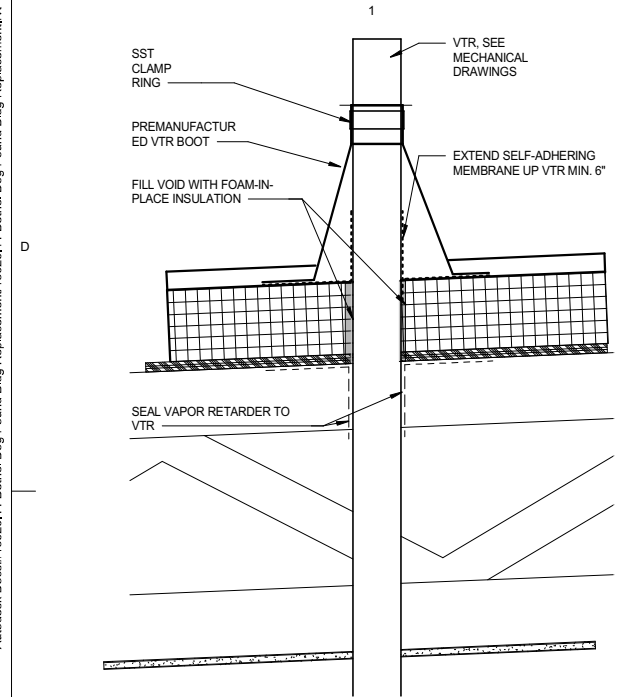
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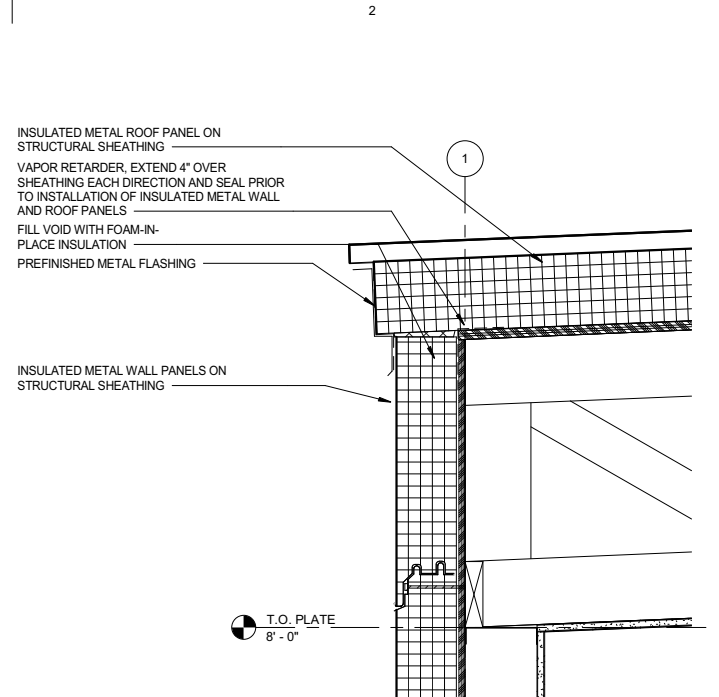
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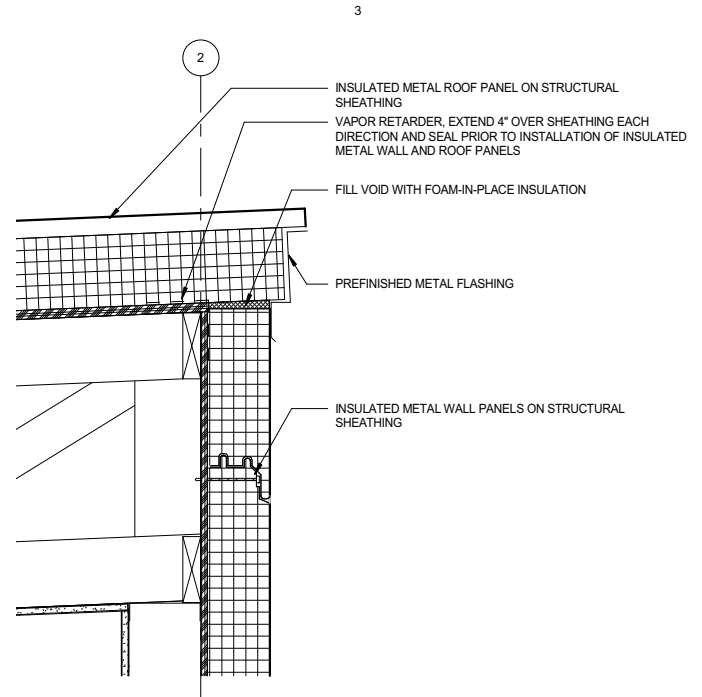
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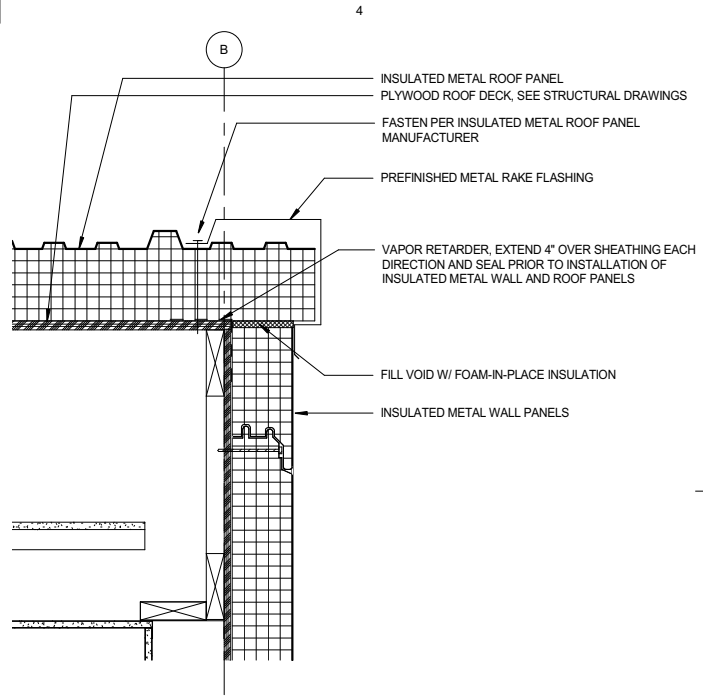
C1
A502
TYP. VTR DETAIL
1 1/2" = 1'-0"



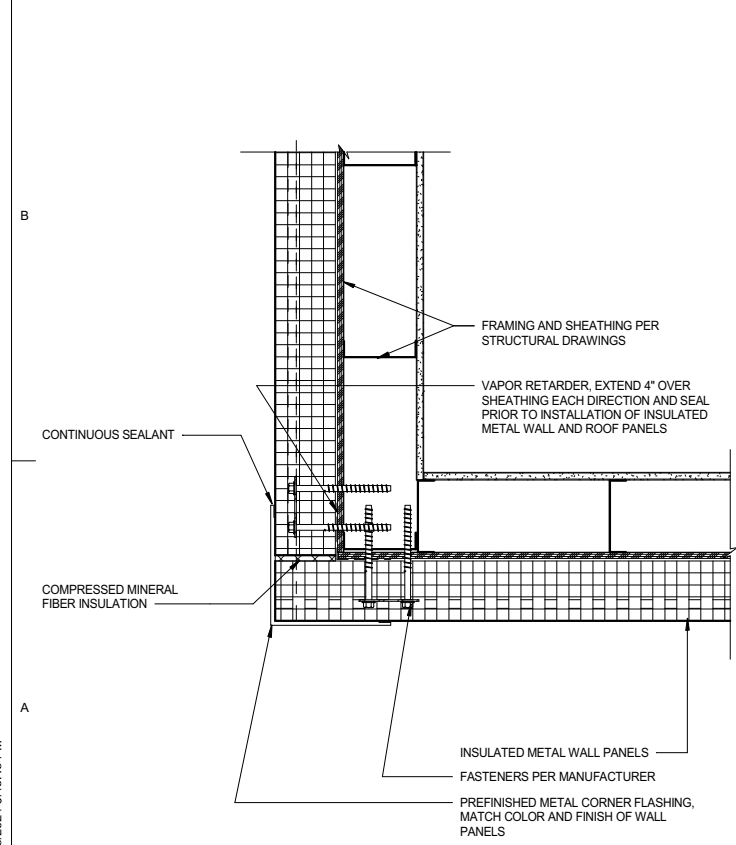
C2
A502
TYP. LOW EAVE DETAIL
1 1/2" = 1'-0"



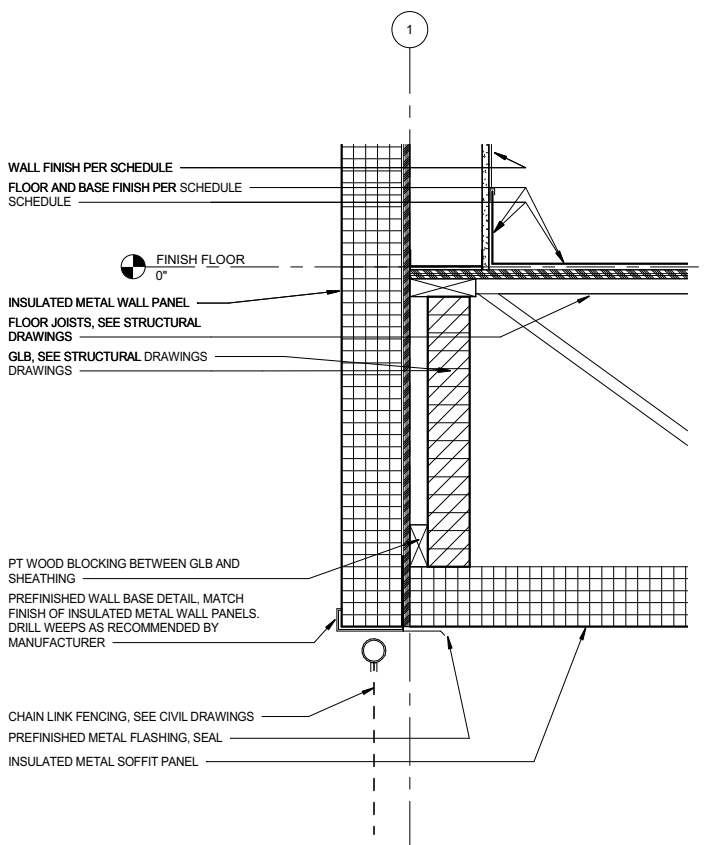
C3
A502
TYP. HIGH EAVE DETAIL
1 1/2" = 1'-0"



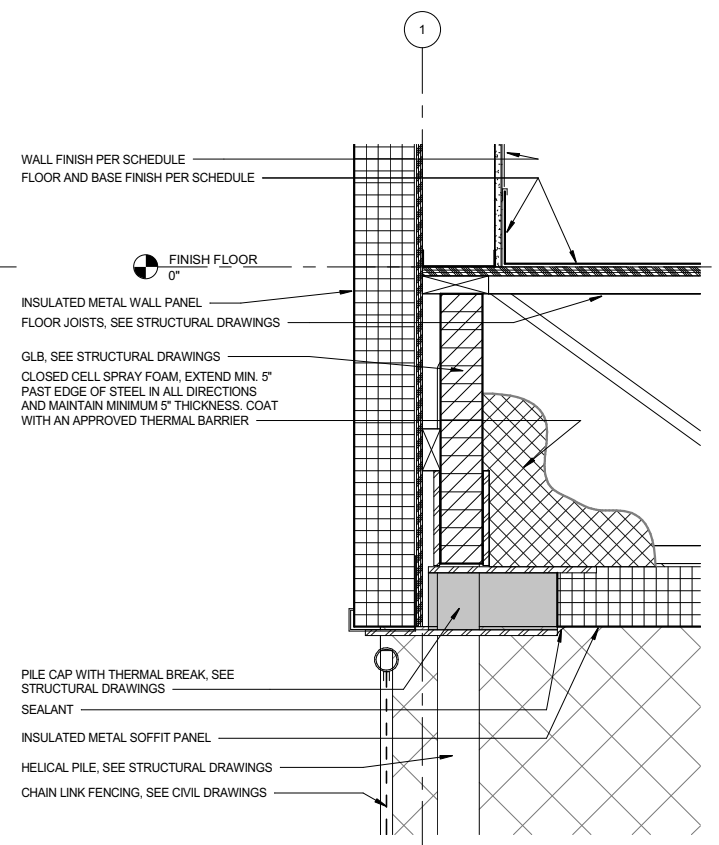
C4
A502
TYP. RAKE DETAIL
1 1/2" = 1'-0"



A1
A502
TYP. OUTSIDE CORNER
1 1/2" = 1'-0"

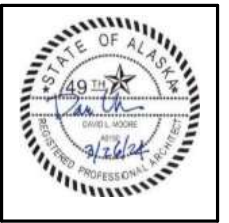


A3
A502
TYPICAL WALL BASE DETAIL
1 1/2" = 1'-0"



A4
A502
TYPICAL WALL BASE DETAIL @ PILE CAP
1 1/2" = 1'-0"

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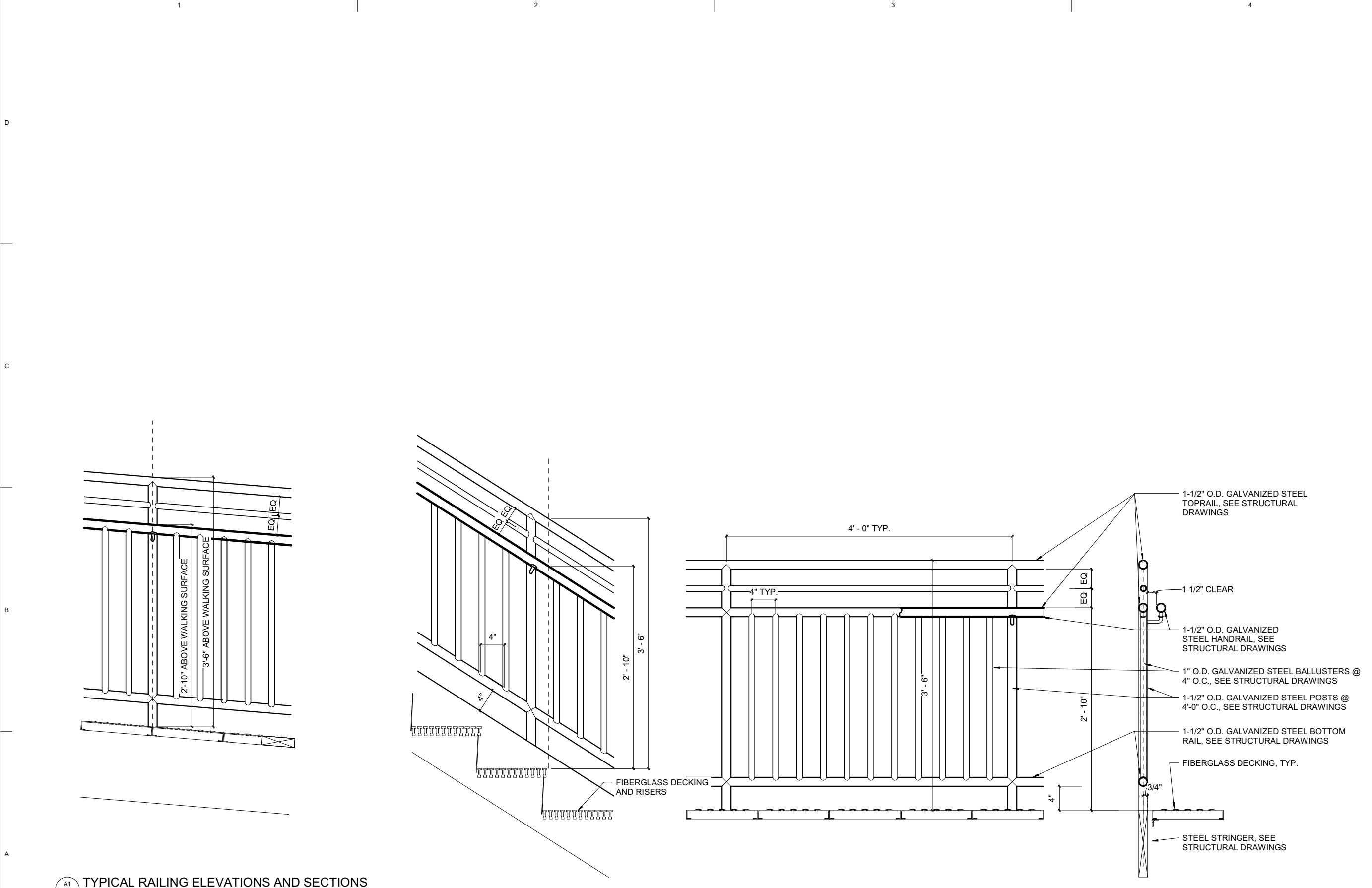
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Sheet Contents
EXTERIOR WALL AND ROOF DETAILS

Sheet No.
A502

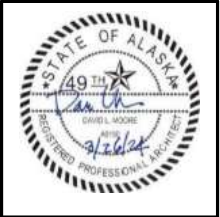
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A1
A503
TYPICAL RAILING ELEVATIONS AND SECTIONS
1 1/2" = 1'-0"



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Sheet Contents
TYPICAL RAILING ELEVATIONS AND SECTIONS

Sheet No.
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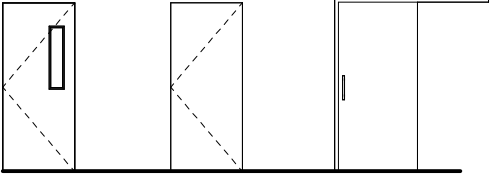
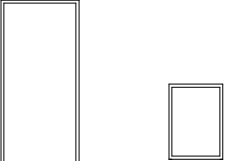
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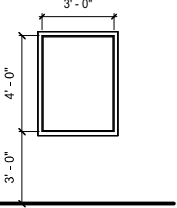
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ROOM FINISH SCHEDULE																			
NO.	NAME	FLOOR			BASE			WALLS											
		MATERIAL	FINISH	COLOR	MATERIAL	FINISH	COLOR	NORTH			EAST			SOUTH			WEST		
								MATERIAL	FINISH	COLOR	MATERIAL	FINISH	COLOR	MATERIAL	FINISH	COLOR	MATERIAL	FINISH	COLOR
01	OFFICE / LOBBY	F1/F2			B1			W1			W1			W1			W1		
02	LOBBY	F1			B1			W1/W2			W1/W3			W1/W3			W1/W3		
03	TOILET	F1			B2			W1/W2			W1/W2			W1/W2			W1/W2		
04	MECHANICAL ROOM	F1			B2			W1			W1			W1			W1		
05	HALL / INDOOR PLAY AREA	F3			B2			W2			W2			W2			W2		
06	AFTER-HOURS DROP OFF	F3			B2			W1			W1/W4			W1/W4			W1/W4		
07	CAT KENNELS	F3			B2			W3			W3			W3			W3		
08	ISOLATION KENNELS	F3			B2			W3			W3			W3			W3		
09	VET / PROCEDURE	F3			B2			W3			W3			W3			W3		
09A	VET STORAGE	F1			B1			W1			W1			W1			W1		
10	KENNEL ROOM	F1			B2			W3			W3			W3			W3		
10A	KENNEL STORAGE	F1			B1			W1			W1			W1			W1		
10B	KENNEL ROOM	F3			B2			W3			W3			W3			W3		

ROOM FINISH LEGEND															
FLOOR MATERIALS				FLOOR FINISHES				WALL MATERIALS				WALL FINISHES			
F1	SHEET VINYL	S	SEALER	W1	GYPSUM WALL BOARD	PT	PAINT	W1	GYPSUM WALL BOARD	FF	FACTORY FINISH	FF	FACTORY FINISH		
F2	WALK OFF CARPET	FF	FACTORY FINISH	W2	FIBER GLASS REINFORCED PANEL +4'-0"			W2	FIBER GLASS REINFORCED PANEL +4'-0"						
F3	RESINOUS FLOOR			W3	GYPSUM WALL BOARD WITH FULL HEIGHT			W3	GYPSUM WALL BOARD WITH FULL HEIGHT						
					FIBERGLASS REINFORCED PANEL				FIBERGLASS REINFORCED PANEL						
					SST WAINSCOT TO 6'-0" AFF			W4	SST WAINSCOT TO 6'-0" AFF						
BASE MATERIALS				BASE FINISH				CEILING MATERIALS				CEILING FINISHES			
B1	4" RUBBER BASE	FF	FACTORY FINISH	C1	GYPSUM BOARD	PT	PAINT	C1	GYPSUM BOARD	FF	FACTORY FINISH	FF	FACTORY FINISH		
B2	6" SELF COVED BASE			C2	SUSPENDED ACOUSITCAL PANELS			C2	SUSPENDED ACOUSITCAL PANELS						
					EXPOSED STRUCTURE			C3	EXPOSED STRUCTURE						

DOOR SCHEDULE															
NO.	SIZE		DOOR				FRAME			HARDWARE GROUP	RATING	DETAILS			COMMENTS
	WIDTH	HEIGHT	TYPE	MATERIAL	FINISH	GLASS	TYPE	MATERIAL	FINISH			HEAD	JAMB	THRESHOLD	
01-1	3' - 0"	7' - 0"	NL	IHM	FF		1	TBHM	FF			C1/A501	B1/A501	A1/A501	
03-1	3' - 0"	7' - 0"	F	HM	FF		1	HM	FF						OCCUPANCY INDICATOR
04-1	4' - 0"	7' - 0"	F	HM	FF		1	HM	FF						
05-1	3' - 0"	7' - 0"	NL	HM	FF		1	HM	FF						
05-2	3' - 0"	7' - 0"	NL	HM	FF		1	HM	FF						
06-1	3' - 4"	7' - 0 3/4"	Q	AL	FF			AL	AN						LOCKABLE
06-2	2' - 0"	3' - 0"	F	IHM	FF		2	TBHM	FF			C1/A501	B1/A501	A4/A501	OCCUPANCY INDICATOR W/ INTERIOR RESET; SILL AT 6" AFF
06-3	2' - 0"	3' - 0"	F	IHM	FF		2	TBHM	FF			C1/A501	B1/A501	A4/A501	OCCUPANCY INDICATOR W/ INTERIOR RESET; SILL AT 6" AFF
07-1	3' - 4"	7' - 0 3/4"	Q	AL	FF			AL	AN						
08-1	3' - 4"	7' - 0 3/4"	Q	AL	FF			AL	A						
09-1	3' - 0"	7' - 0"	F	HM	FF		1	HM	FF						
09A-1	3' - 0"	7' - 0"	F	HM	FF		1	HM	FF						
10-1	3' - 0"	7' - 0"	NL	IHM	FF		1	TBHM	FF			C1/A501	B1/A501	A1/A501	
10A-1	3' - 0"	7' - 0"	F	HM	FF		1	HM	FF						

DOOR TYPES	FRAME TYPES
	
NL B Q	1 1

WINDOW TYPES




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CITY OF BETHEL / DOWL ENGINEERS

DOG POUND REPLACEMENT

BETHEL, ALASKA

Revisions		
No.	Description	Date

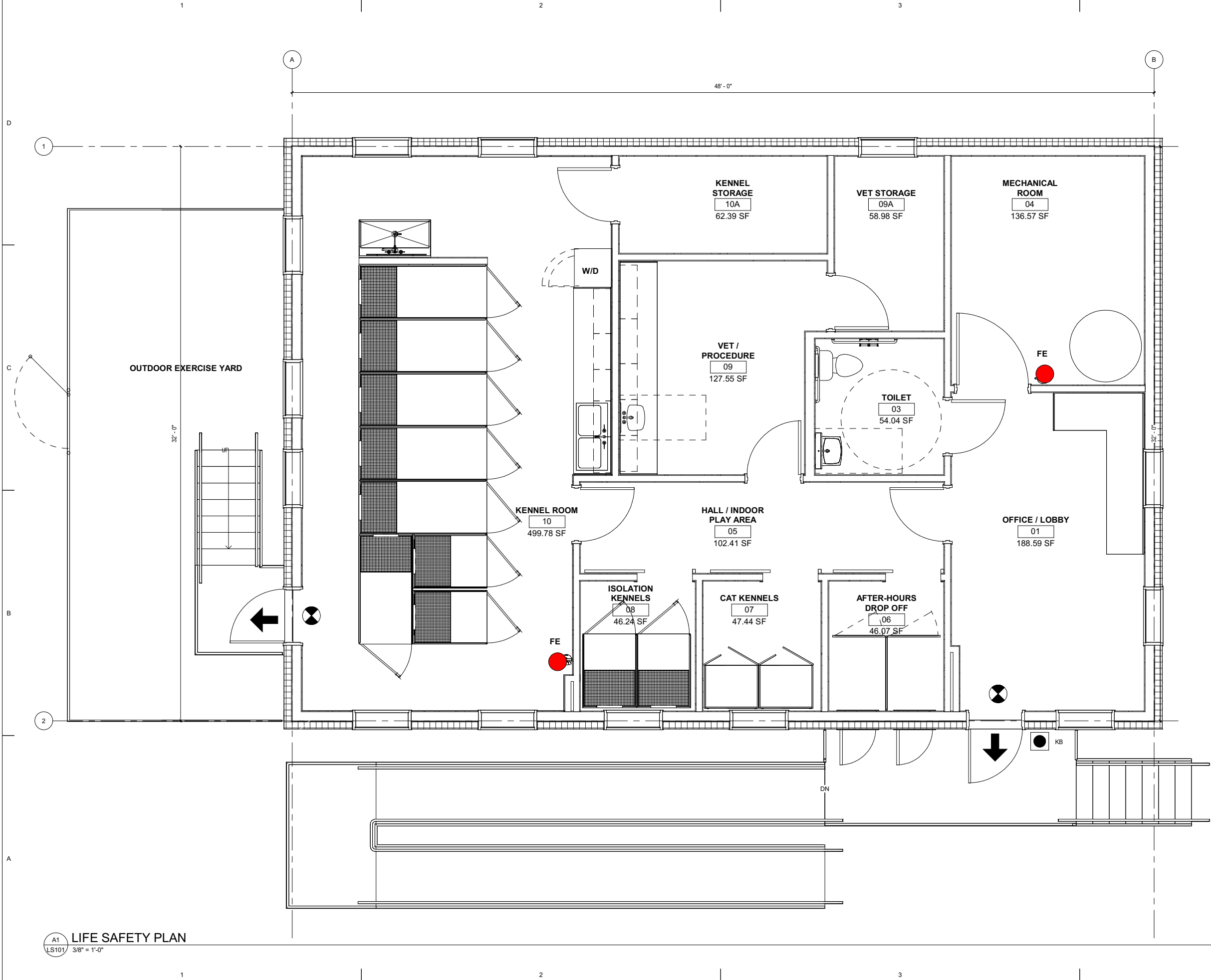
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Checked Checker	Job No. 18020.11

Sheet Contents SCHEDULES

Sheet No.

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LIFE SAFETY PLAN LEGEND

 EXIT SIGN LOCATION

**FE**

FIRE EXTINGUISHER
UL-RATED: 2A-10B:C

**KB**

KNOX BOX LOCATION

 EXIT DISCHARGE

BUILDING CODE ANALYSIS

APPLICABLE BUILDING CODE: 2021 INTERNATIONAL BUILDING CODE AS ADOPTED AND AMENDED BY THE STATE OF ALASKA.

GENERAL: THE PROJECT CONSISTS OF THE CONSTRUCTION OF A NEW DOG POUND SERVING THE CITY OF BETHEL. THE DEMOLITION OF THE EXISTING DOG POUND IS NOT INCLUDED IN THIS project.

CHAPTER 3. OCCUPANCY CLASS
THE BUILDING IS A GROUP B BUSINESS OCCUPANCY FOR ANIMAL HOSPITALS, KENNELS, AND POUNDS.

CHAPTER 4. SPECIAL REQUIREMENTS
429.1 STATE OF ALASKA AMENDMENT. ALL ELEVATED BUILDINGS MUST PROHIBIT UNAUTHORIZED ACCESS TO SPACES UNDERNEATH ELEVATED BUILDINGS. A PERIMETER FENCE IS REQUIRED BENEATH THE BUILDING.

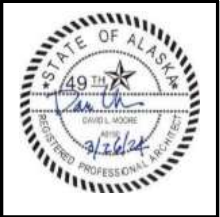
CHAPTER 5. GENERAL BUILDING HEIGHTS AND AREAS.
ALLOWABLE HEIGHT: 40 FEET ABOVE GRADE PLANE
ACTUAL HEIGHT: 15'-3",
OK
ALLOWABLE AREA: 9,000 SF
ACTUAL AREA: 1,536 SF
OK
THE BUILDING IS ELIGIBLE FOR A FRONTAGE INCREASE, HOWEVER NONE IS TAKEN AS ACTUAL AREA IS LESS THAN TABULAR AREA.

CHAPTER 6. TYPES OF CONSTRUCTION
THE BUILDING IS TYPE VB CONSTRUCTION; NO INTERIOR OR EXTERIOR ELEMENTS ARE REQUIRED TO BE RATED.

CHAPTER 7. FIRE AND SMOKE PROTECTION FEATURES
THE MECHANICAL ROOM DOES NOT CONTAIN EQUIPMENT ABOVE 400,000 BTU OR OVER 15PSI/110 HP. AND THEREFORE DOES NOT REQUIRE RATED CONSTRUCTION.

CHAPTER 10. MEANS OF EGRESS
TOTAL OCCUPANT LOAD IS 11 PERSONS.
TWO MEANS OF EGRESS ARE PROVIDED.
EXIT ACCESS TRAVEL DISTANCE DOES NOT EXCEED 200 FEET.
THE BUILDING REQUIRES ONE 2A10BC FIRE EXTINGUISHER; TWO ARE PROVIDED.

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CITY OF BETHEL / DOWL ENGINEERS

DOG POUND REPLACEMENT

BETHEL, ALASKA

Revisions		
No.	Description	Date

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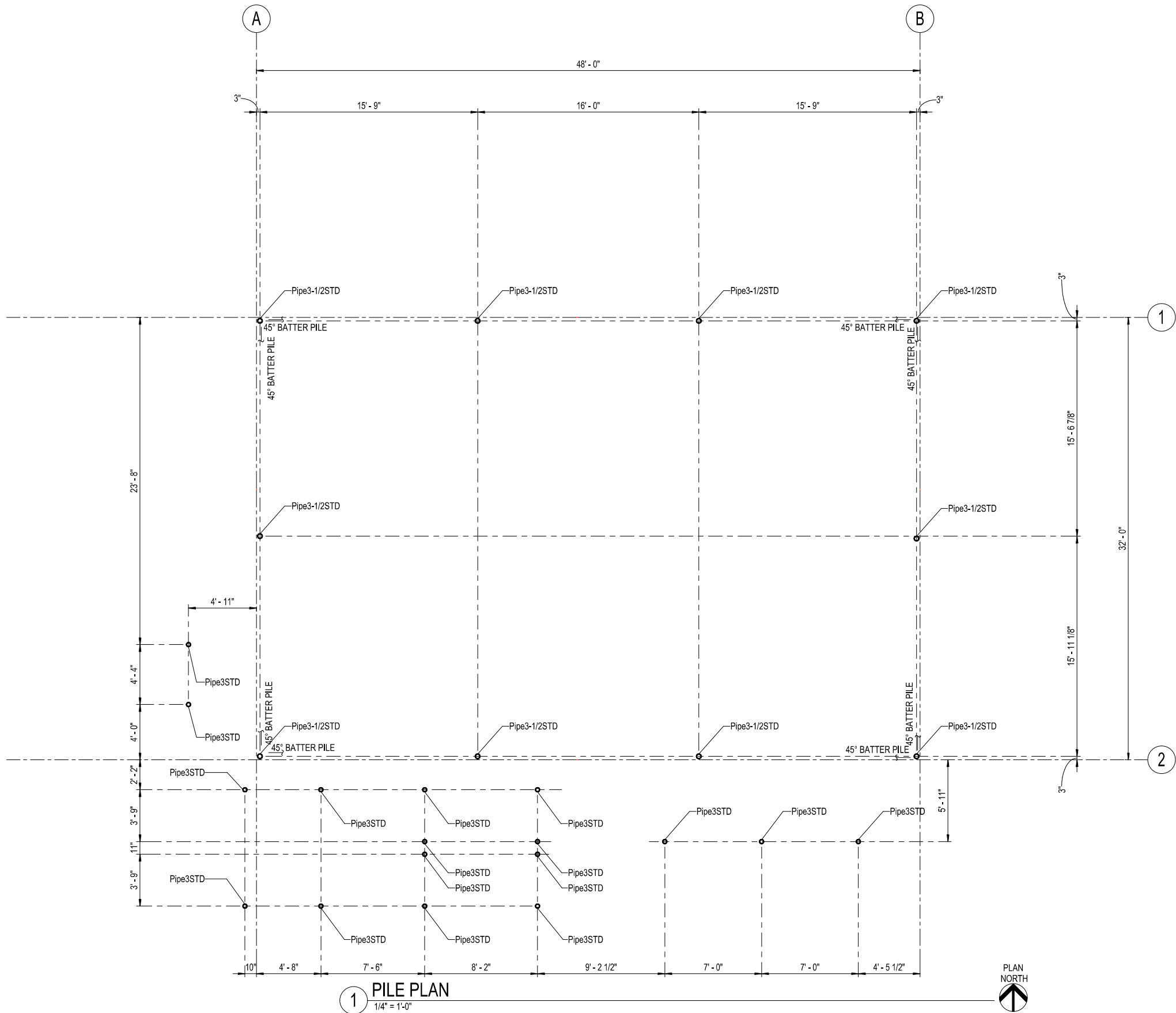
Sheet Contents LIFE SAFETY PLANS

Sheet No. LS101

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TYPICAL ABBREVIATIONS				GENERAL NOTES			
D	(A)	ABOVE	FD	FLOOR DRAIN	P/C	PRECAST	THE FOLLOWING NOTES APPLY UNLESS INDICATED OTHERWISE: CODE: INTERNATIONAL BUILDING CODE, 2021 EDITION. DESIGN LIVE LOADS: RISK CATEGORY ROOF SNOW DRIFT FLOORS UNIFORM CONCENTRATED PARTITIONS CORRIDORS MECHANICAL FLOORS WIND COMPONENTS AND CLADDING WALL - WITHIN 4 FT OF OUTSIDE CORNERS REMAINDER OF WALL ROOF - WITHIN 6 FT OF ROOF CORNERS WITHIN 6 FT OF ROOF EDGES REMAINDER OF ROOF SEISMIC
	AB	ANCHOR BOLT	FDN	FOUNDATION	PCWT	PLATE-CONNECTED WOOD TRUSS	
	ACI	AMERICAN CONCRETE INSTITUTE	FIN	FINISH, FINISHED	PEMB	PRE-ENGINEERED METAL BUILDING	
	ADDL	ADDITIONAL	FF	FINISHED FLOOR	PERP	PERPENDICULAR	
	ADJ	ADJACENT	FLG	FLANGE	PJ	PANEL JOINT	
	AESS	ARCHITECTURALLY EXPOSED STRUCTURAL STEEL	FLR	FLOOR	PL	PLATE (STEEL OR WOOD)	
	AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	FOS	FACE OF STUDS	PLCS	PLACES	
	AISI	AMERICAN IRON AND STEEL INSTITUTE	FRP	FIRE RESISTANT TREATED PLYWOOD	PLWD	PLYWOOD	
	AITC	AMERICAN INSTITUTE OF TIMBER CONSTRUCTION	FRT	FIRE RESISTANT TREATED (LUMBER)	PP	PARTIAL PENETRATION	
	ALT	ALTERNATE	FS	FINISH SLAB ELEVATION, FAR SIDE	PSF	POUNDS PER SQUARE FOOT	
C	ALUM	ALUMINUM	FT OR	FOOT, FEET	PSI	POUNDS PER SQUARE INCH	
	ARCH	ARCHITECT, ARCHITECTURAL	FTG	FOOTING	PSL	PARALLEL STRAND LUMBER	
	@	AT	FV	FIELD VERIFY	PT	PRESSURE TREATED	
	APPROX	APPROXIMATELY			P/T	POST TENSION	
	ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS	GA	GAUGE, GAGE	PVC	POLYVINYL CHLORIDE	
	ASTM	AMERICAN SOCIETY FOR TESTING MATERIAL	GALV	GALVANIZED			
	AWS	AMERICAN WELDING SOCIETY	GEN	GENERAL	R	RADIUS	
	&	AND	GL	GLUE LAMINATED	RD	ROOF DRAIN, ROUND	
			GWB	GYPSPUM WALL BOARD	REF	REFERENCE	
			GYP	GYPSPUM	REINF	REINFORCING, REINFORCEMENT, REINFORCED	
B	(B)	BELOW	HDG	HOT DIPPED GALVANIZED	REQD	REQUIRED	II - TYPICAL BUILDINGS Pg = 40 PSF, Pf = 40 PSF I = 1.00, Ce = 0.8, Ct = 1.00 ASCE 7-16, CHAPTER 7 50 PSF, WITH LIVE LOAD REDUCTION 2000 LB 15 PSF 80 PSF 125 PSF 146 MPH 3-SECOND GUST EXPOSURE C (GCp) = 0.18 BASE SHEAR (EAST & WEST WALLS) = 15 K BASE SHEAR (NORTH & SOUTH WALLS) = 10.5 K 48 PSF 42 PSF 91 PSF 77 PSF 42 PSF I = 1.00, Ss = 0.30, S1 = 0.12 SOIL SITE CLASS: DEFAULT D Sds = 0.31, Sd1 = 0.19, SEISMIC DESIGN CATEGORY C BASIC SEISMIC FORCE RESISTING SYSTEM: LIGHT-FRAME (COLD-FORMED STEEL) WALLS SHEATHED WITH WOOD STRUCTURAL PANELS RATED FOR SHEAR RESISTANCE NORTH AND SOUTH WALLS (BEARING) Cs = 0.048, R = 6.5, OMEGA = 2.5 BASE SHEAR = 5.2 K, EAST AND WEST WALLS (NON-BEARING) Cs = 0.045, R = 7.0, OMEGA = 2.0 BASE SHEAR = 4.8 K EQUIVALENT LATERAL FORCE ANALYSIS
	BD	BOARD	HORIZ	HORIZONTAL	RO	ROUGH OPENING	
	BLDG	BUILDING	HT	HEIGHT	RS	RING SHANK	
	BLK	BLOCK			S	AMERICAN STANDARD STEEL SHAPE, SOUTH	
	BLKG	BLOCKING	SCHED	SCHEDULE	SEC	SECTION	
	BOD	BOTTOM OF DECK ELEVATION	SHT	SHEET	SHTG	SHEETING	
	BM	BEAM	SHTHG	SHEATHING	SIM	SIMILAR	
	BOT	BOTTOM	SIP	STRUCTURAL INSULATED PANEL	SMS	SHEET METAL SCREWS	
	BRG	BEARING	SLBB	SHORT LEGS BACK TO BACK	SOG	CONCRETE SLAB ON GRADE	
	BRK	BRICK	SMS	SHEET METAL SCREWS	SPA	SPACE, SPACING, SPACES	
A	BSMT	BASEMENT	SOG	CONCRETE SLAB ON GRADE	SPEC	SPECIFICATION	MINIMUM NAILING FOR CONNECTION OF VARIOUS COMPONENTS PER TABLE 2304.10.1 OF THE IBC. USE MILD STEEL PLATE WASHERS AT ALL BOLT HEADS AND NUTS BEARING ON WOOD. USE COMMON NAILS ONLY. USE HOT-DIPPED GALVANIZED FASTENERS IN ALL PRESERVATIVE TREATED AND FIRE RETARDANT TREATED WOOD. USE GALVANIZED FRAMING HARDWARE MANUFACTURED BY SIMPSON COMPANY OR APPROVED EQUAL. ICC-ES CERTIFICATION REQUIRED. MINIMUM NAIL SIZES – 8d COMMON – 0.131" DIA X 2 ½" 10d COMMON – 0.148" DIA X 3" 16d COMMON – 0.162" DIA X 3 ½" SHEATHING: SHEATHING GRADE - CD EXPOSURE 1 WITH EXTERIOR GLUE LAID FACE GRAIN PERPENDICULAR TO SUPPORT. SHEATHING MAY BE PLYWOOD OR ORIENTED STRAND BOARD. ROOF SHEATHING – 5/8" THICK, 42/20 SPAN RATING. WALL SHEATHING – 7/16" THICK, 32/16 SPAN RATING. FLOOR SHEATHING – 3/4" THICK, 48/24 SPAN RATING T & G EDGES. PROVIDE 2x4 BLOCKING AT ALL UNSUPPORTED WALL PANEL EDGES. GLUE FLOOR SHEATHING TO ALL SUPPORTS WITH ADHESIVE COMPLYING WITH APA AFG-01, AT A 50 PERCENT SKIP PATTERN AND A 3/16" DIA. BEAD MINIMUM. MINIMUM NAILING AT ALL PANEL EDGES AND AT ALL STUDS WITH HOLDDOWNS IS AS FOLLOWS: ROOF SHEATHING - 10d @ 6" MAX OC. WALL SHEATHING - 8d @ 6" MAX OC. SEE SHEAR WALL SCHEDULE FOR ADDITIONAL REQUIREMENTS. FLOOR SHEATHING - 10d @ 6" MAX OC. MINIMUM NAILING AT ALL PANEL INTERMEDIATE SUPPORTS OTHER THAN STUDS WITH HOLDDOWNS IS AS FOLLOWS: ROOF SHEATHING - 10d @ 12" MAX OC. WALL SHEATHING - 8d @ 12" MAX OC. FLOOR SHEATHING - 10d @ 12" MAX OC. METAL PLATE CONNECTED WOOD TRUSSES: WOOD TRUSSES DESIGNED, MANUFACTURED AND INSTALLED PER TRUSS PLATE INSTITUTE SPECIFICATIONS. ICC-ES CERTIFICATION REQUIRED. ROOF DESIGN DEAD LOAD - 15 PSF MINIMUM. DESIGN TRUSSES FOR SUPPORT OF DEAD, SNOW, AND WIND LOADS AND MECHANICAL EQUIPMENT, PIPING, ETC AS REQUIRED. COORDINATE WEIGHTS, LOCATIONS AND SUPPORT DETAILS. SUBMIT SHOP DRAWINGS SHOWING TRUSSES AND ERECTION BRACING SIZES AND CONNECTIONS. SUBMIT SHOP DRAWINGS STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN STATE OF ALASKA AND DESIGN CALCULATIONS. PROVIDE STANDARD TRUSS CAMBER. PROVIDE ERECTION BRACING PER MANUFACTURER'S INSTRUCTIONS AND PERMANENT BRACING AS INDICATED ON PLANS. PREFABRICATED TIMBER JOISTS: JOISTS DESIGNED AND MANUFACTURED BY REDBUILT LLC OR APPROVED EQUAL. ICC-ES CERTIFICATION REQUIRED. JOIST DESIGNATIONS ARE PER REBUILT STANDARDS AND SIZES INDICATED ON PLANS ARE MINIMUM ONLY. FLOOR DESIGN DEAD LOAD - 15 PSF MINIMUM. DESIGN TRUSSES FOR SUPPORT OF DEAD, LIVE, AND PARTITION LOADS AND MECHANICAL EQUIPMENT, PIPING, PARTITIONS, ETC AS REQUIRED. COORDINATE WEIGHTS, LOCATIONS AND SUPPORT DETAILS. SUBMIT SHOP DRAWINGS STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF ALASKA AND DESIGN CALCULATIONS. PROVIDE STANDARD JOIST CAMBER. PROVIDE BRIDGING AND ERECTION BRACING PER MANUFACTURER'S INSTRUCTIONS. STRUCTURAL INSULATED PANELS: FACTORY ASSEMBLED WALL, FLOOR AND ROOF PANELS CONSISTING OF ORIENTED STRAND BOARD OR PLYWOOD FACINGS WITH EXPANDED POLYSTYRENE CORES. PANEL FACINGS TO COMPLY WITH APA STANDARDS AND SHEATHING THICKNESS NOTED FOR PLYWOOD. THE BOND BETWEEN FACINGS AND CORE SHALL BE ACCOMPLISHED WITH A LAMINATING ADHESIVE UNDER PRESSURE. REINFORCE PANELS WITH SAWN LUMBER OR PREFABRICATED TIMBER JOISTS AS REQUIRED. PANELS SHALL BE SYSTEM 3 BUILDING PANELS BY PREMIER INDUSTRIES, INC.; AFM R-CONTROL PANELS BY AFM CORPORATION; ENERCEPT STRUCTURAL SANDWICH PANELS BY ENERCEPT INC., OR APPROVED EQUAL. ICC CERTIFICATION REQUIRED. PROVIDE SHOP DRAWINGS. MISCELLANEOUS: CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS, MEMBER SIZES AND CONDITIONS PRIOR TO COMMENCING ANY WORK. DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND STRUCTURAL ENGINEER. REFER TO ARCHITECTURAL DRAWINGS FOR WALL OPENINGS, ARCHITECTURAL TREATMENT AND DIMENSIONS NOT SHOWN. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR SIZE AND LOCATION OF DUCT OPENINGS, PIPING, CONDUITS, ETC, NOT SHOWN. SHOP DRAWINGS SHALL BE SUBMITTED AND REVIEWED PRIOR TO FABRICATION. PROVIDE TEMPORARY ERECTION BRACING AND SHORING AS REQUIRED FOR STABILITY OF THE STRUCTURE DURING ALL PHASES OF CONSTRUCTION. REFER TO SPECIFICATIONS FOR INFORMATION NOT CONTAINED IN THESE GENERAL NOTES.
	BTWN	BETWEEN	SHT	SHEET	SS	SQUARE	
			SHTHG	SHEATHING	SSL	STAINLESS STEEL	
	C	AMERICAN CHANNELS	ST	SHORT SLOTTED HOLES	STD	STANDARD	
	CG	CENTER OF GRAVITY	STIFF	STIFFENER	STL	STEEL	
	CJ	CONSTRUCTION JOINT	STL	STEEL	STRUCT	STRUCTURAL	
	CIP	CAST-IN-PLACE	STRUCT	STRUCTURAL	SUPT	SUPPORT	
	CL	CENTER LINE	SUPT	SUPPORT	SUSP	SUSPENDED	
	CJP	COMPLETE JOINT PENETRATION	SYMM	SYMMETRICAL	TS	STRUCTURAL TUBE	
	CLR	CLEAR	T	TOP	TYP	TYPICAL	
	CMU	CORRUGATED METAL PIPE	T&G	TONGUE AND GROOVE	UL	UNDERWRITERS LABORATORY	LUMBER VISUALLY GRADED AND STAMPED PER WWSA STANDARD GRADING RULES. MOISTURE CONTENT OF LUMBER 2" OR LESS IN THICKNESS - 19 PERCENT MAXIMUM. DOUGLAS FIR SPECIES, NO. 2 GRADE OR BETTER, Fb = 900 PSI.
	CO	CONCRETE MASONRY UNIT	TEMP	TEMPERATURE, TEMPORARY	UON	UNLESS OTHERWISE NOTED	
	COL	CLEANOUT, CONCRETE OPENING	THK	THICK	UT	ULTRASONIC TEST	
	CONC	COLUMN	THRU	THROUGH			
	CONN	CONCRETE	TOB	TOP OF BEAM ELEVATION			
	CONSTR	CONNECTION	TOC	TOP OF CONCRETE ELEVATION,			
	CONSTR	CONSTRUCTION		TOP OF CONCRETE ELEVATION,			
	CONT	CONTINUOUS		TOP OF CMU ELEVATION			
	CONTR	CONTRACTOR		TOP OF FOOTING ELEVATION			
	CSA	CONCRETE SCREW ANCHOR		TOP OF STEEL ELEVATION			
	CTJ	CONTROL JOINT, CONTRACTION JOINT		TOP OF STEEL ELEVATION			LUMBER VISUALLY GRADED AND STAMPED PER WWSA STANDARD GRADING RULES. MOISTURE CONTENT OF LUMBER 2" OR LESS IN THICKNESS - 19 PERCENT MAXIMUM. DOUGLAS FIR SPECIES, NO. 2 GRADE OR BETTER, Fb = 900 PSI.
	CTR	CENTER		TOP OF SHEATHING ELEVATION			
	CU	CUBIC		TOP OF WALL ELEVATION			
				TOP OF PAVEMENT			
				TRANSVERSE			
				STRUCTURAL TUBE			
				TYPICAL			
	DBL	DOUBLE					LUMBER VISUALLY GRADED AND STAMPED PER WWSA STANDARD GRADING RULES. MOISTURE CONTENT OF LUMBER 2" OR LESS IN THICKNESS - 19 PERCENT MAXIMUM. DOUGLAS FIR SPECIES, NO. 2 GRADE OR BETTER, Fb = 900 PSI.
	DEPT	DEPARTMENT					
	DET	DETAIL					
	DIA, Ø	DIAMETER					
	DIAA	DRILLED-IN ADHESIVE ANCHOR					
	DIAB	DRILLED-IN ADHESIVE BOLT					
	DIAG	DIAGONAL					
	DIAPH	DIAPHRAGM					
	DIEB	DRILLED-IN EXPANSION BOLT					
	DIM	DIMENSION					
	DN	DOWN					LUMBER VISUALLY GRADED AND STAMPED PER WWSA STANDARD GRADING RULES. MOISTURE CONTENT OF LUMBER 2" OR LESS IN THICKNESS - 19 PERCENT MAXIMUM. DOUGLAS FIR SPECIES, NO. 2 GRADE OR BETTER, Fb = 900 PSI.
	do	DITTO					
	DP	DEEP					
	DWG	DRAWING					
	DWL	DOWEL					
	E	EAST					LUMBER VISUALLY GRADED AND STAMPED PER WWSA STANDARD GRADING RULES. MOISTURE CONTENT OF LUMBER 2" OR LESS IN THICKNESS - 19 PERCENT MAXIMUM. DOUGLAS FIR SPECIES, NO. 2 GRADE OR BETTER, Fb = 900 PSI.
	EA	EACH					
	EF	EACH FACE					
	EL	ELEVATION (HEIGHT)					
	ELEC	ELECTRICAL					
	ELEV	ELEVATOR					
	ENGR	ENGINEER					
	EOD	EDGE OF DECK					
	EQ	EQUAL					
	EQUIP	EQUIPMENT					
	ES	EACH SIDE					LUMBER VISUALLY GRADED AND STAMPED PER WWSA STANDARD GRADING RULES. MOISTURE CONTENT OF LUMBER 2" OR LESS IN THICKNESS - 19 PERCENT MAXIMUM. DOUGLAS FIR SPECIES, NO. 2 GRADE OR BETTER, Fb = 900 PSI.
	EW	EACH WAY					
	EXIST, (E)	EXISTING					
	EXP	EXPANSION					
	EXT	EXTERIOR					
							LUMBER VISUALLY GRADED AND STAMPED PER WWSA STANDARD GRADING RULES. MOISTURE CONTENT OF LUMBER 2" OR LESS IN THICKNESS - 19 PERCENT MAXIMUM. DOUGLAS FIR SPECIES, NO. 2 GRADE OR BETTER, Fb = 900 PSI.
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							LUMBER VISUALLY GRADED AND STAMPED PER WWSA STANDARD GRADING RULES. MOISTURE CONTENT OF LUMBER 2" OR LESS IN THICKNESS

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- NOTES:
1. INSTALL HELICAL PILE PER GEOTECHNICAL RECOMMENDATIONS.

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CITY OF BETHEL
DOG POUND REPLACEMENT
BETHEL, ALASKA

Revisions		
No.	Description	Date

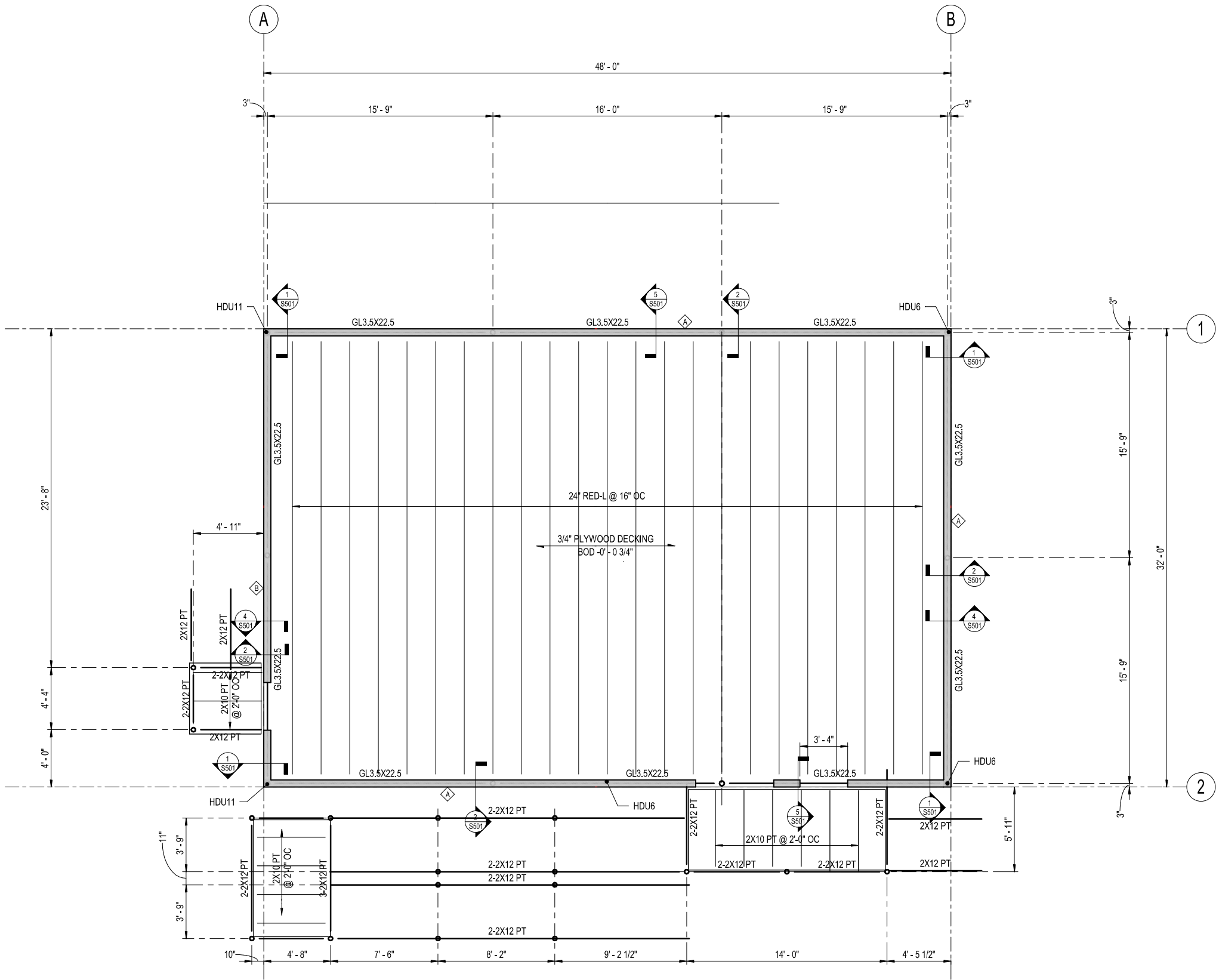
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Checked GOL	Job No. 223151

Sheet Contents
PILE PLAN

Sheet No.
S101

BID DOCUMENTS

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1 FIRST FLOOR FRAMING PLAN
1/4" = 1'-0"

FLOOR/ROOF DIAPHRAGM ATTACHMENT

NAILS	PANEL EDGES AND AT SHEAR WALLS	SPACING
ROOF - 10d MIN UNBLOCKED	6" OC	12" OC
FLOOR - 10d MIN UNBLOCKED	6" OC	12" OC

HOLDDOWN SCHEDULE

HOLDDOWN	HD STUD	ANCHOR LAG DIA	ANCHOR LAG EMBED
HDU6	600S200-43	5/8"	6"
HDU11	600S200-43	7/8"	7"

SHEAR WALL SCHEDULE

MARK	SHEATHING	PANEL EDGE FASTENING	SILL ATTACHMENTS
A	ONE SIDE	#8 @ 4" OC	4 1/2" SIMPSON SDS OR EQUIV @ 12" OC
B	ONE SIDE	#8 @ 3" OC	4 1/2" SIMPSON SDS OR EQUIV @ 12" OC

- SHEAR WALL NOTES:**
- WHERE PANELS ARE APPLIED ON BOTH SIDES OF FRAMING AND SCREW SPACING IS LESS THAN 6" OC, PANEL JOINTS SHALL BE OFFSET TO DIFFERENT FRAMING MEMBERS.
 - PROVIDE 3"x3"x3/16" PL WASHERS ON TOP OF ALL SILL TRACKS AT ANCHOR BOLTS.
 - SHEATHING SHALL BE 7/16 OSB.
 - SIMPSON HOLDDOWNS AND STRAPS ARE INDICATED ON PLANS. EQUIVALENT ALTERNATE HARDWARE MAY BE USED.
 - PROVIDE 2" WIDE 43 MIL FLAT GALVANIZED STAP BLOCKING AT ALL HORIZONTAL JOINTS BETWEEN STUDS.

- FRAMING NOTES:**
- ELEVATIONS NOTED ARE WITH RESPECT TO FIRST FLOOR DATUM OF 0'-0".
 - SHEAR WALL NOTED THUS: FOR SHEAR WALL SCHEDULE SEE SHT S10

BBFM
Engineers Inc.
845 K Street
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Phone: (907) 274-2238 Fax: 274-2520
Corporate Authentication No: C725



CITY OF BETHEL
DOG POUND REPLACEMENT
BETHEL, ALASKA

Revisions		
No.	Description	Date

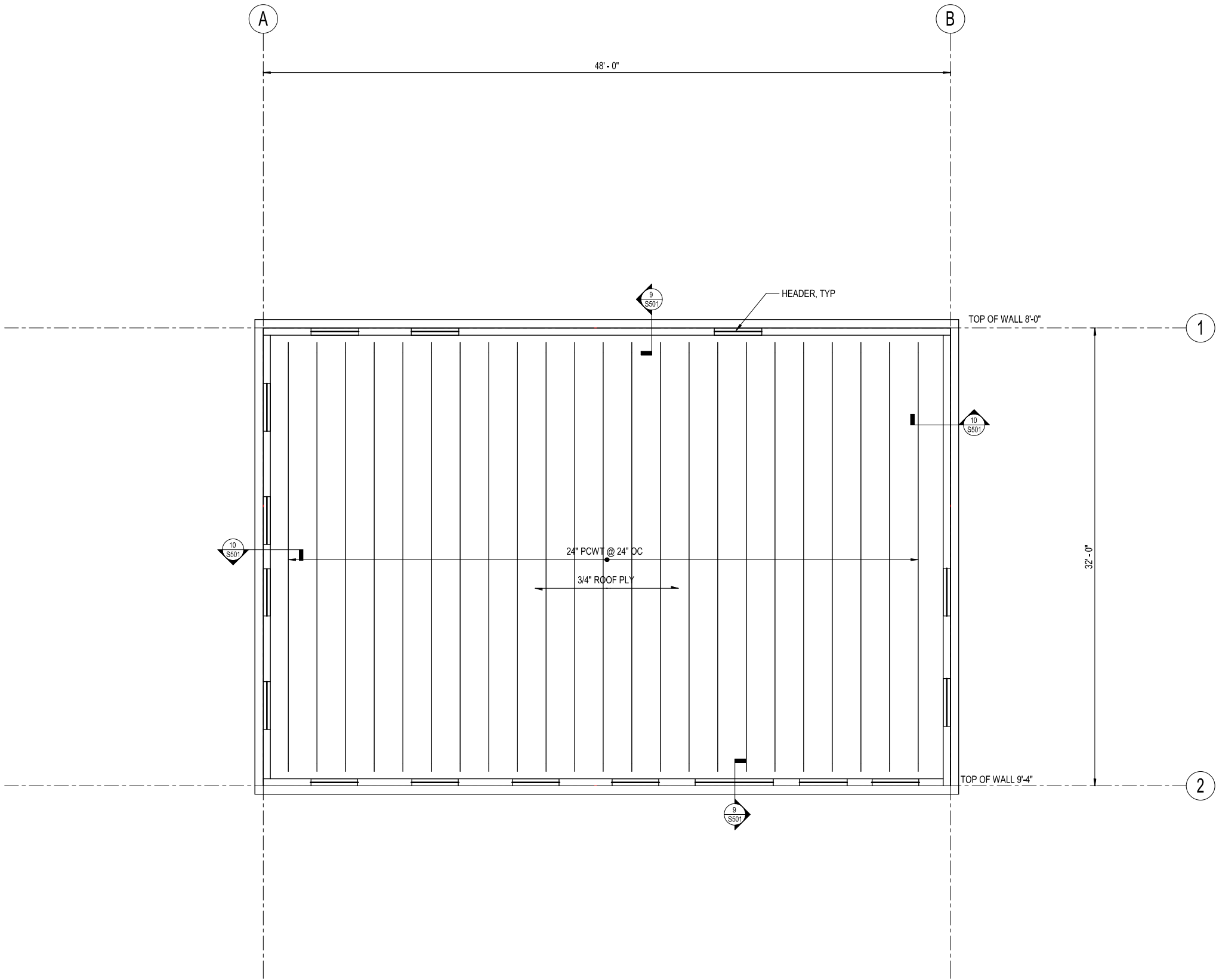
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Checked GOL	Job No. 223151

Sheet Contents
FIRST FLOOR FRAMING PLAN

Sheet No.
S102

BID DOCUMENTS

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Plot Date Time: 3/27/2024 10:58:12 AM



1 ROOF FRAMING PLAN
1/4" = 1'-0"



- FRAMING NOTES:
- ELEVATIONS NOTED ARE WITH RESPECT TO FIRST FLOOR DATUM OF 0'-0".
 - SHEAR WALL NOTED THUS: FOR SHEAR WALL SCHEDULE SEE SHT S102

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Engineers Inc.
845 K Street
Anchorage, AK 99501
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Corporate Authentication No: C725



CITY OF BETHEL
DOG POUND REPLACEMENT
BETHEL, ALASKA

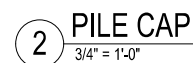
Revisions		
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Checked GOL	Job No. 223151

Sheet Contents ROOF FRAMING PLAN

Sheet No.
S103

BID DOCUMENTS



Sheet No.

S501

P:\Projects\00WL\Bethel Dog Pound Bldg\Draws\Mech\M001 MECHANICAL LEGEND, ABBREVIATIONS AND SCHEDULES.dwg PLOT DATE 2024-03-25 10:20 SAVED DATE 2024-03-22 10:29

HVAC LEGEND

	DUCT SIZE (W"xH")		DUCT ELBOW
	EXTERIOR DUCT INSULATION		SUPPLY DUCT UP
	MOTORIZED DAMPER		SUPPLY DUCT DOWN
	VOLUME DAMPER		RETURN DUCT UP
			RETURN DUCT DOWN
			EXHAUST DUCT UP
			EXHAUST DUCT DOWN

PIPING LEGEND

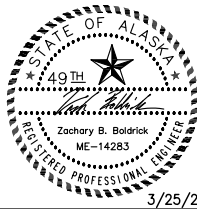
	HEATING GLYCOL (WATER) SUPPLY		CHECK VALVE
	HEATING GLYCOL (WATER) RETURN		PIPE CAP
	PIPE UP		PUMP
	PIPE DOWN		AIR VENT
	PIPE ELBOW		STRAINER W/ BLOWDOWN
	PIPE TEE		RELIEF VALVE
	BALL VALVE		BALANCE VALVE/CIRCUIT SETTER
	OS&Y VALVE		PRESSURE GAUGE
	MOTORIZED CONTROL VALVE		THERMOMETER
	TEMPERATURE SENSOR		PROPELLER FAN
	UNIT HEATER		

PLUMBING LEGEND

COLD WATER	— — — —
HOT WATER	— — — —
VENT	- - - - -
WASTE	— — — —
FLOOR DRAIN	— — — — □
FLOOR CLEANOUT	— — — — ⊗
WALL CLEANOUT	— — — —
HOSE BIB	— — — — ⚡

ABBREVIATIONS

A	COMPRESSED AIR	EXT	EXTERIOR	LAT	LEAVING AIR TEMPERATURE	RAT	RETURN AIR TEMPERATURE
ADA	AMERICAN DISABILITIES ACT	F	FAHRENHEIT	LB	POUND	RCP	REFLECTED CEILING PLAN
AFF	ABOVE FINISHED FLOOR	FA	FREE AREA	LF	LINEAR FEET	RECIRC	RECIRCULATE
AMP	AMPERE	FCO	FLOOR CLEANOUT	LWT	LEAVING WATER TEMPERATURE	RH	RELATIVE HUMIDITY
AP	ACCESS PANEL	FD-X	FLOOR DRAIN DESG.	M/A	MIXED AIR	RHC-X	REHEAT COIL DESG.
APD	AIR PRESSURE DROP	FDC	FIRE DEPARTMENT CONNECTION,	MAT	MIXED AIR TEMPERATURE	RPM	REVOLUTIONS PER MINUTE
APPROX	APPROXIMATELY	FIN	FINISH	MAX	MAXIMUM	S/A	SUPPLY AIR
ARCH	ARCHITECT	FLR	FLOOR	MBH	1,000 BTU/HR	SAN	SANITARY
AS-X	AIR SEPARATOR DESG.	FO	FUEL OIL	MC	MECHANICAL CONTRACTOR	SHT	SHEET
BDD	BACKDRAFT DAMPER	FOR	FUEL OIL RETURN	MECH	MECHANICAL	SPEC	SPECIFICATIONS
BLDG	BUILDING	FOS	FUEL OIL SUPPLY	MIN	MINIMUM	SS	SANITARY SEWER
B-X	BOILER DESG.	FOT-X	FUEL OIL TANK DESG.	MISC	MISCELLANEOUS	STRUCT	STRUCTURAL
BOD	BOTTOM OF DUCT	FOV	FUEL OIL VENT	MOD	MOTOR OPERATED DAMPER	T&P	TEMPERATURE & PRES VALVE
BTU	BRITISH THERMAL UNIT	FP-X	FIRE PUMP DESG.	MOV	MOTOR OPERATED VALVE	TAB	TEST & BALANCE
BV	BALL VALVE	FPM	FEET PER MINUTE	MTD	MOUNTED	T/A	TRANSFER AIR
CD	CONDENSATE DRAIN	FPS	FEET PER SECOND	MVD	MANUAL VOLUME DAMPER	TD-X	TRENCH DRAIN DESG.
CFM	CUBIC FEET PER MINUTE	FSC	FAN SPEED CONTROLLER	NC	NORMALLY CLOSED	TDH	TOTAL DYNAMIC HEAD
CLG	CEILING	FWT-X	FIRE WATER TANK DESG.	N.C.	NOISE CRITERIA	TEMP	TEMPERATURE
CO	CLEAN OUT	GA	GAGE	NIC	NOT IN CONTRACT	TMV-X	THERMOSTATIC MIXING VALVE
CO2	CARBON DIOXIDE	GAL	GALLON	NO	NORMALLY OPEN	TSTAT	THERMOSTAT
CONT	CONTINUATION	GALV	GALVANIZED	NO.	NUMBER	TYP	TYPICAL
CP-X	CIRCULATING PUMP DESG.	GC	GENERAL CONTRACTOR	NTS	NOT TO SCALE	UH-X	UNIT HEATER DESG.
CV	CONTROL VALVE	GPD	GALLON PER DAY	OA	OUTSIDE AIR	V	VENT
CW	COLD WATER	GT-X	GLYCOL TANK DESG.	OAT	OUTSIDE AIR TEMPERATURE	VA	VOLT AMPERE
DA	DENTAL AIR	HB-X	HOSE BIB DESG.	OBD	OPPOSED BLADE DAMPER	VEL	VELOCITY
DB	DECIBEL(S)	HD	HEAD	OD	OUTSIDE DIAMETER	VERT	VERTICAL
DB	DRY BULB TEMPERATURE	HOA	HAND, OFF, AUTO STATION	OF/CI	OWNER FURN./CONTR. INST.	VF-X	VENT FAN DESG.
DDC	DIRECT DIGITAL CONTROL	HP	HORSEPOWER	OF/OI	OWNER FURN./OWNER INST.	VFD	VARIABLE FREQUENCY DRIVE
DEG	DEGREE	HT	HEIGHT	OS&Y	OPEN SCREW & YOKE	VOL	VOLUME
DISCH	DISCHARGE	HW	HOT WATER	OWS-X	OIL/WATER SEPARATOR DESG.	VTR	VENT THROUGH THE ROOF
DPS	DIFFERENTIAL PRES. SENSOR	HWG-X	HOT WATER GENERATOR DESG.	O/W	OIL WASTE	W	WASTE
DT-X	DAY TANK DESG.	HGR	HEATING GLYCOL RETURN	OZ	OUNCE	W/	WITH
DWG	DRAWING	HGS	HEATING GLYCOL SUPPLY	P-X	PLUMBING FIXTURE DESG.	W/O	WITHOUT
DWV	DRAIN, WASTE, AND VENT	HWR	HEATING WATER RETURN	PD	PRESSURE DROP	WCO	WALL CLEAN OUT
E/A	EXHAUST AIR	HWS	HEATING WATER SUPPLY	PH	PHASE (ELECTRIC)	WHA	WATER HAMMER ARRESTOR
EAT	ENTERING AIR TEMPERATURE	HRV-X	HEAT RECOVERY VENT. DESG.	PHC-X	PREHEAT COIL DESG.	WTR	WATER
EF-X	EXHAUST FAN DESG.	HX-X	HEAT EXCHANGER DESG.	PLMB	PLUMBING	'X'	AIR INLET/OUTLET DESG,
EFF	EFFICIENCY	ID	INSIDE DIAMETER	POC	POINT OF CONNECTION	YCO	YARD CLEANOUT
EL	ELEVATION	IN WC	INCHES, WATER COLUMN	PRES	PRESSURE		
ELEC	ELECTRIC	INCL	INCLUDE	PSF	POUNDS PER SQUARE FOOT		
ENT	ENTERING	INSUL	INSULATION	PSI	POUNDS PER SQUARE INCH		
ESP	EXTERNAL STATIC PRESSURE	JP-X	JOCKEY PUMP DESG.	PT-X	PRESSURE TANK DESG.		
ET-X	EXPANSION TANK DESG.	KW	KILOWATT	QTY	QUANTITY		
EWT	ENTERING WATER TEMPERATURE	KWH	KILOWATT HOUR	R/A	RETURN AIR		



CITY OF BETHEL
BETHEL DOG POUND BUILDING
BETHEL, ALASKA

Revisions

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-

Sheet Contents
MECHANICAL LEGEND,
ABBREVIATIONS AND
SCHEDULES

Sheet No.

M001

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1										2									
BOILERS																			
TAG NO.		MAKE AND MODEL NO.		INPUT MBH	OUTPUT MBH	ELECTRICAL			ACCESSORIES/REMARKS										
B-1		BURNHAM MPO-IQ147		147	123	120V, 1 PH, 2.0A			LOW WATER CUTOFF, HIGH LIMIT CONTROL, PRESSURE RELIEF VALVE. TEKMAR BOILER CONTROLLER. DIRECT VENT KIT.										
AIR HANDLING UNITS																			
TAG NO.		SERVICE	CAPACITY (CFM)	EXT S.P. (IN H2O)	FAN SPEED (RPM)	FAN MOTOR (HP)	VOLTAGE & PHASE	MAKE & MODEL					NOTES						
AHU-1		BUILDING VENTILATION	950	0.25	1000	1/3	120/1	DAIKIN BCAD0161					W/ 3 ROW HOT WATER COIL, SEE HC-1						
HEAT RECOVERY VENTILATORS																			
TAG NO.		SERVICE	SUPPLY CAPACITY (CFM)	SUPPLY S.P. (IN H2O)	EXHAUST CAPACITY (CFM)	EXHAUST S.P. (IN H2O)	VOLTAGE & PHASE	MOTOR POWER	MAKE & MODEL					NOTES					
HRV-1		PROCEDURE ROOM	100	0.1	100	0.1	120V, 1-PH	175 W	FANTECH FLEX 100H					-					
HEATING COILS																			
TAG NO.		LOCATION	AIRFLOW (CFM)	CAPACITY (MBH)	AIR PRESS. DROP (IN H2O)	FLUID FLOW (GPM)	FLUID PRESS DROP (FT H2O)	EGT (°F)	LGT (°F)	MAKE & MODEL									
HC-1		AHU-1	950	100,000	0.15	9	13.6	180	155	DAIKIN 3 ROW HOT WATER COIL - INCLUDED WITH AHU-1									
HC-2		HRV-1	100	10,000	0.12	1		180	160	MODINE HEATCRAFT 5WL0804B - 6X8									
AIR SEPARATORS																			
TAG NO.		MANUFACTURER/MODEL			SIZE	FLOW	NOTES												
AS-1		SPIROTHERM/SPRIOVENT JUNIOR			1-1/4"	15 GPM	WITH BOTTOM TAPPING FOR EXPANSION TANK												
PUMPS																			
TAG NO.		SERVICE			FLOW GPM	HEAD FEET	MOTOR POWER	VOLTAGE AND PHASE	MANUFACTURER/MODEL/REMARKS										
CP-1		BOILER CIRCULATOR			16	18	350 W	120/1	GRUNDFOS 43-100F - SPEED 2										
CP-2		DOMESTIC HOT WATER			9	15	197 W	120/1	GRUNDFOS UPS 26-99 FC - SPEED 2										
CP-3		SEWER LINE HEAT TRACE			5	23	197 W	120/1	GRUNDFOS UPS 26-99 FC - SPEED 2										
PP-1		DOMESTIC WATER PRESSURE			8	140	3/4 HP	240/1	GRUNDFOS CRE 1-6 N-B-A-E-HQQE, WITH INTEGRAL VFD AND PRESSURE SENSOR.										
EXPANSION TANKS																			
TAG NO.		MANUFACTURER/MODEL			TANK VOL (GAL)	MAX ACCEPT VOL (GAL)	DIAMETER (IN)	NOTES											
ET-1		AMTROL EX-30			4.4	2.5	11	BOILER SYSTEM EXPANSION TANK											
ET-2		AMTROL WX-102			4.4	2.5	11	POTABLE WATER SYSTEM HYDROPNEUMATIC TANK.											
FANS																			
TAG NO.		MANUFACTURER/MODEL			FLOWRATE (CFM)	EXT SP (IN W.C.)	POWER (W)	VOLTAGE & PHASE	DUCT CONN.	NOTES									
EF-1/2		PANASONIC FV-0510VSL1			80	0.25	13	120/1	4" ROUND	RESTROOM/ISOLATION KENNEL EXHAUST FAN									
WATER HEATERS																			
TAG NO.		MAKE AND MODEL NO.		TANK (GAL)	INPUT HEAT (MBH)	FIRST HOUR RECOVERY	EGT (°F)	LGT (°F)	FLUID FLOW (GPM)	ELECTRICAL			ACCESSORIES/REMARKS						
WH-1		AMTROL WH-7CDW		41	80	144 GPH @ 90°F	180	150	6	120V, 1 PH			INDIRECT-FIRED, DOUBLE WALLED, WITH INTEGRAL THERMOSTAT						

3

4

GRILLES, DIFFUSERS, AND REGISTERS							
TAG	SERVICE	TYPE	WIDTH (IN)	LENGTH (IN)	FLOW RATE (CFM)	PRESSURE DROP (IN H ₂ O)	MAKE & MODEL
SD-1	LOBBY	T-BAR	2X 1" SLOT	24	100	0.08	PRICE TBD4100
SD-2	OFFICES	SQUARE	6	6	25	0.03	PRICE SMD
SD-3	KENNELS	SQUARE	9	9	150	0.03	PRICE SMD
RD-1	RETURN AIR	SQUARE	18	14	400	0.02	PRICE 635

PLUMBING FIXTURES							
TAG NO.	TYPE	HW	CW	WASTE	VENT	MANUFACTURER/MODEL	NOTES
WC-1	WATER CLOSET	-	1/2"	3"	2"	KOHLER HIGHLINE K-3493-TR-0	TWO PIECE ELONGATED RIM BOTTOM DRAIN.
SK-1	KENNEL SINK	1/2"	1/2"	1-1/2"	1-1/2"	PROFLO PFSR332283 W/ MOEN 8227 FAUCET	DOUBLE BOWL, STAINLESS STEEL, COUNTER MOUNTED.
SK-2	PROCEDURE SINK	1/2"	1/2"	1-1/2"	1-1/2"	ELKAY ESS2312 W/ MOEN 8230 FAUCET	WALL HUNG, STAINLESS STEEL, SINGLE BOWL.
LAV-1	LAVATORY	1/2"	1/2"	1-1/2"	1-1/2"	PROFLO PF20174 W/ MOEN L4625 W/ POP UP DRAIN ASSEMBLY.	WALL HUNG.
FD-1	FLOOR DRAIN	-	-	1-1/2"	1-1/2"	JR SMITH 2005	-
SH-1	SHOWER	1/2"	1/2"	2"	2"	MIDMARK 105-0346-10 W/ WATERLOO 750FDU812 PET GROOMING FAUCET W/ COILED HOSE.	FREE STANDING, PROVIDE TIE DOWN RAILS.
W/D	WASHER/DRYER COMBO	1/2"	1/2"	2"	2"	SPEEDQUEEN LTEE5ASP175TW01	STACKABLE WASHER/DRYER COMBO, ELECTRIC DYER



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STATE OF ALASKA
49TH
Zachary B. Boldrick
ME-14283
REGISTERED PROFESSIONAL ENGINEER
3/25/24



CITY OF BETHEL
BETHEL, ALASKA

CITY OF BETHEL
BETHEL DOG POUND BUILDING
BETHEL, ALASKA

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Sheet Contents
MECHANICAL LEGEND,
ABBREVIATIONS AND
SCHEDULES

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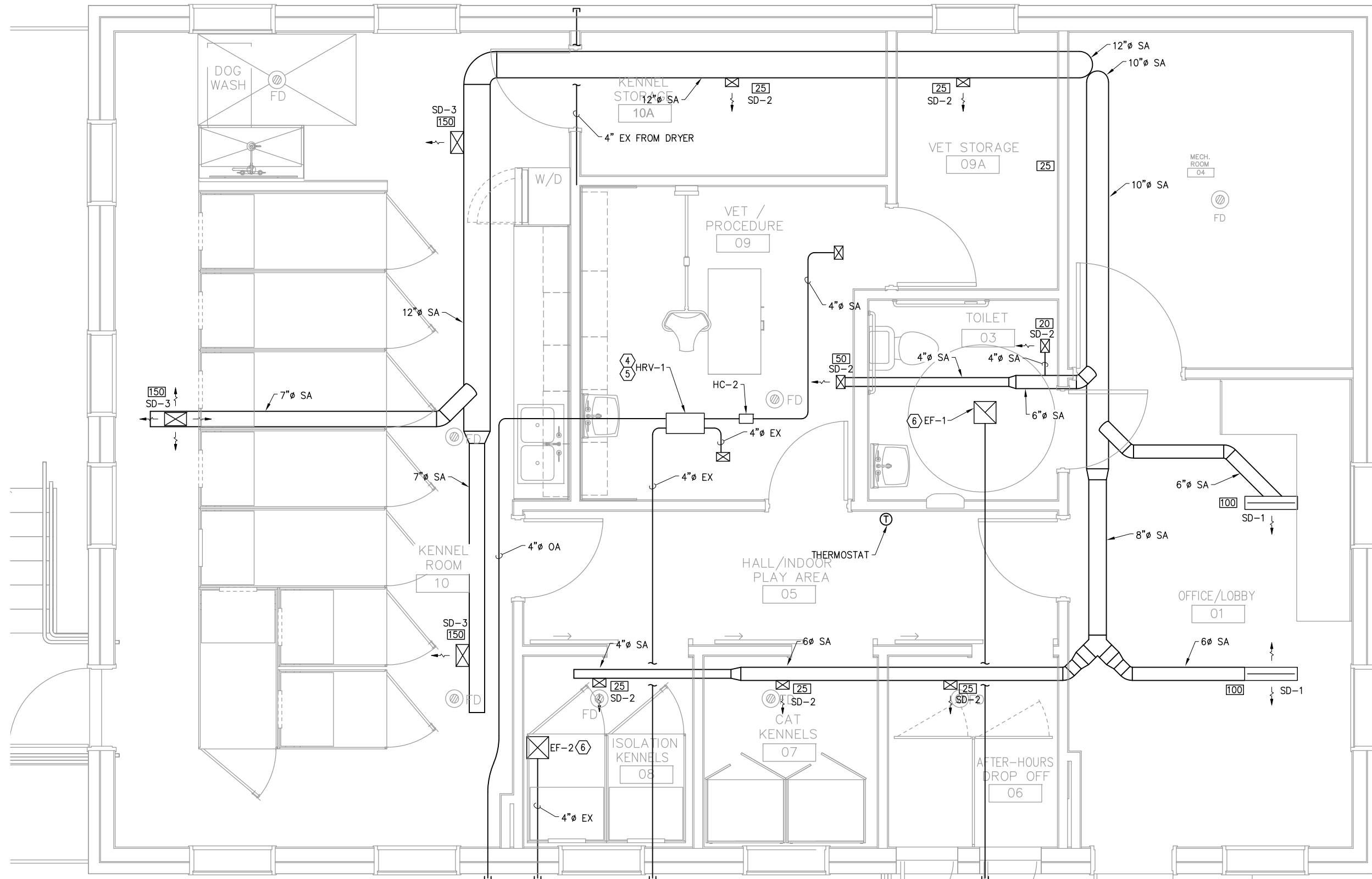
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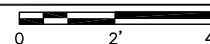
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SHEET NOTES

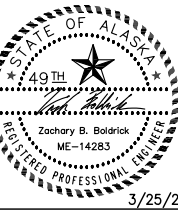
- ① SUPPLY AIR DUCTING TO BE RUN IN SPACE, OR CEILING EXPOSED OVERHEAD.
 - ② RETURN AIR DUCTING TO BE RUN UNDER FLOOR. ROUTE THROUGH OPEN WEB IN FLOOR JOISTS.
 - ③ SPACE HRV VENTS MIN. 10 FEET APART HORIZONTALLY.
 - ④ INSTALL HRV-1 OVERHEAD IN ATTIC SPACE.
 - ⑤ PROVIDE WALL SWITCH FOR HRV-1.
 - ⑥ PROVIDE WALL SWITCH FOR EF-1 AND EF-2.



1 VENTILATION FLOOR PLAN
M101 SCALE: 1/2" = 1'-0"



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CITY OF BETHEL

BETHEL DOG POUND BUILDING

BETHEL, ALASKA

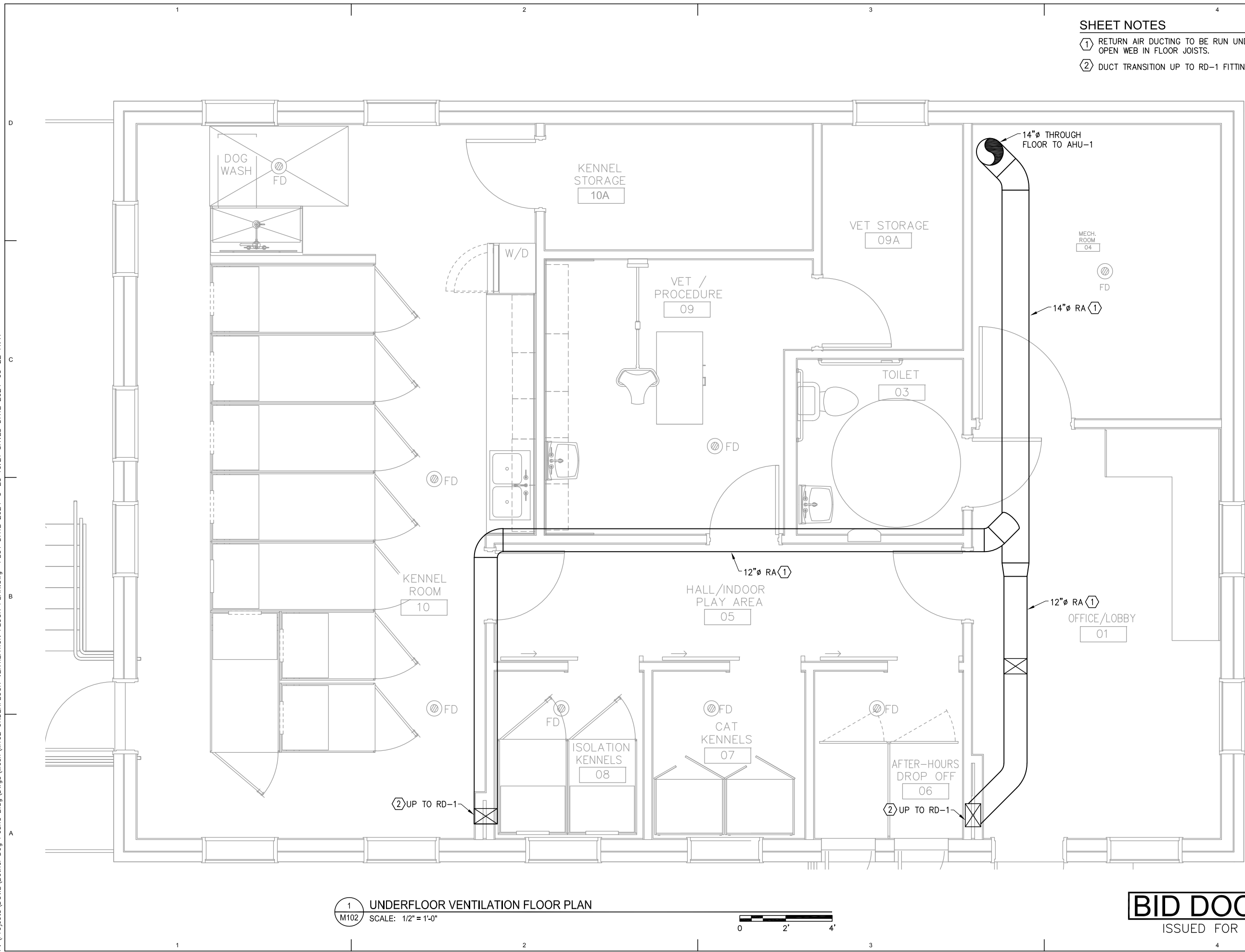
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Checked	Job No. -

Sheet Contents
VENTILATION FLOOR PLAN

Sheet No.

M101



SHEET NOTES

- ① RETURN AIR DUCTING TO BE RUN UNDER FLOOR. ROUTE THROUGH OPEN WEB IN FLOOR JOISTS.
- ② DUCT TRANSITION UP TO RD-1 FITTING.



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UNDERFLOOR VENTILATION
FLOOR PLAN

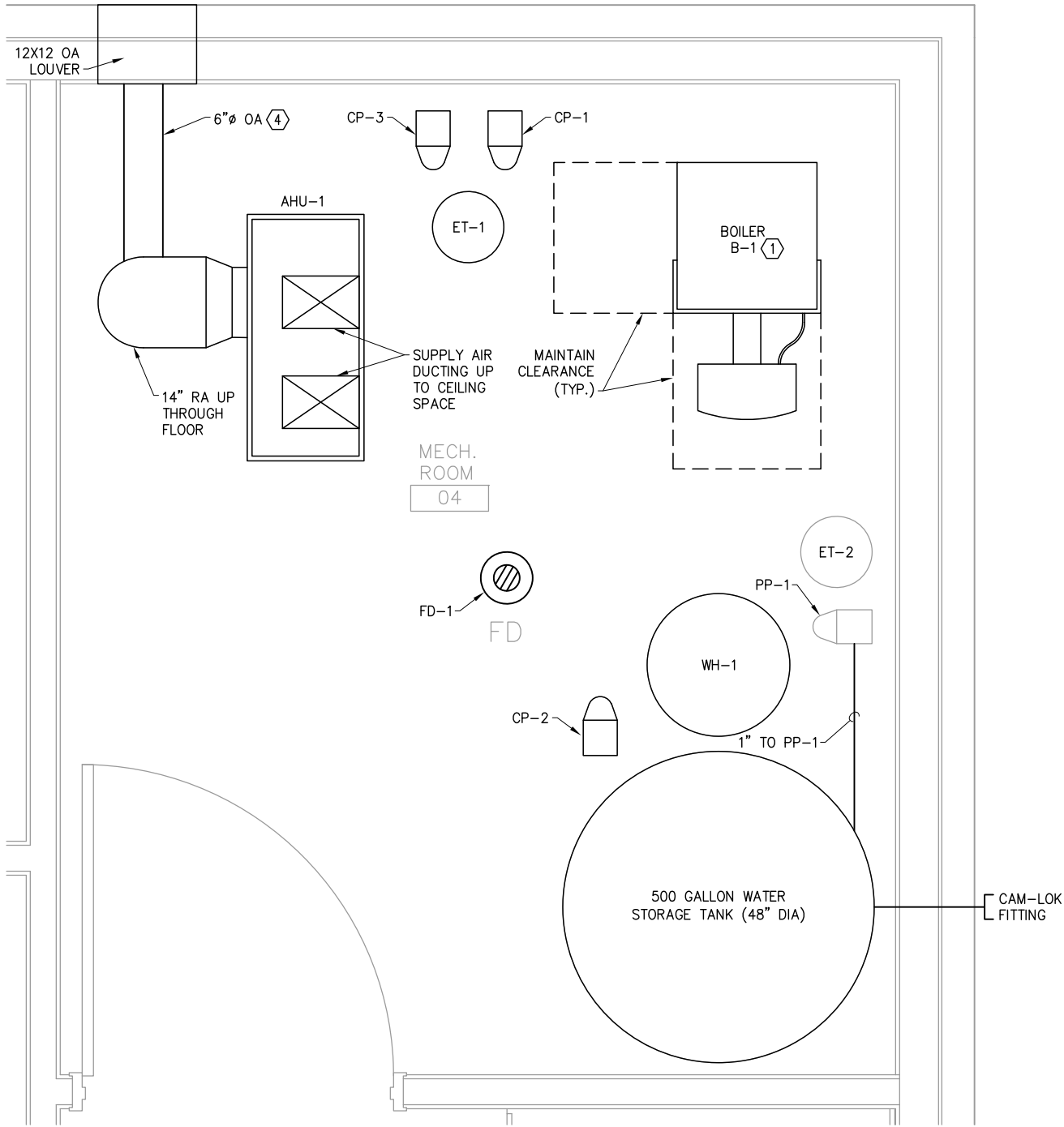
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Sheet No.

M102

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1 ENLARGED MECHANICAL ROOM PLAN
M103 SCALE: 1" = 1'-0"



CONTROL NARRATIVE

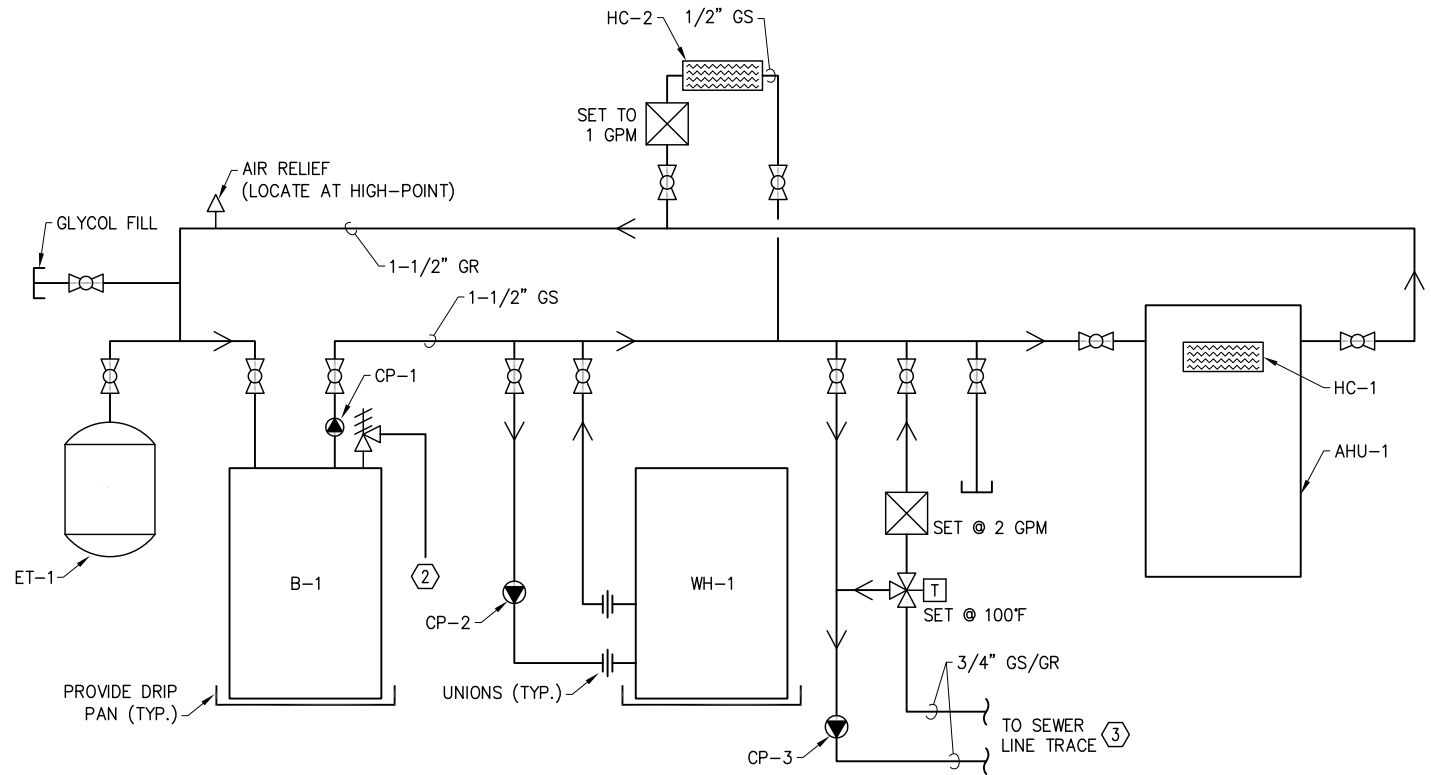
BUILDING CALL FOR HEAT:
ENERGIZE AHU-1, FIRE BOILER B-1, ENERGEIZE PUMP CP-1

WH-1 CALL FOR HEAT:
FIRE BOILER, ENERGIZE CP-1, ENERGIZE CP-2.

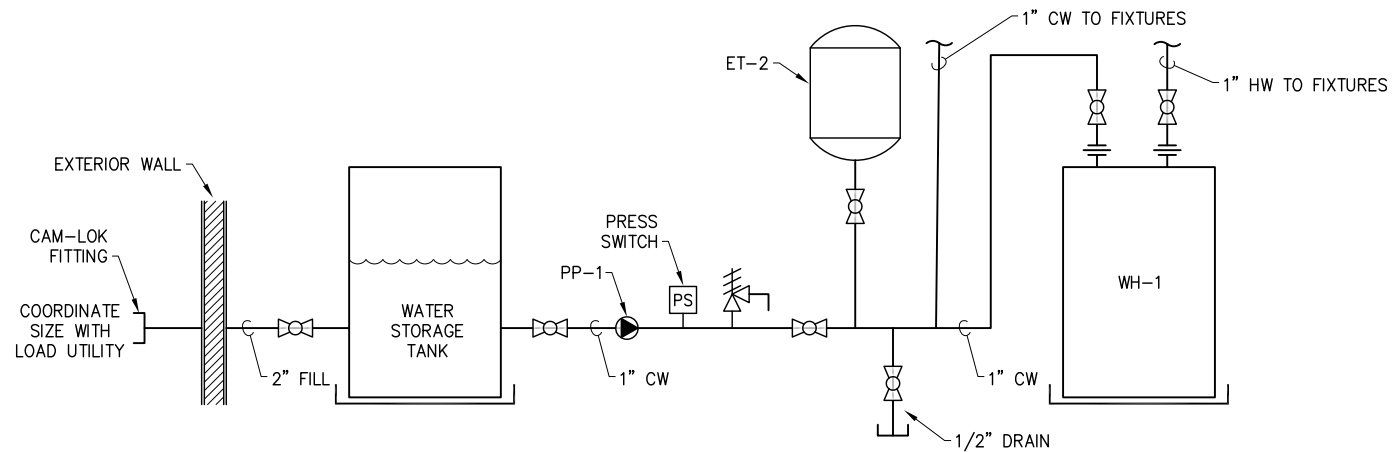
SEWER TRACE:
OUTSIDE AIR THERMOSTAT SHALL ENERGIZE CP-3 WHEN THE OUTDOOR AIR TEMPERATURE IS BELOW 35°F. THE THERMOSTATIC MIXING VALVE SHALL BE SET TO 100°F MAXIMUM.

SHEET NOTES

- 1 INSTALL DIRECT VENT KIT FROM MANUFACTURER.
- 2 ROUTE PSV DISCHARGE TO 6" AFF.
- 3 PROVIDE ISOLATION VALVES AND UNIONS AT TRANSITION TO PEX TRACE LINES.
- 4 PROVIDE OUTSIDE AIR INLET IN MECHANICAL ROOM, WITH DAMPER. CONNECT TO RA RISER BEFORE AHU-1.

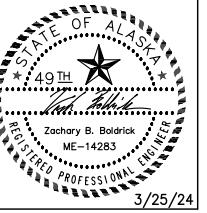


2 HYDRONIC SYSTEM SCHEMATIC
M103 SCALE: NTS



3 POTABLE WATER SYSTEM SCHEMATIC
M103 SCALE: NTS

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CITY OF BETHEL
BETHEL DOG POUND BUILDING
BETHEL, ALASKA

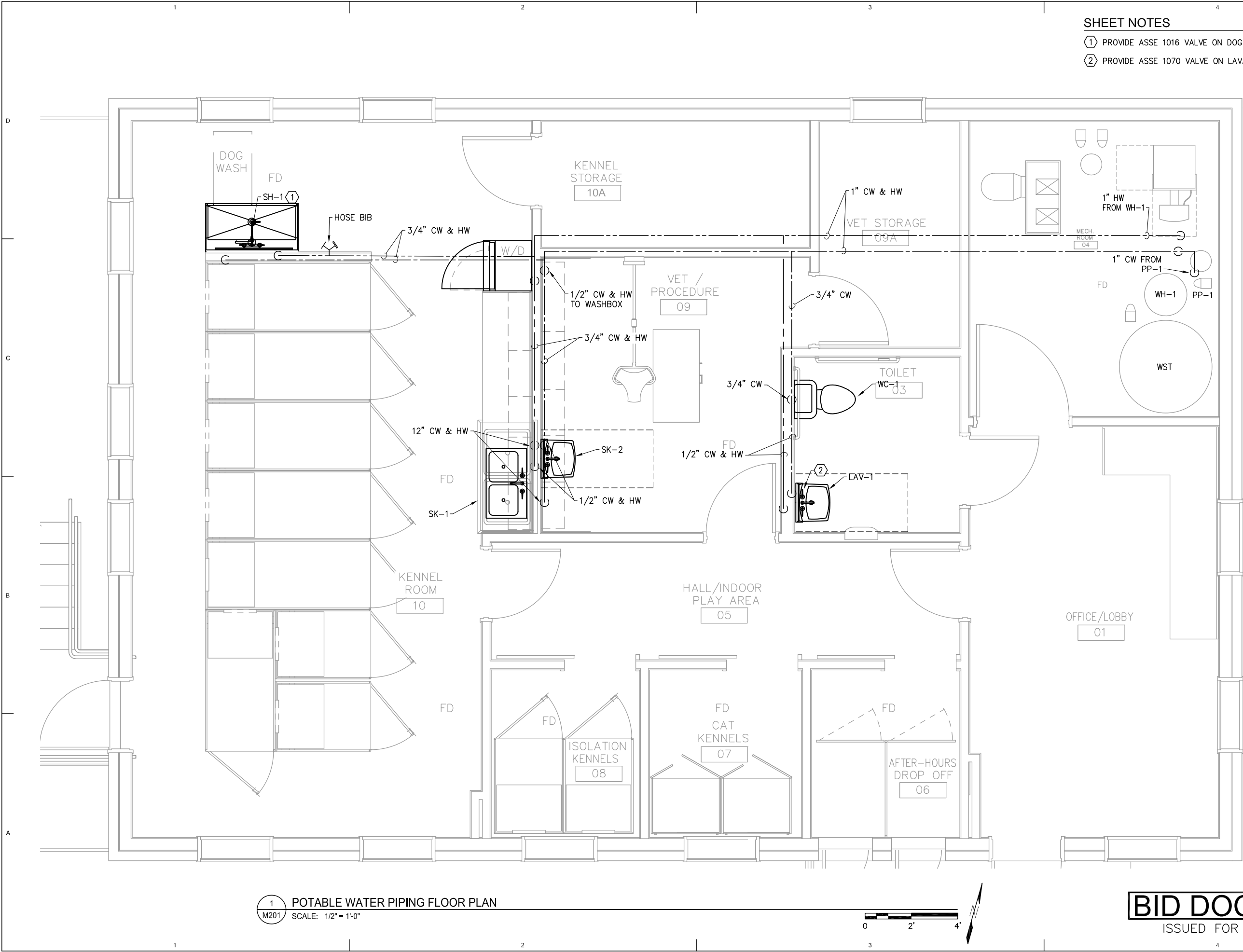
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No.	Description	Date

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	3/25/2024
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Sheet Contents
ENLARGED MECHANICAL ROOM PLAN

Sheet No.
M103

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- SHEET NOTES**
- ① PROVIDE ASSE 1016 VALVE ON DOG WASH SHOWER VALVE.
 - ② PROVIDE ASSE 1070 VALVE ON LAVATORY.

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CITY OF BETHEL

BETHEL DOG POUND BUILDING

BETHEL, ALASKA

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POTABLE WATER PIPING FLOOR PLAN

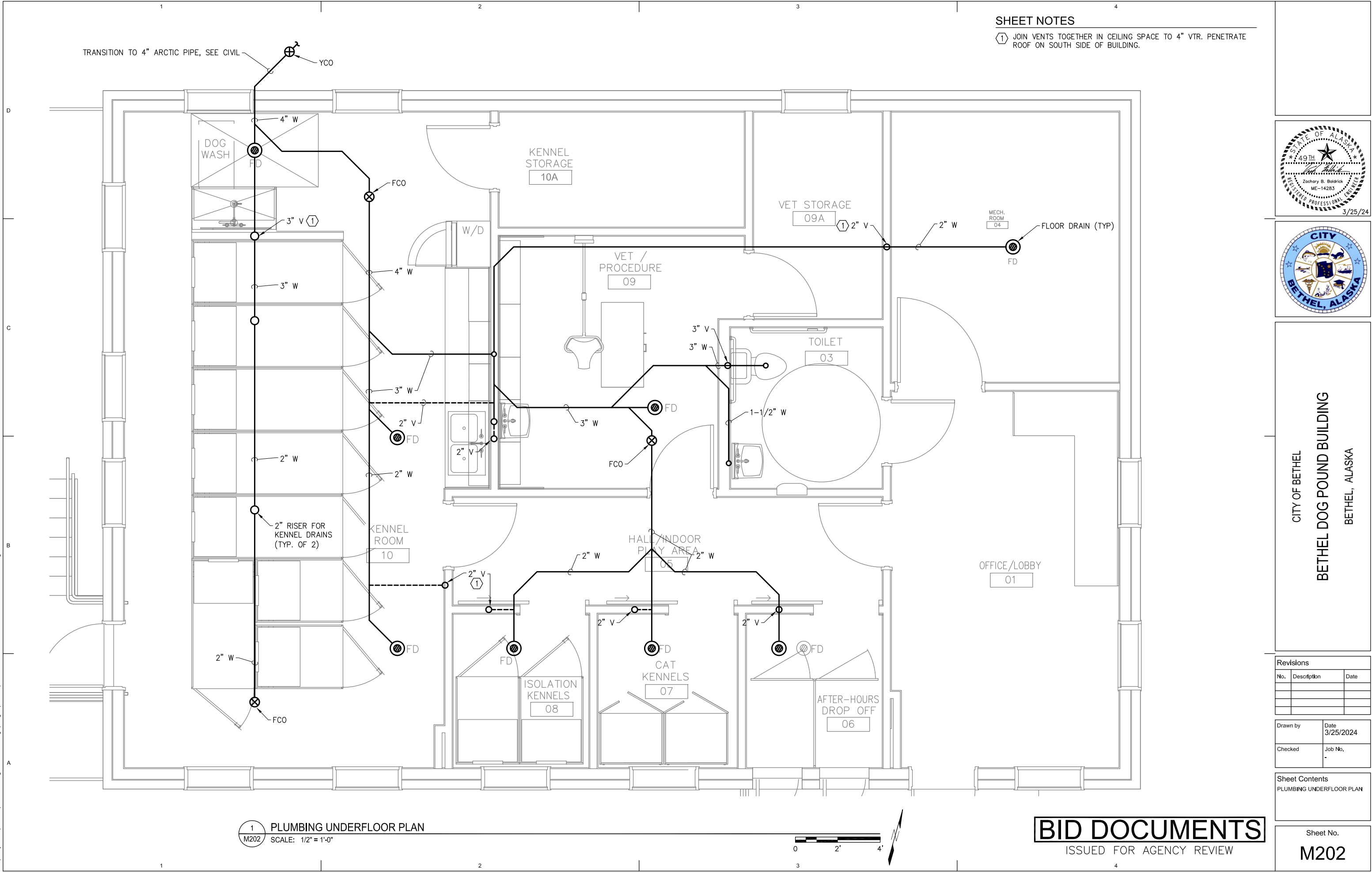
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M201

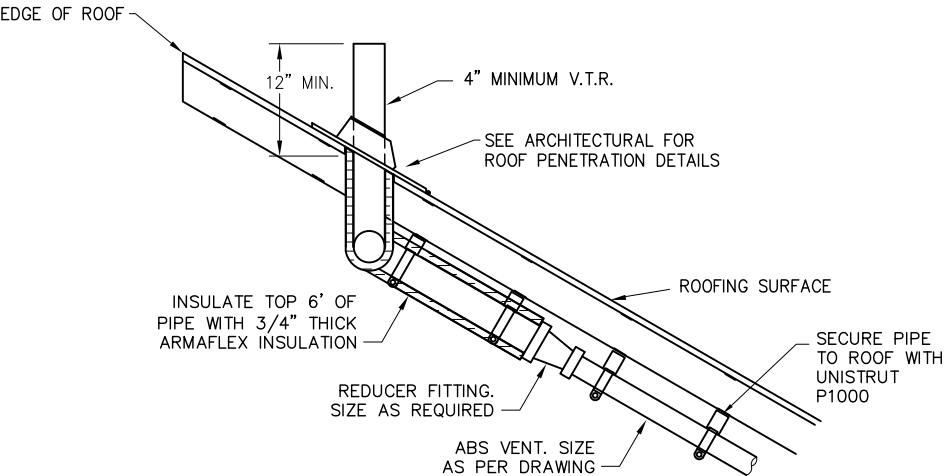
1 POTABLE WATER PIPING FLOOR PLAN
M201 SCALE: 1/2" = 1'-0"

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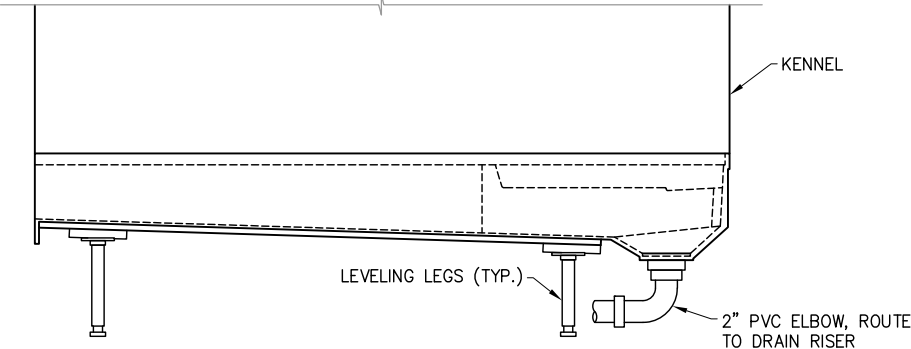
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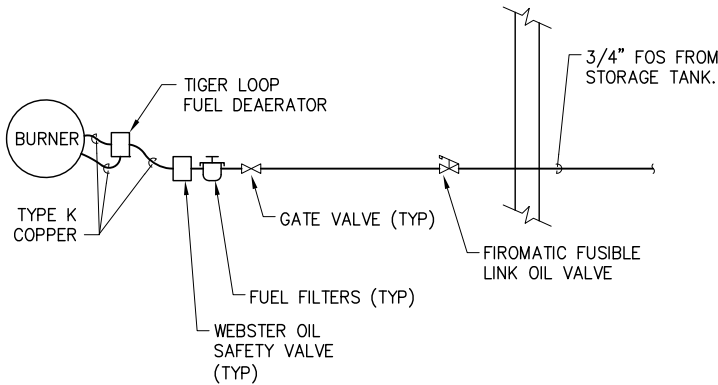
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1 VTR - VENT THROUGH - SANITARY SEWER
M301 SCALE: NTS



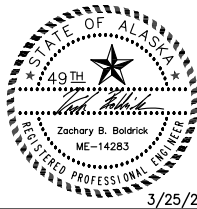
2 KENNEL DRAIN CONNECTION DETAIL
M301 SCALE: NTS



3 BOILER PIPING TIGER LOOP
M301 SCALE: NTS



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CITY OF BETHEL
BETHEL DOG POUND BUILDING
BETHEL, ALASKA

Revisions		
No.	Description	Date

Drawn by	Date 3/25/2024
Checked	Job No. -

Sheet Contents
MECHANICAL DETAILS

Sheet No.
M301

BID DOCUMENTS
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P:\Projects\DOWL\Bethel Dog Pound Bldg\Drawgs\Elec\E001 ELECTRICAL LEGEND, ABBREVIATIONS AND SCHEDULES.dwg PLOT DATE 2024-3-25 10:23 SAVED DATE 2024-03-25 09:57

1	ELECTRICAL LEGEND	
	SYMBOL	DESCRIPTION
	GENERAL	
D		EXPOSED CONDUIT
		UNDERGROUND CONDUIT
		3/4" X 10' COPPER CLAD STEEL GROUND ROD
		CONDUIT RUN - CHANGE IN ELEVATION
		LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT
		HOME RUN
		CATEGORY 6, ETHERNET WIRING
		FIBER OPTIC CABLE
		OVERHEAD ELECTRIC
C	POWER	
		KILOWATT-HOUR METER
		PANELBOARD
		MOLDED CASE CIRCUIT BREAKER: X = AMPERE RATING Y = NO. OF POLES
		POWER MONITOR
		MOTOR, 3-PHASE
		MOTOR, SINGLE PHASE
		STARTER - COMBINATION
		STARTER - FUSED
		DISCONNECT SWITCH
		STARTER - THERMAL
		120V SIMPLEX RECEPTACLE, NEMA 5-20R
		120V GROUND FAULT INTERRUPTING (GFI) RECEPTACLE; 'WP' INDICATES WEATHERPROOF WHILE-IN-USE COVER
		120V DUPLEX RECEPTACLE NEMA 5-20R
		120V DOUBLE DUPLEX RECEPTACLE
		SPECIAL RECEPTACLE (AS NOTED)
		SINGLE POLE SWITCH
		THREE-WAY SWITCH
		FOUR-WAY SWITCH
		OCCUPANCY SENSOR
		DIMMING
B	TELECOM	
		TELECOM OUTLET- PHONE
		TELECOM OULET- DATA
		TELECOM OUTLET- PHONE / DATA
		TELECOM - TTB
A	MISCELLANEOUS	
		THERMOSTAT
		JUNCTION BOX OR FITTING
		EMERGENCY PUSH BUTTON
		FLOAT SWITCH
		HEATER
		MOTORIZED DAMPER
		DOOR SWITCH

ELECTRICAL ABBREVIATIONS	
A	ANALOG SIGNAL, AMPERE
AFF	ABOVE FINISH FLOOR
AFG	ABOVE FINISH GRADE
BCU	BARE COPPER
C	CONDUIT
CP	CONTROL PANEL
CT	CURRENT TRANSFORMER
CU	COPPER
DEG	DEGREES
(E)	EXISTING
F	FRACTIONAL
FLA	FULL LOAD AMPERES
G	GROUND CONDUCTOR
GES	GROUNDING ELECTRODE SYSTEM
GFI	GROUND FAULT INTERRUPTING
GRC	GALVANIZED RIGID (STEEL) CONDUIT
(G)	GROUND
HDPE	HIGH DENSITY POLYETHYLENE (CONDUIT)
HP	HORSEPOWER
ISB	INTRINSICALLY SAFE BARRIER
KVA	KILO-VOLT-AMPERES
LSIG	LONG-TIME, SHORT-TIME, INSTANTANEOUS, GROUND-FAULT
LTF	LIQUID TIGHT FLEXIBLE CONDUIT (METALLIC)
MDP	MAIN DISTRIBUTION PANEL
MFR	MANUFACTURER
MLO	MAIN LUG ONLY
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE - NFPA 70
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN, NUMBER
OS	OCCUPANCY SENSOR SWITCH
PH	PHASE
PLC	PROGRAMMABLE LOGIC CONTROLLER
PM	POWER MONITOR
POE	POWER OVER ETHERNET
PR	PAIR
RVSS	REDUCED VOLTAGE SOFT START
SIG	SIGNAL
SPD	SURGE-PROTECTION DEVICE
SS	STAINLESS STEEL
TWSH	TWISTED WIRE SHIELDED
TYP	TYPICAL
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	VOLTS
VFD	VARIABLE FREQUENCY DRIVE
W	WATTS
WP	WEATHERPROOF
XFMR	TRANSFORMER

- GENERAL NOTES
1.

ALL ELECTRICAL WORK SHALL BE INSTALLED IN ACCORDANCE WITH ALL REQUIREMENTS OF THE LATEST ADOPTED EDITION OF THE NATIONAL ELECTRICAL CODE (NEC) AND OTHER LOCALLY ADOPTED CODES GOVERNING THE PROJECT. IF DIRECT CONFLICT ARISES BETWEEN DESIGN DOCUMENTS AND GOVERNING CODES, GOVERNING CODES SHALL PREVAIL. ALL WORK SHALL BE PERFORMED UNDER THE SUPERVISION OF A CERTIFIED ELECTRICIAN LICENSED IN THE STATE OF ALASKA.
2.

MATERIALS AND EQUIPMENT SHALL BE SPECIFICATION GRADE AND ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION AS SUITABLE FOR THE USE INTENDED. ALL ELECTRICAL EQUIPMENT SHALL INCLUDE THE SEAL OF A NATIONALLY RECOGNIZED TESTING LABORATORY FOR THE PURPOSE FOR WHICH IT IS INSTALLED. WHENEVER POSSIBLE, SIMILAR ITEMS SHALL BE SUPPLIED BY THE SAME MANUFACTURER THROUGHOUT THE PROJECT.
3.

DIMENSIONS OF EQUIPMENT ARE APPROXIMATE. INSTALLATION SHALL BE VERIFIED BASED ON ACTUAL MANUFACTURER'S DATA AND SHOP DRAWINGS.
4.

ALL SINGLE PHASE BRANCH CIRCUITS SHALL BE 1/2"C, 3#12, AND ALL THREE PHASE BRANCH CIRCUITS SHALL BE 3/4"C, 4#12, UNLESS OTHERWISE NOTED. ALL CIRCUITS SHALL HAVE AN EQUIPMENT GROUNDING CONDUCTOR, OF THE WIRE TYPE, SIZED PER NEC 250.122.

LUMINAIRE SCHEDULE								
SYMBOL	TYPE	DESCRIPTION	WATTS	LAMPS	MOUNTING	MANUFACTURER	MODEL	NOTES
	EM1	EMERGENCY LIGHTING UNIT, DUAL HEAD, LED, NI-CAD 90-MIN. BATTERY.	2X 3.3W	LED	WALL MOUNT @ 7'-6" AFF	LITHONIA	ELM4L-UVOLT	
	EM2	SINGLE HEAD EMERGENCY LIGHTING UNIT, LED, POWERED BY EMX2 BATTERY.	1.0W	LED	WALL MOUNT ABOVE DOOR	LITHONIA	ERE-GY-SGL-SQ-WO-SQ-M12	
	EMX1	EXIT EMERGENCY LIGHTING COMBO UNIT, LED, NI-CAD 90-MIN.	3.0W	LED	WALL MOUNT ABOVE DOOR OR AS NOTED	LITHONIA	LHQM-LED-R-M6	
	EMX2	EXIT EMERGENCY LIGHTING COMBO UNIT, LED, NI-CAD 90-MIN. BATTERY WITH CAPACITY TO POWER REMOTE HEAD.	3.0W	LED	WALL MOUNT ABOVE DOOR OR AS NOTED	LITHONIA	LHQM-LED-R-HO-M6	
	F1	2'X4' LED LENSED RECESSED GRID TROFFER. 4800 LUMENS, 5000K COLOR TEMPERATURE, 120V.	34W	LED	CEILING GRID RECESSED	LITHONIA	2GTL-4-48L-MVOLT-GZ10-LP840	
	F2	4' LED LOW-PROFILE ENCLOSED AND GASKETED, 6000 LUMENS, 80CRI, 5000K COLOR TEMPERATURE, 120V.	37.8W	LED	PENDANT MOUNTED	LITHONIA	FEM-L48-5000LM-LP AFL-MD-MVOLT	
	F3	1'X4' LED RECESSED EXAM ROOM FIXTURE, 7800 LUMENS, 80CRI, 5000K COLOR TEMPERATURE, DIMMING DRIVER	53W	LED	CEILING RECESSED	KENALL	M4SEDI22-45L-50K8-DIM1-120-PAF-PAH-SYM-LEL	
	F4	24" SQUARE CHROME LED OVER-MIRROR VANITY, 120V.	36W	LED	WALL MOUNTED ABOVE MIRROR	LITHONIA	FMVCSLS-48IN-MVOLT-40K-KR	
	S1	EXTERIOR PERIMETER LED WALL PACK, 4250 LUMENS, 4000K COLOR TEMPERATURE, 120V	32W	LED	MOUNTED 8'-0"AFG	LITHONIA	TWPX1 LED-P2-40K-MVOLT-DBBXD	
	S2	EXTERIOR PERIMETER LED WALL PACK, 3000 LUMENS, 4000K COLOR TEMPERATURE, 120V	23W	LED	MOUNTED ABOVE EXTERIOR DOOR	LITHONIA	TWPX1 LED-P1-40K-MVOLT-DBBXD	
	SL1	SURGICAL/EXAM LIGHT. 8400 FC (@1M), 3700K, 96CRI, ADJUSTABLE FOCUS, LIGHT FIELD DIA.(10-12"), SINGLE HEAD	105W	HALOGEN	WALL MOUNTED	BURTON	AIM-200, A201W	1
NOTE 1: OWNER FURNISHED, CONTRACTOR INSTALLED EQUIPMENT. NOTE 2:								

EQUIPMENT TAG LEGEND

LUMINAIRES

L1
TYPICAL LUMINAIRE
A-3a
UPPERCASE LETTER DENOTES PANEL NAME, NUMBER DENOTES CIRCUIT NUMBER(S), LOWERCASE LETTER DENOTES SWITCH LEG

SNAP SWITCHES

\$3,a
NUMBER DENOTES SWITCH CONFIGURATION. LOWER CASE LETTER DENOTES SWITCH LEG.

EQUIPMENT CONNECTIONS

P-1
A-1,3
EQUIPMENT TAG
LETTER DENOTES PANEL NAME, NUMBER DENOTES CIRCUIT NUMBER(S)

RECEPTACLES

+48"
A-1
HEIGHT ABOVE FINISH FLOOR
LETTER DENOTES PANEL NAME, NUMBER DENOTES CIRCUIT NUMBER(S)

MOUNTING HEIGHT SCHEDULE	
EQUIPMENT	HEIGHT
PANELBOARDS (TOP)	72"
SERVICE EQUIPMENT (CENTER LINE OF METER)	PER UTILITY
VFDs, MOTOR STARTERS, DISCONNECT SWITCHES (TOP)	66"
RECEPTACLES IN NON-FINISHED AND MECH. SPACES (CENTER)	48"
WALL MOUNTED SWITCHES (CENTER)	46"

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49TH
John A. Pepe
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REGISTERED PROFESSIONAL ENGINEER
3/25/24

CITY OF BETHEL
BETHEL, ALASKA

Revisions

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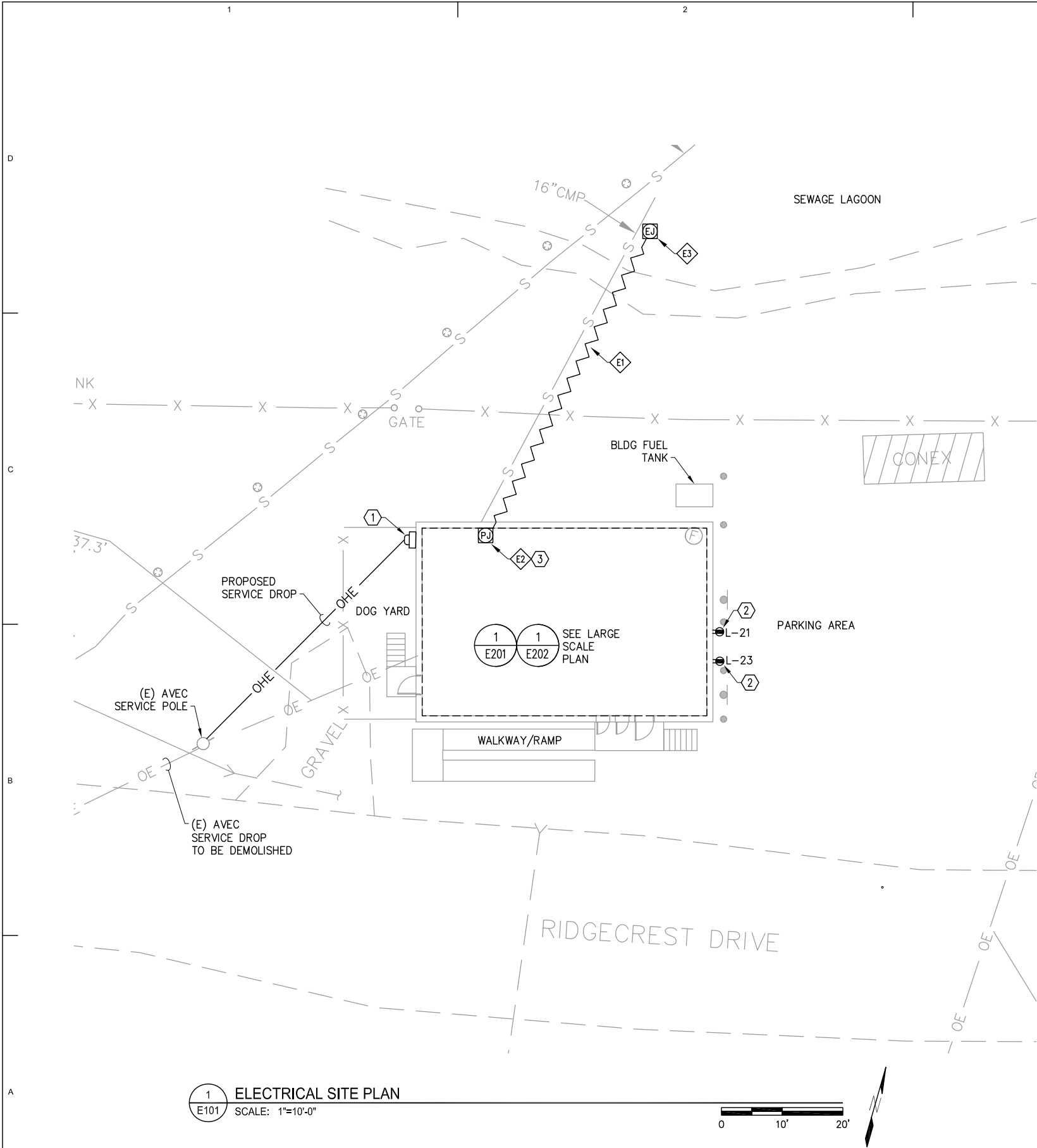
Sheet Contents

ELECTRICAL LEGEND, ABBREVIATIONS AND SCHEDULES

Sheet No.

E001

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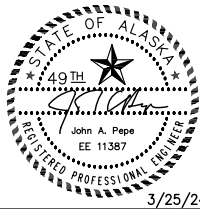


SHEET NOTES

- 1 METER/MAIN SERVICE EQUIPMENT. SEE SHEET E202 AND E401 FOR DETAILS. COORDINATE WITH SERVING UTILITY (AVEC) FOR ELECTRICAL SERVICE DROP CABLE ROUTING, SERVICE EQUIPMENT AND CONNECTIONS. ALL WORK SHALL BE IN ACCORDANCE WITH UTILITY STANDARDS.
- 2 PROVIDE BUILDING MOUNTED, HEADBOLT HEATER GFCI, DUPLEX RECEPTACLES IN WEATHERPROOF BOXES WITH METALLIC 'WHILE-IN-USE' COVERS. PROVIDE SIGNAGE IDENTIFYING 'HEADBOLT HEATER RECEPTACLES' AND CIRCUIT NUMBERS.
- 3 SEWER LINE OUTFALL PIPE HEAT TRACE CIRCUIT. SEE SHEET E202 AND E401 FOR POWER CONNECTION DETAILS.

ELECTRICAL EQUIPMENT SCHEDULE

ITEM NO.	DESCRIPTION	MANUFACTURER OR EQUAL
E1	120VAC, 8W/FT HEAT TRACE.	THERMON FLX
E2	HEAT TRACE POWER CONECTION KIT. SEE SHEET E202, E401 AND E501 FOR DETAILS.	THERMON
E3	HEAT TRACE END KIT. SEE SHEET E-501 FOR DETAILS.	THERMON



CITY OF BETHEL
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BETHEL, ALASKA

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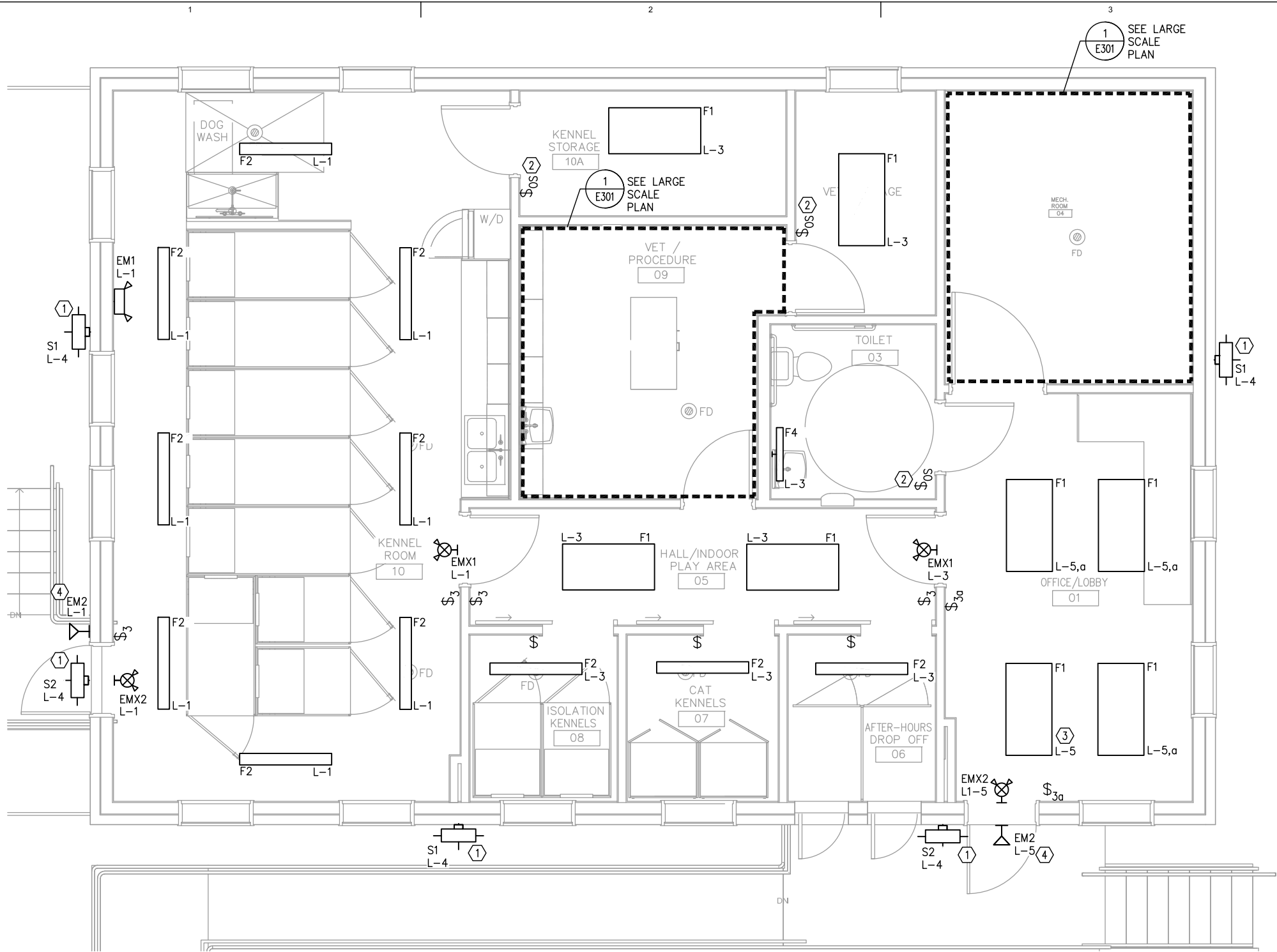
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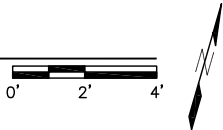
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E101

BID DOCUMENTS
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1 ELECTRICAL FLOOR PLAN - LIGHTING
E201 SCALE: 3/8" = 1'-0"



SHEET NOTES

- 1 EXTERIOR LIGHTING CONTROL VIA 'LC-1' CONTACTOR WITH PHOTOCELL INPUT IN 'AUTO'. CONTACTOR LOCATED IN MECHANICAL ROOM. SEE SHEETS E301 AND E501 FOR DETAILS.
- 2 PROVIDE OCCUPANCY SENSOR LIGHTING CONTROL SWITCHES IN AREAS THAT ARE UNOCCUPIED.
- 3 PROVIDE UNSWITCHED FIXTURE AS NIGHT LIGHT.
- 4 REMOTE EMERGENCY FIXTURE HEAD BATTERY POWERED BY ADJACENT EMX2 FIXTURE.

GENERAL SHEET NOTES

1. INTERIOR LIGHTING CONTROL FROM LOCAL SWITCHES MOUNTED ADJACENT TO ENTRY/EXITS. THREE-WAY SWITCHING PROVIDED IN AREAS WITH MULTIPLE DOORS TO THE SPACE, UON.

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3/25/24

CITY OF BETHEL, ALASKA

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BETHEL DOG POUND BUILDING
BETHEL, ALASKA

Revisions		
No.	Description	Date

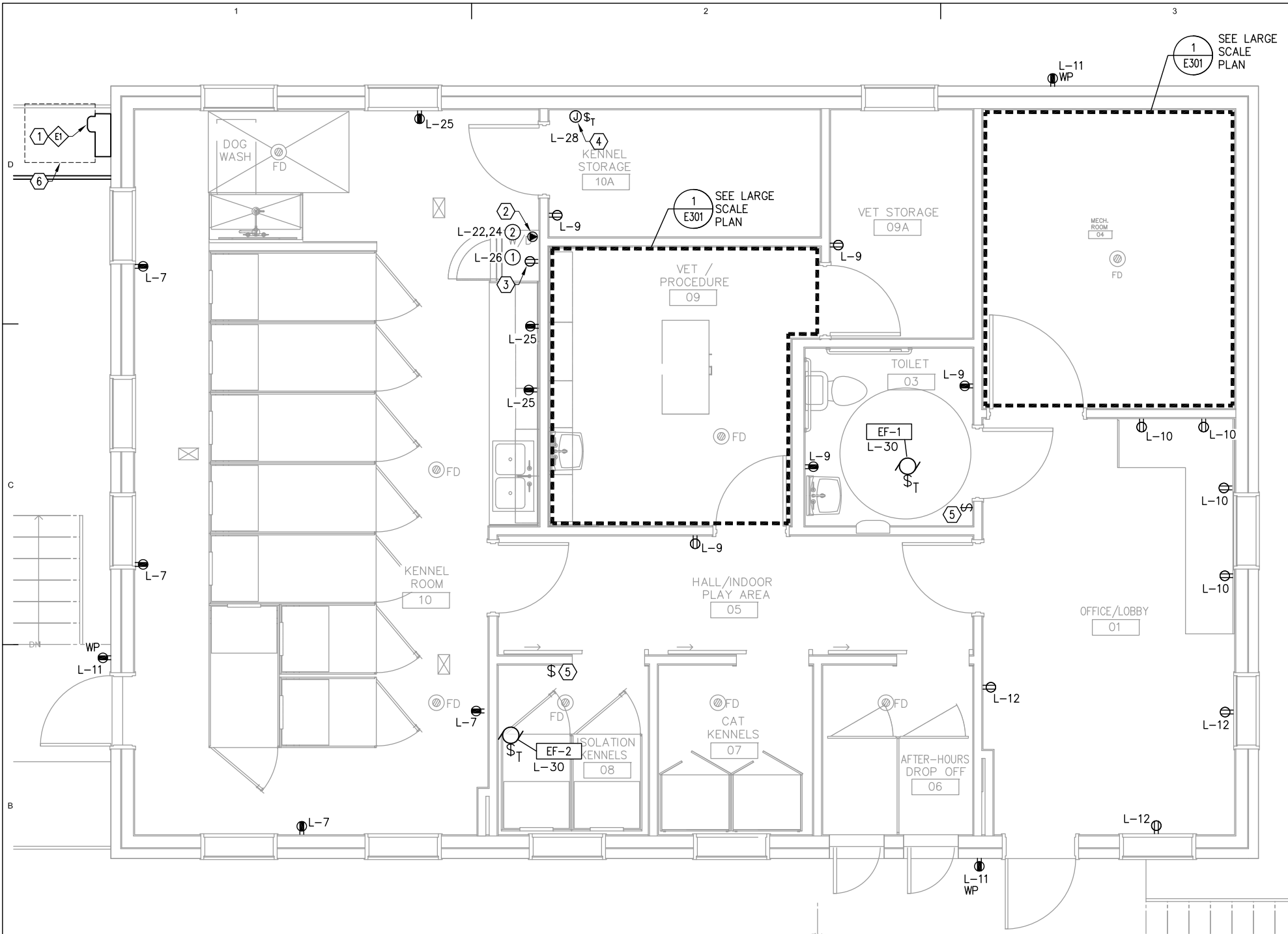
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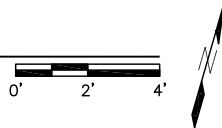
ELECTRICAL FLOOR PLAN - LIGHTING

Sheet No.

E201



1 ELECTRICAL FLOOR PLAN - POWER
E202 SCALE: 3/8" = 1'-0"



SHEET NOTES

- ① COORDINATE WITH SERVING UTILITY (AVEC) FOR ELECTRICAL CABLE ROUTING, SERVICE EQUIPMENT AND CONNECTIONS. ALL WORK SHALL BE IN ACCORDANCE WITH UTILITY STANDARDS.
- ② DRYER RECEPTACLE. SEE COMPONENT SCHEDULE THIS SHEET. COORDINATE INSTALLATION WITH MANUFACTURER REQUIREMENTS.
- ③ WASHER RECEPTACLE. SEE COMPONENT SCHEDULE THIS SHEET. COORDINATE INSTALLATION WITH MANUFACTURER REQUIREMENTS.
- ④ PROVIDE HEAT TRACE POWER CONNECTION KIT AND LIGHTED SWITCH FOR CONTROL OF SEWER LINE OUTFALL. SEE SHEET E-101 SITE PLAN FOR DETAILS.
- ⑤ PROVIDE LOCAL SWITCH FOR CONTROL OF EXHAUST FAN.
- ⑥ MAINTAIN 36" WORKING CLEARANCE IN FRONT OF EQUIPMENT. INSTALLATION SHALL BE IN ACCORDANCE WITH AVEC REQUIREMENTS.
- ⑥# SEE E401 FOR ELECTRICAL EQUIPMENT SCHEDULE.

COMPONENT SCHEDULE

TAG ID	LOAD				CIRCUIT SIZE	DESCRIPTION	CONNECTION
	KW	FLA	V	PH			
①			120	1	1/2"C, 2#12(H,N), 1#12 EGC	WASHER UNIT	NEMA 5-20R
②			240	1	3/4"C, 3#10(2H,N), 1#12 EGC	ELECTRIC DRYER UNIT	NEMA 14-30R

EQUIPMENT CONNECTION SCHEDULE

TAG ID	LOAD					CIRCUIT SIZE	NOTES
	KW	HP	FLC	V	PH		
EF-1		FHP		120	1	1/2"C, 2#12(H,N), 1#12 EGC	
EF-2		FHP		120	1	1/2"C, 2#12(H,N), 1#12 EGC	

NOTES:
1.



CITY OF BETHEL

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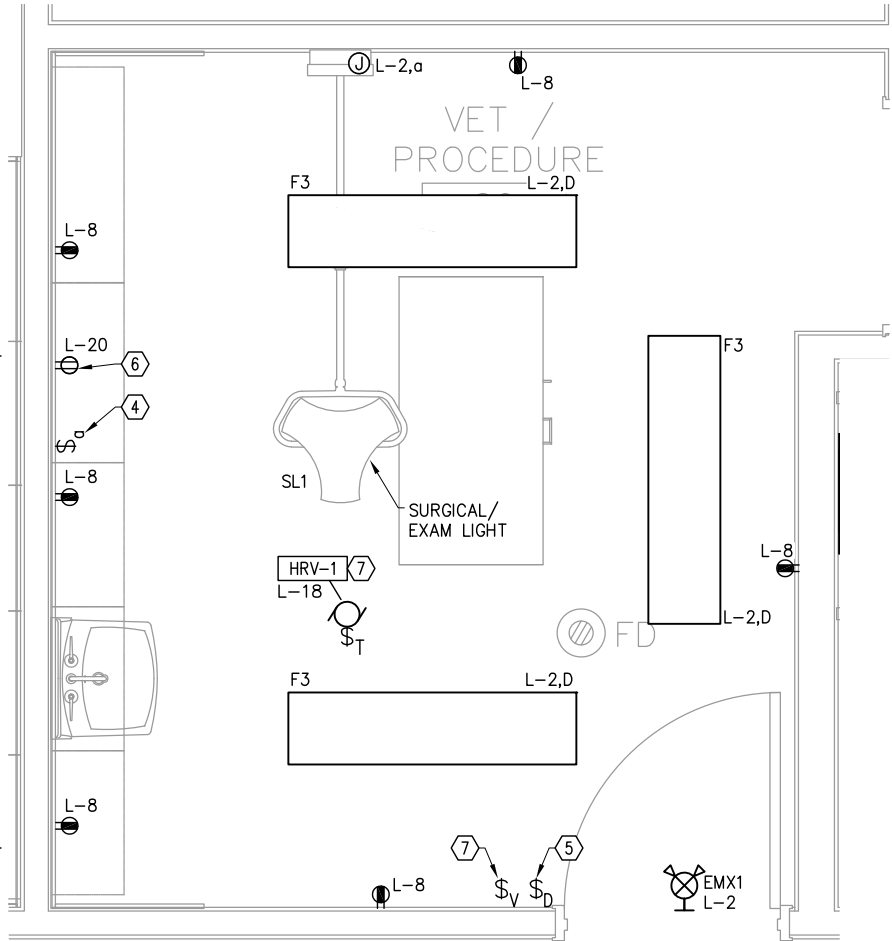
Sheet Contents

ELECTRICAL FLOOR PLAN -
POWER

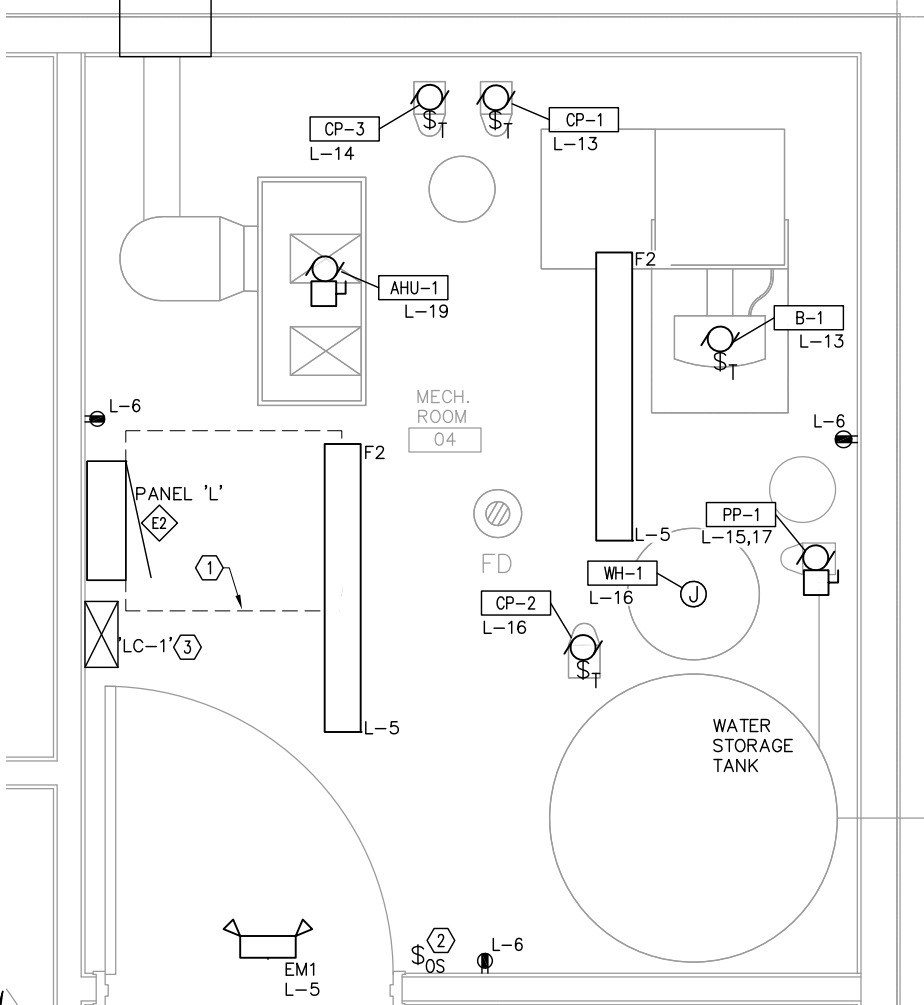
Sheet No.

E202

P:\Projects\00WL\Bethel Dog Pound Bldg\Drawgs\Elec\E301 ENLARGED PROCEDURE AND MECHANICAL ROOMS.dwg PLOT DATE 2024-3-25 10:23 SAVED DATE 2024-03-25 09:18



1
E301 ENLARGED VET / PROCEDURE ROOM
SCALE: 3/4" = 1'-0"



2
E301 ENLARGED MECHANICAL ROOM
SCALE: 3/4" = 1'-0"

SHEET NOTES

- 1 MAINTAIN 36" WORKING CLEARANCE IN FRONT OF PANELBOARD AND ELECTRICAL EQUIPMENT AS REQUIRED BY NEC.
- 2 OCCUPANCY SENSOR LIGHTING CONTROL SWITCHES ARE USED IN AREAS THAT ARE UNOCCUPIED.
- 3 LIGHTING CONTROL CONTACTOR 'LC-1'. SEE SHEET E501 FOR DETAILS.
- 4 EXAM LIGHT CONTROL SWITCH. PROVIDE LABEL TO IDENTIFY.
- 5 PROVIDE 0-10V DIMMING CONTROL FOR 'F3' FIXTURES ONLY IN VET/PROCEDURE ROOM.
- 6 VET/PROCEDURE ROOM UNDER COUNTER REFRIGERATOR. MOUNT DEDICATED RECEPTACLE IN CASEWORK SPACE. COORDINATE INSTALLATION WITH INSTALLED EQUIPMENT.
- 7 PROVIDE LOCAL SWITCHING FOR HRV UNIT WITH SIGNAGE 'HRV-1, TURN ON WHEN ROOM IS OCCUPIED'.

E# SEE SHEET E401 FOR ELECTRICAL EQUIPMENT SCHEDULE.

GENERAL SHEET NOTES

- 1. COORDINATE ALL WORK WITH MECHANICAL CONTRACTOR AND VERIFY EQUIPMENT CONNECTION REQUIREMENTS PRIOR TO INSTALLATION.

EQUIPMENT CONNECTION SCHEDULE							
TAG ID	LOAD					CIRCUIT SIZE	NOTES
	KW	HP	FLC	V	PH		
AHU-1		1/3		120	1	1/2"C, 2#12(H,N), 1#12 EGC	1
B-1	0.3	-		120	1	1/2"C, 2#12(H,N), 1#12 EGC	
CP-1		FHP		120	1	1/2"C, 2#12(2H), 1#12 EGC	
CP-2		FHP		120	1	1/2"C, 2#12(H,N), 1#12 EGC	
CP-3		1/4		120	1	1/2"C, 2#12(H,N), 1#12 EGC	
HRV-1		0.2		120	1	1/2"C, 2#12(H,N), 1#12 EGC	
PP-1		3/4		240	1	1/2"C, 2#12(2H), 1#12 EGC	
WH-1	0.2	-		120	1	1/2"C, 2#12(H,N), 1#12 EGC	

NOTES:
1. PROVIDE WITH VFD AND CONTROLS. SEE MECHANICAL.



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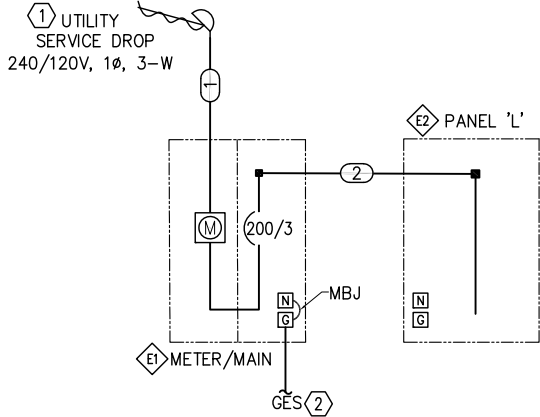
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Sheet Contents
ENLARGED PROCEDURE AND
MECHANICAL ROOMS

Sheet No.
E301

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P:\Projects\00WL\Bethel Dog Pound Bldg\Drawgs\Elec\E401 POWER ONE-LINE AND PANEL SCHEDULES.dwg PLOT DATE 2024-03-25 10:23 SAVED DATE 2024-03-25 09:39



ELECTRICAL EQUIPMENT SCHEDULE		
ITEM NO.	DESCRIPTION	MANUFACTURER OR EQUAL
E1	METER/MAIN, 225A, 240/120V, 1Ø, 3W, NEMA 3R	CIRCLE AW OR EQUAL. EQUIPMENT SHALL BE IN ACCORDANCE WITH AVEC SERVICE REQUIREMENTS
E2	225A, 240/120V, 1Ø, 3W, MLO, 42-SPACE, NEMA 1, PANELBOARD 'L'	SQUARE D QO TYPE

CIRCUIT / FEEDER SCHEDULE	
TAG	DESCRIPTION
1	2"C, 3#3/0 (2H,N), 1#6 EGC. XHHW INSULATION.
2	2"C, 3#3/0 (2H,N), 1#6 EGC.

SHEET NOTES

- 1 COORDINATE WITH SERVING UTILITY (AVEC) FOR ELECTRICAL CABLE ROUTING, SERVICE EQUIPMENT AND CONNECTIONS. ALL WORK SHALL BE IN ACCORDANCE WITH UTILITY STANDARDS.
- 2 GROUNDING ELECTRODE SYSTEM (GES). SEE SHEET E501 FOR DETAILS.

1 POWER ONE-LINE AND PANEL SCHEDULES
E401 SCALE: NTS

VOLT: 120/240V BUS: 225 MAIN: MLO				PANEL 'L' SCHEDULE						A.I.C. RATING: 22,000 ENCLOSURE: NEMA 1 MOUNTING: SURFACE			
				LOCATION: MECHANICAL RM									
CKT	AMP	LOAD DESCRIPTION		KVA	LOAD	A	B	LOAD	KVA	LOAD DESCRIPTION		AMP	CKT
1	20/1	LTG: KENNEL RM		0.5	L	1.0		L	0.5	LTG: VET PROCEDURE RM		20/1	2
3	20/1	LTG: STORAGE/TOILET/HALL		0.3	L		0.8	L	0.5	LTG: EXTERIOR		20/1	4
5	20/1	LTG: OFFICE/MECH. RM		0.4	L	0.8		L	0.4	REC: MECHANICAL RM		20/1	6
7	20/1	REC: KENNEL RM		0.7	R		1.7	R	1.0	REC: VET PROCEDURE		20/1	8
9	20/1	REC: HALL/STORAGE/TOILET		0.7	R	1.4		R	0.7	REC: OFFICE		20/1	10
11	20/1	REC: EXTERIOR		0.5	R		1.4	R	0.9	REC: OFFICE		20/1	12
13	20/1	BOILER, B-1/CIRC PUMP CP-1		0.6	M	0.9			0.3	GLYCOL HEAT TRACE CIRC PUMP, CP-3		20/1	14
15	20/2	PRESSURE PUMP, PP-1		0.8	LM		1.3	M	0.5	WATER HEATER, WH-1/CIRC PUMP, CP-2		20/1	16
17				0.8	LM	1.0		M	0.2	HEAT RECOVERY UNIT, HRV-1		20/1	18
19	20/1	AIR HANDLING UNIT, AHU-1		0.5	M		0.7	M	0.2	VET/PROCEDURE RM FRIG		20/1	20
21	20/1	HEADBOLT HEATER REC		1.2	C	3.7		N	2.5	KENNEL RM LAUNDRY DRYER		30/2	22
23	20/1	HEADBOLT HEATER REC		1.2	C		3.7	N	2.5			20/1	24
25	20/1	REC: KENNEL RM		0.5	R	1.5		M	1.0	KENNEL RM LAUNDRY WASHER		20/1	26
27							0.8	C	0.8	*WASTELINE HEAT TRACE		20/1	28
29						0.1		M	0.1	EXHAUST FANS, EF-1 AND EF-2		20/1	30
31							0.0						32
33							0.0						34
35							0.0						36
37							0.0						38
39	20/1	SPARE			S		0.0	S		SPARE		20/1	40
41	20/1	SPARE			S	0.0		S		SPARE		20/1	42
						10.5	10.5						
*PROVIDE 30mA GFCI CIRCUIT FOR HEAT TRACE													
TOTAL KVA: 21.0 AMPS: 87.3													
SUMMARY BY LOAD TYPE		CONNECTED KVA			TOTAL L KVA	NEC%	NEC TOTAL	NOTES:					
		PH A	PH B	FEED									
L	LIGHTING	1.8	0.8		2.6	1.25	3.2						
R	RECEPTACLES	2.0	3.2		5.1	10K+50%	5.1						
M	MOTORS	1.9	1.2		3.1	1.00	3.1						
LM	LARGEST MOTOR	0.8	0.8		1.7	1.25	2.1						
C	CONTINUOUS	1.2	2.0		3.2	1.25	4.0						
N	NON-CONTINUOUS	2.5	2.5		5.0	1.00	5.0						
S	SPARE	0.0	0.0		0.0	1.00	0.0						
X	NON-COINCIDENT	0.0	0.0		0.0	0.00	0.0						
O	OTHER	0.0	0.0		0.0	1.00	0.0						
F	FEEDER	0.0	0.0		0.0	1.00	0.0						
TOTAL KVA (PHASE)		10.2	10.5		20.7		22.5						
TOTAL AMPERES		84.8	87.4		86.1		93.8						
PHASE BALANCE, AB		A-B	B-A										
PERCENT		50	50										



CITY OF BETHEL
BETHEL DOG POUND BUILDING
BETHEL, ALASKA

Revisions		
No.	Description	Date

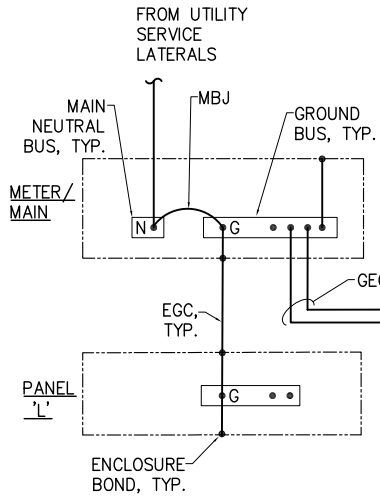
Drawn by	Date 3/25/2024
Checked	Job No. -

Sheet Contents
POWER ONE-LINE AND PANEL
SCHEDULES

Sheet No.
E401

BID DOCUMENTS
ISSUED FOR AGENCY REVIEW

P:\Projects\00WL\Bethel Dog Pound Bldg\Drawgs\Elec\E501 ELECTRICAL DETAILS.dwg PLOT DATE: 2024-3-25 10:23 SAVED DATE: 2024-03-22 16:39



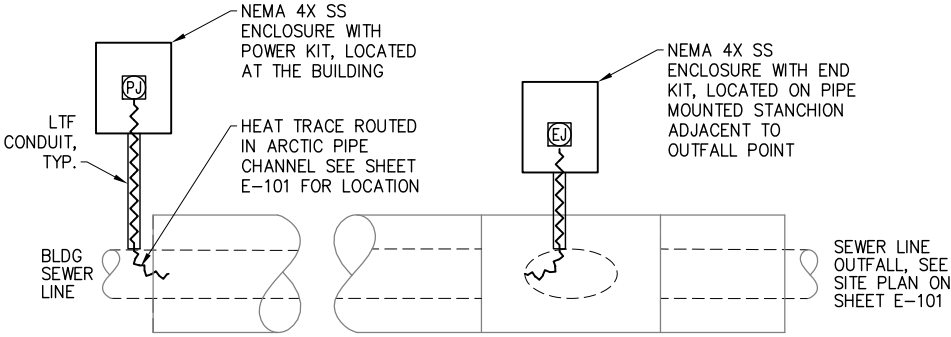
NOTES

1. PROVIDE ELECTRICALLY CONTINUOUS GROUNDING AND BONDING SYSTEM. PROVIDE BONDING JUMPER EQUAL TO GROUNDING ELECTRODE CONDUCTOR AS REQUIRED.
2. ALL CONDUCTOR SIZES ARE COPPER.
3. PROVIDE GROUNDING PER NEC ARTICLE 250 REQUIREMENTS.

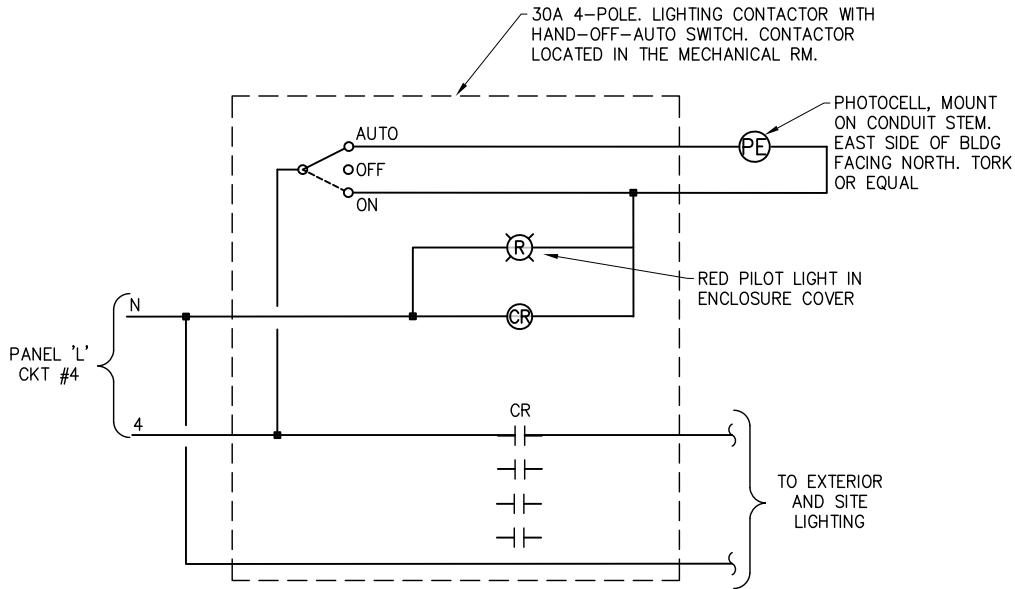
LEGEND

BCU - BARE COPPER
EGC - ELECTRODE GROUNDING CONDUCTOR
GEC - GROUNDING ELECTRODE CONDUCTOR
MBJ - MAIN BONDING JUMPER
G - GROUNDING (BUS BAR, CONDUCTOR)
NEUTRAL - NEUTRAL (BUS BAR, CONDUCTOR)

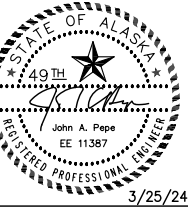
1 ELECTRICAL GROUNDING DETAIL
E501 SCALE: NTS



3 SEWER LINE OUTFALL HEAT TRACE DETAIL
E501 SCALE: NTS



2 EXTERIOR LIGHTING CONTRACTOR 'LC-1' DIAGRAM
E501 SCALE: NTS



CITY OF BETHEL
BETHEL DOG POUND BUILDING
BETHEL, ALASKA

Revisions		
No.	Description	Date

Drawn by	Date 3/25/2024
Checked	Job No. -

Sheet Contents
ELECTRICAL DETAILS

BID DOCUMENTS
ISSUED FOR AGENCY REVIEW

Sheet No.
E501

Project Contract Forms

NOTICE OF AWARD

Date of Issuance:

Owner:

Owner's Project No.:

Engineer:

Engineer's Project No.:

Project:

Contract Name:

Bidder:

Bidder's Address:

You are notified that Owner has accepted your Bid dated **[date]** for the above Contract, and that you are the Successful Bidder and are awarded a Contract for:

[Describe Work, alternates, or sections of Work awarded]

The Contract Price of the awarded Contract is \$**[Contract Price]**. Contract Price is subject to adjustment based on the provisions of the Contract, including but not limited to those governing changes, Unit Price Work, and Work performed on a cost-plus-fee basis, as applicable.

[Number of copies sent] unexecuted counterparts of the Agreement accompany this Notice of Award, and one copy of the Contract Documents accompanies this Notice of Award, or has been transmitted or made available to Bidder electronically.

☐ Drawings will be delivered separately from the other Contract Documents.

You must comply with the following conditions precedent within 15 days of the date of receipt of this Notice of Award:

1. Deliver to Owner **[number of copies sent]** counterparts of the Agreement, signed by Bidder (as Contractor).
2. Deliver with the signed Agreement(s) the Contract security (such as required performance and payment bonds) and insurance documentation, as specified in the Instructions to Bidders and in the General Conditions, Articles 2 and 6.
3. Other conditions precedent (if any): **[Describe other conditions that require Successful Bidder's compliance]**

Failure to comply with these conditions within the time specified will entitle Owner to consider you in default, annul this Notice of Award, and declare your Bid security forfeited.

Within 10 days after you comply with the above conditions, Owner will return to you one fully signed counterpart of the Agreement, together with any additional copies of the Contract Documents as indicated in Paragraph 2.02 of the General Conditions.

Owner: **[Full formal name of Owner]**

By (signature): _____

Name (printed): _____

Title: _____

Copy: Engineer

EJCDC® C-510, Notice of Award.

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Page 1 of 1

NOTICE TO PROCEED

Owner: _____ Owner's Project No.: _____
Engineer: _____ Engineer's Project No.: _____
Contractor: _____ Contractor's Project No.: _____
Project: _____
Contract Name: _____
Effective Date of Contract: _____

Owner hereby notifies Contractor that the Contract Times under the above Contract will commence to run on **[date Contract Times are to start]** pursuant to Paragraph 4.01 of the General Conditions.

On that date, Contractor shall start performing its obligations under the Contract Documents. No Work will be done at the Site prior to such date.

In accordance with the Agreement: **[Select one of the following two alternatives, insert dates or number of days, and delete the other alternative.]**

The date by which Substantial Completion must be achieved is **[date for Substantial Completion, from Agreement]**, and the date by which readiness for final payment must be achieved is **[date for readiness, from Agreement]**.

[or]

The number of days to achieve Substantial Completion is **[number of days, from Agreement]** from the date stated above for the commencement of the Contract Times, resulting in a date for Substantial Completion of **[date, calculated from commencement date above]**; and the number of days to achieve readiness for final payment is **[number of days, from Agreement]** from the commencement date of the Contract Times, resulting in a date for readiness for final payment of **[date, calculated from commencement date above]**.

Before starting any Work at the Site, Contractor must comply with the following:

[Note any access limitations, security procedures, or other restrictions]

Owner: **[Full formal name of Owner]**
By (signature): _____
Name (printed): _____
Title: _____
Date Issued: _____
Copy: Engineer

Contractor's Application for Payment

Owner: _____ Engineer: _____ Contractor: _____ Project: _____ Contract: _____	Owner's Project No.: _____ Engineer's Project No.: _____ Contractor's Project No.: _____
Application No.: _____ Application Date: _____	
Application Period: From _____ to _____	

1. Original Contract Price	\$	-
2. Net change by Change Orders	\$	-
3. Current Contract Price (Line 1 + Line 2)	\$	-
4. Total Work completed and materials stored to date (Sum of Column G Lump Sum Total and Column J Unit Price Total)	\$	-
5. Retainage		
a. _____ X \$ _____ Work Completed	\$	-
b. _____ X \$ _____ Stored Materials	\$	-
c. Total Retainage (Line 5.a + Line 5.b)	\$	-
6. Amount eligible to date (Line 4 - Line 5.c)	\$	-
7. Less previous payments (Line 6 from prior application)		
8. Amount due this application	\$	-
9. Balance to finish, including retainage (Line 3 - Line 4)	\$	-

Contractor's Certification

The undersigned Contractor certifies, to the best of its knowledge, the following:

(1) All previous progress payments received from Owner on account of Work done under the Contract have been applied on account to discharge Contractor's legitimate obligations incurred in connection with the Work covered by prior Applications for Payment;

(2) Title to all Work, materials and equipment incorporated in said Work, or otherwise listed in or covered by this Application for Payment, will pass to Owner at time of payment free and clear of all liens, security interests, and encumbrances (except such as are covered by a bond acceptable to Owner indemnifying Owner against any such liens, security interest, or encumbrances); and

(3) All the Work covered by this Application for Payment is in accordance with the Contract Documents and is not defective.

Contractor: _____	
Signature: _____	Date: _____

Recommended by Engineer By: _____ Title: _____ Date: _____	Approved by Owner By: _____ Title: _____ Date: _____
Approved by Funding Agency By: _____ Title: _____ Date: _____	By: _____ Title: _____ Date: _____

Contractor's Application for Payment

Owner:	_____	Owner's Project No.:	_____
Engineer:	_____	Engineer's Project No.:	_____
Contractor:	_____	Contractor's Project No.:	_____
Project:	_____		
Contract:	_____		

[illegible]

Contractor's Application for Payment

Owner:		Owner's Project No.:	
Engineer:		Engineer's Project No.:	
Contractor:		Contractor's Project No.:	
Project:			
Contract:			

Application No.: _____ Application Period: From _____ to _____ Application Date: _____

A	B	C	D	E	F	G	H	I	J	K	L
Bid Item No.	Description	Contract Information				Work Completed		Materials Currently Stored (not in G) (\$)	Work Completed and Materials Stored to Date (H + I) (\$)	% of Value of Item (J / F) (%)	Balance to Finish (F - J) (\$)
		Item Quantity	Units	Unit Price (\$)	Value of Bid Item (C X E) (\$)	Estimated Quantity Incorporated in the Work	Value of Work Completed to Date (E X G) (\$)				
Change Orders											
					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
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					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
Change Order Totals					\$ -		\$ -	\$ -	\$ -		\$ -
Original Contract and Change Orders											
Project Totals					\$ -		\$ -	\$ -	\$ -		\$ -

Contractor's Application for Payment

[illegible]

CERTIFICATE OF SUBSTANTIAL COMPLETION

Owner:
Engineer:
Contractor:
Project:
Contract Name:

Owner's Project No.:
Engineer's Project No.:
Contractor's Project No.:

This ☐ Preliminary ☐ Final Certificate of Substantial Completion applies to:

☐ All Work ☐ The following specified portions of the Work:

[Describe the portion of the work for which Certificate of Substantial Completion is issued]

Date of Substantial Completion: **[Enter date, as determined by Engineer]**

The Work to which this Certificate applies has been inspected by authorized representatives of Owner, Contractor, and Engineer, and found to be substantially complete. The Date of Substantial Completion of the Work or portion thereof designated above is hereby established, subject to the provisions of the Contract pertaining to Substantial Completion. The date of Substantial Completion in the final Certificate of Substantial Completion marks the commencement of the contractual correction period and applicable warranties required by the Contract.

A punch list of items to be completed or corrected is attached to this Certificate. This list may not be all-inclusive, and the failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

Amendments of contractual responsibilities recorded in this Certificate should be the product of mutual agreement of Owner and Contractor; see Paragraph 15.03.D of the General Conditions.

The responsibilities between Owner and Contractor for security, operation, safety, maintenance, heat, utilities, insurance, and warranties upon Owner's use or occupancy of the Work must be as provided in the Contract, except as amended as follows:

Amendments to Owner's Responsibilities: ☐ None ☐ As follows:

[List amendments to Owner's Responsibilities]

Amendments to Contractor's Responsibilities: ☐ None ☐ As follows:

[List amendments to Contractor's Responsibilities]

The following documents are attached to and made a part of this Certificate:

[List attachments such as punch list; other documents]

This Certificate does not constitute an acceptance of Work not in accordance with the Contract Documents, nor is it a release of Contractor's obligation to complete the Work in accordance with the Contract Documents.

Engineer

By *(signature)*: _____

Name *(printed)*: _____

Title: _____

Change Order No. _____

Date of Issuance: _____ Effective Date: _____

Project:	Owner:	Owner's Contract No.:
Contract:		Date of Contract:
Contractor:		Engineer's Project No.:

The Contract Documents are modified as follows upon execution of this Change Order:

Description:

Attachments (list documents supporting change):

CHANGE IN CONTRACT PRICE:

Original Contract Price:

\$ _____

[Increase] [Decrease] from previously approved Change Orders No. _____ to No. _____

\$ _____

Contract Price prior to this Change Order:

\$ _____

[Increase] [Decrease] of this Change Order:

\$ _____

Contract Price incorporating this Change

\$ _____

CHANGE IN CONTRACT TIMES:

Original Contract Times: ☐ Working days ☐ Calendar days

Substantial completion (days or date): _____

Ready for final payment (days or date): _____

[Increase] [Decrease] from previously approved Change Orders No. _____ to No. _____:

Substantial completion (days): _____

Ready for final payment (days): _____

Contract Times prior to this Change Order:

Substantial completion (days or date): _____

Ready for final payment (days or date): _____

[Increase] [Decrease] of this Change Order:

Substantial completion (days or date): _____

Ready for final payment (days or date): _____

Contract Times incorporating approved Change Orders:

Substantial completion (days or date): _____

Ready for final payment (days or date): _____

RECOMMENDED:

By: _____
Engineer (Authorized Signature)

Date: _____

Approved by Funding Agency (if applicable):

ACCEPTED:

By: _____
Owner (Authorized Signature)

Date: _____

ACCEPTED:

By: _____
Contractor (Authorized Signature)

Date: _____

Date: _____

Introduced by: Lori Strickler, Acting City
Manager
Introduction Date: August 27, 2024
Public Hearing: September 10, 2024
Action:
Vote:

CITY OF BETHEL, ALASKA

Ordinance #24-10

**AN ORDINANCE BY THE BETHEL CITY COUNCIL APPLYING FOR AND
CONDITIONALLY APPROVING AN AMENDMENT TO THE OFFICIAL LAND USE
MAP OF BETHEL BY ADOPTING A GENERAL USE ZONING DESIGNATION TO
LAND OWNED BY THE CITY OF BETHEL CONSISTING OF A PROPERTY
LOCATED AT FIFTH AVENUE, LOT 4, 5, 6, BLOCK 7, USS 3230**

WHEREAS, Bethel Municipal Code 18.04.050(A) (Zoning Jurisdiction) provides that the territorial jurisdiction under title 18 shall include all lands located within the corporate limits of the city;

WHEREAS, BMC 18.76.010 (A), Initiation of text amendment and land use map modification, provides that an amendment to any portion of the text of the official land use map may be initiated by application from the Bethel City Council;

WHEREAS, BMC 18.04.030(B), Zoning Application, provides that no structure or land shall be used or occupied and no structure or part thereof shall be erected, moved, or altered except in conformity with the provisions of title 18;

WHEREAS, the City of Bethel has entered into a contract to have two triplex units constructed for professional housing to be owned and operated by the City of Bethel;

WHEREAS, the Bethel City Council seeks the Planning Commission's concurrence on an amendment to the official land use map, rezoning three lots owned by the City of Bethel, from Public Lands and Institutions to General Use;

WHEREAS, on August 23, 2024, the City of Bethel Planning Department received a request from the Acting City Manager, on behalf of the City Council, to amend the Official Land Use Zoning Map by rezoning the above-entitled property from Public Lands and Institutions to General Use, in order to build additional City-owned housing;

WHEREAS, BMC 18.36.010 provides that the intent of the General Use District is to allow a mix of compatible residential and commercial uses;

WHEREAS, the proposed General Use designation will also comport with the residential nature of the neighborhood because of the various residential structures constructed catty-corner to said property and throughout the Avenues neighborhood;

Introduced by: Lori Strickler, Acting City Manager
Introduction Date: August 27, 2024
Public Hearing: September 10, 2024
Action:
Vote:

WHEREAS, this General Use re-zoning is also consistent with the City's Comprehensive Plan which has identified housing as a priority for the City;

WHEREAS, the zoning request satisfies BMC 18.76.040 (B), which provides that the planning department may only recommend approval of the map amendment to the Planning Commission, if it makes and supports the following findings regarding the proposed zoning:

- Is consistent with the Comprehensive Plan.
- Is suited to the area.
- Is compatible with principle and permitted uses within 1,000 feet.
- Constitutes an expansion of an area of the same designation or is at least 2 acres in size
- Has adequate transportation, water and sewage availability; and

WHEREAS, the Planning Commission will hold a public hearing on September 12, 2024 to review the General Use Zoning designation requested by the City Council; ; and

WHEREAS, if the Planning Commission, recommends approving a zoning map amendment to the Official Land Use Map of Bethel, that will apply a General Use zoning designation to lots 4, 5, 6, of Block 7, USS 3230.

BE IT ENACTED BY THE CITY COUNCIL OF THE CITY OF BETHEL, ALASKA that: the Official Land Use Map of Bethel shall be amended to show a General Use zoning designation to lots 4, 5, 6, of Block 7, USS 3230;

SECTION 1. Classification. This ordinance is of a permanent nature and shall be shown on the Official Land Use Map of Bethel as General Use.

Section 2. Conditional Effective Date. This ordinance shall become effective upon approval of the Planning Commission consistent with the terms of this Ordinance.

ENACTED THIS 10 DAY OF SEPTEMBER 2024, BY A VOTE OF ___ IN FAVOR AND ___ OPPOSED.

Mark Springer, Mayor

ATTEST:

Kevin Morgan, Acting City Clerk



CITY OF BETHEL



NOTICE OF PUBLIC HEARING (BMC 18.76.030)

The City of Bethel will hold public hearings to discuss a proposed amendment to the City's Zoning Land Use Map. The proposed change involves reclassifying City-owned land from "Public Lands and Institutions" to "General Use."

City Council Public Hearing: September 10, 2024

Time: 6:30 p.m.

Location: 300 Chief Eddie Hoffman Hwy, Bethel, Alaska

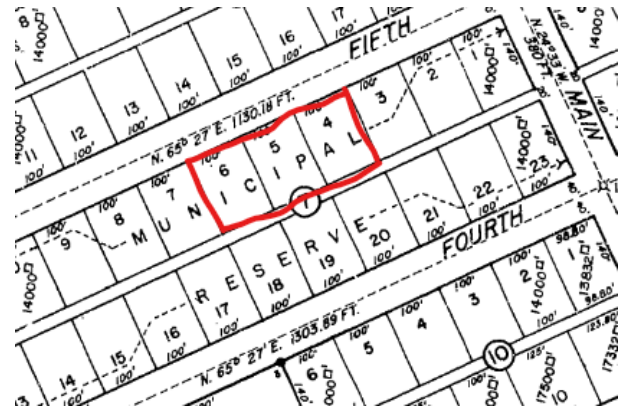
Planning Commission Date of Hearing: September 12, 2024

Time: 6:30 p.m.

Location: 300 Chief Eddie Hoffman Hwy, Bethel, Alaska

Proposed Action:

The City of Bethel is requesting a change to the zoning classification for the parcels located at USSS 3230, Block 7, Lots 4, 5, 6, located on Fifth Avenue, currently zoned as "Public Lands and Institutions," to "General Use." This change will allow for the City's construction of three residential housing duplexes.



Interested parties are encouraged to attend the hearings to express their views.

The meeting materials can be found here:

<https://bethelak.portal.civicclerk.com/>

City Council Hearing written comments may be submitted within 24 hours of the meeting by going to:

<https://www.cityofbethel.org/162/Written-Public-Comment-for-City-Council->

The packet material will be available on the City's website on September 6, 2024.

Planning Commission Hearing Written comments may be submitted within 24 hours of the meeting may be submitted to the Planning Department planning@cityofbethel.net.

The packet material will be available on the City's website on September 9, 2024.

Contact Information:

For more information regarding the proposed zoning change or the public hearing, please contact the City of Bethel Planning Department at 907-543-5306 or planning@cityofbethel.net.

City of Bethel, Alaska

Acting City Manager's Office

August 7, 2024-August 20, 2024

Staff

We are excited to welcome Andrea Asicksik and Samantha Robinett to our Finance Team! At the same time, we were saddened to see our valued colleague, Henrietta Knight, leave the department. Henrietta brought much joy and positivity to our team, and she will be greatly missed.

General

- Following the scheduled shutdown of the Bethel Heights Water Treatment Plant and the resulting boil water notice, the City has begun exploring better ways to notify residents. With our new website, the "Notify Me" application will enable residents to subscribe to the News Flash page and receive emails or text messages whenever notices are posted. In the coming weeks, we will be working on marketing materials to inform residents about this service.
- There is currently a Vitus Marine Boat docked at Beach 1 in our Port. As of August 6, 2024, Vitus Marine is working on securing a permit from the Coast Guard to allow the boat to return to the water for the remainder of the season. We expect a large barge to arrive on Sunday, August 25, which has expedited our need to find an alternative location for this vessel. We are considering short-term storage options on City land but have advised the vessel owners that this should be a last resort due to limited space and the less-than-ideal nature of the potential locations.
- The piped utility notice discussed previously will be included in next month's billing. We have sent the request to Delta Discovery for inclusion in the next two new publications and will be preparing Facebook and bulletin board notices this week.
- The City is making progress on plans to rehabilitate portions of Ridgecrest, Delapp, and Ptarmigan. However, due to the involvement of Federal Government partner funding through the Statewide Transportation Improvement Plan, we need to address some right-of-way encroachments before work can begin. While we still have several development phases to complete, we are actively communicating with property owners who will be impacted. The City's Engineering Firm, Planning Department, Public Works, Legal, and Administration are collaborating closely to resolve these issues.
- We have requested the State of Alaska to elevate Hanger Lake Road. This request was made before the recent flooding but was reiterated following the road washout after the flood.
- We are working with AC Commercial to address work initiated on their storefront without a site plan permit. A stop-work order was issued on August 16, 2024. On August 19, a meeting was held with AC, their contractors, the City Planner, City Attorney, and Administration, and a formal corrective action notice was issued on August 20, 2024. The City is committed to ensuring that parking requirements in the code are met.
- The President of the Lion's Club met with Administration to discuss renewing their lease for the building located on City land. The previous lease has expired, and they are currently on a

month-to-month arrangement. The Lion's Club will be presenting the City with details on their public service contributions and intended use of the land, which could qualify them for a lease rate below fair market value.

- Administration is continuously seeking ways to streamline City operations and support our business community. Since the City Council's recent amendments to provide senior exemptions to anyone over 65 and to eliminate the exemption expiration, we are considering a code change to repeal the senior card exemption requirements entirely. This change would allow seniors to use a state or tribal ID as proof of age at checkout. We are currently reviewing this process and its potential impacts to determine if it would be a beneficial modification.
- Audit season is upon us. Much of our time during the week of August 12th was spent responding to auditors' questions. During our department head meeting on August 14, the Deputy Finance Director shared important takeaways from the audit and provided guidance to department heads to improve our audit responses in future years.
- We have begun reviewing our Fee and Rate Schedule, prompted by feedback from the Planning Department and Commission. The review has been sent to the Departments, and we anticipate presenting an updated rate schedule to the Council in October.
- Administration has asked the Port Department to prioritize developing a long-term parking solution for the port facilities, with the goal of having a plan in place before the winter season.

Request for Proposals/Bids/Grants/Contracts

- The City is preparing to release an RFP for fencing installation around the old Bus Barn, which is now our primary streets and roads facility. A grant from the State Homeland Security FY23 covers the costs of the supply purchase and installation.
- We have released an RFP for the Transit Building Boiler, which is also funded by a grant.
- The City is coordinating with the winners of the contract for the six-plex professional housing units to confirm the contract terms and initiate the construction plan.
- Administration has asked the Grant Manager to apply for the Rasmuson Foundation Grant for the Animal Control Center.
- We are exploring opportunities to strengthen our partnership with the Consortium Library. On August 16, Library Director Theresa Quiner met with Administration to discuss a grant partnership with the National Digital Inclusion Alliance. We plan to present an Action Memo to the Council at the September 10th meeting to enter into an agreement to pursue this grant partnership.
- The Grant Manager has applied for funding for a comprehensive safety action plan focused on pedestrian safety.

Kudos

- A shoutout to our new Administrative Assistant to the Police Department, Kelsi Kime, who received praise from Council Member Miller for doing an excellent job supporting the Commission.
- Another shoutout to Public Safety Director James Harris, who was recognized by Library Director Theresa Quiner for making a meaningful contribution at the Library's recent community event.

Council Legislation Prepared/ Supported

- The City Council will be considering three budget amendments, which reflect a significant amount of work. Cindy Sharp, Deputy Director, and Bill Arnold, Public Works Director, dedicated a lot of time and effort to ensure the accuracy of the budget amendments.
- A code amendment has been presented to the Finance Team and will be brought to the Finance Committee for consideration. The amendment proposes repealing the business license provisions of the BMC and will be on the agenda at the next Finance Committee meeting.

Task	Period Total	Year to Date Total
Complaints from Citizens	3	9
Claims Against the City	0	2

Bethel 4-H Community Report

Q2
April - June 2024

I. Introduction

The Bethel 4-H program is committed to providing year-round after-school opportunities for children in our community. Unlike traditional daycare services, Bethel 4-H focuses on equipping participants with valuable life skills and exposing them to new and diverse topics. We believe in nurturing the potential of every child, offering a supportive environment for their growth. At the heart of the Bethel 4-H program is the Thrive model, which guides our efforts in fostering long-term positive outcomes for youth participants.

As we transition into summer, our operational model changes to accommodate longer camp hours, running from 11:30 am to 5:30 pm. This extended schedule provides a safe and engaging environment where youth can spend their summer.

We partner with ONC and LKSD to offer employment opportunities to teens through our 'teen counselor' positions. These roles are more than just summer jobs; they allow teens to make a positive impact in their community while exploring a variety of skills and interests. We believe our counselors benefit as much from the program as our campers do. During the summer, we employed a total of 12 teen leaders, with 6 assisting in facilitating the camps each week. Additionally, we engaged these teens in 4-H learning models that emphasize equity and community leadership.

This report comprehensively addresses various facets of the Bethel 4-H program, encompassing the following sections:

Learning Themes & Activities: This section focuses on the end-of-school-year activities and the transition into summer camps for Q2. It highlights the educational experiences and opportunities provided during this period, showcasing how the Bethel 4-H program adapts its themes and activities to meet the needs of participants as they move from the academic year into the summer months.

Metrics: The metrics section examines the quantitative and qualitative measures used to assess the impact and effectiveness of the Bethel 4-H program, including data on participants, program reach, and community engagement.

Conclusion: The conclusion synthesizes key findings and insights from the report, reflecting on the achievements of the Bethel 4-H program and outlining future directions for continued growth and success.

II. Learning Themes & Activities

When selecting activities for the 4-H center, our staff rigorously evaluates the following criteria:

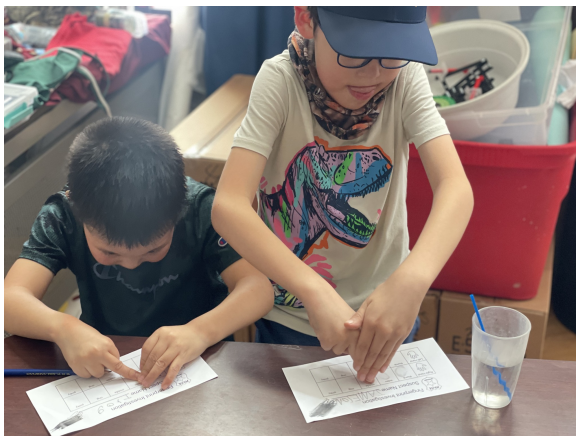
- Availability of established, validated 4-H curriculum for targeted topics.
- Alignment of the chosen curriculum with both Alaskan and National Education Standards.
- Interest expressed by participants and their parents/guardians.
- Potential for generating positive community impact.

By employing this approach, our staff strives to deliver daily programming that appeals to a diverse audience of interests and skill levels, fostering an inclusive environment where all our participants have the opportunity to showcase their individual talents.

The following is a selection of the weekly themes that have taken place at the Bethel 4-H. Also included is a short synopsis of the weeks aims, as well as just a few of the activities that took place during the week

February 12 - 16 Forensic Science

This week, our 4-H program delved into forensic science, engaging participants in activities like fingerprint dusting, DNA extraction, and mock autopsies. These hands-on experiences fostered critical thinking, problem-solving, and a multidisciplinary understanding of science. The program also promoted teamwork and collaboration, while inspiring interest in potential careers in science and criminal justice.



May 6 - 10 Native Culture and Performance Art

Youth engaged in an enriching exploration of native culture and traditions, immersing themselves in activities such as cooking, music, dance, and storytelling. This hands-on experience not only deepened their understanding of cultural practices but also highlighted the importance of preserving and celebrating heritage. The culmination of their efforts was a performance of the story "Berry Magic," presented to an audience of parents and supporters. This event provided a valuable opportunity for public speaking, helping participants build confidence and presentation skills. By integrating cultural exploration with communication practice, the program fostered a holistic learning experience that emphasized both personal growth and cultural appreciation.



June 10 - 14 Healthy Living & Gardening

Our "4-H Sunny Garden" thrived during Garden Week, where youth turned their ideas into reality by nurturing a vibrant garden space that merges learning with growth. The beautiful summer weather set the stage for exploration as participants discovered new and unique foods, harvested fireweed, and prepared the garden for the upcoming season. Special thanks to Danielle Craven, our Bethel SNAP-ED Educator, for sharing her expertise on healthy eating and inspiring our young gardeners. Her insights into subsistence living and nutrition highlighted the importance of maintaining a healthy lifestyle through traditional food practices.



III. Metrics

A. Attendance

Throughout the second quarter, the Bethel 4-H program experienced fluctuating attendance, reflective of the seasonal transition from the school year to summer. In April, we saw strong participation with an average daily attendance of 22 youth and a peak attendance of 28. May saw a slight decrease, with an average of 19 youth per day and a maximum attendance of 26. By June, as summer camps began, attendance averaged 13 youth daily, with a maximum of 17 participants. Notably our summer camps are through direct enrollment and have a cap on attendance. In addition we explain the decline in summer camp attendance by highlight the numerous other summer offerings being hosted in Bethel this year. In addition, these numbers do not reflect the attendance of our 12 teen leaders

Monthly Average and Max Attendance

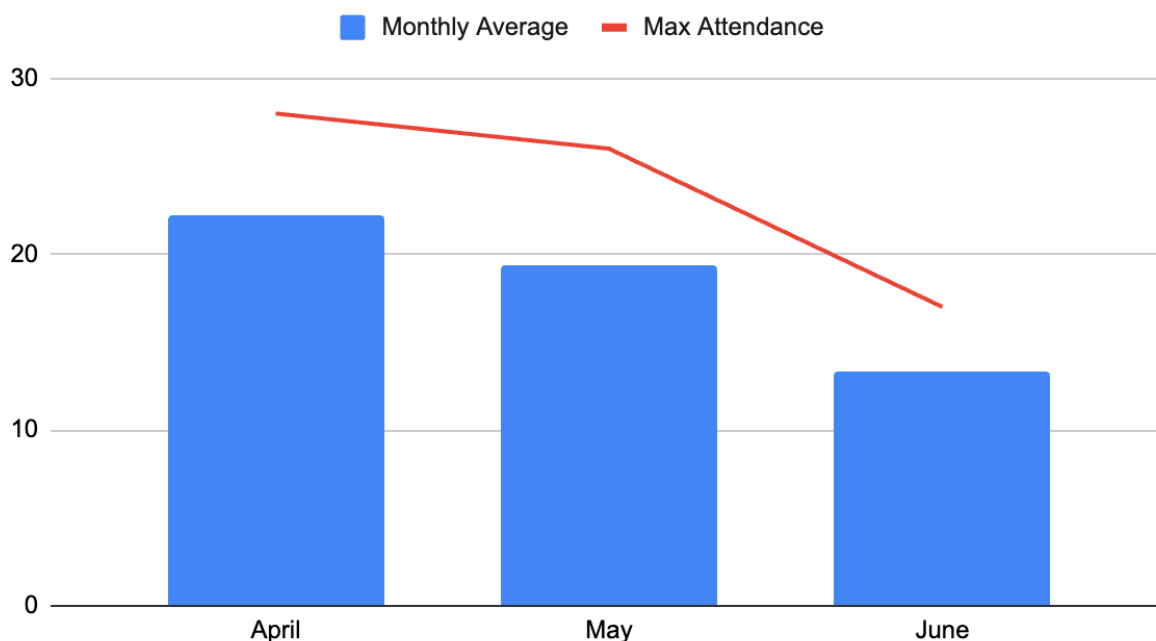


Fig 1.

Despite these variations, the overall engagement remained positive, with youth actively participating in both afterschool activities and the early stages of our summer camps. The transition period also highlighted the adaptability of our program, as we shifted focus to more summer-oriented themes and activities, ensuring that participants continued to benefit from enriching experiences throughout the quarter. In addition we highlight that while attendance may be lower during summer camps, contact time is nearly doubled due to our 11:30 - 5:30 operating hours, meaning each youth is afforded more interaction and exploration time.

B. Food Service Program

During both the school year and summer, Bethel 4-H partners with Food Bank Alaska to provide free, pre-packaged meals to our youth. Our aim is to help address food insecurity within Bethel, while helping to alleviate some of the financial strain families may experience during the school break. During Q2, Bethel 4-H provided approximately 800 meals during our afterschool program and summer camps.



Sample meal

IV. Conclusion

The second quarter of 2024 has been a period of dynamic growth and adaptation for the Bethel 4-H program. Our commitment to providing year-round, enriching opportunities for youth continued with a successful transition into summer activities, marked by expanded camp hours and the engagement of 12 teen counselors. Our diverse programming not only offered educational enrichment but also fostered essential life skills and cultural appreciation. Although attendance varied throughout the quarter, the overall engagement remained strong, reflecting the program's ability to adapt and thrive amidst seasonal changes. We extend our heartfelt thanks to all our supporters and the City of Bethel for their unwavering support, which has been instrumental in our continued success and growth.

If you have any questions or would like to visit a 4-H program in person, please do not hesitate to reach out to us. We welcome the opportunity to showcase our programs and answer any inquiries you may have. Our youth are enthusiastic about learning and actively engaging with their community, so they may have questions for you as well. We look forward to the chance to connect and share the exciting work happening at Bethel 4-H.

Very Respectfully

Jared Vaughn
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City of Bethel, Alaska

City Clerk's Office

Council Meetings

August 27, 2024 Regular City Council Meeting

September 10, 2024 Regular City Council Meeting

City Clerk's Office

- Clerk's Office provided Election support for the State of Alaska's Primary Election. This was the first Election where the voting location for Precinct 1 and Precinct 2 were combined at the Cultural Center. Election Chairs and Election workers for the Primary Election work for the State, however, I want to point out that this is a voluntary, temporary employment which is driven more by civil service than the modest amount of money they are given for the important work that they do. The City aided the election by providing election booths, signs, ballot boxes, meeting with the chairs to assist in coordinating tasks that needed to get done, setting up the space, and working at the election as an election official. City Administration provided free Transit service that day for the voters.

-Declaration of Candidacy period has closed. We received 5 applications for City Council. One has been confirmed, and as of 8-22-2024, I am waiting for the State of Alaska to confirm the other four candidates. Coordinating with KYUK to have a Candidate Forum on September 11, 2024 at 6:30pm.

- Providing training and assistance for the Public Safety and Transportation and Port Ex-Officios.

- Coordinating two more Website training sessions. The Website has a robust workflow software that our previous website did not have. It will take more training and time to start use the features.

-Assisting Administration with finding documents for the audit.

Task	Period Total	Year to Date Total
Passport Appointments	4	45
Burial Permits/Reservations	7	27
Notary Services	5	22
Meeting Minutes Drafted	1	14
Resolutions Drafted	-	6
Ordinances Drafted	-	2
AM/IM Drafted	-	3

Committee/Commission Vacancies	Regular	Alternate
Community Parks and Recreation Committee	full	1
Planning Commission	full	2
Port Commission	1	2
Public Safety and Transportation Commission	full	2
Community Action Grant Technical Review Board	full	full
Public Works Committee	3	2
Finance Committee	1	2
Ethics Board	full	1