



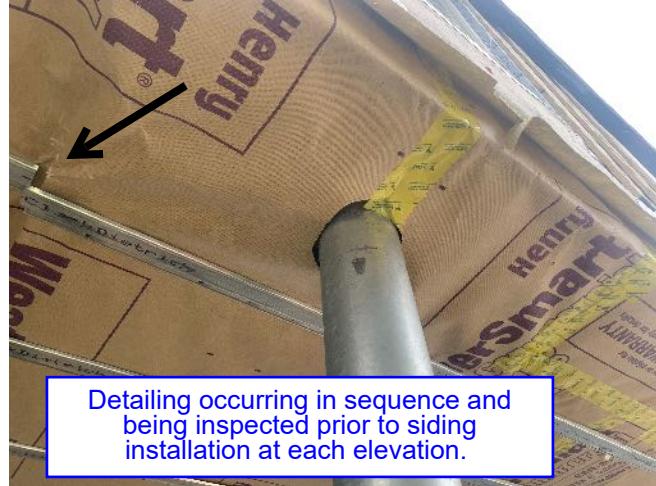
SUBMITTED TO	DISTRIBUTED TO	SITE VISIT #
Wendy Klein, CDP	Wendy Klein, CDP Robert Wait, LMC Mark Carrick, LMC Quinten McElvain, Waechter Judson Moore, Waechter Reed Ledbetter, LMC Dylan Dalton, LMC	3
SITE ATTENDEES	PROJECT LOCATION	ENVIRONMENTAL CONDITIONS
Dylan Dalton, LMC Tom Michie, LMC Martin Houston, QEC	783 SE 185th Avenue, Portland, Oregon 97233	57F, 77% RH Overcast, light rain

SITE VISIT

The Rockwood 10 project is a new construction project located in NE Portland, Oregon. The requested site observations on June 11th, 2021 were related to the building enclosure components currently being installed. Areas of specific review included hollow metal doors, storefront, and integration of HVAC components. Observations were made of the condition of the roof on Building C.

Our observations of conditions are limited to the areas observed on June 11th. Below is a photo appendix of our observations followed by an executive summary.

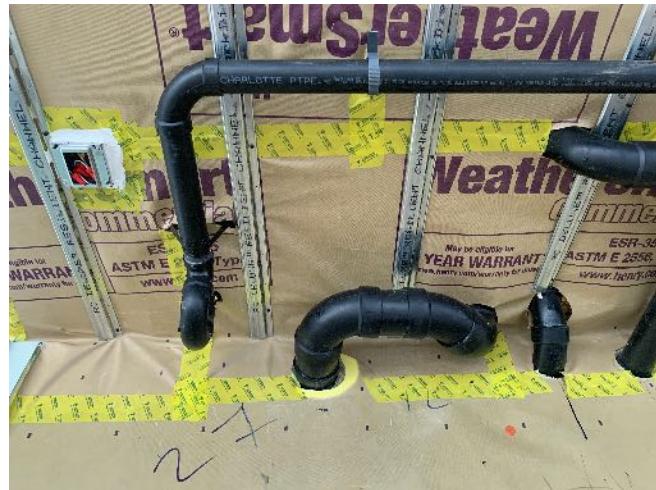
Additional photos were taken while observing the installed work. Not all photos are included in this report, but are available upon request.



3 .01 Building B, 1st floor. Weeps have not been drilled in the sub sill of the storefront sill. Verify that weeps are installed per manufacturer's spacing recommendations.

Corrections made - complete.

3 .02 Building A, West soffit. WRB/AB component detailing is incomplete in some areas and exhibits damage in other areas throughout both soffits. Complete detailing where needed and repair or replace damaged WRB/AB components.



3 .03 Building A, West soffit. WRB/AB component detailing is incomplete in some areas and exhibits damage in other areas throughout both soffits. Complete detailing where needed and repair or replace damaged WRB/AB components.

Detailing occurring in sequence and being inspected prior to siding installation at each elevation.

3 .04 Building A, West soffit. WRB/AB component detailing is incomplete in areas throughout both soffits. Complete detailing where needed prior to installing gypsum soffits.

Detailing occurring in sequence and being inspected prior to siding installation at each elevation.



This is Building B. Blocking details will be installed at all hose bib locations as directed. Note: No blocking details currently exist in project docs for hose bibs.



<p>3 .05 Building A, West elevation. This hose bib requires a solid block behind the hose bib to properly support the hose bib. The block doesn't need to be much larger than the face of the hose bib and should be protected by a head flashing, attached to the rainscreen, not back to the WRB.</p>	<p>3 .06 Building A, West elevation. Detailing of HVAC components is incomplete. See SVR 04 for more detail on this condition.</p> <p>Detailing completed and layouts revised due to structural framing changes.</p>
--	---



<p>3 .07 Building A, West soffit. WRB/AB component detailing is incomplete in some areas and exhibits damage in other areas throughout both soffits. Complete detailing where needed and repair or replace damaged WRB/AB components.</p>	<p>3 .08 Building A, west elevation. The hollow metal door sills have not been detailed as indicated in the drawings. For these doors under significant protective cover (low exposure), a face sealed approach can be used. Source a larger threshold, and seal it to the HM door frame and concrete while also sealing the HM door frame jamb to concrete and cladding using a backer rod and sealant.</p>
--	---

Detailing occurring in sequence and being inspected prior to siding installation at each elevation.



	<p>Corrections 90% complete. Doors removed and sills detailed in accordance with project documents.</p>
--	---



3 .09 Building A, South elevation. Hollow metal doors at exposed locations that have not been correctly detailed at the sill must be removed to allow for correct application of the sill detail.

Corrections 90% complete. Doors removed and sills detailed in accordance with project documents.

3 .10 Building A, South soffit. WRB/AB component detailing is incomplete in some areas and exhibits damage in other areas throughout both soffits. Complete detailing where needed and repair or replace damaged WRB/AB components. This condition was evident while the drywall subcontractor was installing the gypsum soffit at this area. Verify that all WRB/AB detailing is complete prior to cover.



3 .11 Building A, North storefront entrance. The elevation of the storefront sill has been poured below the elevation of the adjacent exterior slab. The storefront framing will need to be removed to allow for a solid shim to be placed in the sill to provide a 1/4" drop from the sill to the adjacent exterior concrete. The solid shim will be stripped in with SAM per the original detail.

Corrections in progress at all WOM areas as discussed by LMC/QEC. HDPE being used for solid shim material as recommended by QEC.

3 .12 Building A, East elevation. Repair damaged SAM at storefront corner.

All damage to SAM and WRB being corrected prior to siding install.



Verified. Shims are being installed under the sill can horizontally, on top of the L metal.

- 3 .13** Building A, East elevation. Repair damaged SAM at storefront corner.

All damage to SAM and WRB being corrected prior to siding install.

- 3 .14** Building A, East elevation. Storefronts have been installed with a shim between the structural back angle and storefront subsill. This is in accordance with Waechter's mark up of the shop drawings but not what was installed on the mock up. Verify that shim drainage below sill flashing was installed per our mock up discussions.



- 3 .15** Building A, East elevation. Storefront subsill. Complete sealant detailing at mitered corner of subsill prior to installing storefront sill can components.

See SVR 05 - 5.03 for response.

- 3 .16** Building A, East elevation. Repair areas of SPF damaged by installation of out of sequence work.

All SPF areas corrected and inspected by LMC and COG prior to cover.



3 .17 Building B, South elevation. Repairs damaged areas of WRB prior to covering with furring and cladding.

All damage to SAM and WRB being corrected prior to siding install.



VPI engineering responded via email 6/28/21 saying, "the exposed screws into the sash pocket are typical and should not affect any water testing performance." LMC will require this to be noted by VPI in their warranty of all RW10 windows.

3 .18 Typical condition. Fasteners are seen protruding through the wall of the vinyl window frame. LMC to discuss with VPI if this condition is acceptable or if remedial work to the window will be required.



3 .19 Building C, Roof. The roof installation is largely complete. These observations will focus on issues with the current installation.

All parapet cap metals scheduled to be replaced in their entirety pending acceptance of revised mockup utilizing standing seam detail.



3 .20 Building C, Roof. Wood debris with fasteners protruding from the wood (likely from temporary guardrails) has been left on the roof without protecting the membrane. This debris should be removed in the presence of the roofer so they can accurately locate and identify areas of damage.

Debris removed and all TPO inspected and repaired.



3 .21 Building C, Roof. Verify that water cut off mastic has been applied behind the top of the TPO membrane continuously around the pipe.

Corrections completed by roofing installer .

3 .22 Building C, Roof. These round pipes are the structural support for the mechanical screen. There are two holes in the plate on top of the pipe that provide a clear path for water into the roof assembly. These need to be plugged to prevent water ingress into the roof assembly. This needs to be remediated on all buildings in the project.



3 .23 Building C, Roof. Specifications section 076000 2.4.G.1 calls for standing seam metal at roofs. The parapet metal submittal does not indicate that seams would not be fabricated using standing seams. Please verify that the proper seam detail has been used and that the two pieces of metal have been properly sealed.

See response 3.19

3 .24 Building C, Roof. Please verify that the proper seam detail has been used and that the two pieces of metal have been properly sealed.



See response 3.19



3 .25 Building C, Roof. The parapet metal in the right side of this image has been fastened approximately 12" O.C. The parapet metal in the left side of the image has a total of 2 fasteners holding it in place. Verify uplift requirements for fastener spacing and install consistently around all roof parapets.

3 .26 Building C, Roof. This outside corner detail is completely sealant dependent. There are not mechanical fasteners holding the corner together. When the metal expands and contracts, this corner will open up. Fabricate corners with 18" legs per 076000 2.4 H.



3 .27 Building C, Roof. This parapet metal has no slope as currently installed. Parapet metal must be sloped per SMACNA standards, the specification and submittal documents. The flatness combined with flat seams provides a risk for water intrusion at the seams.

See response 3.19



3 .28 Building C, Roof. Pre fabricated pipe boots have been installed for electrical penetrations. The annular space between the conduit and the Romex is unsealed, providing a clear path fro water into the roofing system. Correct this at all locations at all roofs.

Work complete. Sealants, J-Box, outlet and bubble cover installed.



<p>3 .29 Building C, Roof. Two curbs have been left without weather protection, allowing water ingress into the building. Provide temporary waterproof coverings (a piece of TPO properly fastened over the curb and draping down the sides would suffice) over these curbs until the equipment is permanently installed.</p>	<p>3 .30 Building C, Roof. These lengths of parapet metal are fastened only by 2 fasteners in each 10' piece of metal. Verify uplift requirements for fastener spacing and install consistently around all roof parapets.</p> <p style="text-align: right;">See response 3.19</p>
--	--



<p>3 .31 Building C, Roof. Parapet metal has been damaged prior to or during installation. Replace as directed by Waechter.</p>	<p>3 .32 Building C, Roof. Please verify that the proper seam detail has been used and that the two pieces of metal have been properly sealed.</p> <p style="text-align: center;">See response 3.19</p>
--	--



3 .33 Building C, Roof. This work is unacceptable and must be removed and replaced.

3 .34 Building C, Roof. This work is unacceptable and must be removed and replaced.

[See response 3.19](#)



3 .35 Building C, Roof. This work is unacceptable and must be removed and replaced.

3 .36 Building C, Roof. These lengths of parapet metal are fastened only by 2 fasteners in each 10' piece of metal. Verify uplift requirements for fastener spacing and install consistently around all roof parapets.

[See response 3.19](#)



3 .37 Building C, inset on South elevation. Sealant is apparently being used behind the metal cladding components. Verify that metal cladding components are adequately structurally attached to the furring.

Sealant not being used for attachment of metal. This is excess caulk installers wiping off on rain screen/wrb. All metals nailed as detailed prior to panel installation.

3 .38 Building B, South elevation. Hardie Panel products should not be stored in the rain or allowed to become saturated prior to installing on the building. If Panels become saturated, place them inside to completely dry out before installing on the building.

This was damaged material being used for cut station work bench only. Discarded after use.

3 .39 Not Used

3 .40 Not Used



CONCLUSIONS

Cladding installation is ongoing on buildings A and B. WRB and windows are largely complete on buildings C-E.

There are issues identified with hollow metal doors on building A that need to be addressed. On buildings A and B where installation has progressed significantly- and where the door is located under the tuck under parking, a face sealed approach can be used. On exposed locations, doors must be removed to provide proper detailing of the hollow metal sill condition.

There is a good amount of detailing to be completed on the building A and B soffit WRB/AB prior to the application of the gypsum soffit.

Additional due diligence is needed to protect installed product from trade damage. This is certainly the case with the building C roof, which likely has many punctures from the nails in the ends of boards left on the roof. It would be prudent to remove those board sin the presence of the roofer so that they can accurately identify and assess the damage. This same damage may have occurred on other buildings, which should be reviewed for similar conditions.

The parapet metal on Building C is problematic in several respects. The first issue is the lack of fasteners on the interior face of the parapet metal. A number of 10' sticks of metal were fastened with only 2 fasteners. Fastener type and spacing to meet wind uplift requirements need to be verified and installed properly. The second and third issues are connected: the parapet coping metal appears to be installed without slope and the joints are fabricated as laps. Best practice suggests that standing seam joints be created in parapet coping metal and that the metal slope to shed water. The material installed dead flat with a lap seam using cladding sealant is at high risk for water intrusion at the seams. The specification calls for standing seam joints while the specification, architectural drawings and submittals call for the metal to slope. If this does not meet those project criteria, it will need to be removed and replaced.

DISCLAIMERS

You have hired QEC as a consultant. The scope of QEC's work is limited to visual observations. We do not remove any exterior cladding, windows, or building components. As a result, there may be construction issues or defects which are not visible and not identified by QEC. Concealed issues and defects include water intrusion, structural damage, and microbial growth. You recognize and acknowledge that QEC is not responsible or liable for identifying construction issues or defects which are 1) not part of QEC's scope of work; and 2) not readily and visually observable.

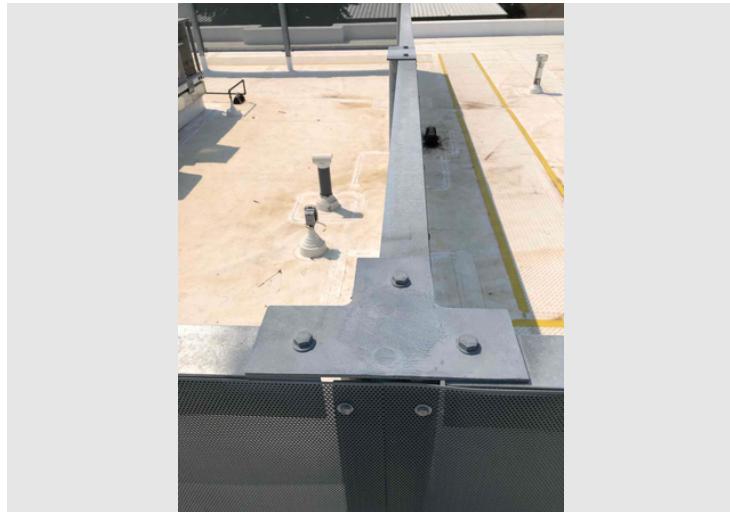
If we produce repair guidelines for you, those guidelines are based on, and limited to, our visual observations. There may be additional repairs required as a result of concealed conditions. Again, QEC has no obligation to identify any concealed issues or defects. We make no warranties or guarantees relating to our visual observations or repair guidelines.

Our reports, guidelines, and work product are intended only for your use and information. Third-parties may not rely on any of QEC's work product. In the event a third-party claim is asserted against QEC arising out of our work for you, you agree to indemnify, defend, and hold harmless QEC.

This report is strictly limited to your use and should, in any event, be used only in its entirety with this disclaimer included.

End of Report

Proactive Planning. Proven Results.



Description

SVR 03: 3.22

Taken Date

08/03/2021 at 02:30 pm

Uploaded By

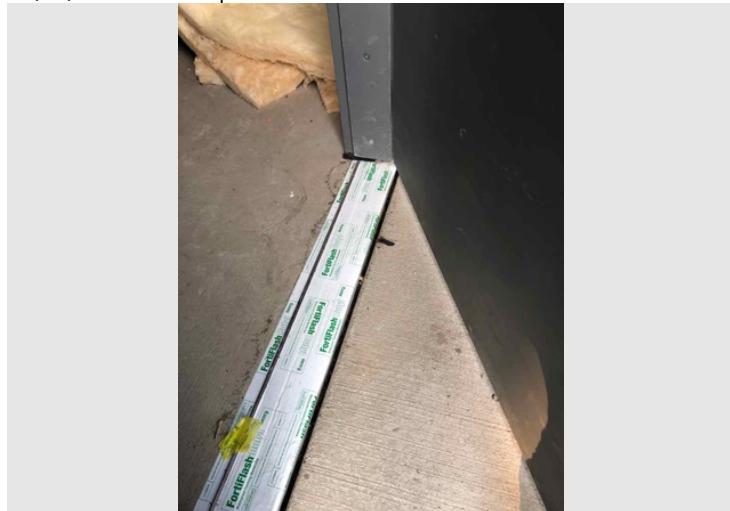
Dylan Dalton

Upload Date

08/03/2021 at 03:42 pm

File Name

[15ACF424-29AA-43EC-96EE-AD9...](#)



Description

SVR 03: 3.08, 3.09

Taken Date

Dylan Dalton

Upload Date

08/03/2021 at 08:38 am

Uploaded By

Dylan Dalton

File Name

[68345C19-19E5-4155-A9D5-2EF6...](#)



Description

SVR 03: 3.22

Taken Date

08/03/2021 at 02:29 pm

Uploaded By

Dylan Dalton

Upload Date

08/03/2021 at 03:42 pm

File Name

[833C7F5A-9CF6-43BA-9AA3-556...](#)



Description

SVR 03: 3.08, 3.09

Taken Date

Dylan Dalton

Upload Date

08/03/2021 at 08:38 am

Uploaded By

Dylan Dalton

File Name

[83EE0280-3AB3-4D8F-9889-B935...](#)



Description

SVR 03: 3.06

Taken Date

08/02/2021 at 12:19 pm

Uploaded By

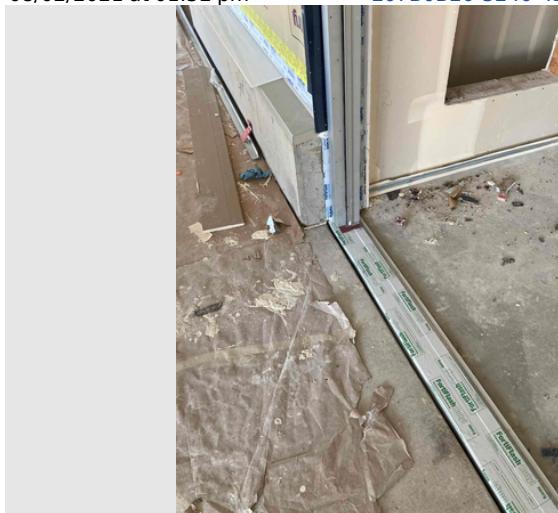
Dylan Dalton

Upload Date

08/02/2021 at 01:52 pm

File Name

E07B0B20-3240-427D-86C5-541...



Description

SVR 03: 3.11

Taken Date

07/29/2021 at 11:58 am

Uploaded By

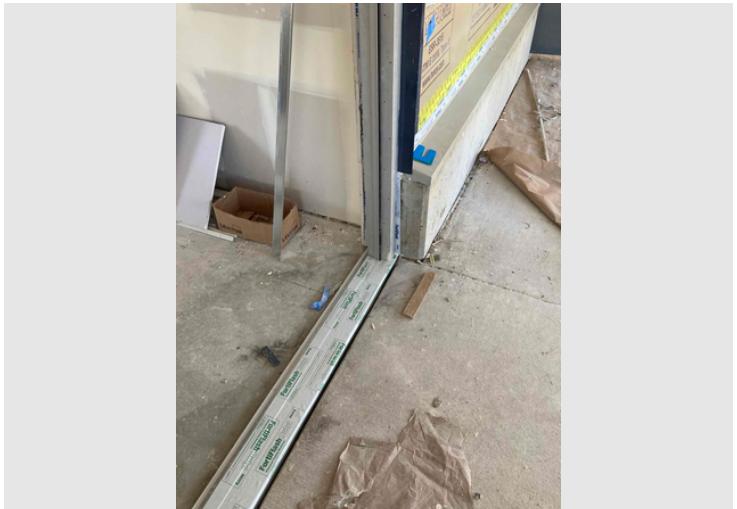
Dylan Dalton

Upload Date

08/03/2021 at 06:32 am

File Name

5AAD3B98-DDCC-494F-AC5A-7A5...



Description

SVR 03: 3.11

Taken Date

07/29/2021 at 11:58 am

Uploaded By

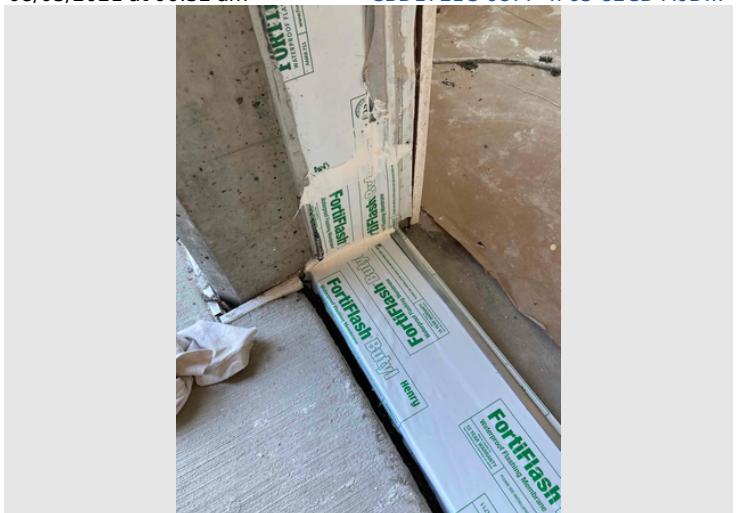
Dylan Dalton

Upload Date

08/03/2021 at 06:32 am

File Name

CBD17E1C-6877-4F63-82CD-A6D...



Description

SVR 03: 3.11

Taken Date

07/28/2021 at 02:05 pm

Uploaded By

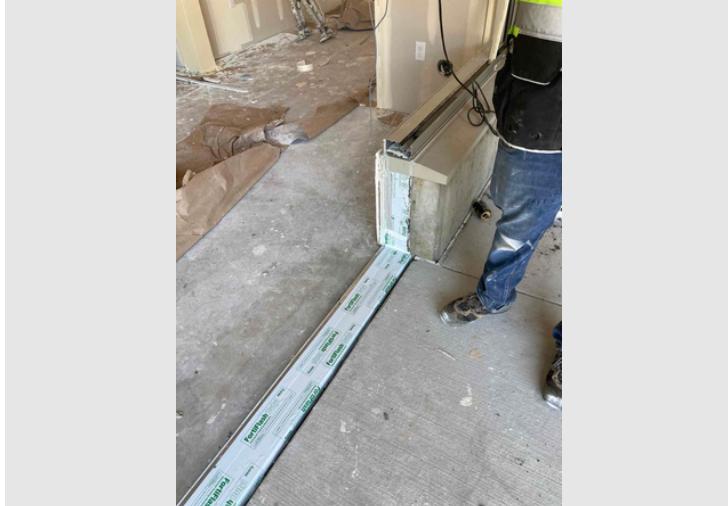
Dylan Dalton

Upload Date

08/03/2021 at 06:32 am

File Name

2676D9A0-71E2-4AB8-99E0-C2D...



Description

SVR 03: 3.11

Taken Date

07/28/2021 at 02:05 pm

Uploaded By

Dylan Dalton

Upload Date

08/03/2021 at 06:32 am

File Name

[FDDC7854-57D5-44DC-9BD2-EB...](#)



Description

SVR 03: 3.11

Taken Date

07/28/2021 at 11:17 am

Uploaded By

Dylan Dalton

Upload Date

08/03/2021 at 06:33 am

File Name

[784604C4-8FD3-4507-922D-456...](#)



Description

SVR 03: 3.11

Taken Date

07/28/2021 at 11:17 am

Uploaded By

Dylan Dalton

Upload Date

08/03/2021 at 06:33 am

File Name

[4F925FDC-E4E7-491D-BBFA-5B79...](#)



Description

SVR 03: 3.11

Taken Date

07/28/2021 at 11:17 am

Uploaded By

Dylan Dalton

Upload Date

08/03/2021 at 06:33 am

File Name

[40AD32A1-BA27-4A01-9B32-BAD...](#)



Description

SVR 03: 3.02, 3.03, 3.04, 3.07, 3.10

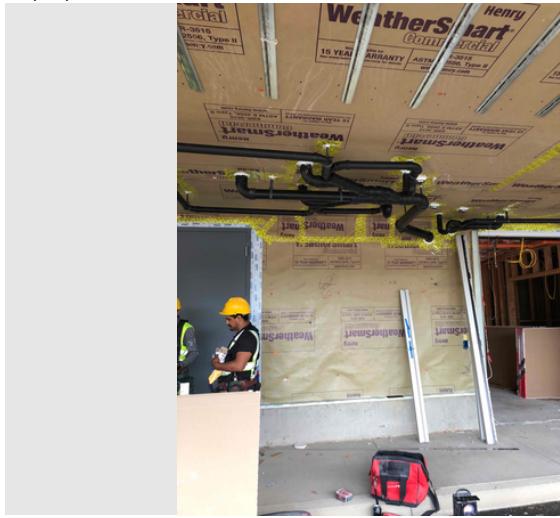
Taken Date
07/28/2021 at 07:58 am

Uploaded By
Dylan Dalton

Upload Date
08/03/2021 at 06:33 am

File Name

[32455B00-98B7-45BE-BD73-AD7...](#)



Description

SVR 03: 3.02, 3.03, 3.04, 3.07, 3.10

Taken Date
07/28/2021 at 07:41 am

Uploaded By
Mark Carrick

Upload Date
07/28/2021 at 07:41 am

File Name

[09CBE64C-E031-4E3C-B487-846...](#)



Description

SVR 03: 3.02, 3.03, 3.04, 3.07, 3.10

Taken Date
07/28/2021 at 07:58 am

Uploaded By
Dylan Dalton

Upload Date
08/03/2021 at 06:33 am

File Name

[8B8CCB45-936F-4D7D-8AF7-BAD...](#)



Description

SVR 03: 3.02, 3.03, 3.04, 3.07, 3.10

Taken Date
07/28/2021 at 07:24 am

Uploaded By
Mark Carrick

Upload Date
07/28/2021 at 07:46 am

File Name

[ED605F93-F76F-4935-9B9E-97FE...](#)



Description

SVR 03: 3.28



Description

SVR 03: 3.01

Taken Date

07/26/2021 at 01:48 pm

Uploaded By

Mark Carrick

Upload Date

07/26/2021 at 02:09 pm

File Name

[F76172F0-DCD7-480F-88CA-E1FE...](#)



Description

SVR 03: 3.05

Taken Date

07/26/2021 at 12:45 pm

Uploaded By

Mark Carrick

Upload Date

07/26/2021 at 02:09 pm

File Name

[B3A8FEC2-7FBB-41AF-A102-C366...](#)



Description

SVR 03: 3.12, 3.13

Taken Date

07/26/2021 at 08:33 am

Uploaded By

Dylan Dalton

Upload Date

08/03/2021 at 11:58 am

File Name

[34079BA3-B798-44F2-A917-D0B...](#)

Taken Date

07/26/2021 at 08:28 am

Uploaded By

Dylan Dalton

Upload Date

08/03/2021 at 06:35 am

File Name

[B110D641-B900-4712-A8DF-0EE...](#)



Description

SVR 03: 3.12, 3.13

Taken Date

07/26/2021 at 08:27 am

Uploaded By

Dylan Dalton

Upload Date

08/03/2021 at 06:35 am

File Name

[58F9AAA8-08A1-4F8B-9736-30A...](#)



Description

SVR 03: 3.02, 3.03, 3.04, 3.07, 3.10

Taken Date

07/23/2021 at 09:42 am

Uploaded By

Mark Carrick

Upload Date

07/23/2021 at 09:44 am

File Name

[DF45020E-58B3-4D03-BA18-44E...](#)



Description

SVR 03: 3.02, 3.03, 3.04, 3.07, 3.10

Taken Date

07/23/2021 at 09:44 am

Uploaded By

Mark Carrick

Upload Date

07/23/2021 at 10:27 am

File Name

[FEFB2610-9E35-4C92-9077-A48E...](#)



Description

SVR 03: 3.02, 3.03, 3.04, 3.07, 3.10

Taken Date

07/22/2021 at 02:03 pm

Uploaded By

Mark Carrick

Upload Date

07/22/2021 at 02:04 pm

File Name

[001227EC-770E-44D8-BD9E-06B...](#)



Description

SVR 03: 3.16 (typical)



Description

SVR 03: 3.21 (typical)

Taken Date	Uploaded By
06/28/2021 at 08:11 am	Mark Carrick

Upload Date	File Name
06/28/2021 at 08:48 am	7AB65B72-46D3-4AB4-8C79-9D3...



Description

SVR 03: 3.15 & SVR 05: 5.03 (typical)

Taken Date	Uploaded By
06/22/2021 at 09:20 am	Mark Carrick

Upload Date	File Name
06/22/2021 at 09:20 am	4F356A17-72C3-4428-B357-6F4F...

Taken Date	Uploaded By
06/11/2021 at 09:37 am	Dylan Dalton

Upload Date	File Name
08/03/2021 at 06:35 am	5C979353-70C1-470F-A96C-0107...