



March 27, 2019

ADDENDUM NO. 3 TO SPECIFICATION NO. 1360S
MV/SJV/TV RWRFS Blower Electrification

This addendum to the specifications is for the purpose of adding, clarifying, or deleting certain information to the construction drawings and project specifications as follows:

BIDDING SHEETS

Revise Bid Item 12 as follows:

Item	Qty	Unit	Description	Unit Price	Total
12	1	LS	ADDITION OR DEDUCTION	<i>Circle one (If applicable):</i>	
			_____	Addition (+)	
			_____	Deduction(-)	\$ _____
			(words)		

Delete Bid Item 13 in its entirety.

Add Additive Bid Item A1 as follows:

Item	Qty	Unit	Description	Unit Price	Total
A1	1	LS	This line item is an allowance to provide a rented temporary boiler at TVRWRf during project construction in accordance with the contract documents. Refer to Special Condition SC-56.		
			_____	\$ <u>Preset</u>	\$ <u>30,000</u>
			(words)		

THE BIDDING SHEETS HAVE BEEN UPDATED AND ARE INCLUDED IN THE REVISED PROPOSAL PACKAGE MADE A PART OF THIS ADDENDUM. FAILURE TO SUBMIT THE REVISED PROPOSAL PACKAGE "MAY" DEEM YOUR BID NON-RESPONSIVE

SPECIAL CONDITIONS

ADD the following Special Conditions:

SC-56. Temporary Boiler at TVRWRF. The Contractor is required to provide 1.95 MBTU temporary boiler at TVRWRF to provide heat to digesters during construction in accordance with contract drawings. The temporary boiler shall be commissioned prior to the removal of the last operating engine blower from the heating loop recovery system. The temporary boiler shall run parallel with the exiting boiler at TVRWRF. A pre-set bid item allowance of \$30,000 for mobilization, connection, rental, decommissioning, and demobilization for the temporary boiler has been included in Bid Item A1. Actual cost will be determined based on invoices submitted. The Contractor shall coordinate District operation on boiler installation location. One proposed location for the temporary boiler is outside of existing Digester Gas Control Building. Contractor shall coordinate the temporary boiler equipment with NFPA 54 and NFPA 820 requirements and all other applicable code requirements. Record drawings of the existing Digester Gas Control Building are provided for in Appendix P.

SECTION 1026 – SCHEDULE OF VALUES

REPLACE Schedule of values in its entirety.

TECHNICAL SPECIFICATIONS

SECTION 17950 – FUNCTIONAL CONTROL DESCRIPTIONS

DELETE PARAGRAPH 2.02-A in its entirety and *REPLACE* with the following:

“A. Operator workstation graphic display symbols and indicator lights on all MCC's, control panels, starter enclosures, etc. shall conform to the following color convention:

<u>Condition</u>	<u>Color</u>
Running/On/Open	Green
Valve Closed	Red
Fail/Alarm	Amber
Normal/Ready	White

DELETE PARAGRAPH 3.03-B-3 in its entirety and *REPLACE* with the following:

“3. Remote Control

a. When the H-O-A is in Auto the fans shall START and STOP based on discrete RUN signals from the thermostat and blower MCP. The Blower MCP shall be configured to send a Start signal to the set of fans when the associated Blower is sent a Start command. The Start signal shall cease to be active when the associated Blower is sent a Stop command.”

DELETE PARAGRAPH 3.03-B-4 in its entirety.

DELETE “and enabling the modification of fan control mode (remote-manual and remote-auto)” from PARAGRAPH 3.03-C:

DELETE “connected to the paralleling network” from PARAGRAPH 3.04-A and *REPLACE* with “connected to the closed transition network (refer to SC-54 and Section 16426 for additional information).”

DELETE PARAGRAPH 3.04-B in its entirety and *REPLACE* with the following:

“B. Contractor shall refer to Specification Section 16426 for control requirements associated with the closed transition system at TVRWRF.”

ADD PARAGRAPH to 3.06A as follows:

SJVWRF Exhaust Fan Control - The Contractor shall program new exhaust fans to match the control scheme of the existing fans and update the HMI to reflect status of the new fans.

DELETE PARAGRAPH 3.08-B-3 in its entirety and *REPLACE* with the following:

“3. Remote Control

a. When the H-O-A is in Auto the fans shall START and STOP based on discrete RUN signals from the thermostat and blower MCP. The Blower MCP shall be configured to send a Start signal to the set of fans when the associated Blower is sent a Start command. The Start signal shall cease to be active when the associated Blower is sent a Stop command.”

DELETE PARAGRAPH 3.08-B-4 in its entirety.

DRAWINGS

DRAWING 00G04 (D-57360)

Modify the “Shutdown Coordination Table for Blower Electrification” as noted below:

Row No 2 – *ADD* the following to the Remarks column:

“Contractor may extend the shutdown period up to 48 hours if they provide 900kW worth of temporary power to the Primary & Secondary Treatment Service. If temporary power will be provided by a temporary generator, then the Contractor shall provide a standby temporary generator on site and shall have a technician capable of servicing and changing the generator on site for the duration of the temporary operation.”

Row No 3 – ADD the following to the Remarks column:

“Contractor may extend the shutdown period up to 48 hours if they provide 900kW worth of temporary power to the Primary & Secondary Treatment Service. If temporary power will be provided by a temporary generator, then the Contractor shall provide a standby temporary generator on site and shall have a technician capable of servicing and changing the generator on site for the duration of the temporary operation.”

Row No 6 – ADD the following to the Remarks column:

“Contractor may de-energize Switchgear MS Bus B for up to 48hrs after plant staff has transferred all loads to Bus A and Contractor provides up to 500kW worth of temporary power to SWBD SBA. In the event utility power is lost while Switchgear Bus B is de-energized, Contractor shall discontinue their work on Bus B and put the Standby Power System online within 4 hours.”

Row No 9 – ADD the following to the Remarks column:

“Contractor may de-energize Switchgear SGB Bus B for up to 24hrs after plant staff has transferred all loads to Bus A and Contractor provides up to 100kW worth of temporary power to MCC-23 and up to 100kW worth of temporary power to MCC-24.”

Row No 10 – ADD the following to the Remarks column:

“Contractor may de-energize MCC-3MA for up to 48hrs after providing the following temporary provisions:

- SWBD-4 – Provide up to 200kW temporary power
- MCC-7 – Provide up to 100kW temporary power
- MCC-8A – Provide up to 500kW temporary power
- MCC-3MA – Provide up to 200kW temporary power and up to six (6) temporary Size 2 starters”

Note below table – ADD the following to the note below the table: “The shutdown duration shall not be adjacent to any holiday and major event.”

DRAWING TVRWRF 70E01 (D-57398)

REMOVE conduit tags “C-070-009” and “C-070-010”

DRAWING TVRWRF 70E02 (D-57399)

ADD conduit tags “P-070-025” and “P-070-011” to SWITCHBOARD MSB-5 – SINGLE LINE DIAGRAM where appropriate.

DRAWING SJVRWRF 77E01 (D-57428)

REPLACE SJVRWRF 77E01 (D-57428) with the attached.

DRAWING SJVRWRF 77E03 (D-57430)

ADD a conduit from Fuel Maintenance System (VCP-73.6200) to LIT-73.6310 labeled P-077-018

EXTEND conduit 773047 from existing stub up on east side of Fuel Storage Structure to Fuel Maintenance System (VCP-73.6200).

DRAWING SJVRWRF 77E07 (D-57434)

EXHAUST FAN – ELEMENTARY CONTROL SCHEMATIC

CHANGE all references from “PLC-33” to “PLC-33 AUXILIARY CONTROL PANEL”

ADD “HS-79.1022” label to the H/O/A switch.

REVISE the schematic to reflect one field mounted RESET push button with two sets of contacts. One set of contacts shall reset the OL relay on line 4. The second set of contacts shall reset the alarm circuitry on line 11. ADD “HS-79.1022A” label to RESET push button.

PANEL SCHEDULE – EX LP-18

CHANGE Description of circuit 20 to “VCP-73.6400 (GEN 2 DAY TANK)”

CHANGE Wire of circuit 24 to “P-077-008”

CHANGE Description of circuit 24 to “VCP-73.6400 (GEN 2 DAY TANK)”

PANEL SCHEDULE – EX LP-18A

CHANGE Description of circuit 30/32 to “SWITCHGEAR MS (SECTION P)”

DRAWING SJVRWRF 77E08 (D-57435)

CONDUIT AND WIRE SCHEDULE

REPLACE the appropriate rows in the conduit and wire schedule with the rows below:

CONDUIT NO.	SIZE	FROM	TO	CONDUCTORS	REMARKS
P-077-008	3/4"	LP-18	DAY TANK NO.2 (VCP-73.6400)	4#10, #10GND	

CONDUIT NO.	SIZE	FROM	TO	CONDUCTORS	REMARKS
C-077-001	3/4"	VCP-73.6200	BV-73.6201	10#14, #14GND	
C-077-002	3/4"	VCP-73.6200	BV-73.6202	10#14, #14GND	
C-077-003	3/4"	VCP-73.6200	BV-73.6203	10#14, #14GND	
C-077-004	3/4"	VCP-73.6200	BV-73.6204	10#14, #14GND	
C-077-006	3/4"	MCC-18	HS-79.1022/HS-79.1022A	10#14, #14GND	FAN-79.1022
C-077-008	2"	PLC-33	DAY TANK NO.2 (VCP-73.6400)	PER MFR	
C-077-009	3/4"	PLC-33 AUXILIARY CONTROL PANEL	MCC-18 (FAN-79.1022 STARTER)	10#14, #14GND	
C-077-021	2"	MS-G2 LCP (SECTION 200)	DAY TANK NO.2 (VCP-73.6400)	PER MFR	
I-077-008	2"	PLC-33	DAY TANK NO.2 (VCP-73.6400)	PER MFR	

PLC-33 – PARTIAL CONTROL ONE LINE DIAGRAM

ADD "EX PLC-33 AUXILIARY CONTROL PANEL" between "EX PLC-33" and "MCC-18".

GENERATOR INTERCONNECTION – RISER DIAGRAM

CHANGE "VCP-73.6100 MTU ENGINE (MS-G2)" TO "VCP-73.6300 MTU ENGINE (MS-G2)"

DRAWING MVRWRF 15E09 (D-57455)

CONDUIT AND WIRE SCHEDULE

REPLACE the appropriate rows in the conduit and wire schedule with the rows below:

CONDUIT NO.	SIZE	FROM	TO	CONDUCTORS	REMARKS
P-015-009	3/4"	MCC-13M	SUPPLY FAN (SF-1502)	3#12, #12GND	VIA DSW
P-015-010	EX.	MCC-13M	SUPPLY FAN (SF-1503)	3#12, #12GND	VIA DSW

ADD THE FOLLOWING APPENDICES

APPENDIX P – TVRWRF Record Drawings of the Existing Digester Gas Control Building

APPENDIX Q – TVRWRF Drawings and Specifications for Existing Grating at Blower Building

QUESTIONS & ANSWERS

Big Sky Electric

Q1. I have questions concerning the amount of temporary power to be furnished by the contractor. On the attached sheet, I have highlighted items that cannot be accomplished in the time allowed. Therefore, according to the note at the bottom of the sheet, the contractor is to provide temporary power for the extended outage time. There is no indication of how much temporary power is required, therefore I cannot determine what size generator is needed. Please provide the amount of power (amperage) needed for each task that is highlighted.

Shutdown Coordination Table for Blower Electrification							
No.	Shutdown Item	Purpose	Notice Requirement			Maximum Shutdown Duration*	Remarks
			4/15/16	4/15/17	4/15/18		
1	At the TVRWRF, shutdown existing digester gas (DG) or natural gas (NG) engines and isolate Blowers.	Remove existing blowers and install new Neuros NX600 blowers	X	X	X	A minimum of one blower shall be operational at any given time	The Contractor may not shut down for replacement until the new Plant 2 air line has been installed. The new Plant 2 air line will be installed by October 15, 2019. The contractor isolate DG or NG supply to the engine and heating loop piping, purge existing DG and NG line to be demolished.
2	At the TVRWRF, 12kV duct bank connecting the Tertiary Plant and the Primary & Secondary Treatment Plant	Installation of new 12kV conductors in existing spare conduit	X	X	X	Less than 4 hours	Contractor shall de-energize power for the existing 12kV circuit installed in the existing duct bank while the new 12kV circuit is installed.
3	At the TVRWRF, PMH-10	Connect new 12kV conductors to existing switch	X	X	X	Less than 4 hours during day time	Contractor shall shutdown power to existing PMH-10 at the Primary & Secondary Treatment service in order to connect new 12kV conductors through the existing PMH-10 switch and the new pad mounted switch to supply the new Plant 1/2 Blower System (MSB-5).
4	At the TVRWRF, Switchgear MS-1	Connect new 12kV conductors to existing circuit breaker	X	X	X	Less than 4 hours between 1:00 AM to 6:00 AM	Contractor shall connect the new 12kV conductors to the existing (Spare) circuit breaker identified to supply the new Plant 1/2 Blower System (MSB-5).
5	At the SJVRWRF, shutdown two existing blowers	Install one new Neuros blower and commission	X	X	X	Less than 2 hours between 1:00 AM to 6:00 AM	Tie in of new blower to existing 42-inch common air header of plant process air system.
6	At the SJVRWRF, Switchgear MS Bus B	Install new generator circuit breaker for MS-G2 Generator Circuit Breaker and connect new generator conductors to new generator circuit breaker	X	X	X	Less than 4 hours	Contractor shall install new generator circuit breaker section and connect new breaker section to existing MS Bus B. Contractor shall also connect new generator conductors to new generator circuit breaker.
7	At the SJVRWRF, MCC-18	Modifications/ Connections to MCC-18	X	X	X	Less than 4 hours	Contractor shall modify MCC-18 and make connections as indicated on the electrical drawings and as required.
8	At the SJVRWRF, Standby Generator Fuel System	Connect new bulk fuel storage tank and new day tank	X	X	X	Less than 4 hours	Contractor shall connect new bulk storage fuel tank and day tank to existing fuel piping.
9	At the SJVRWRF, Switchgear SGB	Install a new circuit breaker to power new Aeration Blower No. 4 and connect new conductors to new circuit breaker	X	X	X	Less than 4 hours	Contractor shall install a new circuit breaker in existing Switchgear SGB and shall connect new conductors from Aeration Blower No. 4 to new breaker.
10	At the MVRWRF, MCC-3MA	Modifications/ Connections to MCC-3MA	X	X	X	Less than 4 hours	Contractor shall modify MCC-3MA and make connections as indicated on the electrical drawings and as required.
11	At the MVRWRF, MCC-13M	Modifications/ Connections to MCC-13M	X	X	X	Less than 4 hours	Contractor shall modify MCC-13M and make connections as indicated on the electrical drawings and as required.
12	At the MVRWRF, shut down existing Plant 2 Blower MCP	Upgrade PLC to current standard	X	X	X	Less than 4 hours	Contractor shall upgrade the PLC in the existing Plant 2 Blower MCP.
13	At the MVRWRF, Plant 2 Blowers	Tie in new Blower	X	X	X	Less than 4 hours	Install third NX300 at Power and Blower Building (relocated from TVRWRF and refurbished) and tie in of plant process air system.

* CONTRACTOR SHALL PROVIDE TEMPORARY POWER AS REQUIRED TO MAINTAIN OPERATION OF CRITICAL LOADS IF THE SHUTDOWN PERIOD REQUIRED TO TIE-IN ELECTRICAL LOADS WILL EXCEED THE MAXIMUM PERMITTED SHUTDOWN DURATION. CONTRACTOR CAN SUBMIT IN ADVANCE FOR THE DISTRICT'S AND ENGINEER'S REVIEW AND CONSIDERATION TO EXTEND THE DURATION OF THE SHUTDOWN UP TO 8 HOURS IF NECESSARY TO COMPLETE THE REQUIRED WORK, IN WHICH CASE PORTABLE POWER PROVIDED BY THE CONTRACTOR WILL BE REQUIRED FOR THE ENTIRE SHUTDOWN DURATION.

A1. The Shutdown coordination table on Drawing D-57360 is revised to provide requested information and revisions are included with this addendum. Row No 4 references existing Switchgear MS-1. It is believed the required terminations can be made without an extended shutdown of MS-1.

Q2. Below are conduit tags which appear on the drawings, but are not listed on the conduit schedule:

I-007-010

773049

776006

773002

774009

773024

774014

776004

773018

775003

Also, below are conduit tags which appear on the conduit schedule, but are not on the drawings:

P-015-008

P-015-010

P-015-016

P-015-018

P-015-019

P-015-022

C-015-006

774006

774018

775003

P-077-003

P-077-012

P-077-018

C-077-012

I-077-010

C-022-003

The following are listed on the conduit schedule as not used, but are shown on the drawings, are these needed?

C-070-009

C-070-010

Please advise.

A2. Requested information is provided in the table as follows:

Below are conduit tags which appear on the drawings, but are not listed on the conduit schedule:		
Plant	Conduit Tag	Response
SJVRWRF	I-007-010	Typo on 77E01 - should be I-077-010
SJVRWRF	773049	Conduit tag copied from previous project. Not required for this project. Remove from Drawings.
SJVRWRF	776006	Conduit tag copied from previous project. Not required for this project. Remove from Drawings.
SJVRWRF	773002	Conduit tag copied from previous project. Not required for this project. Remove from Drawings.
SJVRWRF	774009	Conduit tag copied from previous project. Not required for this project. Remove from Drawings.
SJVRWRF	773024	Conduit tag copied from previous project. Not required for this project. Remove from Drawings.
SJVRWRF	774014	Conduit tag copied from previous project. Not required for this project. Remove from Drawings.
SJVRWRF	776004	Conduit tag copied from previous project. Not required for this project. Remove from Drawings.
SJVRWRF	773018	Conduit tag copied from previous project. Not required for this project. Remove from Drawings.
SJVRWRF	775003	See conduit and wire schedule on 77E08.

Also, below are conduit tags which appear on the conduit schedule, but are not on the drawings:		
Plant	Conduit Tag	Response
MVRWRF	P-015-008	Existing conduit, not shown in plan

Plant	Conduit Tag	Response
MVRWRF	P-015-010	Existing conduit, not shown in plan
MVRWRF	P-015-016	Conduit from starter to fan, not shown in plan
MVRWRF	P-015-018	Shown on drawings 15E01 and 15E08
MVRWRF	P-015-019	Conduit from starter to fan, not shown in plan
MVRWRF	P-015-022	Conduit from starter to fan, not shown in plan
MVRWRF	C-015-006	Drawing 15E01 - Route conduit overhead from Valve Control Panel VCP-24.7621 to Discharge Valve HV-24.7621
SJVRWRF	774006	Shown on drawings 77E01 and 77E08
SJVRWRF	774018	In existing ductbank between structures
SJVRWRF	775003	Shown on drawings 77E01 and 77E04
SJVRWRF	P-077-003	Drawing 77E01 - Route conduit overhead from LP-18A to SWITCHGEAR MS Section P
SJVRWRF	P-077-012	Drawing 77E01 - Route conduit parallel to C-077-016
SJVRWRF	P-077-018	Drawing 77E03 - Route conduit exposed from VCP-73.6200 to LIT-73.6310. See additional notes on PLC-33 Partial Control One Line Diagram on Drawing 77E08.
SJVRWRF	C-077-012	Drawing 77E01 - Route conduit parallel to I-077-011
SJVRWRF	I-077-010	Typo on 77E01 - should be I-077-010
SJVRWRF	C-022-003	Drawing 22E01 - Route conduit overhead from Valve Control Panel VCP-24.7421 to Discharge Valve HV-24.7421

The following are listed on the conduit schedule as not used, but are shown on the drawings, are these needed?:		
Plant	Conduit Tag	Response
TVRWRF	C-070-009	Not needed. Remove from Drawings.
TVRWRF	C-070-010	Not needed. Remove from Drawings.

J.R. Filanc Construction Company, Inc.

- Q1. Please provide the specification for the existing grating which is to be replaced in kind at the TVRWRF Blower Room.
- A1. Steel bar grating to be replaced at the TVRWRF Blower Room over the pipe trenches shall match the existing grating removed including depth and shall be rated for forklift wheel live load. Record drawings, details and specifications for existing grating at TVRWRF Blower Building are provided in Appendix Q issued with this addendum.

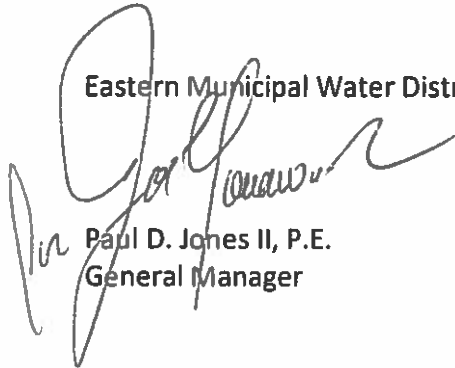
- Q2. Is the pre-negotiated quote available for the generator at SJRWRF? Only the quote for the generator at TVRWRF is included in Spec Section 16620.
- A2. The proposal for the generator at SJRWRF was included in Appendix O issued by Addendum No.2.
- Q3. Please provide a specification for the (4) motor actuators on the ball valves for the fuel storage system at SJRWRF.
- A3. Please refer to Specification 15106 Valve Operators and Electric Valve Actuators.
- Q4. Please clarify the intent of Key Note 11 on 21D01, which states "Provide temporary dust control. See Specification 01520 for sequencing." There does not appear to be a section 01520, or any other reference to dust control in the specifications.
- A4. The intent is to provide dust control barrier within the blower building to isolate the area with demolition from the rest of the blower building and keep dust from impacting the blowers that remain in operation. Please refer to Specification 01140 for details on work restriction and sequencing instead of 01520.
- Q5. Note 8 on 21D01 regarding the temporary boiler system does not provide sufficient information from which the contractor can form a reasonable basis of bid. Please provide a specification for the temporary boiler system, appurtenances, and commissioning requirements, and reasonable assumptions about the work required to tie in to the existing system. Alternatively, consider adding an allowance to perform this work which will be coordinated during construction.
- A5. The first sentence of Note 8 on 21D01 shall be replaced with the following: "Contractor to provide 1.95 MMBTU temporary boiler rental during project construction to provide heat. The temporary boiler shall be California Boiler DW-1950, or equal. The temporary boiler shall be commissioned prior to the removal of the last operating engine blower from the heating loop recovery system. A pre-set bid item allowance of rental is provided in the bid form, and the contractor shall be responsible for any additional rental period required." The rest of the note shall remain. Please see SC-56.
- Q6. Please clarify the intent of Note 3 on 21A01 regarding the metal faced acoustical panels. Are ceiling panels required or not? Can a ceiling mounting detail be provided if so? There are numerous existing structures and fixtures on the walls and ceilings that would conflict with the installation of the acoustical panels. Is the 60% figure intended to be an estimate of what the contractor can install in areas without existing conflicts, or is the contractor expected to remove/reroute/reinstall as necessary to meet the coverage requirement?

- A6. Panels shall be installed using 4" offset clips as recommended by manufacturer. With the offset clips it is acceptable for small conduits and piping that run tight to the ceiling or wall to remain behind the acoustical wall panels if space allows. Projecting beam faces and other items that are more than 4" from the wall or ceiling deck are not required to be covered.
- Q7. Please consider waiving the requirement for AISC certification of fabricators and erectors of structural steel in Specification 05120.
- A7. It is not permissible to waive this requirement referenced in specification 05120. This is a requirement of ANSI/AISC Specifications.
- Q8. Per the updated Neuros scope of supply in addendum 2 and confirmed directly with Neuros, the remote push button control station for the motorized discharge valves will be provided at MVRWRF and SJRWRF but NOT at TVRWRF. This is inconsistent with the vendor scope of supply shown in the instrumentation drawings 21N01-21N03. Please confirm if Neuros can add these to their scope or if the contractor will need to supply them separately.
- A8. District will amend contract with APG-Neuros to include remote control stations at TVRWRF to the Scope of Supply of APG-Neuros.

Pacific Hydrotech Corp.

- Q1. Can you please provide clarification on the following? Bid Item #12 (addendum 2) has mention of a temporary boiler system, but there is no mention of this in the specs. Can you please provide a spec section on this for what the city is looking for?
- A2. Bid Item 12 (addendum No.2) is deleted. An allowance for the temporary boiler is added on revised bidding sheet. Revised bidding sheet is issues with this addendum.

Eastern Municipal Water District



Paul D. Jones II, P.E.
General Manager

PE: SAW
PM: ETJ
DFE: BM
DE: MAS by ETJ

PDJ:SL:ae

ATTACHMENTS: Proposal Package
 Schedule of Values Sample
 SJVRWRF 77E01 (D-57360)
 APPENDIX P – TVRWRF Record Drawing of the Existing Digester Gas Control
 Building
 APPENDIX Q – TVRWRF Drawings and Specifications for Existing Grating at
 Blower Building