ADDENDUM NO. 1     DATE:  January 26, 2023

REVISIONS TO:
Request for Bids Specification No. PW22-0287F
Beacon Activity Center HVAC Upgrade and Exterior Renovation

NOTICE TO ALL Bidders:

This addendum is issued to clarify, revise, add to or delete from, the original specification documents for the above project. This addendum, as integrated with the original specification documents, shall form the specification documents. The noted revisions shall take precedence over previously issued specification documents and shall become part of this contract.

REVISIONS TO THE SUBMITTAL DEADLINE:

- The submittal deadline remains the same.

REVISIONS TO THE GENERAL INFORMATION AND REQUIREMENTS:

- Attached is the sign in sheet and agenda from the pre-bid meeting held on Tuesday, January 24, 2023. The pre-bid meeting was not mandatory.
- Attached photos of the as-built roof condition.

REVISIONS TO THE PLANS:

- Revisions to the ELECTRICAL plans, will be issued by a future addendum.
- Attached MECHANICAL revisions are as follows:
  - REPLACE all MECHANICAL SHEETS. These revisions consist of additional detail to describe the scope of work. This deletes the mechanical plans marked “95% CD Set” and replaces them with “Bid Set”.
    - SHEET M0.1 MECHANICAL LEGEND & NOTES
    - SHEET M0.2 MECHANICAL NOTES
    - SHEET M0.3 MECHANICAL SCHEDULES
    - SHEET M1.1 CRAWL SPACE PLAN - MECHANICAL DEMO
    - SHEET M1.2 FIRST FLOOR PLAN - MECHANICAL DEMO
    - SHEET M3.1 FIRST FLOOR PLAN – PLUMBING
    - SHEET 4.1 CRAWL SPACE PLAN – MECHANICAL
    - SHEET 4.2 FIRST FLOOR PLAN – HVAC
    - SHEET 4.3 ROOF PLAN – HVAC
    - SHEET M4.4 HVAC DETAILS
  - ADD SHEET M4-5 HVAC DETAILS

NOTE: Acknowledge receipt of this addendum by initialing the corresponding space as indicated on the SIGNATURE PAGE. Vendors who have already submitted their bid/proposal may contact the Purchasing Division at 253-502-8468 and request return of their bid/proposal for acknowledgment and re-submittal. Or, a letter acknowledging receipt of this addendum may be submitted in an envelope marked Request for Bids Specification No. PW22-0287F Addendum No. 1. The City reserves the right to reject any and all bids, including, in certain circumstances, for failure to appropriately acknowledge this addendum.

cc:  Mina Zarelli, PW/FM
# CITY OF TACOMA

**Pre-Bid Meeting – Sign-in Sheet**

**Project:** Beacon Activity Center HVAC Upgrade and Exterior Renovation (PW22-0287F)

**Date, Time:** Tuesday, January 24, 2023 at 11:00 a.m., at 415 S 13th Street, Tacoma, WA 98402

**Attendees:** (PLEASE PRINT)

<table>
<thead>
<tr>
<th>Name</th>
<th>Company</th>
<th>Email</th>
<th>Phone #</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mina Zarelli, Project Manager</td>
<td>City of Tacoma, Public Works</td>
<td><a href="mailto:mzarelli@cityoftacoma.org">mzarelli@cityoftacoma.org</a></td>
<td>253-208-8582</td>
</tr>
<tr>
<td>Todd Roy</td>
<td>NCFES</td>
<td>TodRoyNet-compliance.com</td>
<td>560-902-1099</td>
</tr>
<tr>
<td>Corey Maughan</td>
<td>NCFES</td>
<td><a href="mailto:Corey.m@net-compliance.com">Corey.m@net-compliance.com</a></td>
<td>360-414-7395</td>
</tr>
<tr>
<td>Dina Marciano</td>
<td>Blumbeck Painting</td>
<td><a href="mailto:bllumbeckandpainting@gmail.com">bllumbeckandpainting@gmail.com</a></td>
<td>253-594-2383</td>
</tr>
<tr>
<td>Bob Shearon</td>
<td>Miller Sheet Metal</td>
<td>Miller Sheet Metal</td>
<td>360-731-8123</td>
</tr>
<tr>
<td>Aaron White</td>
<td>PSF Mechanical</td>
<td><a href="mailto:awhite@psfmechanical.com">awhite@psfmechanical.com</a></td>
<td>206-388-3691</td>
</tr>
<tr>
<td>RALPH STICKELL</td>
<td>METCALF ELECTRIC</td>
<td>RalphMETCALF84.com</td>
<td>253-534-5010</td>
</tr>
<tr>
<td>Tyler Mortenson</td>
<td>Harper Winn / Carlisle</td>
<td><a href="mailto:tyler2@harperwinn.com">tyler2@harperwinn.com</a></td>
<td>253-206-5954</td>
</tr>
<tr>
<td>Tyler Schmittkler</td>
<td>Capital Heating / Cooling</td>
<td><a href="mailto:tyler2@capitalheatingandcooling.com">tyler2@capitalheatingandcooling.com</a></td>
<td>360-890-2737</td>
</tr>
<tr>
<td>Colton Reeves</td>
<td>Thompson Electrical Constructors</td>
<td><a href="mailto:Colton@ThompsonConstructors.com">Colton@ThompsonConstructors.com</a></td>
<td>253-281-0567</td>
</tr>
<tr>
<td>Gui Zum</td>
<td>Air Fabric</td>
<td>Gui1 @ AirFabric.com</td>
<td>706-259-0890</td>
</tr>
<tr>
<td>Dan Heuerstein</td>
<td>Snyder</td>
<td><a href="mailto:DanHeuerstein@SnyderBulbs.com">DanHeuerstein@SnyderBulbs.com</a></td>
<td>425-343-6252</td>
</tr>
<tr>
<td>Miles Johnson</td>
<td>Western Ventures</td>
<td><a href="mailto:bids@westernventures.com">bids@westernventures.com</a></td>
<td>760-579-1380</td>
</tr>
<tr>
<td>Clayton Torgerson</td>
<td>Neeley Construction</td>
<td><a href="mailto:bids@neeleycorp.com">bids@neeleycorp.com</a></td>
<td>253-720-4369</td>
</tr>
<tr>
<td>Curt Collins</td>
<td>TRS Mechanical</td>
<td><a href="mailto:Curt@trsmechanical.com">Curt@trsmechanical.com</a></td>
<td>253-260-2594</td>
</tr>
<tr>
<td>Charles Weekes</td>
<td>Westmark Construction</td>
<td><a href="mailto:bids@westmarkconstruction.com">bids@westmarkconstruction.com</a></td>
<td>253-564-4620</td>
</tr>
<tr>
<td>Name</td>
<td>Company:</td>
<td>Email:</td>
<td>Phone #</td>
</tr>
<tr>
<td>-----------------</td>
<td>-------------------</td>
<td>------------------------------</td>
<td>---------------</td>
</tr>
<tr>
<td>Steve Ness</td>
<td>Rivers Co. - Daup</td>
<td><a href="mailto:sness@rivener.city">sness@rivener.city</a></td>
<td>360-425-584-7089</td>
</tr>
<tr>
<td>Paul Orth</td>
<td>JA Morris Construction</td>
<td><a href="mailto:paul@jamarisconstruction.com">paul@jamarisconstruction.com</a></td>
<td>360-556-4439</td>
</tr>
<tr>
<td>Rebecca Reule</td>
<td></td>
<td><a href="mailto:rebecca@jamarisconstruction.com">rebecca@jamarisconstruction.com</a></td>
<td>4126-556-0116</td>
</tr>
<tr>
<td>Gay Hamilton</td>
<td>crescent Mechanical</td>
<td><a href="mailto:abby@crescentmechanicalinc.com">abby@crescentmechanicalinc.com</a></td>
<td></td>
</tr>
</tbody>
</table>
City of Tacoma  
Beacon Activity Center HVAC Upgrade and Exterior Renovation  
Specification No. PW22-0287F  

PRE-BID MEETING  
Agenda  
Meeting Date: Tuesday, January 24, 2023

1) General  
a) Introductions – Sign Up Sheet  
b) Review project site  
c) Major components of the project include, but not limited to:  
   • Building: 
     (1) Window replacement  
     (2) New siding/roofing  
     (3) New restroom finishes  
     (4) HVAC work, demo of gas-fired boiler and radiators  
     (5) Electrical work, including new underground electrical vault & 3ph transformer  
d) The estimate for the project is $1.6 million  
e) Schedule for completion:  
   • NTP anticipated April 2023  
   • 100 Calendar Days for construction.  
   • Anticipated substantial completion date August 2023.  
f) Permits  
   • Paid for by Owner  
     (1) Building  
     (2) Tacoma Power -new electrical service costs  
   • Paid for by Contractor  
     (1) Mechanical  
     (2) Electrical  
     (3) Other

2) Bid Period  
a) Bidder Questions & Substitution Requests are due by Friday January 27 at Noon. Must be e-mailed to Tina Eide, Senior Buyer. teide@cityoftacoma.org  
b) Final addenda for the project will be issued by Tuesday January 31st. Ensure that you are signed up on the Planholders List to receive notice of any addendums.  
c) Bid submittals are due 11 a.m. February 7th. Ensure all proposal forms included in the Project Manual are submitted with the bid. Ensure bids are submitted to the Purchasing Division located at the Tacoma Public Utilities Building.

3) City Programs  
a) Local Employment and Apprenticeship Training Program (LEAP) is 15%.  
b) EIC Program: 5% MBE, 2% WBE 5% SBE.

4) Tour building site

5) Questions?
1. SW corner of roof – facing South

![Image of SW corner of roof facing South]

2. SE corner of roof – facing East

![Image of SE corner of roof facing East]
3. West roof facing North

4. East roof facing North
5. Roof core sample from the SW corner (3 photos)
6. Exterior access to steam boiler room
7. Existing steam boiler

8. View of crawl space conditions accessible from the Stair to Boiler area
GENERAL DEMOLITION NOTES

1. DEMOLITION WORK IS INTENDED TO ONLY GIVE A GENERAL REPRESENTATION OF THE DEMOLITION EQUIPMENT AND METHODS TO BE USED. THE ACTUAL DEMOLITION WORK SHALL BE PERFORMED TO MEET THE SPECIFICATIONS.

2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW AND COMPLY WITH ALL GENERAL SPECIFICATIONS AND TO IDENTIFY ALL DEMOLITION WORK AND TO INCLUDE ALL COSTS FOR DEMOLITION & RELATED WORK.

3. EXIST. EQUIPMENT, MACHINES, PIPE, DUCTS, PIPING SYSTEMS, PLUMBING SYSTEMS, ETC. NOT SHOWN EXCEPT WHERE SPECIFIED OR SHOWN ON SHEETS

4. ALL EXISTING ITEMS NOT BEING REUSED SHALL BE REMOVED. THIS INCLUDES SUCH ITEMS AS ELECTRICAL PANELS, PANEL BOARDS, WATER TANKS, STAINDLESS STEEL EMBRACES,تصرفات،アルミパイプ، AND RELATED ACCESSORIES.

5. REMOVE ALL WALL, CEILING, AND FLOOR OPENINGS LEFT BY REMOVAL OF EXISTING ITEMS. PATCH SO AS TO MATCH SURROUND FINISHES.

6. PROVIDE TEMPORARY DIVERTORS OF ALL SYSTEMS TO ALLOW CONTINUATION OF ALL SYSTEMS UNTIL THE FINAL COMPLETE SYSTEMS ARE INSTALLED AND CONNECTED.

MECHANICAL GENERAL NOTES

1. DEMOLITION WORK IS NOT LIMITED TO DEMOLITION DRAWINGS AND SPECIFICATIONS AS SHOWN AND MAY INCLUDE ADDITIONAL EXISTING ITEMS NOT SHOWN ON THE SHEETS. THE CONTRACTOR SHALL PROVIDE A GENERAL REPRESENTATION OF THE DEMOLITION WORK AND THE SPECIFICATIONS.

2. THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING THE DEMO SHEETS AND PROVIDING ALL DEMOLITION WORK TO MEET THE SPECIFICATIONS.

3. DEMOLITION WORK IS INTENDED TO ONLY GIVE A GENERAL REPRESENTATION OF THE DEMOLITION EQUIPMENT AND METHODS TO BE USED. THE ACTUAL DEMOLITION WORK SHALL BE PERFORMED TO MEET THE SPECIFICATIONS.

4. PROVIDE EXHAUST DUCTS SHALL BE CONSTRUCTED TO -1" PRESSURE CLASS. SEAL DUCTS PER ARCHITECT PRIOR TO BEGINNING WORK.

5. ALL DUCTWORK SHALL BE RUN CONCEALED, UNLESS OTHERWISE SPECIFIED OR SHOWN ON SHEETS.

6. PROVIDE ALL EXISTING DUCTS IN ALL AREAS SHALL BE CONSTRUCTED TO MEET THE SPECIFICATIONS. PROVIDE ALL W/STRUCTURE & OTHER ITEMS. SUCH DUCTS SHALL MAINTAIN SYMMETRY OF AIR TERMINALS & SHALL HAVE PRIOR APPROVAL OF ARCHITECT.

7. DUCT WORK, DUCT ACCESS DOORS AT ALL DAMPS & BDD'S. PROVIDE FLEX CONNECTORS IN DUCT CONNECTIONS TO ALL EQUIPMENT.

8. VERIFY MOUNTING HEIGHTS OF ALL EXPOSED DUCTWORK & WALL GRILLES/WALL CAPS W/ STRUCTURE & OTHER ITEMS.

9. VERIFY LOCATIONS OF ITEMS INSTALLED IN CEILINGS WITH ARCHITECTURAL REFLECTED PLANS.

10. ALL DUCT PENETRATIONS THRU WALLS AND FLOORS SHALL BE PROVIDED WITH CLOSURE COLLARS, W/ ThrAPER & REMOVAL RANCH PIPE DOWN. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE & SELECT FINAL LOCATIONS OF AIR TERMINALS.

11. ALL DUCTWORK SHALL BE RUN CONCEALED, UNLESS OTHERWISE SPECIFIED OR SHOWN ON SHEETS.

12. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW SITE CONDITIONS AND TO IDENTIFY ALL MECHANICAL ITEMS TO BE REMOVED. SEE GENERAL NOTES, DRAWING NOTES & DEMOLITION WORK, AND INCLUDE IN HIS BID ALL COSTS FOR DEMOLITION & DISPOSAL.

13. PROVIDE GENERAL NOTES, DRAWING NOTES & DEMOLITION WORK IS NOT LIMITED TO MECHANICAL DRAWINGS AND DIVISION 20, 21, 22, 23, 24.

14. PROVIDE MECHANICAL LEGEND & NOTES

15. PROVIDE ALL EXISTING DUCTS IN ALL AREAS SHALL BE CONSTRUCTED TO MEET THE SPECIFICATIONS. PROVIDE ALL W/STRUCTURE & OTHER ITEMS. SUCH DUCTS SHALL MAINTAIN SYMMETRY OF AIR TERMINALS & SHALL HAVE PRIOR APPROVAL OF ARCHITECT.

16. ALL DUCT PENETRATIONS THRU WALLS AND FLOORS SHALL BE PROVIDED WITH CLOSURE COLLARS, W/ ThrAPER & REMOVAL RANCH PIPE DOWN.

17. PROVIDE ALL REMOVED DUCTS AND PLUMBING ARE NOTED TO SHOW WHERE THE REMOVED DUCTS ARE NOT SHOWN. PROVIDE THE FOLLOWING ITEMS DUCTS & PLUMBING:

- DUCTS TO AIR
- PIPE DIA
- PIPE WALL THICKNESS
- pipe Nominal Size, Unlined
- pipe Nominal Size, Lined
- pipe Nominal Size, Sizing For Net Free Area
- pipe Nominal Size, Lined Duct (Dimensions For Net Free Area)
- pipe Nominal Size, Lined Duct (Dimensions For Net Free Area)
1. **LOAD CALCULATIONS, C403.1.2:** LOAD CALCULATIONS HAVE BEEN PERFORMED IN ACCORDANCE WITH WSEC.

2. **EQUIPMENT/SYSTEM SIZING, C403.3.1:** EQUIPMENT CAPACITIES ARE NO GREATER THAN THE SMALLEST AVAILABLE SIZE THAT EXCEEDS THE CALCULATED LOADS.

3. **MINIMUM EQUIPMENT EFFICIENCY, C406.2.2:** EQUIPMENT EFFICIENCY SHALL EXCEED ALL MINIMUM REQUIREMENTS OF TABLES C406.2.2(1) THROUGH (4). FRACTION HP FAN MOTORS 1/12HP OR GREATER UP TO THE FOLLOWING:

   - 1 HP
   - 2 HP
   - 2.5 HP
   - 3 HP
   - 4 HP
   - 5 HP
   - 10 HP

4. **AUTOMATIC START, C403.4.2.3:** AUTOMATIC START CONTROLS SHALL BE PROVIDED FOR EACH HVAC SYSTEM (DOAS).

5. **VENTILATION AIR HEATING CONTROL, C403.7.3:** UNITS PROVIDING VENTILATION AIR TO MULTIPLE ZONES SHALL BE CONTROLLED TO PROVIDE ENOUGH VOLUME OF HEATING AIR TO EACH ZONE. UNITS PROVIDING VENTILATION AIR TO EACH ZONE SEPARATELY SHALL BE CONTROLLED TO PROVIDE ENOUGH VOLUME OF HEATING AIR TO EACH ZONE.

6. **REQUIREMENTS OF TABLES C405.8(1) THROUGH (4) . FRACTION HP FAN MOTORS 1/12HP OR GREATER UP TO THE FOLLOWING:

   - 1 HP
   - 2 HP
   - 2.5 HP
   - 3 HP
   - 4 HP
   - 5 HP
   - 10 HP

7. **EXHAUST AND BOUNDARY RECOVERY:**

   - 10% FOR SPACE 
   - 15% FOR SPACE 
   - 20% FOR SPACE 
   - 25% FOR SPACE 
   - 30% FOR SPACE 
   - 35% FOR SPACE 

8. **I-PACK SYSTEMS:**

   - 10% FOR SPACE 
   - 15% FOR SPACE 
   - 20% FOR SPACE 
   - 25% FOR SPACE 
   - 30% FOR SPACE 
   - 35% FOR SPACE 

9. **FANS AND FAN CONTROL:**

   - 10% FOR SPACE 
   - 15% FOR SPACE 
   - 20% FOR SPACE 
   - 25% FOR SPACE 
   - 30% FOR SPACE 
   - 35% FOR SPACE 

10. **EQUIPMENT DAMPER, PROVIDE DAMPERS WITH LOWEST LEAKAGE RATE AVAILABLE FROM THE EQUIPMENT MANUFACTURER.**

11. **DEADBAND, C403.4.1.2:** THERMOSTATIC CONTROLS SHALL BE CONFIGURED WITH 5°F MINIMUM DEADBAND LIMITATIONS PER C403.8.1.

12. **THERMOSTATIC CONTROLS, C403.4.1:** WHERE ADJACENT ZONES CONNECTED BY PERMANENT OPENINGS WITH AREA GREATER THAN 10% OF EITHER ZONE SF, PROVIDE CONTROLS TO PREVENT ALREADY ZONES FROM BEING SURPRISED BY OCCUPANTS IN ADJACENT ZONES. THIS WILL BE RECOMMENDED TO THE ZONE WITH THE DEGREE OF OCCUPANCY.

13. **MINIMUM EQUIPMENT EFFICIENCY, C406.2.2:** EQUIPMENT EFFICIENCY SHALL EXCEED ALL MINIMUM REQUIREMENTS OF TABLES C406.2.2(1) THROUGH (4). FRACTION HP FAN MOTORS 1/12HP OR GREATER UP TO THE FOLLOWING:

   - 1 HP
   - 2 HP
   - 2.5 HP
   - 3 HP
   - 4 HP
   - 5 HP
   - 10 HP

14. **DECOUPLED DOAS SUPPLY AIR, C403.3.5.3:** DOAS SUPPLY AIR SHALL BE DELIVERED DIRECTLY TO THE AREAS SERVED AND NOT THROUGH TRANSIT ZONES OR OTHER ZONES.

15. **MULTIPLE ZONE DOAS, C403.6.1:** FOR ZONES SERVING MULTIPLE ZONES, ZONES SHALL COMPLY WITH C392.3.1 AND C392.3.2(1) AND (2) AND REQUIREMENTS OF THE ZONES SERVING THE CORRESPONDING ZONES.

16. **THERMOSTATIC CONTROLS, C403.4.1:** WHERE ADJACENT ZONES CONNECTED BY PERMANENT OPENINGS WITH AREA GREATER THAN 10% OF EITHER ZONE SF, PROVIDE CONTROLS TO PREVENT ALREADY ZONES FROM BEING SURPRISED BY OCCUPANTS IN ADJACENT ZONES. THIS WILL BE RECOMMENDED TO THE ZONE WITH THE DEGREE OF OCCUPANCY.

17. **LOAD CALCULATIONS, C403.1.2:** LOAD CALCULATIONS HAVE BEEN PERFORMED IN ACCORDANCE WITH WSEC.

18. **EQUIPMENT/SYSTEM SIZING, C403.3.1:** EQUIPMENT CAPACITIES ARE NO GREATER THAN THE SMALLEST AVAILABLE SIZE THAT EXCEEDS THE CALCULATED LOADS.

19. **MINIMUM EQUIPMENT EFFICIENCY, C406.2.2:** EQUIPMENT EFFICIENCY SHALL EXCEED ALL MINIMUM REQUIREMENTS OF TABLES C406.2.2(1) THROUGH (4).

20. **AUTOMATIC START, C403.4.2.3:** AUTOMATIC START CONTROLS SHALL BE PROVIDED FOR EACH HVAC SYSTEM (DOAS).

21. **DECOUPLED DOAS SUPPLY AIR, C403.3.5.3:** DOAS SUPPLY AIR SHALL BE DELIVERED DIRECTLY TO THE AREAS SERVED AND NOT THROUGH TRANSIT ZONES OR OTHER ZONES.

22. **MULTIPLE ZONE DOAS, C403.6.1:** FOR ZONES SERVING MULTIPLE ZONES, ZONES SHALL COMPLY WITH C392.3.1 AND C392.3.2(1) AND (2) AND REQUIREMENTS OF THE ZONES SERVING THE CORRESPONDING ZONES.

23. **THERMOSTATIC CONTROLS, C403.4.1:** WHERE ADJACENT ZONES CONNECTED BY PERMANENT OPENINGS WITH AREA GREATER THAN 10% OF EITHER ZONE SF, PROVIDE CONTROLS TO PREVENT ALREADY ZONES FROM BEING SURPRISED BY OCCUPANTS IN ADJACENT ZONES. THIS WILL BE RECOMMENDED TO THE ZONE WITH THE DEGREE OF OCCUPANCY.

24. **EXHAUST AND BOUNDARY RECOVERY:**

   - 10% FOR SPACE 
   - 15% FOR SPACE 
   - 20% FOR SPACE 
   - 25% FOR SPACE 
   - 30% FOR SPACE 
   - 35% FOR SPACE 

25. **DECOUPLED DOAS SUPPLY AIR, C403.3.5.3:** DOAS SUPPLY AIR SHALL BE DELIVERED DIRECTLY TO THE AREAS SERVED AND NOT THROUGH TRANSIT ZONES OR OTHER ZONES.

26. **MULTIPLE ZONE DOAS, C403.6.1:** FOR ZONES SERVING MULTIPLE ZONES, ZONES SHALL COMPLY WITH C392.3.1 AND C392.3.2(1) AND (2) AND REQUIREMENTS OF THE ZONES SERVING THE CORRESPONDING ZONES.

27. **THERMOSTATIC CONTROLS, C403.4.1:** WHERE ADJACENT ZONES CONNECTED BY PERMANENT OPENINGS WITH AREA GREATER THAN 10% OF EITHER ZONE SF, PROVIDE CONTROLS TO PREVENT ALREADY ZONES FROM BEING SURPRISED BY OCCUPANTS IN ADJACENT ZONES. THIS WILL BE RECOMMENDED TO THE ZONE WITH THE DEGREE OF OCCUPANCY.

28. **LOAD CALCULATIONS, C403.1.2:** LOAD CALCULATIONS HAVE BEEN PERFORMED IN ACCORDANCE WITH WSEC.

29. **EQUIPMENT/SYSTEM SIZING, C403.3.1:** EQUIPMENT CAPACITIES ARE NO GREATER THAN THE SMALLEST AVAILABLE SIZE THAT EXCEEDS THE CALCULATED LOADS.

30. **MINIMUM EQUIPMENT EFFICIENCY, C406.2.2:** EQUIPMENT EFFICIENCY SHALL EXCEED ALL MINIMUM REQUIREMENTS OF TABLES C406.2.2(1) THROUGH (4).

31. **AUTOMATIC START, C403.4.2.3:** AUTOMATIC START CONTROLS SHALL BE PROVIDED FOR EACH HVAC SYSTEM (DOAS).

32. **DECOUPLED DOAS SUPPLY AIR, C403.3.5.3:** DOAS SUPPLY AIR SHALL BE DELIVERED DIRECTLY TO THE AREAS SERVED AND NOT THROUGH TRANSIT ZONES OR OTHER ZONES.

33. **MULTIPLE ZONE DOAS, C403.6.1:** FOR ZONES SERVING MULTIPLE ZONES, ZONES SHALL COMPLY WITH C392.3.1 AND C392.3.2(1) AND (2) AND REQUIREMENTS OF THE ZONES SERVING THE CORRESPONDING ZONES.

34. **THERMOSTATIC CONTROLS, C403.4.1:** WHERE ADJACENT ZONES CONNECTED BY PERMANENT OPENINGS WITH AREA GREATER THAN 10% OF EITHER ZONE SF, PROVIDE CONTROLS TO PREVENT ALREADY ZONES FROM BEING SURPRISED BY OCCUPANTS IN ADJACENT ZONES. THIS WILL BE RECOMMENDED TO THE ZONE WITH THE DEGREE OF OCCUPANCY.

35. **LOAD CALCULATIONS, C403.1.2:** LOAD CALCULATIONS HAVE BEEN PERFORMED IN ACCORDANCE WITH WSEC.

36. **EQUIPMENT/SYSTEM SIZING, C403.3.1:** EQUIPMENT CAPACITIES ARE NO GREATER THAN THE SMALLEST AVAILABLE SIZE THAT EXCEEDS THE CALCULATED LOADS.

37. **MINIMUM EQUIPMENT EFFICIENCY, C406.2.2:** EQUIPMENT EFFICIENCY SHALL EXCEED ALL MINIMUM REQUIREMENTS OF TABLES C406.2.2(1) THROUGH (4).

38. **AUTOMATIC START, C403.4.2.3:** AUTOMATIC START CONTROLS SHALL BE PROVIDED FOR EACH HVAC SYSTEM (DOAS).

39. **DECOUPLED DOAS SUPPLY AIR, C403.3.5.3:** DOAS SUPPLY AIR SHALL BE DELIVERED DIRECTLY TO THE AREAS SERVED AND NOT THROUGH TRANSIT ZONES OR OTHER ZONES.

40. **MULTIPLE ZONE DOAS, C403.6.1:** FOR ZONES SERVING MULTIPLE ZONES, ZONES SHALL COMPLY WITH C392.3.1 AND C392.3.2(1) AND (2) AND REQUIREMENTS OF THE ZONES SERVING THE CORRESPONDING ZONES.

41. **THERMOSTATIC CONTROLS, C403.4.1:** WHERE ADJACENT ZONES CONNECTED BY PERMANENT OPENINGS WITH AREA GREATER THAN 10% OF EITHER ZONE SF, PROVIDE CONTROLS TO PREVENT ALREADY ZONES FROM BEING SURPRISED BY OCCUPANTS IN ADJACENT ZONES. THIS WILL BE RECOMMENDED TO THE ZONE WITH THE DEGREE OF OCCUPANCY.

42. **LOAD CALCULATIONS, C403.1.2:** LOAD CALCULATIONS HAVE BEEN PERFORMED IN ACCORDANCE WITH WSEC.

43. **EQUIPMENT/SYSTEM SIZING, C403.3.1:** EQUIPMENT CAPACITIES ARE NO GREATER THAN THE SMALLEST AVAILABLE SIZE THAT EXCEEDS THE CALCULATED LOADS.
### AIR INLET & OUTLET SCHEDULE

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>BASIS OF DESIGN</th>
<th>CFM</th>
<th>ESP</th>
<th>MAX. LOAD</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### VRF INDOOR HEAT PUMP SCHEDULE

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>BASIS OF DESIGN</th>
<th>CFM</th>
<th>ESP</th>
<th>MAX. LOAD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### VRF OUTDOOR HEAT PUMP SCHEDULE

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>BASIS OF DESIGN</th>
<th>CFM</th>
<th>ESP</th>
<th>MAX. LOAD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### DOAS ENERGY RECOVERY VENTILATOR UNIT

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>BASIS OF DESIGN</th>
<th>CFM</th>
<th>ESP</th>
<th>MAX. LOAD</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### FAN SCHEDULE

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>SPECIFICATION AND SERIES NUMBER</th>
<th>CFM</th>
<th>ESP</th>
<th>MAX. LOAD</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### MISCELLANEOUS EQUIPMENT SCHEDULE

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>BASIS OF DESIGN</th>
<th>CFM</th>
<th>ESP</th>
<th>MAX. LOAD</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
GENERAL NOTES:
1. SEE MECHANICAL DEMOLITION NOTES SHEET M0.2.
2. AS-BUILTS DO NOT EXIST. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS PRIOR TO BEGINNING WORK.
3. REMOVE ALL STEAM/CONDENSATE PIPING COMPLETE THROUGHOUT THE BUILDING, NOT LIMITED TO AREAS SHOWN ON PLANS.
4. REMOVE EXISTING RADIATOR, ASSOCIATED PIPING, SUPPORTS & ACCESSORIES. CAP OFF PIPING IN CONCEALED LOCATION.
5. NOT ALL KEYED NOTES USED THIS SHEET.

KEYED NOTES:
1. REMOVE EXISTING RADIATOR, ASSOCIATED PIPING, SUPPORTS & ACCESSORIES. CAP OFF PIPING IN CONCEALED LOCATION.
2. REMOVE EXISTING WALL MOUNTED EXHAUST FAN. INFILL WALL, SEE ARCH PLANS.
3. REMOVE EXISTING ROOF INTAKE. INFILL ROOF, SEE ARCH PLANS.
4. REMOVE EXISTING PORTABLE AC UNIT. PRIOR TO REMOVAL, CONFIRM WITH OWNER IF EQUIPMENT SHALL BE SALVAGED & DELIVERED TO LOCATION SELECTED BY OWNER.
5. REMOVE EXISTING DUCTWORK, ASSOCIATED GRILLE, SUPPORTS & ACCESSORIES.
6. REMOVE EXISTING WALL MOUNTED EXHAUST FAN. INFILL WALL, SEE ARCH PLANS.
GENERAL NOTES:
1. MECHANICAL DEMOLITION NOTES SHEET M0.2.
2. AS-BUILTS DO NOT EXIST. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS PRIOR TO BEGINNING WORK.
3. REMOVE ALL STEAM PIPING COMPLETE THROUGHOUT THE ENTIRE BUILDING, NOT LIMITED TO AREAS SHOWN ON PLANS.
4. COORDINATE WITH OWNER TO CONFIRM CAPTURING SHUTDOWN TO ACFIOMATE WORK.
5. NOT ALL KEYED NOTES USED ON THIS SHEET.

KEYED NOTES:
1. REMOVE EXISTING RADIATOR, ASSOCIATED PIPING, SUPPORTS & ACCESSORIES. CAP OFF PIPING IN CONCEALED LOCATION.
2. REMOVE EXISTING AIR HANDLER, ASSOCIATED PIPING, DUCTWORK, SUPPORTS, CONTROLS & ACCESSORIES.
3. REMOVE EXISTING ROOF INTAKE. INFILL ROOF, SEE ARCH PLANS.
4. REMOVE EXISTING PORTABLE AC UNIT. PRIOR TO REMOVAL, CONFIRM OWNER’S INTENT TO SALVAGE & DELIVER TO LOCATION SELECTED BY OWNER.
5. REMOVE EXISTING WALL MOUNTED EXHAUST FAN. INFILL WALL, SEE ARCH PLANS.
6. REMOVE EXISTING DUCTWORK, ASSOCIATED GRILLE, SUPPORTS & ACCESSORIES.
7. REMOVE EXISTING WALL MOUNTED EXHAUST FAN. INFILL WALL, SEE ARCH PLANS.

GENERAL NOTES:
1. SEE MECHANICAL DEMOLITION NOTES SHEET M0.2.
2. AS-BUILTS DO NOT EXIST. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS PRIOR TO BEGINNING WORK.
3. REMOVE ALL STEAM PIPING COMPLETE THROUGHOUT THE ENTIRE BUILDING, NOT LIMITED TO AREAS SHOWN ON PLANS.
4. COORDINATE WITH GC FOR CEILING CUTTING/PATCHING TO ACCOMMODATE WORK.
5. NOT ALL KEYED NOTES USED ON THIS SHEET.

KEYED NOTES:
1. REMOVE EXISTING RADIATOR, ASSOCIATED PIPING, SUPPORTS & ACCESSORIES. CAP OFF PIPING IN CONCEALED LOCATION.
2. REMOVE EXISTING AIR HANDLER, ASSOCIATED PIPING, DUCTWORK, SUPPORTS, CONTROLS & ACCESSORIES.
3. REMOVE EXISTING ROOF INTAKE. INFILL ROOF, SEE ARCH PLANS.
4. REMOVE EXISTING PORTABLE AC UNIT. PRIOR TO REMOVAL, CONFIRM OWNER'S INTENT TO SALVAGE & DELIVER TO LOCATION SELECTED BY OWNER.
5. REMOVE EXISTING WALL MOUNTED EXHAUST FAN. INFILL WALL, SEE ARCH PLANS.
6. REMOVE EXISTING WALL MOUNTED EXHAUST FAN. INFILL WALL, SEE ARCH PLANS.
7. REMOVE EXISTING DUCTWORK, ASSOCIATED GRILLE, SUPPORTS & ACCESSORIES.
8. REMOVE EXISTING WALL MOUNTED EXHAUST FAN. INFILL WALL, SEE ARCH PLANS.

GENERAL NOTES:
1. SEE MECHANICAL DEMOLITION NOTES SHEET M0.2.
2. AS-BUILTS DO NOT EXIST. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS PRIOR TO BEGINNING WORK.
3. REMOVE ALL STEAM PIPING COMPLETE THROUGHOUT THE ENTIRE BUILDING, NOT LIMITED TO AREAS SHOWN ON PLANS.
4. COORDINATE WITH OWNER TO CONFIRM CAPTURING SHUTDOWN TO ACCOMMODATE WORK.
5. NOT ALL KEYED NOTES USED ON THIS SHEET.

KEYED NOTES:
1. REMOVE EXISTING RADIATOR, ASSOCIATED PIPING, SUPPORTS & ACCESSORIES. CAP OFF PIPING IN CONCEALED LOCATION.
2. REMOVE EXISTING AIR HANDLER, ASSOCIATED PIPING, DUCTWORK, SUPPORTS, CONTROLS & ACCESSORIES.
3. REMOVE EXISTING ROOF INTAKE. INFILL ROOF, SEE ARCH PLANS.
4. REMOVE EXISTING PORTABLE AC UNIT. PRIOR TO REMOVAL, CONFIRM OWNER’S INTENT TO SALVAGE & DELIVER TO LOCATION SELECTED BY OWNER.
5. REMOVE EXISTING WALL MOUNTED EXHAUST FAN. INFILL WALL, SEE ARCH PLANS.
6. REMOVE EXISTING WALL MOUNTED EXHAUST FAN. INFILL WALL, SEE ARCH PLANS.
7. REMOVE EXISTING DUCTWORK, ASSOCIATED GRILLE, SUPPORTS & ACCESSORIES.
8. REMOVE EXISTING WALL MOUNTED EXHAUST FAN. INFILL WALL, SEE ARCH PLANS.

GENERAL NOTES:
1. SEE MECHANICAL DEMOLITION NOTES SHEET M0.2.
2. AS-BUILTS DO NOT EXIST. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS PRIOR TO BEGINNING WORK.
3. REMOVE ALL STEAM PIPING COMPLETE THROUGHOUT THE ENTIRE BUILDING, NOT LIMITED TO AREAS SHOWN ON PLANS.
4. COORDINATE WITH OWNER TO CONFIRM CAPTURING SHUTDOWN TO ACCOMMODATE WORK.
5. NOT ALL KEYED NOTES USED ON THIS SHEET.

KEYED NOTES:
1. REMOVE EXISTING RADIATOR, ASSOCIATED PIPING, SUPPORTS & ACCESSORIES. CAP OFF PIPING IN CONCEALED LOCATION.
2. REMOVE EXISTING AIR HANDLER, ASSOCIATED PIPING, DUCTWORK, SUPPORTS, CONTROLS & ACCESSORIES.
3. REMOVE EXISTING ROOF INTAKE. INFILL ROOF, SEE ARCH PLANS.
4. REMOVE EXISTING PORTABLE AC UNIT. PRIOR TO REMOVAL, CONFIRM OWNER’S INTENT TO SALVAGE & DELIVER TO LOCATION SELECTED BY OWNER.
5. REMOVE EXISTING WALL MOUNTED EXHAUST FAN. INFILL WALL, SEE ARCH PLANS.
6. REMOVE EXISTING WALL MOUNTED EXHAUST FAN. INFILL WALL, SEE ARCH PLANS.
7. REMOVE EXISTING DUCTWORK, ASSOCIATED GRILLE, SUPPORTS & ACCESSORIES.
8. REMOVE EXISTING WALL MOUNTED EXHAUST FAN. INFILL WALL, SEE ARCH PLANS.
GENERAL NOTES:
1. SEE GENERAL MECHANICAL NOTES, SHEET M0.1.
2. COORDINATE DUCTWORK WITH EXISTING ELEMENTS, INCLUDING BUT NOT LIMITED TO, FIRE SPRINKLER PIPING, LIGHTING, AND STRUCTURE.
3. LOCATE MOUNTING HEIGHTS OF ALL EXPOSED DUCTWORK IN ARCHITECT PRIOR TO CONSTRUCTION.
4. PROVIDE TRANSITIONS AT DUCT CONNECTIONS TO EQUIPMENT TO MATCH UNIT CONNECTION SIZES.
5. VERIFY MOUNTING HEIGHTS OF ALL EXPOSED DUCTWORK IN ARCHITECT PRIOR TO CONSTRUCTION.
6. VERIFY CONNECTIONS TO EQUIPMENT TO PROVIDE BEST FINISHED APPEARANCE.
7. SEE VRF SCHEMATIC ON SHEET M4.4 FOR RG/RL PIPE SIZES.
8. NOT ALL KEYED NOTES MAY BE USED ON ALL SHEETS.

KEYED NOTES:
1. HEAT PUMP LOCATED IN CRAWL SPACE UNDER STAGE.
2. LOCATE THE PUMPS AS HIGH AND TIGHT TO EXTERIOR WALL AS POSSIBLE. LOCATION IS APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY EXACT LOCATION PRIOR TO BEGINNING WORK.
3. RE-USE (E) WALL OPENINGS. MODIFY AS REQUIRED TO ACCOMMODATE NEW LOUVER.
4. RE-USE (E) FLOOR PENETRATIONS. PATCH FLOOR AS NECESSARY.
5. INTERLOCK W/ HP-26A & HP-26B, TO BE OPEN WHEN UNITS ARE IN THE OCCUPIED MODE.

SCALE: 1/8" = 1'-0"
GENERAL NOTES:
1. SEE GENERAL MECHANICAL NOTES, SHEET M0.1.
2. ALL WORK MUST BE COMPLETE PRIOR TO FIELD VERIFY EXISTING CONDITIONS PRIOR TO BEGINNING WORK.
3. LOCATE DUCTWORK AS HIGH AND TIGHT TO EXTERIOR WALL AS POSSIBLE. LOCATION IS APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY EXACT LOCATION PRIOR TO BEGINNING WORK.
4. VERIFY MOUNTING HEIGHTS OF ALL EXPOSED DUCTWORK WITH ARCHITECT PRIOR TO CONSTRUCTION.
5. VERIFY HEIGHTS OF ALL WALL OUTLETS/INLETS WITH ARCHITECT PRIOR TO CONSTRUCTION.
6. PROVIDE TRANSITIONS AT DUCT CONNECTIONS TO EQUIPMENT TO MATCH UNIT CONNECTION SIZES.
7. SEE VRF SCHEMATIC ON SHEET M4.4 FOR RG/RL PIPE SIZES.
8. NOT ALL KEYED NOTES MAY BE USED ON ALL SHEETS.

KEYED NOTES:
1. DUCTWORK RUNS EXPOSED IN THIS ROOM; CAREFULLY FABRICATE & ASSEMBLE DUCTWORK TO PROVIDE BEST FINISHED APPEARANCE.
2. LOCATE ELECTRICAL WIRING, LIGHTING, AND STRUCTURE.
3. COORDINATE DUCTWORK LOCATION WITH EXISTING ELEMENTS, INCLUDING BUT NOT LIMITED TO, FIRE SPRINKLER PIPING, LIGHTING, AND STRUCTURE.
4. PROVIDE TRANSITIONS AT DUCT CONNECTIONS TO EQUIPMENT TO MATCH UNIT CONNECTION SIZES.
5. LOCATE DUCTWORK AS HIGH AND TIGHT TO EXTERIOR WALL AS POSSIBLE.
6. LOCATE DUCTWORK AS HIGH AND TIGHT TO EXTERIOR WALL AS POSSIBLE.
7. LOCATE DUCTWORK AS HIGH AND TIGHT TO EXTERIOR WALL AS POSSIBLE.
8. LOCATE DUCTWORK AS HIGH AND TIGHT TO EXTERIOR WALL AS POSSIBLE.
9. LOCATE DUCTWORK AS HIGH AND TIGHT TO EXTERIOR WALL AS POSSIBLE.
10. LOCATE DUCTWORK AS HIGH AND TIGHT TO EXTERIOR WALL AS POSSIBLE.

GENERAL NOTES:
1. SEE GENERAL MECHANICAL NOTES, SHEET M0.1.
2. ALL WORK MUST BE COMPLETE PRIOR TO FIELD VERIFY EXISTING CONDITIONS PRIOR TO BEGINNING WORK.
3. LOCATE DUCTWORK AS HIGH AND TIGHT TO EXTERIOR WALL AS POSSIBLE. LOCATION IS APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY EXACT LOCATION PRIOR TO BEGINNING WORK.
4. VERIFY MOUNTING HEIGHTS OF ALL EXPOSED DUCTWORK WITH ARCHITECT PRIOR TO CONSTRUCTION.
5. VERIFY HEIGHTS OF ALL WALL OUTLETS/INLETS WITH ARCHITECT PRIOR TO CONSTRUCTION.
6. PROVIDE TRANSITIONS AT DUCT CONNECTIONS TO EQUIPMENT TO MATCH UNIT CONNECTION SIZES.
7. SEE VRF SCHEMATIC ON SHEET M4.4 FOR RG/RL PIPE SIZES.
8. NOT ALL KEYED NOTES MAY BE USED ON ALL SHEETS.

KEYED NOTES:
1. DUCTWORK RUNS EXPOSED IN THIS ROOM; CAREFULLY FABRICATE & ASSEMBLE DUCTWORK TO PROVIDE BEST FINISHED APPEARANCE.
2. LOCATE ELECTRICAL WIRING, LIGHTING, AND STRUCTURE.
3. COORDINATE DUCTWORK LOCATION WITH EXISTING ELEMENTS, INCLUDING BUT NOT LIMITED TO, FIRE SPRINKLER PIPING, LIGHTING, AND STRUCTURE.
4. PROVIDE TRANSITIONS AT DUCT CONNECTIONS TO EQUIPMENT TO MATCH UNIT CONNECTION SIZES.
5. LOCATE DUCTWORK AS HIGH AND TIGHT TO EXTERIOR WALL AS POSSIBLE.
6. LOCATE DUCTWORK AS HIGH AND TIGHT TO EXTERIOR WALL AS POSSIBLE.
7. LOCATE DUCTWORK AS HIGH AND TIGHT TO EXTERIOR WALL AS POSSIBLE.
8. LOCATE DUCTWORK AS HIGH AND TIGHT TO EXTERIOR WALL AS POSSIBLE.
9. LOCATE DUCTWORK AS HIGH AND TIGHT TO EXTERIOR WALL AS POSSIBLE.
10. LOCATE DUCTWORK AS HIGH AND TIGHT TO EXTERIOR WALL AS POSSIBLE.

GENERAL NOTES:
1. SEE GENERAL MECHANICAL NOTES, SHEET M0.1.
2. ALL WORK MUST BE COMPLETE PRIOR TO FIELD VERIFY EXISTING CONDITIONS PRIOR TO BEGINNING WORK.
3. LOCATE DUCTWORK AS HIGH AND TIGHT TO EXTERIOR WALL AS POSSIBLE. LOCATION IS APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY EXACT LOCATION PRIOR TO BEGINNING WORK.
4. VERIFY MOUNTING HEIGHTS OF ALL EXPOSED DUCTWORK WITH ARCHITECT PRIOR TO CONSTRUCTION.
5. VERIFY HEIGHTS OF ALL WALL OUTLETS/INLETS WITH ARCHITECT PRIOR TO CONSTRUCTION.
6. PROVIDE TRANSITIONS AT DUCT CONNECTIONS TO EQUIPMENT TO MATCH UNIT CONNECTION SIZES.
7. SEE VRF SCHEMATIC ON SHEET M4.4 FOR RG/RL PIPE SIZES.
8. NOT ALL KEYED NOTES MAY BE USED ON ALL SHEETS.

KEYED NOTES:
1. DUCTWORK RUNS EXPOSED IN THIS ROOM; CAREFULLY FABRICATE & ASSEMBLE DUCTWORK TO PROVIDE BEST FINISHED APPEARANCE.
2. LOCATE ELECTRICAL WIRING, LIGHTING, AND STRUCTURE.
3. COORDINATE DUCTWORK LOCATION WITH EXISTING ELEMENTS, INCLUDING BUT NOT LIMITED TO, FIRE SPRINKLER PIPING, LIGHTING, AND STRUCTURE.
4. PROVIDE TRANSITIONS AT DUCT CONNECTIONS TO EQUIPMENT TO MATCH UNIT CONNECTION SIZES.
5. LOCATE DUCTWORK AS HIGH AND TIGHT TO EXTERIOR WALL AS POSSIBLE.
6. LOCATE DUCTWORK AS HIGH AND TIGHT TO EXTERIOR WALL AS POSSIBLE.
7. LOCATE DUCTWORK AS HIGH AND TIGHT TO EXTERIOR WALL AS POSSIBLE.
8. LOCATE DUCTWORK AS HIGH AND TIGHT TO EXTERIOR WALL AS POSSIBLE.
9. LOCATE DUCTWORK AS HIGH AND TIGHT TO EXTERIOR WALL AS POSSIBLE.
10. LOCATE DUCTWORK AS HIGH AND TIGHT TO EXTERIOR WALL AS POSSIBLE.
ROOFTOP FAN DETAIL

(1) EXHAUST FAN
(2) CONCRETE ROOF FURNISHED W/ ROOF VENT
(3) ROOFING
(4) RIGID INSULATION
(VERIFY THICKNESS)

NEW ROOFING, PATCH/SEAL INTO EXISTING, W/ MIN 12" OVERLAP

EXTEND DUCT UP TO TOP OF CURB, SEAL AT BOTHSIDES OF DUCT

DUCT SIZE PER PLAN

ANCHOR TO CURB, 12" O.C.

M4.5

ELECTRIC DUCT COIL

MINIMUM 4' UPSTREAM OF ELECTRICAL DUCT HEATER TO FITTING (OR AS REQUIRED BY HEATER MANUFACTURER)

MINIMUM 2' DOWNSTREAM OF ELECTRICAL DUCT HEATER TO FITTING (OR AS REQUIRED BY HEATER MANUFACTURER)

ELECTRICAL DUCT HEATER

M4.5

ELECTRICAL

Sheet Title: 9

Sheet Size Is True Scale When Above Line Measures As Noted

21/24/2023

Date: 12/30/22

Signed: 12-30-2022

22-016

BID SET

CITY OF TACOMA
BEACON ACTIVITY CENTER - PHASE 2
415 SOUTH 13TH STREET, TACOMA, WA 98402

REVISIONS:

1

2

3

4

5

6

7

8

9

10

general@hultzbhu.com

Phone: (253) 383-3257

Fax: (253) 383-3283

1111 Fawcett Ave Suite 100

Tacoma, WA 98402

e   n   g   i   n   e   e   r   s       i   n   c