

# CHARDON LOCAL SCHOOLS 2021 ROOF PROJECT

CONSTRUCTION DOCUMENTS BID SET  
3/29/21

## DRAWING INDEX:

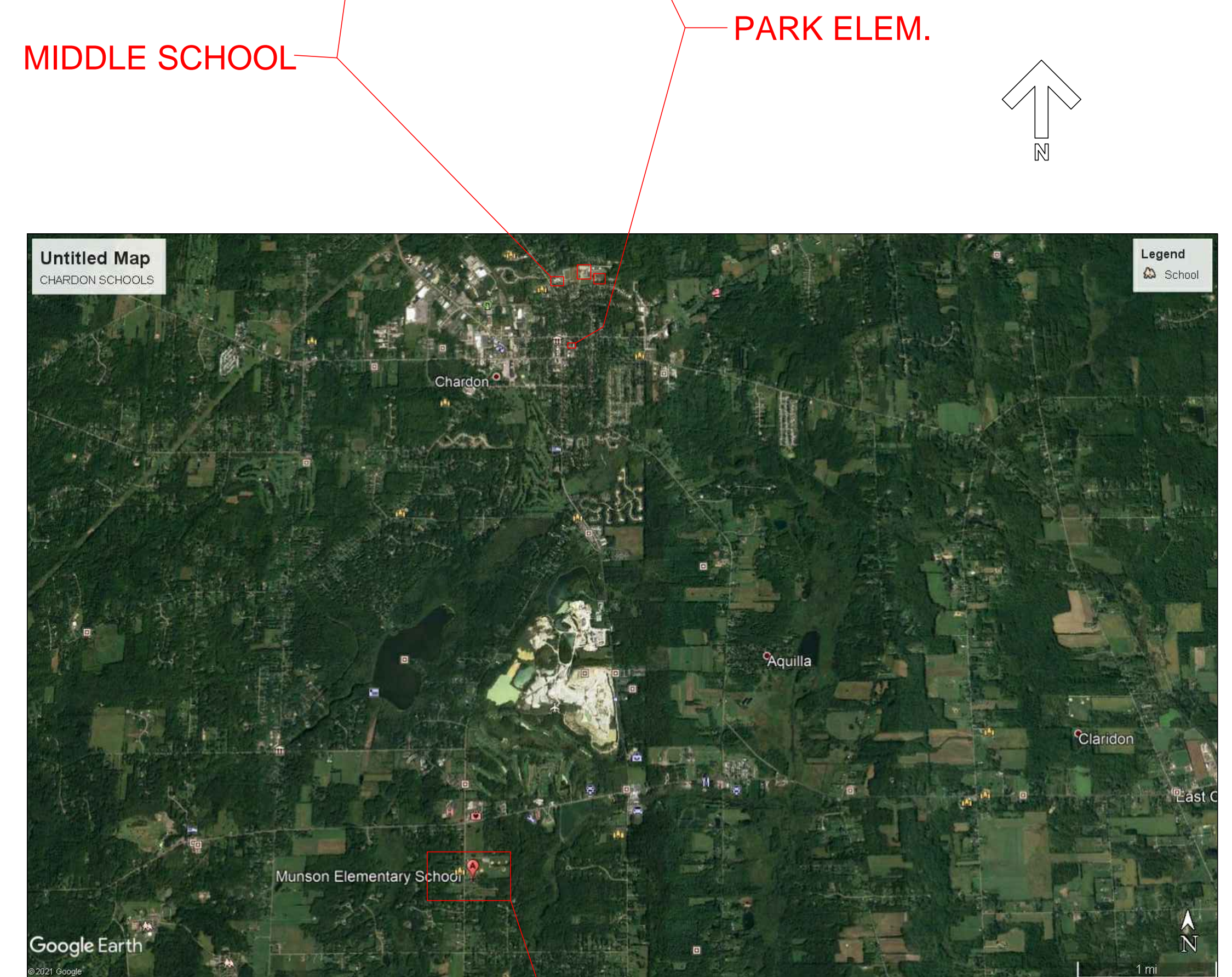
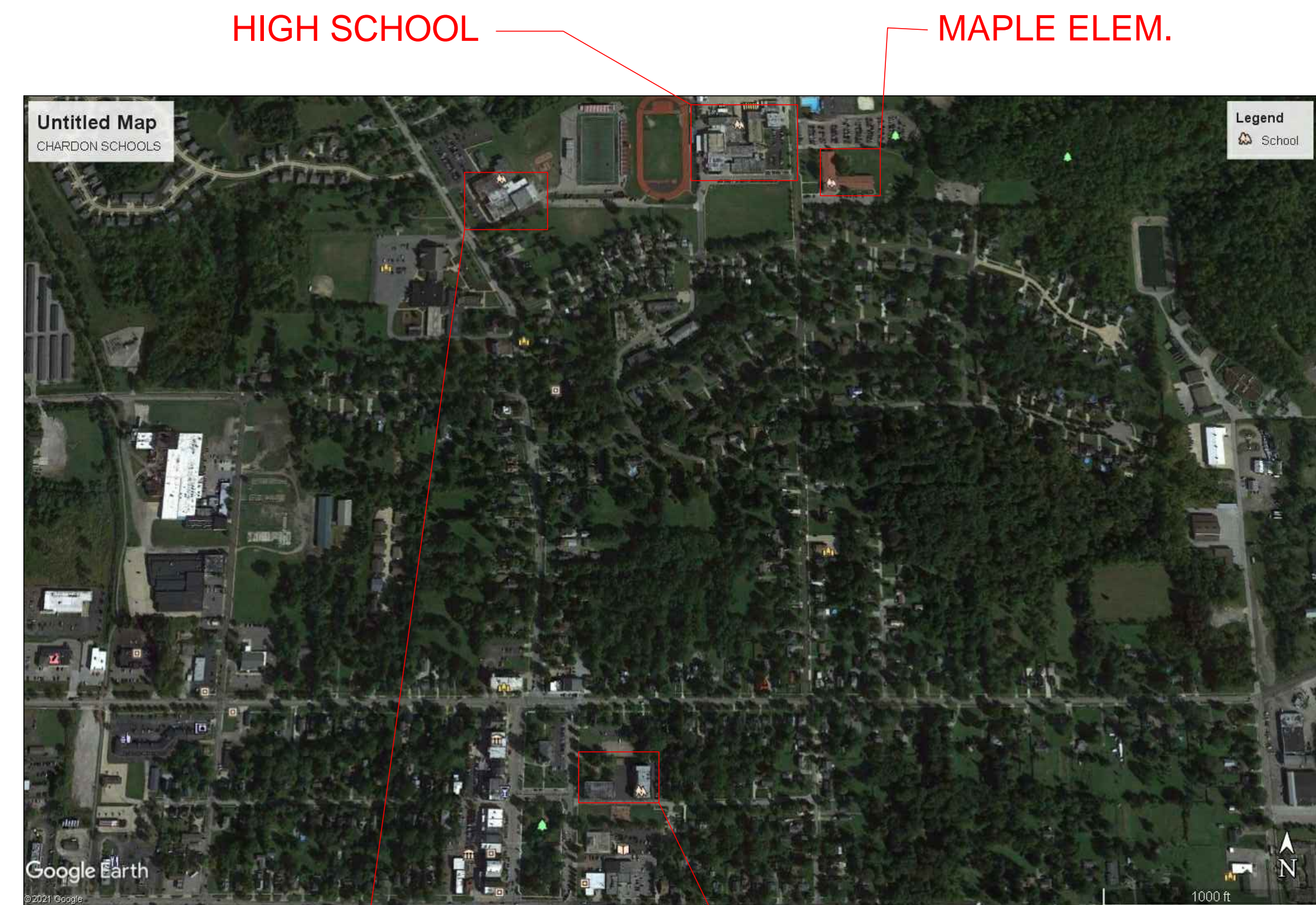
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## GENERAL SCOPE:

1. High School, Middle School, Munson Elementary:
  - 1.1. Tear off and replace all roof areas.
2. Park Elementary, Classroom Building:
  - 2.1. Masonry Repairs & Related roof flashing
3. Park Elementary Auditorium Bulding:
  - 3.1. Misc. repairs to existing BUR
4. Maple Elementary:
  - 4.1. Metal roof repairs

## CODES AND STANDARDS INFORMATION:

Ohio Building Code (OBC)  
National Fire Protection Association (NFPA)  
Occupational Safety and Health Standards of Construction Industry (OSHA)  
Environmental Protection Agency  
Underwriters Laboratories (UL)  
Class A  
Wind Design Standards:  
ASCE 7  
ANSI/SPRI WD-1



### Project Contacts

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Drawing Title:

**Cover Sheet**

Scale NTS	Sheet
Date 3.29.21	<b>X1</b>







**CHARDON SCHOOLS  
2021 ROOF PROJECT  
Project # BB201216**

**Project Contacts**

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**GENERAL NOTES:**

- Do not scale drawings.
- The contractor shall field verify all site conditions, including but not limited to, dimensions, existing condition components, slopes, etc.
- The Contractor shall be responsible for obtaining all permits, licenses and fees for this work and contractor shall include any such costs in their bids.
- Work shall be performed in accordance with all federal, state and local regulations and requirements, including but not limited to those of the Owner, OSHA and the EPA rules and regulations.
- Contractor shall comply with Owners tobacco policy (Appendix 2 in specifications)
- The contractor shall review and become familiar with all existing conditions prior to commencing work. Any existing conditions shown on these documents have been obtained from documents that were available and have been verified to the greatest extent possible, but are not guaranteed to be 100% accurate. Any conditions not documented on these drawings or observed to be different than those shown on these drawings are to be reported the Owner and Consultant prior to beginning work.
- Roof area scope lines are intended to indicate the project work area and are schematic in nature. Additional work, as required by these documents, may occur outside the project scope lines. Contractor shall complete all work required by the documents.
- The location, size, number, and types of penetrations, drains and equipment have been defined schematically and are approximate. Contractor shall be responsible for completing a detailed inventory of all to establish precise size, location, number and types. Any previously undefined conditions shall be brought to the immediate attention of the Consultant and Owner.
- The contractor shall perform and submit a pre-construction survey, including photographic documentation of all existing conditions including any existing damage, for the project area and surrounding areas that may become damaged during the work. The pre-construction survey shall be submitted to the Consultant and Owner for approval prior to the beginning of construction.
- Prior to commencement of any construction under this project, the contractor shall provide the Owner with 48 hours advanced notice.
- The contractor shall coordinate work with the Owner as they relate to utility, power, or HVAC shut-downs. A 72 hours minimum notification shall be provided.
- The contractor shall provide and implement a temporary protection plan to be employed for all existing roofs, walls and other structural and building features that are adjacent to or can become affected by their work. A temporary protection plan shall be submitted and approved by the Consultant and the Owner prior to the commencement of any work.
- All surfaces, finishes, utilities or other building features that are damaged within the limits of construction or in adjacent areas as a result of the contractors work shall be repaired and returned to their original functioning and finished condition at no additional cost to the Owner. This includes, but is not limited to, adjacent roofs, facades, sidewalks, roadways, electrical piping and system lines, etc.
- Air intakes must be shut down whenever dust, fumes or odors are possible. Coordinate shut downs with Owner.
- The contractor shall remove all debris created as a result of this project, daily or as directed by the Owner and shall dispose of all construction waste in a legal and proper manner. All dirt, dust and debris must be swept from deck surfaces, including metal deck flutes
- Roofing work shall be performed so as to provide completed, functioning and water tight roof systems at all locations where roofing work is performed under this project. Completed work shall not impede drainage.
- Protect all existing roofing, new roofing and facade systems (with rigid insulation covered by plywood) when moving materials, debris or equipment across roofing systems, staging or during storage. Storage shall be distributed to prevent concentrated loads being applied to the

- roof structure. Contractor shall submit for review load data for any palette or equivalent, which exceeds 500 lbs gross weight. Contractor shall maintain spacing between palettes at all times.
- In general, new material and materials for repair conditions shall match similar items in quality, detail, profile, and finish as those already built into the work unless otherwise indicated.
- All patching of existing material shall be done with the materials and workmanship matching adjacent surfaces.
- Prior to any other roof work, test drains to ensure that they are free flowing. Mark drains that are not free flowing and submit to Consultant and Owner to review. All drains shall be operational and free flowing at all times during the work and shall be maintained free of debris at all times.
- Extend all conduits, condensate and gas lines as needed to provide for the final equipment heights. Adjust ductwork connections as necessary to provide complete connections at new equipment elevations.
- Existing mechanical equipment shall remain in place provided it does not have to be raised to achieve an 8" final flashing height. Contractor is to raise all equipment as necessary to provide a minimum of 8" flashing height above final roof surface elevation at all mechanical equipment and curbed units. Raise equipment and remove and replace existing rails or supports with new pate rails or curbs and anchor new rails or curbs to the deck. Install pate rails or curbs at all equipment where curbs or rails do not exist or where they are not mounted to the deck. Where equipment need not be raised, use manufacturer's approved flashing details, including, but not limited to slip flashing details, repair or replacement of damaged substrates, etc.. All roof-top equipment, curbs and rails shall be re-anchored to deck, flashed into membrane, flashed over the top of rails and curbs and a new metal cap flashing over rails and curbs shall be installed. All these conditions shall provide a complete, functioning and water tight roofing system.
- Contractor shall inspect and extend all existing roof vents to ensure top of vent pipe is a minimum of 12" above the new finished roof surface. Replace all rusted, broken or damaged vent stacks.
- Raise and temporarily support all conduits, piping, gas lines and other utilities as necessary to install the new roof system. Conduits and electrical lines must be disconnected and reconnected to run through new goose neck penetrations or pipe chases through the roof. Gas lines, conduits and pipes to be permanently raised as required to run above new roof system elevation. Contractor shall be responsible to include all costs associated with disconnecting and reconnecting service lines as required by qualified system contractors. Coordinate with Owner for timing and locations.
- All mechanical equipment that has been removed and re-installed to accommodate roofing work shall be returned to fully functioning and operational system.
- The Contractor must include all costs associated with raising rooftop units, gas lines, soil stacks, conduits, etc. or with repositioning same to ensure that proper flashing heights as designed and required by the manufacturer and by industry standards are achieved. This includes costs involved in evacuating and charging HVAC units, and gas lines. Work may need to be performed during off hours to accommodate the Owner. The Contractor must also use licensed, Owner approved and proper subcontractors for all of this type of work.
- Conduits, junction boxes, cabling, etc. that are mounted on walls or copings must be moved and remounted on masonry above the counter flashings or on proper blocking or supports on the roof. No such items may be mounted or remounted in a manner in which attachment penetrates roof membrane, flashing materials or metal components or accessories.
- Where gas lines, pipes, conduit, duct work or the like penetrates horizontally through any surfaces including walls, equipment or the like, the openings must be sealed in an appropriate weatherproof manner.
- Remove sealant from control and expansion joints on all walls on adjoining roof replacement areas. Caulk new and existing masonry joints and seal holes and penetrations through walls
- All edge metal components shall comply with the latest version of ANSI/SPRI/FM4335 ES-1

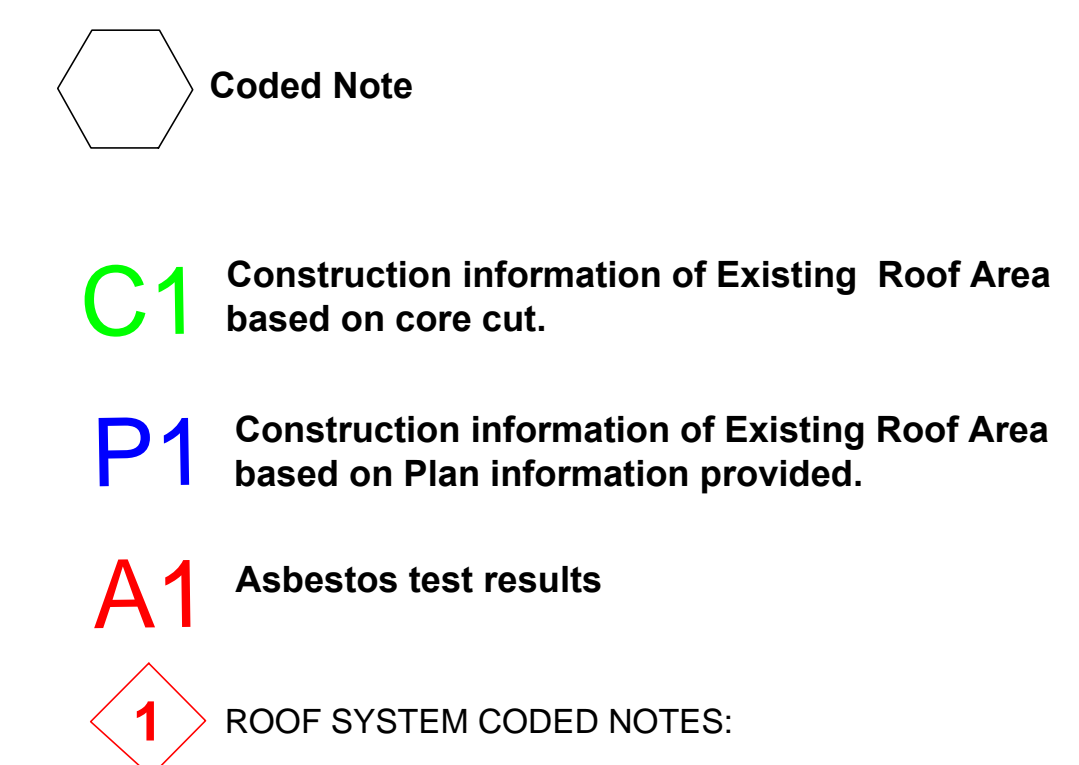
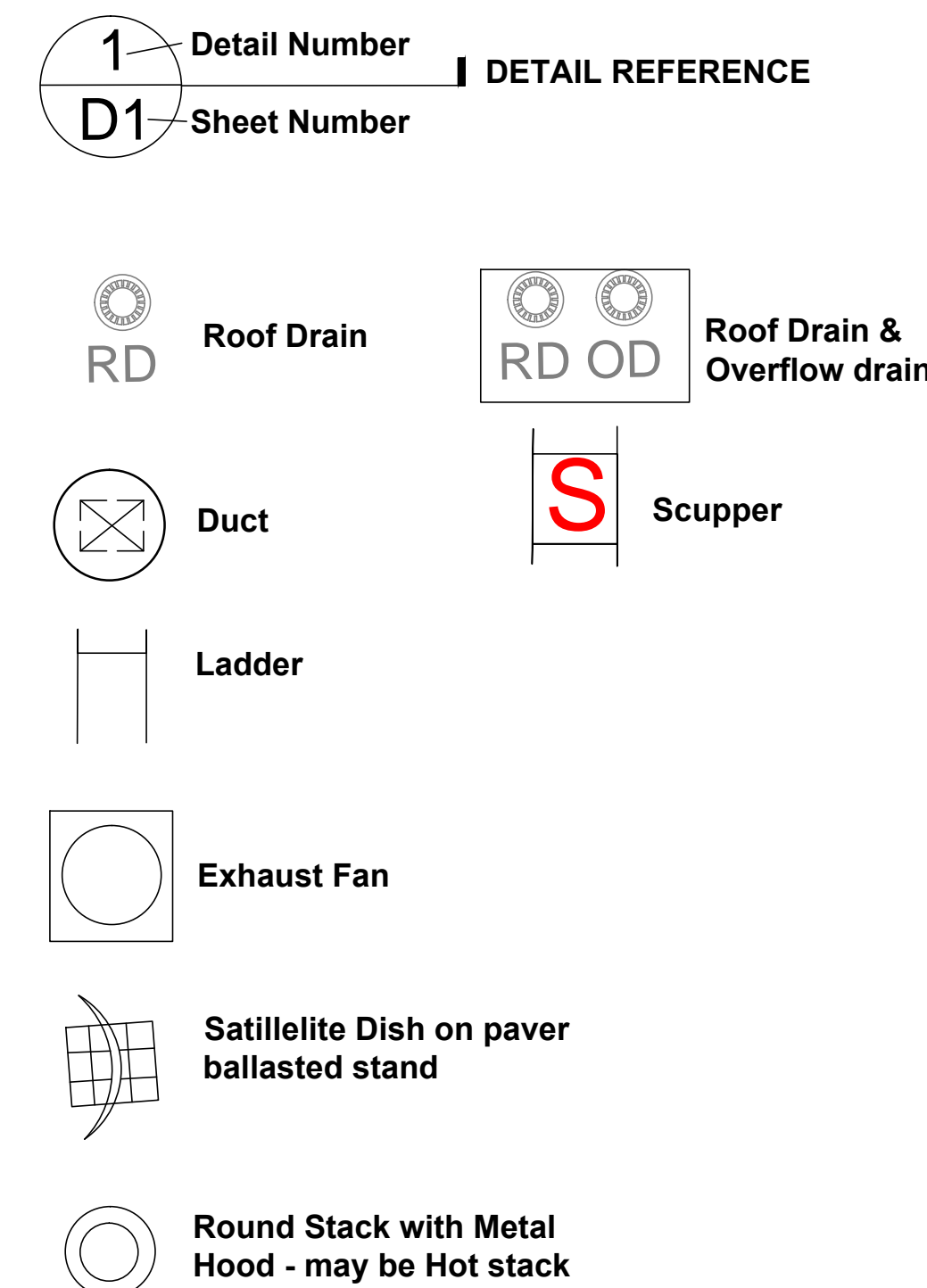
- wind uplift requirements. (latest edition)
- Below deck and interior wall surface utilities and systems - contractor shall inspect and inventory the underside of all deck systems and the interior surface side of of all exterior wall systems for the presence of electrical conduit, fire communications, cabling, data, control panel, or other utility lines and any other system features including, but not limited to drop ceiling, duct work or other supports that are secured to the bottom side of the deck systems or the interior surface of the existing exterior walls or that appear to penetrate the deck in a way that suggests that it may run across the top surface of the deck. The contractor shall review conditions and locations with the Owner and mark out such systems and items on the deck and wall surfaces prior to cutting into walls, removing roof system or deck materials or placement of mechanically fastened insulation, flashing, framing or other fastened building components to prevent damage to these items and systems during construction. The contractor shall be responsible to temporarily support, reinstall and repair and/or replace any such items and systems (by the Owners service contractors) for damage that occurs as a result of its work. Removal or temporary disconnection shall be coordinated with the Owner and performed by an approved qualified contractor.
- Contractor shall inspect underside of metal deck for spray on fireproofing and shall patch any areas where spray on fireproofing becomes dislodged as a result of construction activities. Contractor to protect interior equipment and finished surfaces from falling fireproofing with tarps or other suitable methods during removal of existing roof and installation of new roof system components.
- Below deck condition inspection - contractor shall inspect underside of all deck areas for visible damage that may require deck replacement and document areas required to be replaced. Submit to Consultant and Owner for review and approval prior to beginning roof removal.
- All below deck inspections should be conducted seven days before beginning roof removal.
- At the end of each day's work or before the arrival of inclement weather, the roof system shall be positively sealed. It is the contractor's responsibility to assure the night tie-ins are water tight and storm resistant. Water shedding night tie-ins are not acceptable.
- At the end of each days work, contractor shall inspect interior spaces under metal deck areas and areas where deck joints exist in panel or plank decks where existing roof has been removed and to clean up any dirt and debris which has fallen through.
- Install duct, pipe and gas line supports as required to match existing support locations.
- All condensate lines shall be re-installed and safe wasted to the roof drains.
- Delegated Design: Should the contractor choose to utilize the existing roof structure for storing or transporting materials or debris staging or removal, then the contractor shall retain a structural engineer licensed in the State of Ohio, at no additional cost to the Owner, to assess the existing roof structure and design all supports, bracing, reinforcing and other related requirements for the protection of the roof surface and structural integrity of the building.
- Masonry work areas where masonry has been removed and not yet replaced shall be shored as appropriate and shall be protected by temporary waterproofing measures until new masonry is installed.

**ABBREVIATIONS**

ADJ	adjacent	EQUIP	equipment
AL	Aluminum	ETR	existing to remain
ALT	alternate	EXIST	existing
APPROX	approximate	EXT	exterior
ARCH	architect(ural)		
AUTO	automatic		
		FB	face brick
		FIN	finish
		FR	fire resistant
		FT	feet
		GA	gauge
		GALV	galvanized
		GBUR	gravel surfaced
		BUR	grade
		GR	grade
		GWB	gypsum board
		HORIZ	horizontal
		HR	hour
		HT	height
		HVAC	heating, ventilation air conditioning
		ID	inside diameter
		IN	inch
		INCL	include
		INSUL	insulation
		LB	pound
		LF	linear foot
		LWC	Light weight concrete
		MAS	masonry

MAT	material	STD	standard
MB	modified bitumen		
MAX	maximum	TEMP	temporary
MEMB	membrane	THK	thick
MFR	manufacturer	TOD	top of deck
MIN	minimum	TOP	top of parapet
MISC	miscellaneous	TYP	typical
MTL	metal		
		UNO	unless noted otherwise
N/A	not applicable	VIF	verify in field
NTS	not to scale	VB	vapor retarder
OC	on center	W	width
OPT	optional	W/	with
		W/O	without
		WF	wood fiber insulation
PERIM	perimeter		
PNL	panel		
PLYWD	plywood		
PROJ	projection		
QTY	quantity		
RD	roof drain		
REINF	reinforcement (reinforcing)		
SCHED	schedule		
SDL	saddle		
SECT	section		
SHT	sheet		
SPEC	specifications		
SPR	single ply roofing		
SQ IN	square inch		

**SYMBOLS**



Drawing Title:

**General Information**

Scale NTS	Sheet
Date 3.29.21	<b>A0.0</b>



**CHARDON SCHOOLS  
2021 ROOF PROJECT  
Project # BB201216**

**Legend:**  
= Roof Areas Included in Roof Replacement Scope

**Project Contacts**

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Location, size, number, and types of penetrations and equipment have been defined schematically and are approximate. Contractor shall be responsible for completing a detailed inventory of all to establish precise size, location, number and types. Any previously undefined conditions shall be brought to the immediate attention of the Consultant.

Drawing Title:  
**DEMOLITION PLAN  
HIGH SCHOOL**

**DEMOLITION GENERAL NOTES:**

- Do not scale drawings.
- The contractor shall field verify all site conditions, including but not limited to, dimensions, existing conditions, components, slopes, etc.
- Roof demolition and disposal of asbestos containing materials on roof areas identified or found to contain asbestos shall be performed in accordance with specifications and all federal state and local laws and ordinances.
- Roof demolition shall include, but not be limited to, removal of existing roof membrane, insulation, vapor retarders, base sheets, cover board, original roof, base flashings, counterflashings where indicated, deteriorated or damaged wood blocking, walkway pads, and all other roof system components and features to bare structural deck surface, including metal coping, edge metal including fascia extenders and any other metal fascia components, and any residual adhesive. Special safety precautions apply to removal over gypsum decks (see specification section 03 52 00).
- Inspect deck for damage seven days prior to beginning roof removal to mark out areas of potentially bad deck:
  1. Metal: Make repairs or replace metal deck materials as specified, clean deck including metal deck flutes, prepare deck as specified, and install blocking, install new new curb supports or raise existing curbs as specified, install new new roof system components as required to ensure a weather tight and storm resistant system at the end of each day.
  2. Concrete decks: Make repairs to concrete decks and seal joints in panel or plank decks as specified, clean deck prepare deck as specified, and install blocking, install new new curb supports or raise existing curbs as specified, install new new roof system components as required to ensure a weather tight and storm resistant system at the end of each day.
  3. Gypsum Decks: Inspect underside of deck for signs of damage to identify areas of potential replacement before removing roof system. Prior to proceeding with any gypsum deck replacement, Contractor must engage a structural engineer, at Contractors expense, to review and approve any modifications to the existing deck. See Specification Section 03 52 00.
- Remove and replace existing roof drain assemblies to match existing in size and capacity at existing locations where existing drains do not have a conventional bowl and ring configuration and where existing bowls are cracked or damaged.
- After removal of existing roof membrane and flashing, Contractor to inspect substrates, such as decks, blocking, flashing substrates, etc. Contractor bring to the Owners attention any concealed items that require repair or replacement that is not already specified and is not included in the base bid or that exceeds the quantities in the unit price values in the base bid. This applies to all concealed items.
- Remove and dispose of existing pitch pockets.
- Remove and dispose of unused equipment designated by Owner.
- Remove existing flashings, including rusted or deteriorated metal sleeves and hoods from existing vent stacks, curbs, exhaust stacks, and other roof top features.
- Remove sealant from masonry control and expansion joints on all exterior walls extending above roof level. Install backer rod where required and install new silicon sealant.
- Remove brick and salvage for re-use. Install through wall receiver and counter flashing where indicated on Drawings and where new flashing heights will be less than 8" on Brick masonry walls that have existing through wall flashings below the new 8" flashing height. Re-install salvaged BMU's.
- Roof demolition and replacement shall be limited to the work that can be performed in a single work shift to provide a continuous watertight and storm resistant system.
- The contractor shall keep sufficient materials available on the project site to cover work in progress in the event of an unanticipated rain event.
- Dispose of all demolition debris in accordance with the specifications and all federal state and local codes and ordinances.
- Existing mechanical equipment and electrical conduits are not shown but do exist. Contractor to field verify all rooftop devices prior to submittal of bids. Where necessary, conduits, pipes or other devices must be raised and remounted as specified.
- Existing gas lines and other pipes are shown schematically. Additional equipment and gas lines or other pipes exist. Contractor to field verify all rooftop devices prior to submittal of bids. Gas lines need to be permanently raised and supported as specified.

**EXISTING CONSTRUCTION BASED ON DRAWINGS PROVIDED:**

**NOTES:**

- GENERAL: Multiple building additions, demolitions and modifications have been made through the years. Not all existing Drawings accurately reflect the changes made, tie ins to existing construction at the time, actual as built conditions, changes or deletions made between design and construction or future changes made by additional additions or demolitions. As a result, deck types may differ from those listed and various multiple deck types may be present on existing roof areas.
- P1 Existing drawing indicates metal deck.  
P2 Existing drawing indicates gypsum deck with tapered light weight fill for taper.  
P3 Existing drawing indicates poured gypsum over fiberglass form board.  
P4 Existing drawings indicates multiple deck types including poured gypsum over fiberglass form board, metal deck and concrete - possibly hollow core and possibly with tapered light weight fill that may exist.  
P4A Existing drawings indicates this area may be steel deck.  
P5 Existing drawings indicates multiple deck types including concrete in North section of 04 and metal in south section.

**EXISTING CONSTRUCTION BASED ON CORE CUTS MADE:**

**NOTES:**

- GENERAL: Location of core symbol does not correspond to core location on roof area(s)
- C1, C2, C3, C6, C7, C8, C11, C12, C13, C14, C15, C19, C20, C23, C25, C26 Metal Deck  
C4, C18 Concrete Deck  
C21, C22, C24 Gypsum Deck  
C10A Concrete deck detected in core area, no light wt. fill.  
C10B Gypsum deck, GBUR, perlite, MB.  
C16 Core indicated a wood deck - possibly a deck patch  
C17 Plywood

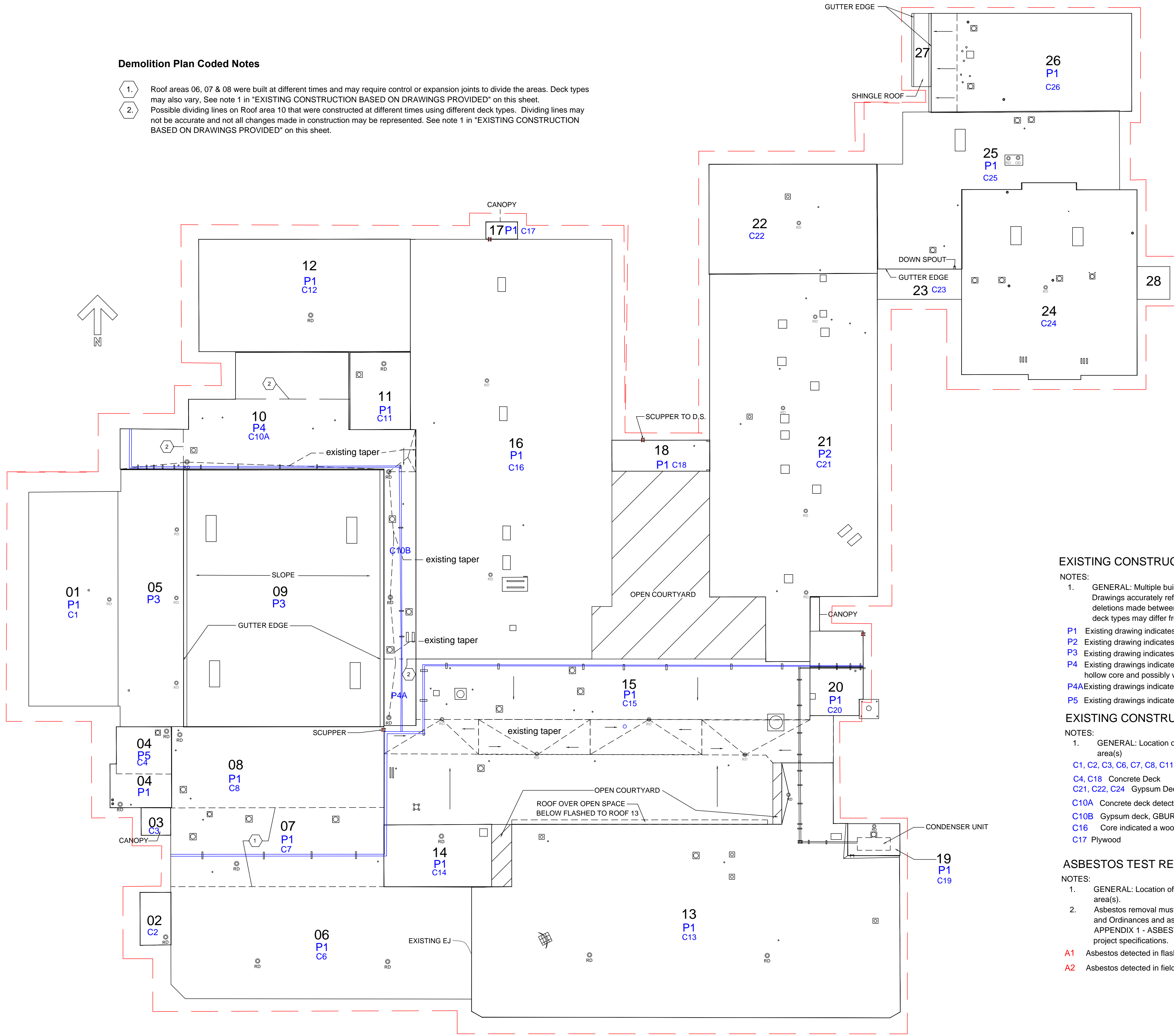
**ASBESTOS TEST RESULTS & GENERAL REQUIREMENTS:**

**NOTES:**

- GENERAL: Location of core symbol does not correspond to core location on roof area(s).
  - Asbestos removal must comply with all Federal, State and local laws, regulations and Ordinances and as required and recommended by CTG reports contained in APPENDIX 1 - ASBESTOS TEST RESULTS AND REQUIREMENTS in the project specifications.
- A1 Asbestos detected in flashings. Report results Pending  
A2 Asbestos detected in field of roof. Report results Pending

**Demolition Plan Coded Notes**

- Roof areas 06, 07 & 08 were built at different times and may require control or expansion joints to divide the areas. Deck types may also vary. See note 1 in "EXISTING CONSTRUCTION BASED ON DRAWINGS PROVIDED" on this sheet.
- Possible dividing lines on Roof area 10 that were constructed at different times using different deck types. Dividing lines may not be accurate and not all changes made in construction may be represented. See note 1 in "EXISTING CONSTRUCTION BASED ON DRAWINGS PROVIDED" on this sheet.





**CHARDON SCHOOLS  
2021 ROOF PROJECT  
Project # BB201216**

**Legend:**

= Roof Areas Included in Roof Replacement Scope

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**DEMOLITION GENERAL NOTES:**

1. Do not scale drawings.
2. The contractor shall field verify all site conditions, including but not limited to, dimensions, existing conditions, components, slopes, etc.
3. Roof demolition and disposal of asbestos containing materials on roof areas identified or found to contain asbestos shall be performed in accordance with specifications and all federal state and local laws and ordinances.
4. Roof demolition shall include, but not be limited to, removal of existing roof membrane, insulation, vapor retarders, base sheets, cover board, original roof, base flashings, counterflashings where indicated, deteriorated or damaged wood blocking, walkway pads, and all other roof system components and features to bare structural deck surface, including metal coping, edge metal including fascia extenders and any other metal fascia components, and any residual adhesive.
5. Inspect deck for damage seven days prior to beginning roof removal to mark out areas of potentially bad deck. Make repairs or replace of all deck materials as specified, clean deck including metal deck flutes, prepare deck as specified, and install blocking, install new new curb supports or raise existing curbs as specified, install new roof system components as required to ensure a weather tight and storm resistant system at the end of each day.
6. Remove and replace existing roof drain assemblies to match existing in size and capacity at existing locations where existing drains do not have a conventional bowl and ring configuration where existing bowls are cracked or damaged.
7. After removal of existing roof membrane and flashing, Contractor to inspect substrates, such as decks, blocking, flashing substrates, etc. Contractor bring to the Owners attention any concealed items that require repair or replacement that is not already specified and is not included in the base bid or that exceeds the quantities in the unit price values in the base bid. This applies to all concealed items.
8. Remove and dispose of existing pitch pockets.
9. Remove and dispose of unused equipment designated by Owner.
10. Remove existing flashings, including rusted or deteriorated metal sleeves and hoods from existing vent stacks, curbs, exhaust stacks, and other roof top features.
11. Remove sealant from masonry control and expansion joints on all exterior walls extending above roof level. Install backer rod where required and install new silicon sealant.
12. Remove brick and salvage for re-use. Install through wall receiver and counter flashing where indicated on Drawings and where new flashing heights will be less than 8" on Brick masonry walls that have existing through wall flashings below the new 8" flashing height. Re-install salvaged BMU's.
13. Roof demolition and replacement shall be limited to the work that can be performed in a single work shift to provide a continuous watertight and storm resistant system.
14. The contractor shall keep sufficient materials available on the project site to cover work in progress in the event of an unanticipated rain event.
15. Dispose of all demolition debris in accordance with the specifications and all federal state and local codes and ordinances.
16. Existing mechanical equipment and electrical conduits are not shown but do exist. Contractor to field verify all rooftop devices prior to submittal of bids. Where necessary, conduits, pipes or other devices must be raised and remounted as specified.
17. Existing gas lines and other pipes are shown schematically. Additional equipment and gas lines or other pipes exist. Contractor to field verify all rooftop devices prior to submittal of bids. Gas lines need to be permanently raised and supported as specified.

**EXISTING CONSTRUCTION BASED ON DRAWINGS PROVIDED:**

**NOTES:**

1. GENERAL: Multiple building additions, demolitions and modifications have been made though the years. Not all existing Drawings accurately reflect the changes made, tie ins to existing construction at the time, actual as built conditions, changes or deletions made between design and construction or future changes made by additional additions or demolitions. As a result, deck types may differ from those listed and various multiple deck types may be present on existing roof areas.

**P1** Existing drawing indicates metal deck.

**P1a** Existing drawing indicates metal deck, inspections indicate metal deck goes in two different directions

**EXISTING CONSTRUCTION BASED ON CORE CUTS MADE:**

**NOTES:**

1. GENERAL: Location of core symbol does not correspond to core location on roof area(s)

**C2** MB, 1/2" WF, GBUR, Fiberglass, Rosin Paper, Metal

**C3** MB, WF, GBUR, Fiberglass, metal

**C6** 2 layers MB, Vented BS, pitch GBUR, Fiberglass, Metal

**C7** MB, Vented BS, GBUR, Perlite, VB, Metal. 4" thick

**C8** MB, 1/2" WF, GBUR, Perlite, metal

**C9** MB, 1/2" WF, GBUR, Perlite, VB, Metal

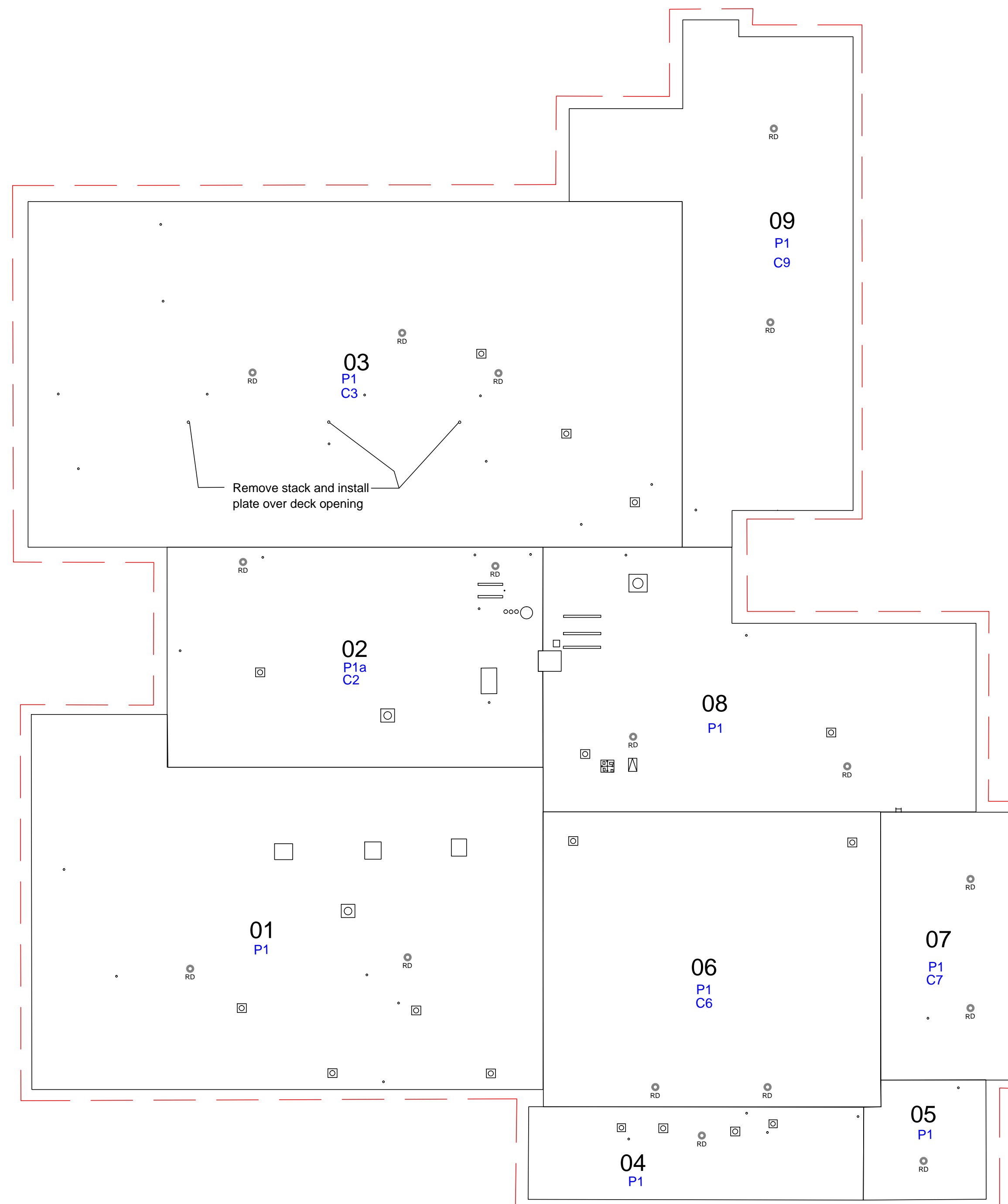
**ASBESTOS TEST RESULTS & GENERAL REQUIREMENTS:**

**NOTES:**

1. GENERAL: Location of core symbol does not correspond to core location on roof area(s).
2. Asbestos removal must comply with all Federal, State and local laws, regulations and Ordinances and as required and recommended by CTG reports contained in APPENDIX 1 - ASBESTOS TEST RESULTS AND REQUIREMENTS in the project specifications.

**A1** Asbestos detected in flashings. Report results Pending

**A2** Asbestos detected in field of roof. Report results Pending



**Middle School**

Location, size, number, and types of penetrations and equipment have been defined schematically and are approximate. Contractor shall be responsible for completing a detailed inventory of all to establish precise size, location, number and types. Any previously undefined conditions shall be brought to the immediate attention of the Consultant.

Drawing Title:

**DEMOLITION PLAN  
MIDDLE SCHOOL**

Scale  
NTS  
Date  
3.29.21

Sheet  
**A1.2**

**CHARDON SCHOOLS  
2021 ROOF PROJECT  
Project # BB201216**

**Legend:**

  = Roof Areas Included in Roof Replacement Scope

**Project Contacts**

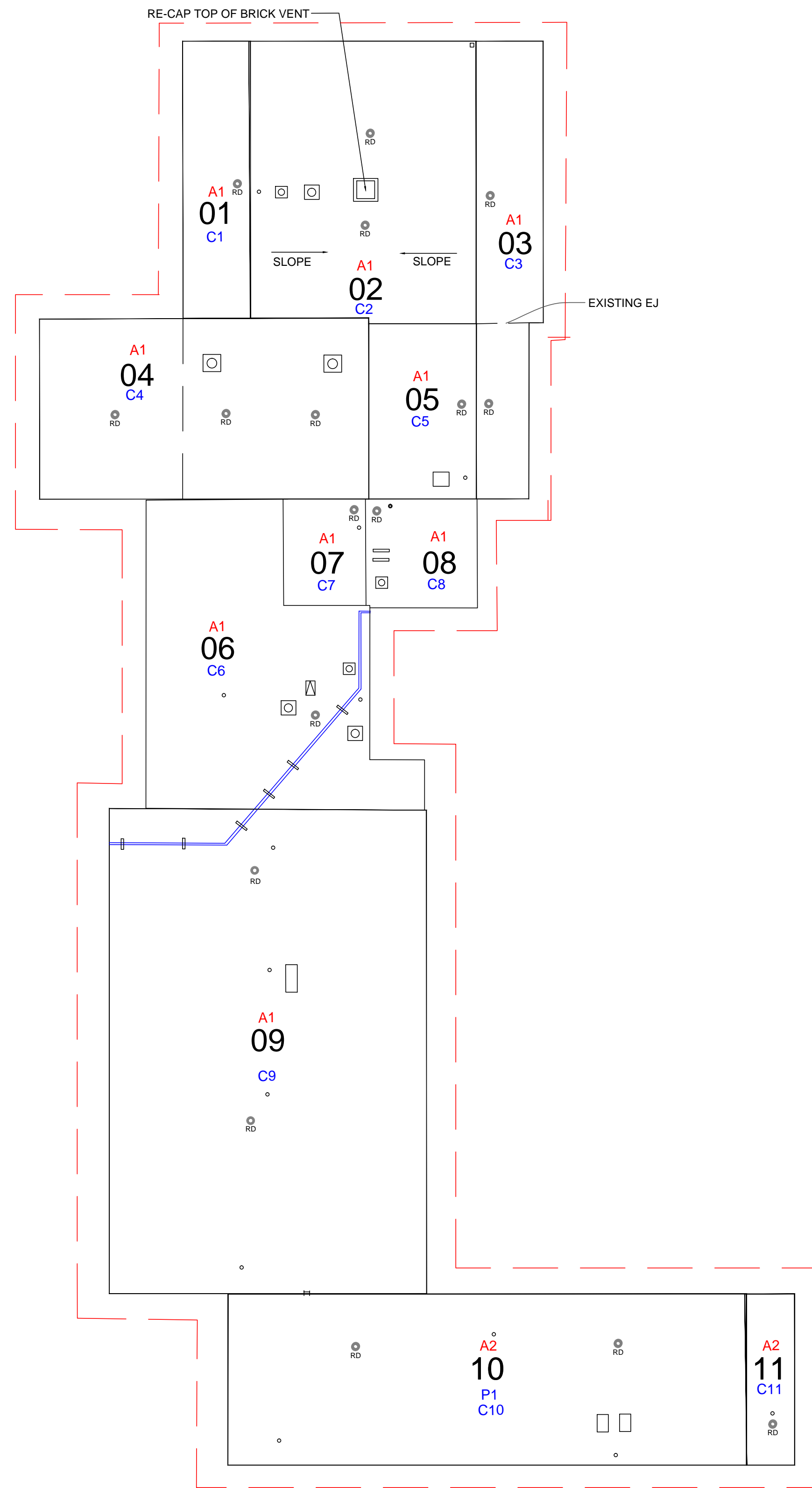
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**DEMOLITION GENERAL NOTES:**

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- The contractor shall field verify all site conditions, including but not limited to, dimensions, existing conditions, components, slopes, etc.
- Roof demolition and disposal of asbestos containing materials on roof areas identified or found to contain asbestos shall be performed in accordance with specifications and all federal state and local laws and ordinances.
- Roof demolition shall include, but not be limited to, removal of existing roof membrane, insulation, vapor retarders, base sheets, cover board, original roof, base flashings, counterflashings where indicated, deteriorated or damaged wood blocking, walkway pads, and all other roof system components and features to bare structural deck surface, including metal coping, edge metal including fascia extenders and any other metal fascia components, and any residual adhesive.
- Inspect deck for damage seven days prior to beginning roof removal to mark out areas of potentially bad deck. Make repairs or replace of all deck materials as specified, clean deck including metal deck flutes, prepare deck as specified, and install blocking, install new new curb supports or raise existing curbs as specified, install new roof system components as required to ensure a weather tight and storm resistant system at the end of each day.
- Remove and replace existing roof drain assemblies to match existing in size and capacity at existing locations where existing drains do not have a conventional bowl and ring configuration where existing bowls are cracked or damaged.
- After removal of existing roof membrane and flashing, Contractor to inspect substrates, such as decks, blocking, flashing substrates, etc. Contractor bring to the Owners attention any concealed items that require repair or replacement that is not already specified and is not included in the base bid or that exceeds the quantities in the unit price values in the base bid. This applies to all concealed items.
- Remove and dispose of existing pitch pockets.
- Remove and dispose of unused equipment designated by Owner.
- Remove existing flashings, including rusted or deteriorated metal sleeves and hoods from existing vent stacks, curbs, exhaust stacks, and other roof top features.
- Remove sealant from masonry control and expansion joints on all exterior walls extending above roof level. Install backer rod where required and install new silicon sealant.
- Remove brick and salvage for re-use. Install through wall receiver and counter flashing where indicated on Drawings and where new flashing heights will be less than 8" on Brick masonry walls that have existing through wall flashings below the new 8" flashing height. Re-install salvaged BMU's.
- Roof demolition and replacement shall be limited to the work that can be performed in a single work shift to provide a continuous watertight and storm resistant system.
- The contractor shall keep sufficient materials available on the project site to cover work in progress in the event of an unanticipated rain event.
- Dispose of all demolition debris in accordance with the specifications and all federal state and local codes and ordinances.
- Existing mechanical equipment and electrical conduits are not shown but do exist. Contractor to field verify all rooftop devices prior to submittal of bids. Where necessary, conduits, pipes or other devices must be raised and remounted as specified.
- Existing gas lines and other pipes are shown schematically. Additional equipment and gas lines or other pipes exist. Contractor to field verify all rooftop devices prior to submittal of bids. Gas lines need to be permanently raised and supported as specified.



Munson Elementary School

**EXISTING CONSTRUCTION BASED ON DRAWINGS PROVIDED:**

- P1** Existing drawing indicates metal deck.

**ASBESTOS TEST RESULTS & GENERAL REQUIREMENTS:**

- NOTES:**
- GENERAL: Location of core symbol does not correspond to core location on roof area(s).
  - Asbestos removal must comply with all Federal, State and local laws, regulations and Ordinances and as required and recommended by CTG reports contained in APPENDIX 1 - ASBESTOS TEST RESULTS AND REQUIREMENTS in the project specifications.
- A1** Asbestos detected in flashings.
  - A2** Asbestos detected in field of roof.

**EXISTING CONSTRUCTION BASED ON CORE CUTS MADE:**

- NOTES:**
- GENERAL: Location of core symbol does not correspond to core location on roof area(s)
- C1** AL coating, MB, ~1/2" WF, GBUR, ~1" Perlite, ~2" Iso, ~1" Fiberglass, granulated BUR or VB, Fiberglass, concrete panel
  - C2** AL Coating, MB, WF?, Perlite, BUR?, Fiberglass, BUR, Fiberglass, Concrete panel
  - C3** AL coating, MB, ~1/2" WF?, GBUR, ~1" Perlite, ~2" Iso, ~1" Fiberglass, granulated BUR or VB, Fiberglass, concrete panel
  - C4** AL Coating, MB, WF?, Perlite, BUR?, Fiberglass, BUR, Fiberglass, Concrete panel
  - C5** AL coating, MB, ~1/2" WF, GBUR, ~1" Perlite, ~2" Iso, GBUR, ~1" Fiberglass, granulated VB, base sheets below VB, concrete panel
  - C6** AL coating, MB WF, GBUR, LWC, Styrofoam board, concrete
  - C7** AL Coating, MB, WF?, BUR, LWC, styrofoam board, concrete
  - C8** AL Coating, MB, WF?, BUR, LWC, styrofoam board, concrete
  - C9** AL Coating, MB, WF, GBUR, 2 layers 2" Perlite in hot bitumen, plastic VB, metal deck
  - C10** AL Coating, MB, Perlite, GBUR, perlite, plastic VB, metal
  - C11** AL Coating, MB, Perlite, GBUR, perlite, plastic VB, metal

Location, size, number, and types of penetrations and equipment have been defined schematically and are approximate. Contractor shall be responsible for completing a detailed inventory of all to establish precise size, location, number and types. Any previously undefined conditions shall be brought to the immediate attention of the Consultant.

Drawing Title:

**DEMOLITION PLAN  
MUNSON  
ELEMENTARY  
SCHOOL**

Scale  
NTS  
Date  
3.29.21

Sheet  
**A1.3**



**CHARDON SCHOOLS  
2021 ROOF PROJECT  
Project # BB201216**

**Legend:**  
1 Roof System coded notes

**ROOF SYSTEM CONFIGURATION NOTES::**

- DECK PREPARATION:**
1. Repair/replace deck materials as required.
  2. Clean/prime deck as required.
  3. Tapered insulation plans are to be submitted by contractor after confirming existing slopes on each deck area prior to beginning installation.

**ROOF SYSTEM CODED NOTES:**

- 1 Existing drawings show some areas may be overlaid with light weight fill to provide slope. If sloped light weight fill is present and provides slope, use roof system TYPE 6 and use appropriate fasteners.
- 2 Tapered saddles and crickets are to be installed on all roof types where required to provide positive drainage between drains and scuppers, around curbs and where ever else required based on field conditions to provide positive drainage

**Project Contacts**

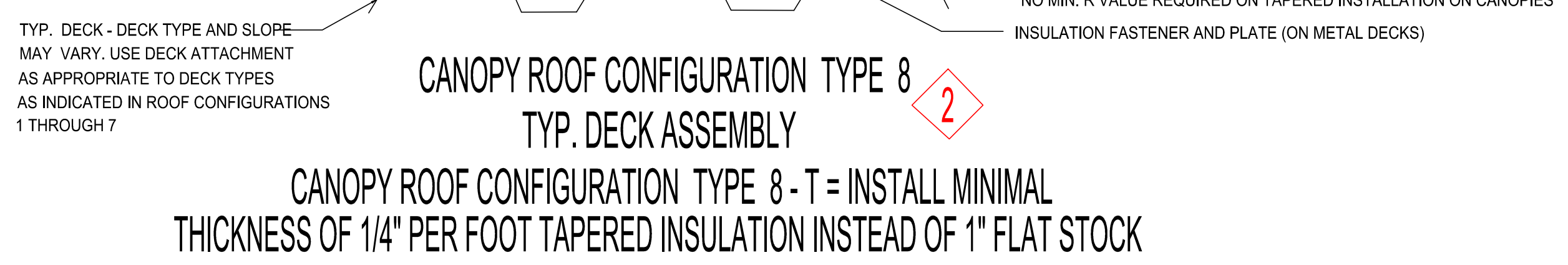
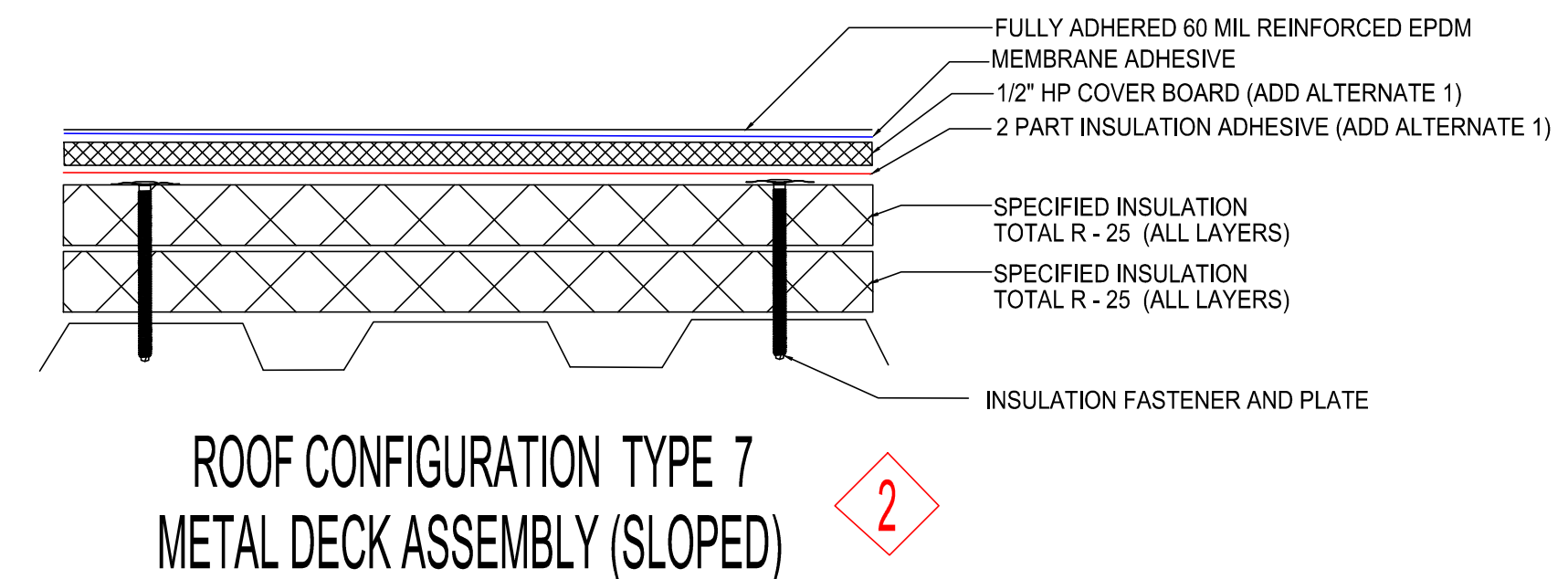
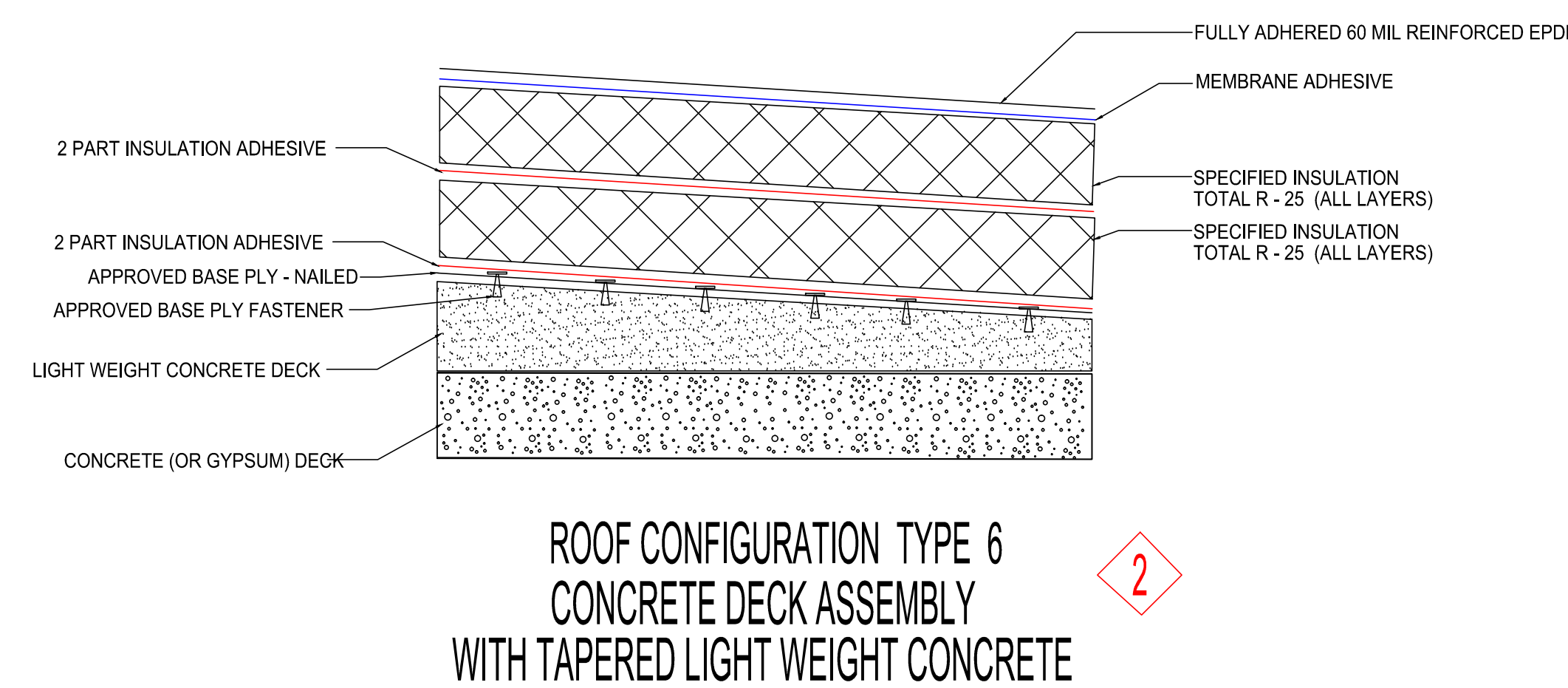
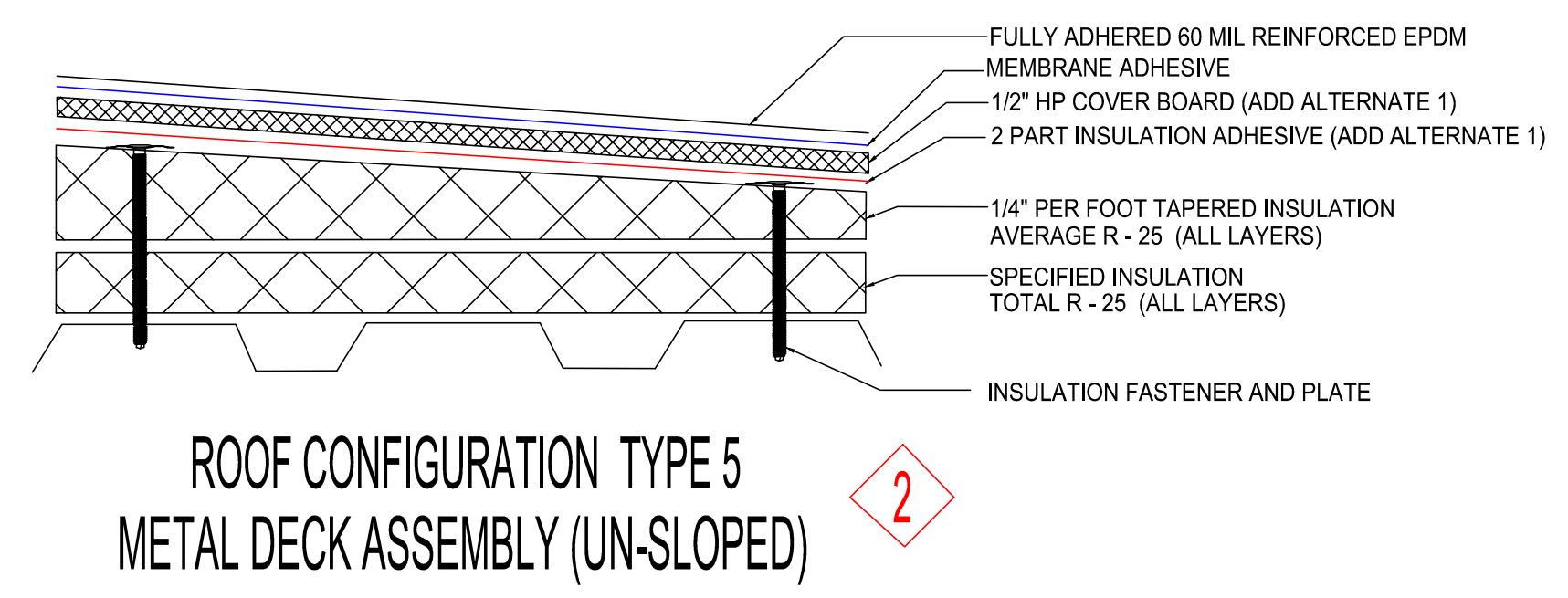
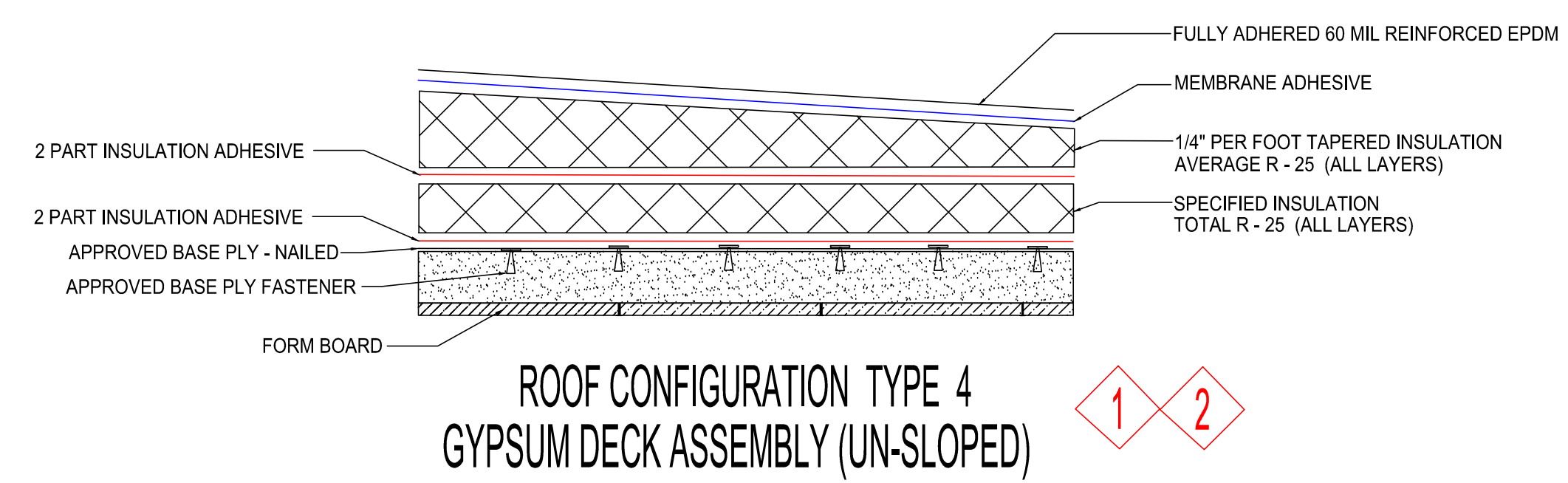
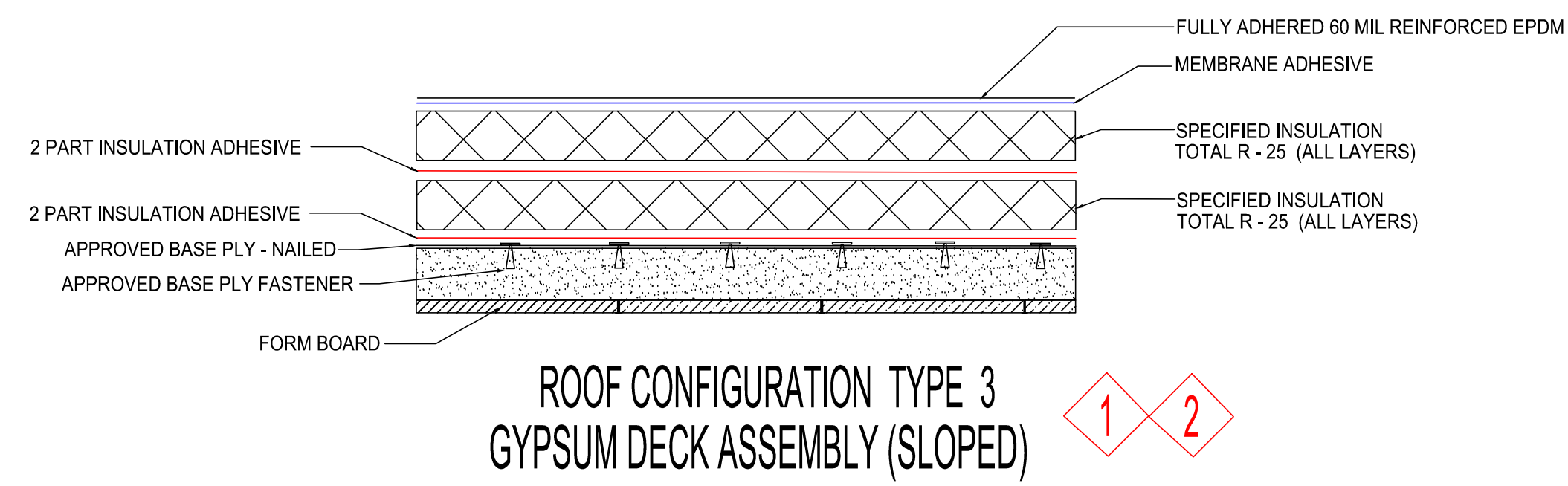
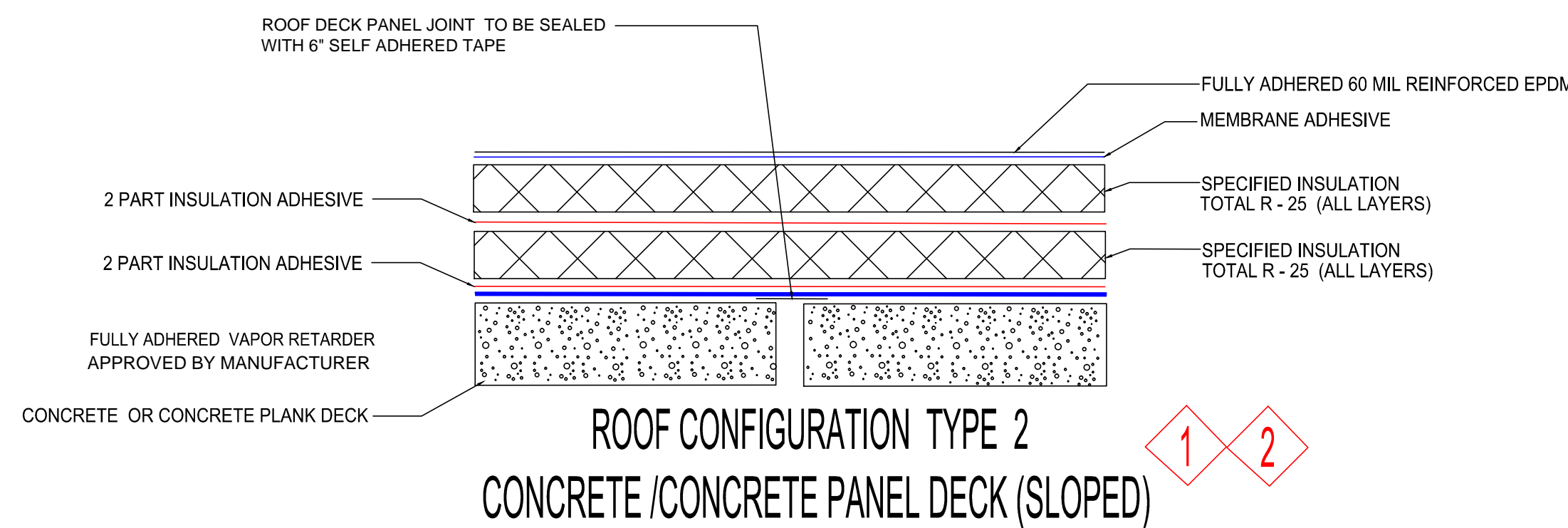
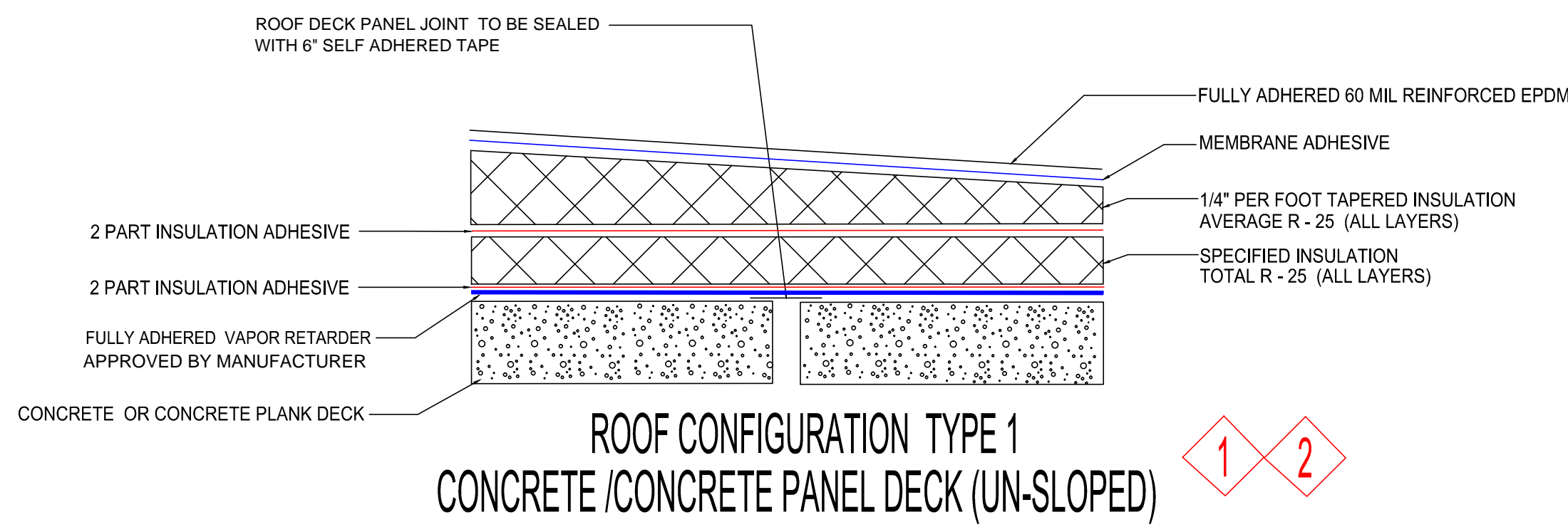
- Tom Case**  
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**GENERAL NOTES FOR ALL ROOF SYSTEM TYPES:**

1. CONTRACTOR TO CONFIRM DECK TYPES AND SLOPES BEFORE PROCEEDING WITH INSTALLATION OF ANY SPECIFIC SYSTEM TYPE.

Drawing Title:  
**ROOF SYSTEM CONFIGURATION TYPES**

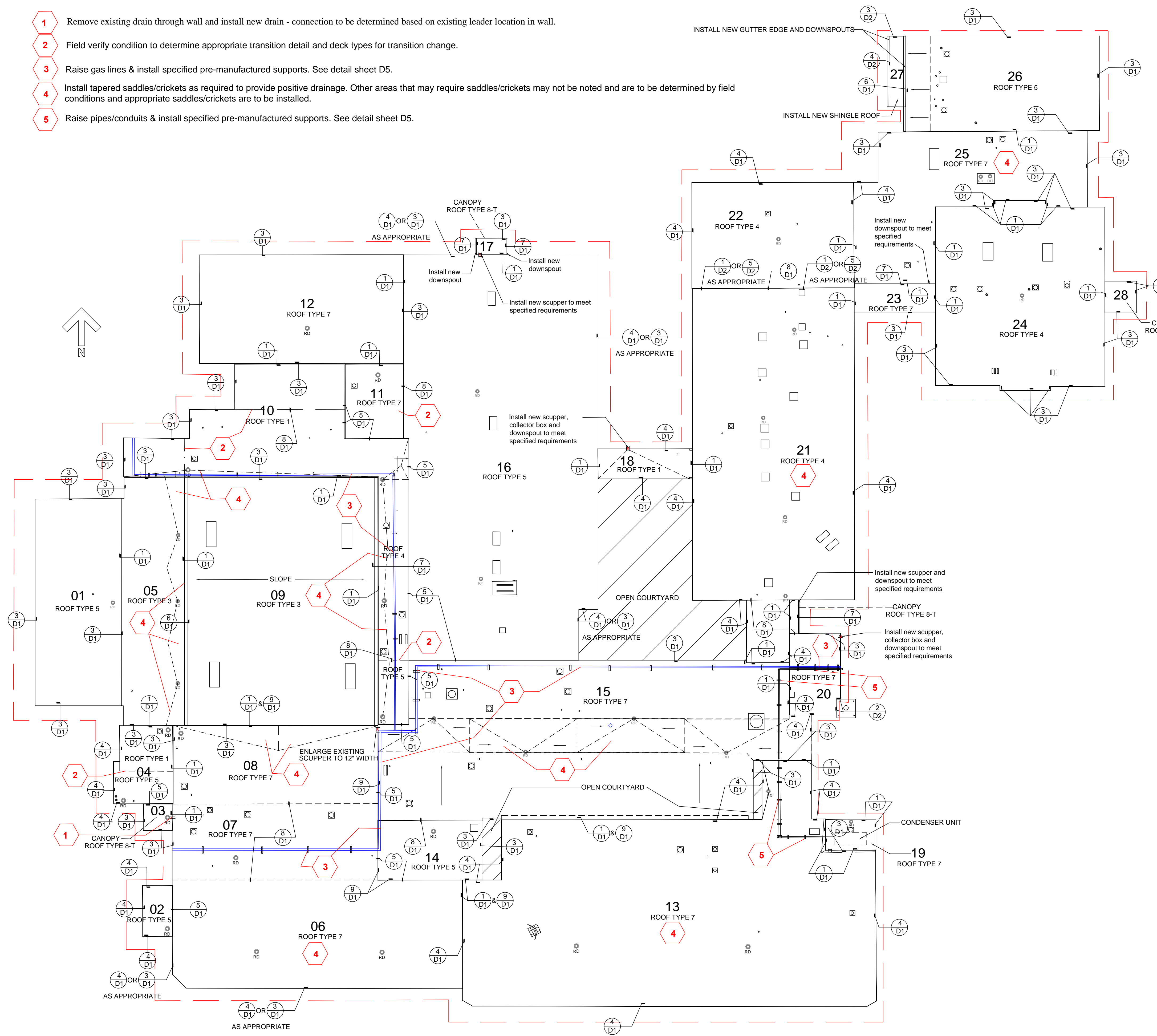
Scale NTS	Sheet
Date 3.29.21	<b>A2.0</b>





ROOF PLAN CODED NOTES:

- 1 Remove existing drain through wall and install new drain - connection to be determined based on existing leader location in wall.
- 2 Field verify condition to determine appropriate transition detail and deck types for transition change.
- 3 Raise gas lines & install specified pre-manufactured supports. See detail sheet D5.
- 4 Install tapered saddles/crickets as required to provide positive drainage. Other areas that may require saddles/crickets may not be noted and are to be determined by field conditions and appropriate saddles/crickets are to be installed.
- 5 Raise pipes/conduits & install specified pre-manufactured supports. See detail sheet D5.



ROOF PLAN SCOPE OF WORK:

Base Bid:

1. Air intakes must be shut down whenever dust, fumes or odors are possible. Coordinate shut downs with Facilities Management
2. On brick masonry unit (BMU) walls, install new through wall receiver and counterflashing where existing through wall flashing exists and where new flashing heights would be less than 8" below the existing through wall flashing. Reinstall salvaged BMU's or replace to match in kind.
3. Repair concrete deck and repair or replace metal deck and gypsum decking and form boards as required.
6. Raise all mechanical equipment and support rails and curbs as needed to provide 8" minimum flashing height. Remove and replace existing support rails or curbs that are deteriorated or that are not set on and secured to the deck. All curbs and supports to be at a height as required to provide 8" minimum flashing ht. Contractor will be responsible for duct work, gas line, electrical and all other disconnect and re-connect if required.
7. Install new support rails or curbs attached to the deck under all equipment that is currently setting on pads or supports that sit on top of the existing roof. All new supports and rails must provide a finished flashing height of 8" minimum.
8. Install all roof membranes, flashings, insulation, tapered insulation, adhesives, fasteners, walkway pads and all other roofing components and accessories as specified.
9. Install treated lumber, flashings and metal details as required to provide substrate anchoring and elevations need to accommodate details as specified and as indicated on the drawings.
10. Do not install any flashings, termination bars, surface mounted counter flashings or sealants above existing through wall counter flashings or where weep holes exist. Open any weep holes that are sealed shut.
11. Remove and re-locate conduits/pipes where they interfere with new flashings or counter flashing heights. Remount electrical lines, conduits, junction boxes, electrical outlets, light fixtures, cabling, and similar items on mounts that do not penetrate the roof membrane, flashing or sheet metal components and that are to be raised as necessary to accommodate new insulation thickness.
12. Remount all gas lines, piping, duct work and similar items on acceptable prefabricated supports and that are to be raised as necessary to accommodate new insulation thickness as specified. Support spacing to be as specified.
13. Maintain condensate drain lines from equipment in operational condition at all times during project. Install new condensate lines from units to drains where they are damaged or do not exist.
14. Install slip metal counter flashings on curbs where equipment does not need to be raised.
15. Install new sheet metal components according to the Specifications and Drawings or as needed to properly terminate the roof system in accordance with referenced standards or manufacturer's requirements, whichever is more stringent.
16. When new sheet metal covers masonry components below, ensure that at least one full brick is covered unless specified or drawn otherwise.
17. When existing sheet metal fascia components have been removed, install sheet metal extensions as required to cover all area previously covered as a minimum. Remove and replace sealant on vertical precast wall joints and apply siloxane coating to interior of precast concrete walls.
19. Install walk pads from roof entrances to and around all serviceable equipment as specified.
20. Provide warranties as specified

CHARDON SCHOOLS  
2021 ROOF PROJECT  
Project # BB201216

Legend:

= Roof Areas Included in Roof Replacement Scope

= CODED NOTES

Project Contacts

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GENERAL NOTES FOR ALL ROOF SYSTEM TYPES:

1. SYSTEM TYPES INDICATED ON EACH ROOF AREA MAY NOT ACCURATELY REFLECT EXISTING CONDITIONS AND MAY BE SUBJECT TO CHANGE BASED ON ACTUAL FIELD CONDITIONS.
2. CONTRACTOR TO CONFIRM DECK TYPES AND SLOPES BEFORE PROCEEDING WITH INSTALLATION OF ANY SPECIFIC SYSTEM TYPE ON EACH ROOF AREA.

Location, size, number, and types of penetrations and equipment have been defined schematically and are approximate. Contractor shall be responsible for completing a detailed inventory of all to establish precise size, location, number and types. Any previously undefined conditions shall be brought to the immediate attention of the Consultant.

Drawing Title:  
**ROOF PLAN HIGH SCHOOL**

Scale NTS	Sheet
Date 3.29.21	<b>A2.1</b>



**CHARDON SCHOOLS  
2021 ROOF PROJECT  
Project # BB201216**

**Legend:**

= Roof Areas Included in Roof Replacement Scope

= CODED NOTES

**Project Contacts**

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Drawing Title:

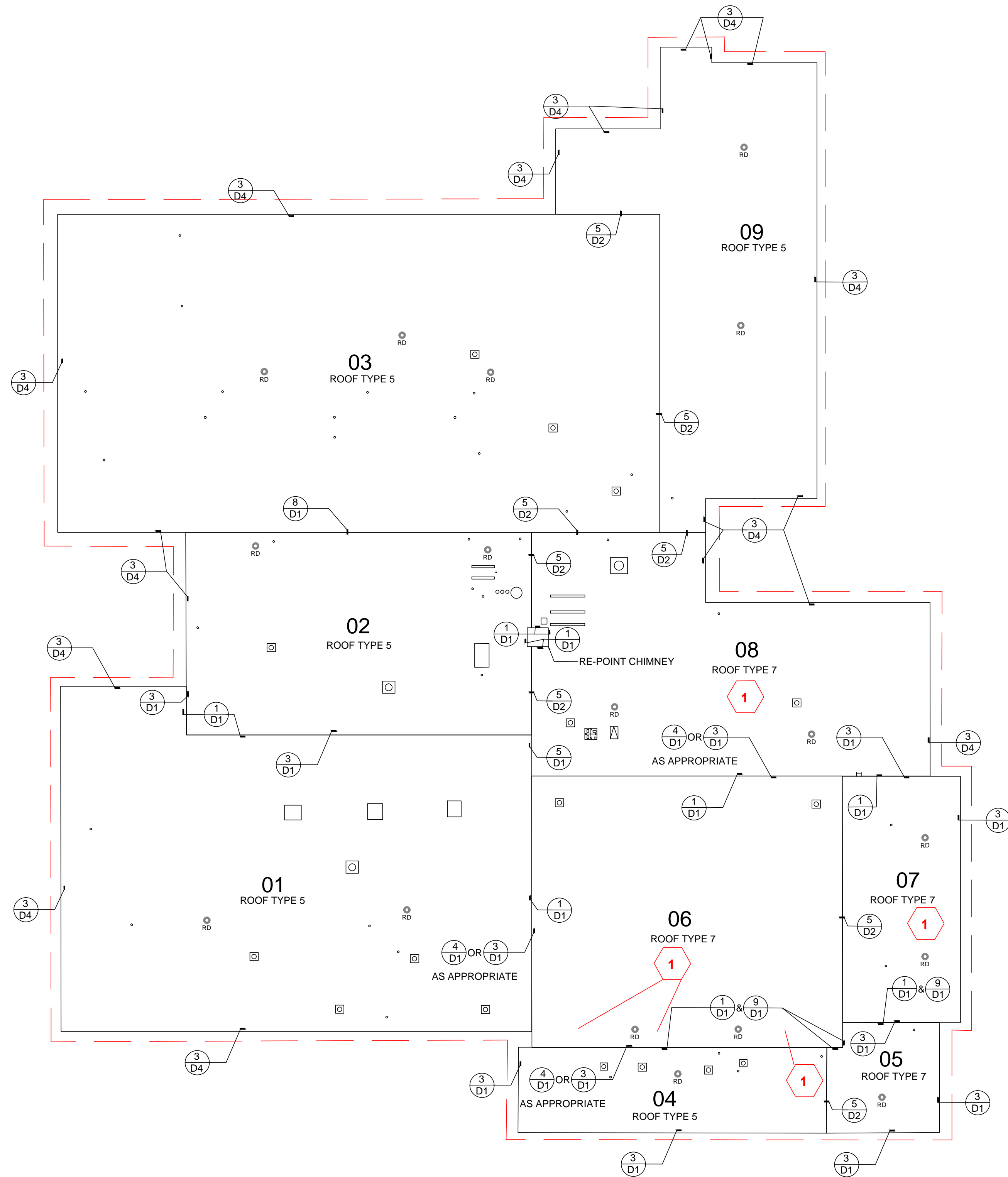
**ROOF PLAN  
MIDDLE SCHOOL**

Scale NTS	Sheet
Date 3.29.21	<b>A2.2</b>

**ROOF PLAN SCOPE OF WORK:**

**Base Bid:**

1. Air intakes must be shut down whenever dust, fumes or odors are possible. Coordinate shut downs with Facilities Management
2. On brick masonry unit (BMU) walls, install new through wall receiver and counterflashing where existing through wall flashing exists and where new flashing heights would be less than 8" below the existing through wall flashing. Reinstall salvage BMU's or replace to match in kind.
3. Re-Point chimney masonry joints that are cracked or open. Replace cracked or damaged BMU's)
4. Repair concrete deck and repair or replace metal deck and gypsum decking and form boards as required.
6. Raise all mechanical equipment and support rails and curbs as needed to provide 8" minimum flashing height. Remove and replace existing support rails or curbs that are deteriorated or that are not set on and secured to the deck. All curbs and supports to be at a height as required to provide 8" minimum flashing ht. Contractor will be responsible for duct work, gas line, electrical and all other disconnect and re-connect if required.
7. Install new support rails or curbs attached to the deck under all equipment that is currently setting on pads or supports that sit on top of the existing roof. All new supports and rails must provide a finished flashing height of 8" minimum.
8. Install all roof membranes, flashings, insulation, tapered insulation, adhesives, fasteners, walkway pads and all other roofing components and accessories as specified.
9. Install treated lumber, flashings and metal details as required to provide substrate anchoring and elevations need to accommodate details as specified and as indicated on the drawings.
10. Do not install any flashings, termination bars, surface mounted counter flashings or sealants above existing through wall counter flashings or where weep holes exist. Open any weep holes that are sealed shut.
11. Remove and re-locate conduits/pipes where they interfere with new flashings or counter flashing heights. Remount electrical lines, conduits, junction boxes, electrical outlets, light fixtures, cabling, and similar items on mounts that do not penetrate the roof membrane, flashing or sheet metal components and that are to be raised as necessary to accommodate new insulation thickness.
12. Remount all gas lines, piping, duct work and similar items on acceptable prefabricated supports and that are to be raised as necessary to accommodate new insulation thickness as specified. Support spacing to be as specified.
13. Maintain condensate drain lines from equipment in operational condition at all times during project. Install new condensate lines from units to drains where they are damaged or do not exist.
14. Install slip metal counter flashings on curbs where equipment does not need to be raised.
15. Install new sheet metal components according to the Specifications and Drawings or as needed to properly terminate the roof system in accordance with referenced standards or manufacturer's requirements, whichever is more stringent.
16. When new sheet metal covers masonry components below, ensure that at least one full brick is covered unless specified or drawn otherwise.
17. When existing sheet metal fascia components have been removed, install sheet metal extensions as required to cover all area previously covered as a minimum.
18. Remove and replace sealant on vertical precast wall joints and apply siloxane coating to interior of precast concrete walls.
19. Install walk pads from roof entrances to and around all serviceable equipment as specified.
20. Provide warranties as specified



**ROOF PLAN CODED NOTES:**

- Install tapered saddles/crickets as required to provide positive drainage. Other areas that may require saddles/crickets may not be noted and are to be determined by field conditions and appropriate saddles/crickets are to be installed.



**CHARDON SCHOOLS  
2021 ROOF PROJECT  
Project # BB201216**

**Legend:**

= Roof Areas Included in Roof Replacement Scope

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**GENERAL NOTES FOR ALL ROOF SYSTEM TYPES:**

1. SYSTEM TYPES INDICATED ON EACH ROOF AREA MAY NOT ACCURATELY REFLECT EXISTING CONDITIONS AND MAY BE SUBJECT TO CHANGE BASED ON ACTUAL FIELD CONDITIONS.
2. CONTRACTOR TO CONFIRM DECK TYPES AND SLOPES BEFORE PROCEEDING WITH INSTALLATION OF ANY SPECIFIC SYSTEM TYPE ON EACH ROOF AREA.

Location, size, number, and types of penetrations and equipment have been defined schematically and are approximate. Contractor shall be responsible for completing a detailed inventory of all to establish precise size, location, number and types. Any previously undefined conditions shall be brought to the immediate attention of the Consultant.

Drawing Title:  
**ROOF PLAN  
MUNSON**

Scale NTS	Sheet
Date 3.29.21	<b>A2.3</b>

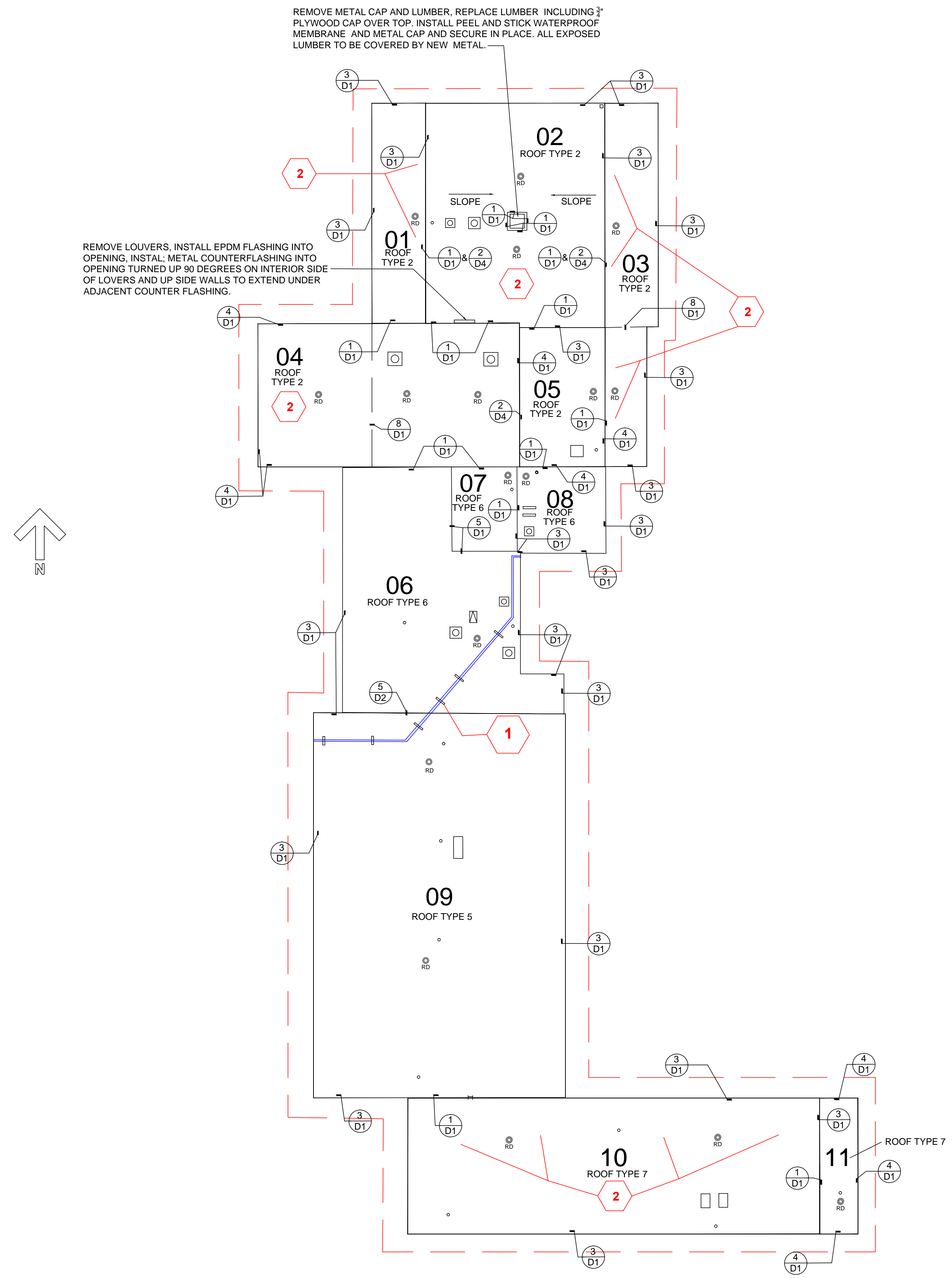
**ROOF PLAN SCOPE OF WORK:**

**Base Bid:**

1. Air intakes must be shut down whenever dust, fumes or odors are possible. Coordinate shut downs with Facilities Management
2. On brick masonry unit (BMU) walls, install new through wall receiver and counterflashing where existing through wall flashing exists and where new flashing heights would be less than 8" below the existing through wall flashing. Reinstall salvage BMU's or replace to match in kind.
3. Repair concrete deck and repair or replace metal deck and gypsum decking and form boards as required.
6. Raise all mechanical equipment and support rails and curbs as needed to provide 8" minimum flashing height. Remove and replace existing support rails or curbs that are deteriorated or that are not set on and secured to the deck. All curbs and supports to be at a height as required to provide 8" minimum flashing ht. Contractor will be responsible for duct work, gas line, electrical and all other disconnect and re-connect if required.
7. Install new support rails or curbs attached to the deck under all equipment that is currently setting on pads or supports that sit on top of the existing roof. All new supports and rails must provide a finished flashing height of 8" minimum.
8. Install all roof membranes, flashings, insulation, tapered insulation, adhesives, fasteners, walkway pads and all other roofing components and accessories as specified.
9. Install treated lumber, flashings and metal details as required to provide substrate anchoring and elevations need to accommodate details as specified and as indicated on the drawings.
10. Do not install any flashings, termination bars, surface mounted counter flashings or sealants above existing through wall counter flashings or where weep holes exist. Open any weep holes that are sealed shut.
11. Remove and re-locate conduits/pipes where they interfere with new flashings or counter flashing heights. Remount electrical lines, conduits, junction boxes, electrical outlets, light fixtures, cabling, and similar items on mounts that do not penetrate the roof membrane, flashing or sheet metal components and that are to be raised as necessary to accommodate new insulation thickness.
12. Remount all gas lines, piping, duct work and similar items on acceptable prefabricated supports and that are to be raised as necessary to accommodate new insulation thickness as specified. Support spacing to be as specified.
13. Maintain condensate drain lines from equipment in operational condition at all times during project. Install new condensate lines from units to drains where they are damaged or do not exist.
14. Install slip metal counter flashings on curbs where equipment does not need to be raised.
15. Install new sheet metal components according to the Specifications and Drawings or as needed to properly terminate the roof system in accordance with referenced standards or manufacturer's requirements, whichever is more stringent.
16. When new sheet metal covers masonry components below, ensure that at least one full brick is covered unless specified or drawn otherwise.
17. When existing sheet metal fascia components have been removed, install sheet metal extensions as required to cover all area previously covered as a minimum.
18. Remove and replace sealant on vertical precast wall joints and apply siloxane coating to interior of precast concrete walls.
19. Install walk pads from roof entrances to and around all serviceable equipment as specified.
20. Provide warranties as specified

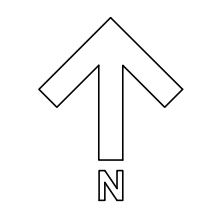
**ROOF PLAN CODED NOTES:**

- 1 Raise pipes/conduits & install specified pre-manufactured supports. See detail sheet D5
- 2 Install tapered saddles/crickets as required to provide positive drainage. Other areas that may require saddles/crickets may not be noted and are to be determined by field conditions and appropriate saddles/crickets are to be installed.



REMOVE METAL CAP AND LUMBER, REPLACE LUMBER INCLUDING 3/4" PLYWOOD CAP OVER TOP, INSTALL PEEL AND STICK WATERPROOF MEMBRANE AND METAL CAP AND SECURE IN PLACE. ALL EXPOSED LUMBER TO BE COVERED BY NEW METAL.

REMOVE LOUVERS, INSTALL EPDM FLASHING INTO OPENING, INSTAL: METAL COUNTERFLASHING INTO OPENING TURNED UP 90 DEGREES ON INTERIOR SIDE OF LOVERS AND UP SIDE WALLS TO EXTEND UNDER ADJACENT COUNTER FLASHING.





**CHARDON SCHOOLS  
2021 ROOF PROJECT  
Project # BB201216**

**Legend:**  
= Roof Areas Included in Roof Replacement Scope

**Project Contacts**

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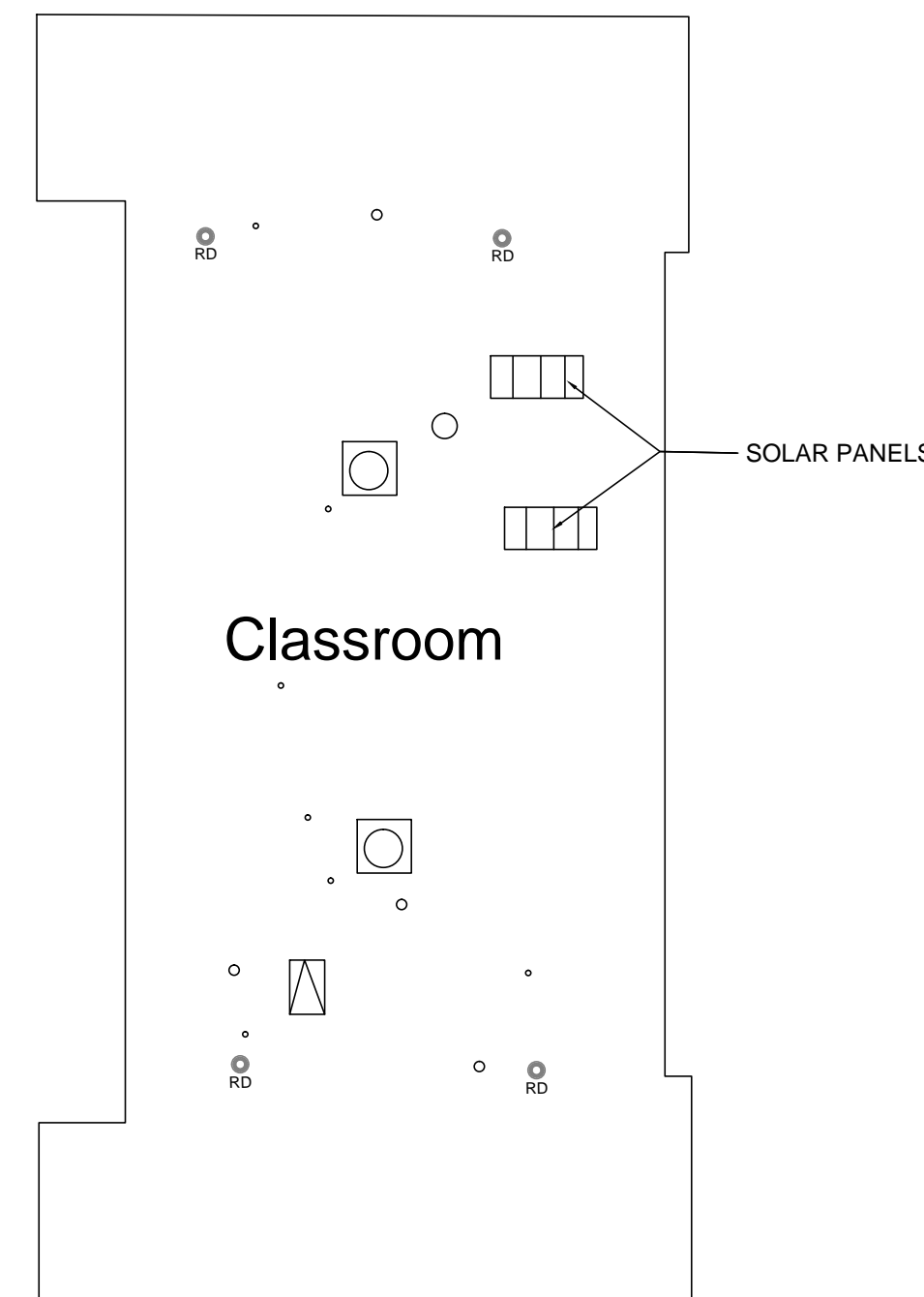
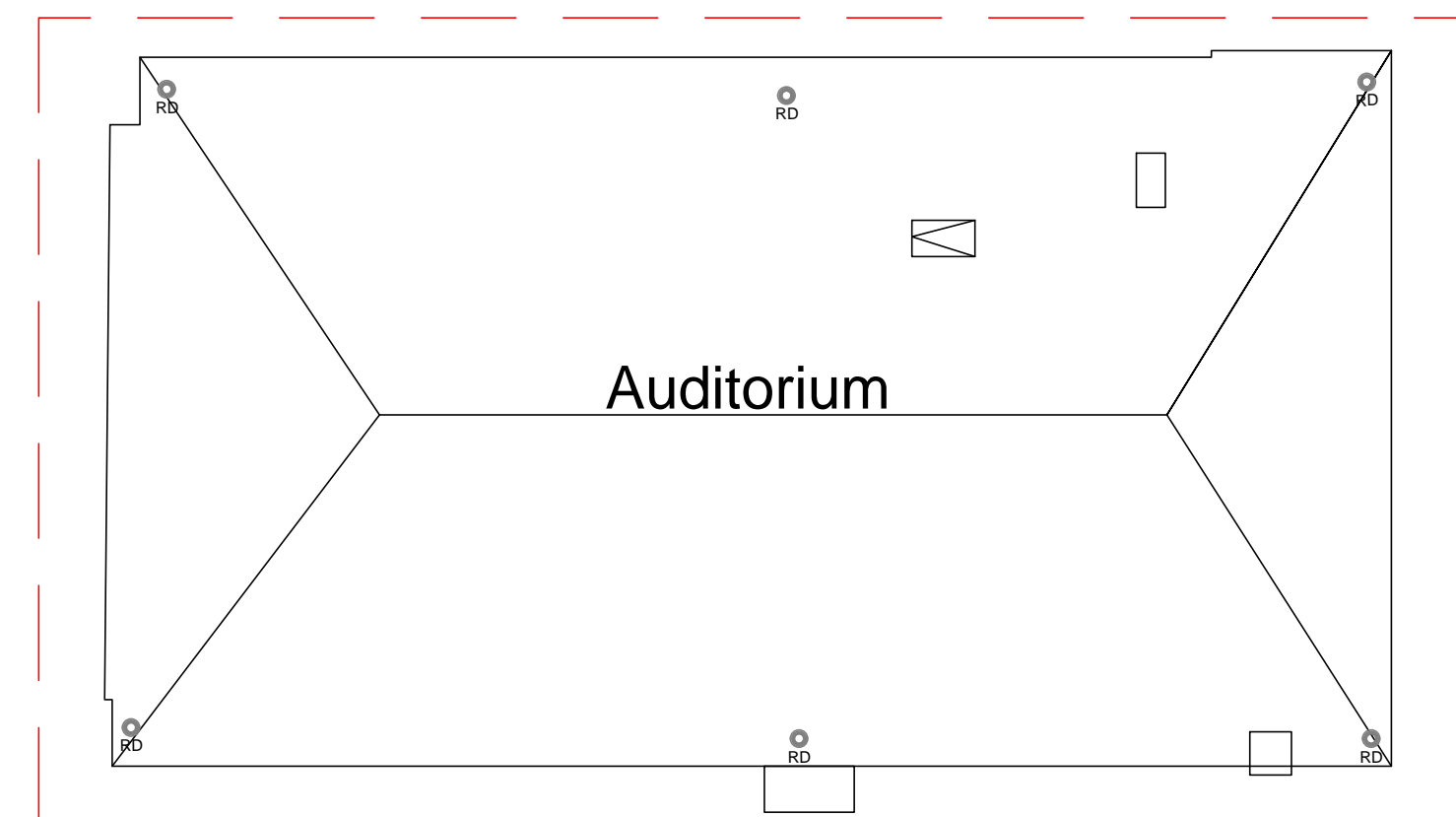
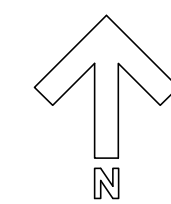
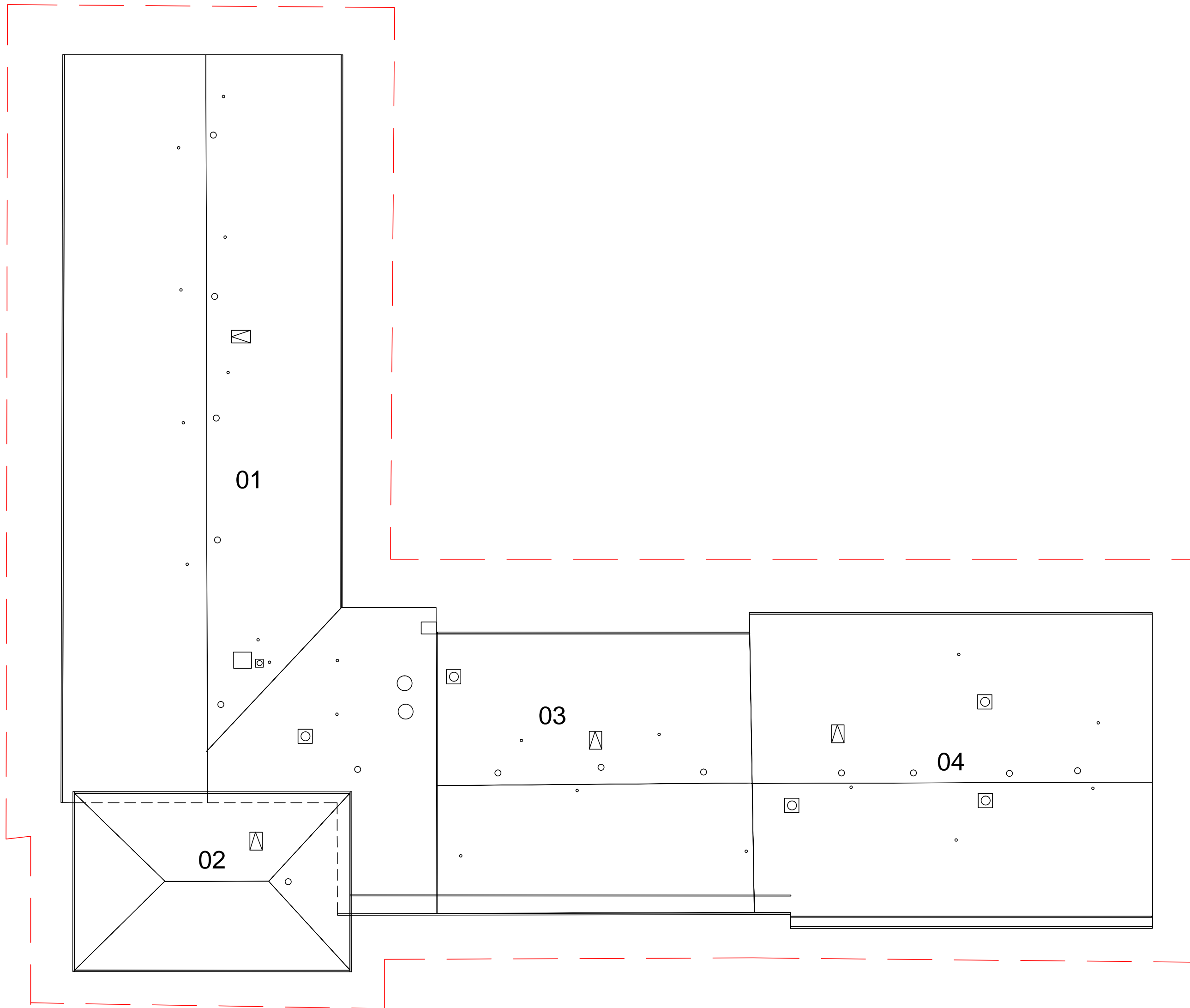
**ROOF PLAN SCOPE OF WORK:**

**Park Elementary Auditorium Roof Repair Scope:**

1. Cut out and seal all water blisters in existing Modified Bitumen roofing membrane and patches.
2. Install proper tie-ins of Modified Bitumen to existing roof system.
3. Cut back Modified bitumen applications that extend from base flashing onto metal coping and area dividers. Install separate terminations between the components.
  - 3.1. Fasten top edge of flashing below inner lip of coping.
  - 3.2. Install slip metal flashing into place as using 0.040 aluminum with hemmed lower edge and fastened through the coping face with fasteners through neoprene washers.
  - 3.3. Clean all metal coping joint surfaces and install self adhered 6" EPDM strips over all metal coping joints. Do not extend extend down outer face of coping.
4. Install 250 linear feet of base flashing seam re-inforcement.
5. Install 250 linear feet of field seam reinforcement.

**Maple St. Elementary Roof Repair Scope:**

1. Re-coat the ridge cap with new coating after proper surface preparation as required by the Manufacturer. Rust must be removed before painting.
  - 1.1. Products to be: Zinc primer for all metal surfaces to be 2-part Benjamin Moore M01/M02 Inorganic Zinc Primer or equal. Paint to be Benjamin Moore M26 D.T.M. Alkyd Gloss Enamel or equal.
  - 1.2. Sherwin Williams, Tnemec or Duron primers and paints for metal surfaces may also be used according to Manufacturer recommendations and requirements.
2. Inspect fasteners for any missing or loose fasteners. All fasteners to be install through neoprene washers. Replace an estimated 1,000 fasteners as required.
3. Clear debris from gutters.
4. Check adhesion of EPDM flashing boots. Reseal as required.
5. Remove asphalt repair materials from penetration flashings. Apply a fluid applied flashing with reinforcement after proper surface prep. (Roof section 01).
6. Re-paint the area divider cap on roof area 03 after surface preparation and rust removal as specified in paragraph 1 above.
7. Replace damaged section of ridge cap on in kind on roof section 04.



Location, size, number, and types of penetrations and equipment have been defined schematically and are approximate. Contractor shall be responsible for completing a detailed inventory of all to establish precise size, location, number and types. Any previously undefined conditions shall be brought to the immediate attention of the Consultant.

Drawing Title:

**ROOF PLAN PARK  
AUDITORIUM &  
MAPLE ST.  
ELEMENTARY**

Scale  
NTS  
Date  
3.29.21

Sheet  
**A2.4**





**MASONRY PLAN SCOPE OF WORK:**

**Base Bid:**

1. Remove existing parapet wall down to roof deck level.
2. Remove outer wythe of brick down to third floor window heads.
3. Remove masonry above second floor windows. Shore as required to prevent collapse.
4. Replace lintels and install through wall counterflashing, flashing and weep hole system above second and third floor windows as specified.
5. Remove corrosion and pack rust from exposed steel elements that are not replaced and clean, prime and paint hose elements.
6. Install new brick brick (BMU's) above second floor windows and above third floor window head level.
7. Install new BMU and CMU above deck level to match existing height.
8. Install new coping and through wall flashing at top of wall.
9. Install new flashings compatible with existing roof system on backside of parapet wall.
10. Rake out and re-point 15% of existing mortar joints below third floor windows.
11. Remove and replace 25 bricks that exhibits:
  - 11.1. Chipped corners, cracks, voids or holes, or that has spalled.
  - 11.2. Bearing failure.
  - 11.3. Loose bricks.
  - 11.4. Displaced masonry that is out of plane across bricks.
12. Remove and replace sealant around all window perimeters.
9. Apply water repellant to all masonry.

**CHARDON SCHOOLS  
2021 ROOF PROJECT  
Project # BB201216**

**Legend:**

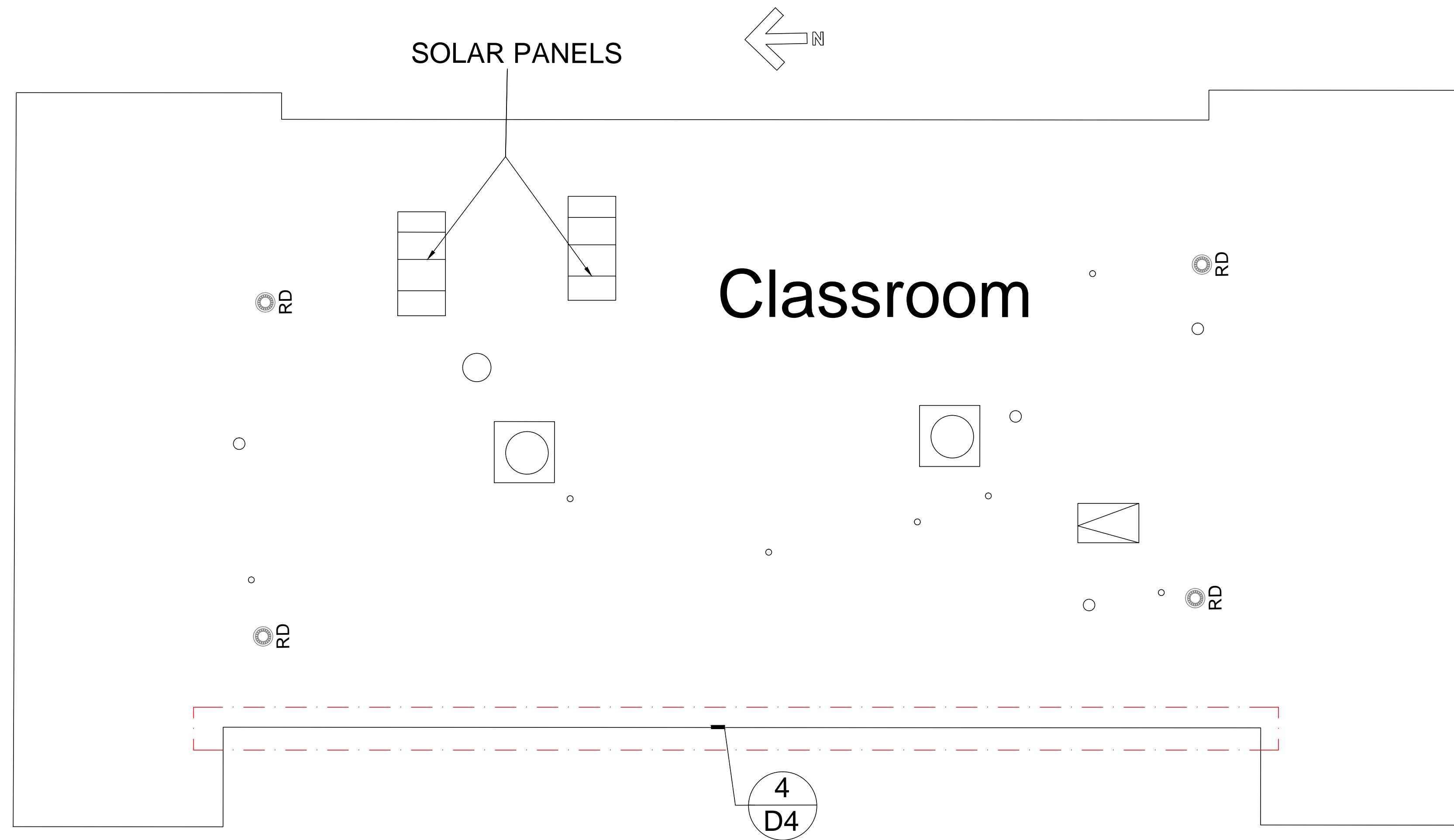
= Roof Areas Included in Roof Replacement Scope

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Location, size, number, and types of penetrations and equipment have been defined schematically and are approximate. Contractor shall be responsible for completing a detailed inventory of all to establish precise size, location, number and types. Any previously undefined conditions shall be brought to the immediate attention of the Consultant.

Drawing Title:

**MASONRY PLAN  
PARK  
ELEMENTARY  
CLASSROOM**

Scale  
NTS  
Date  
3.29.21

Sheet  
**A2.5**



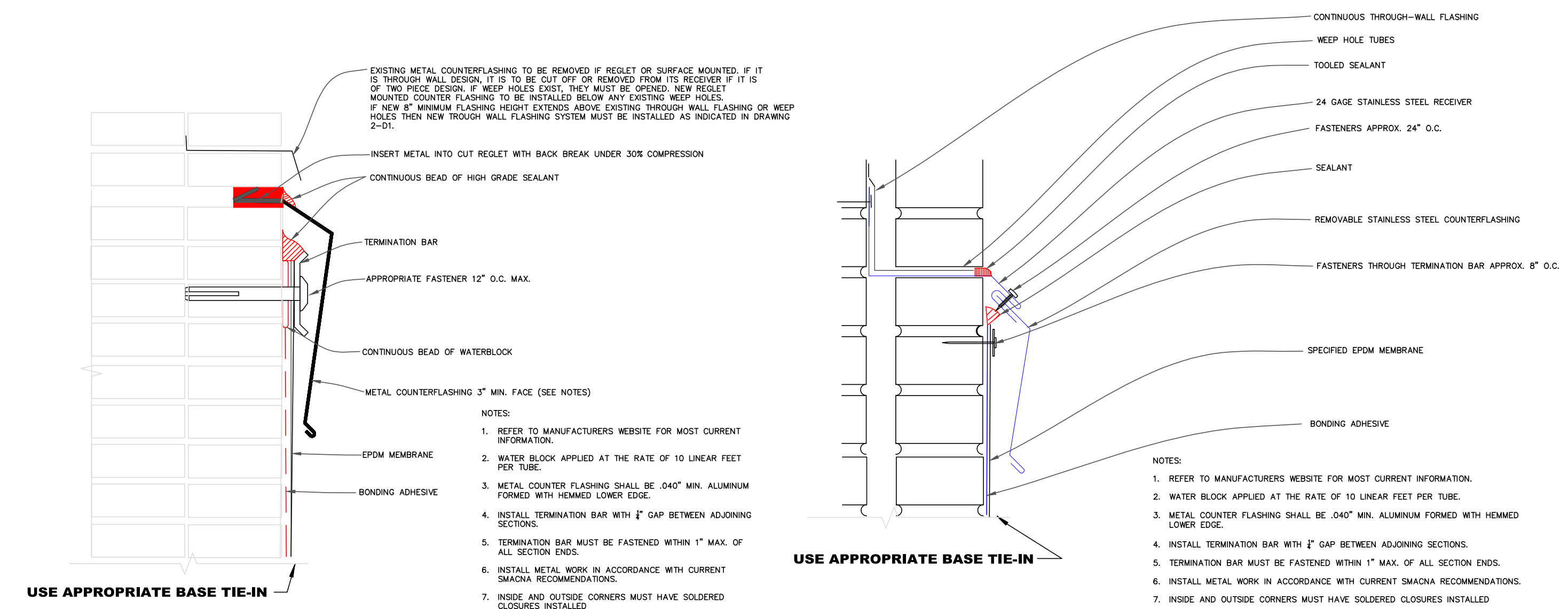
**CHARDON SCHOOLS  
2021 ROOF PROJECT  
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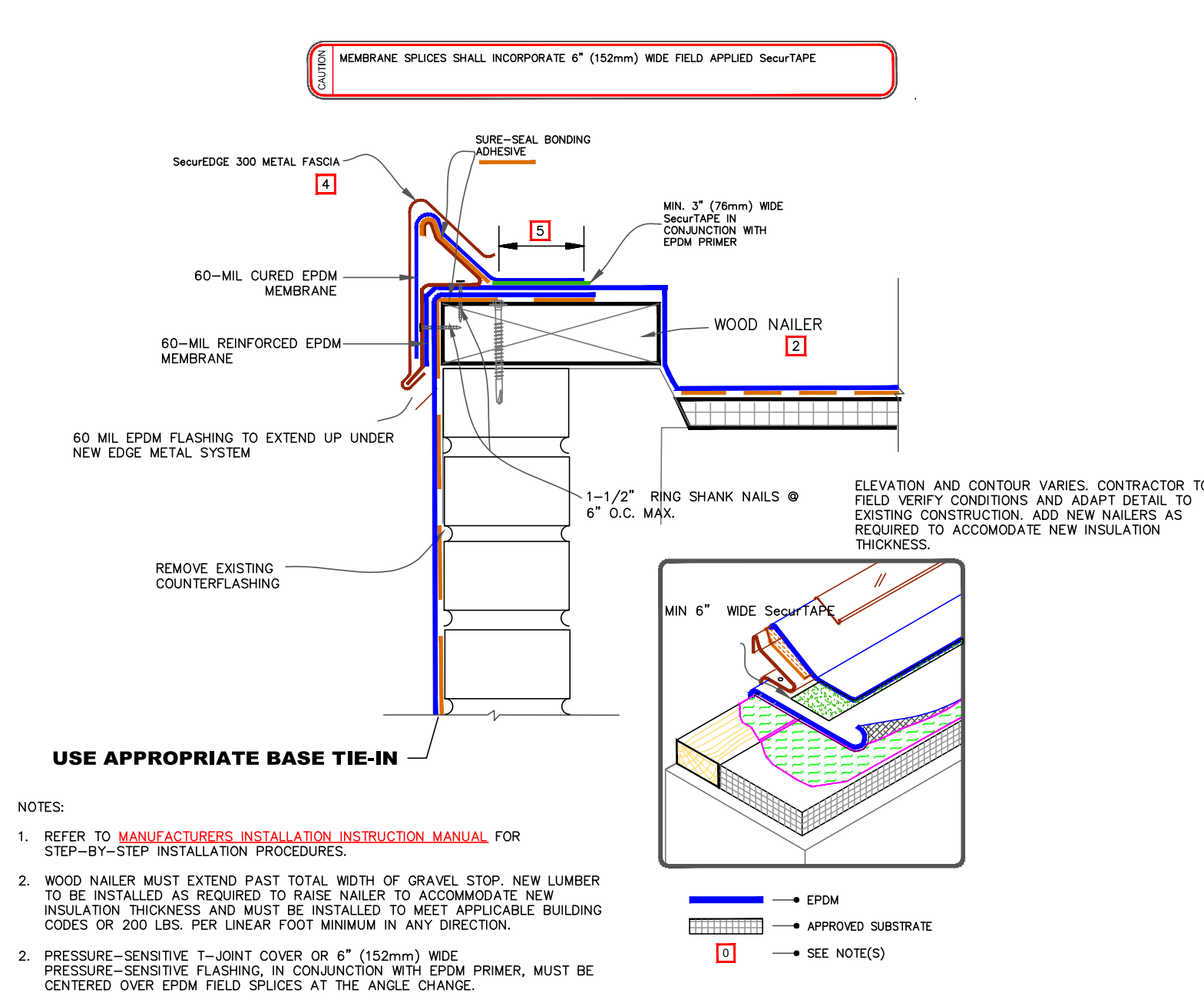
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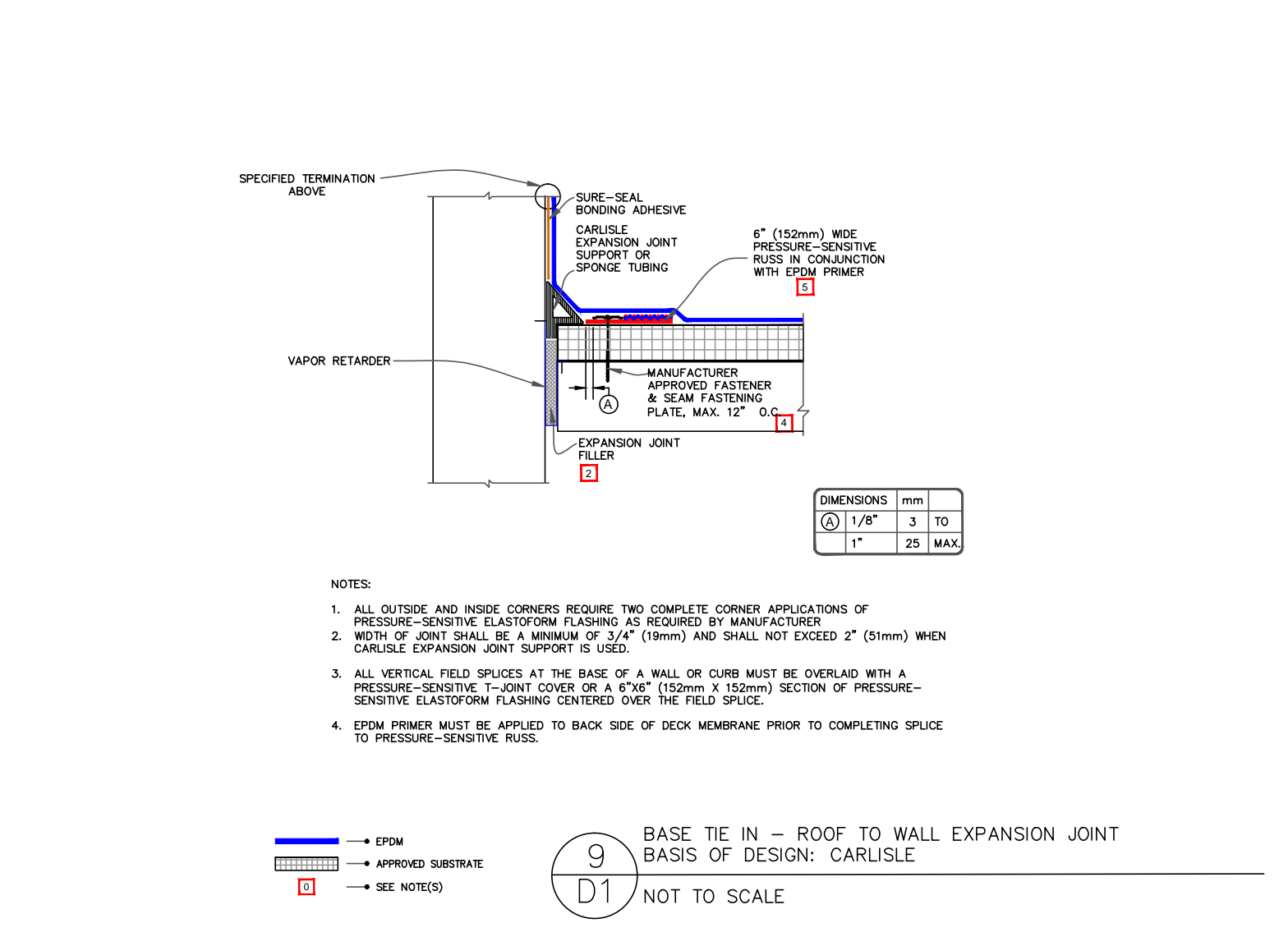


**1** REGLET MOUNTED COUNTERFLASHING SYSTEM  
D1 NOT TO SCALE

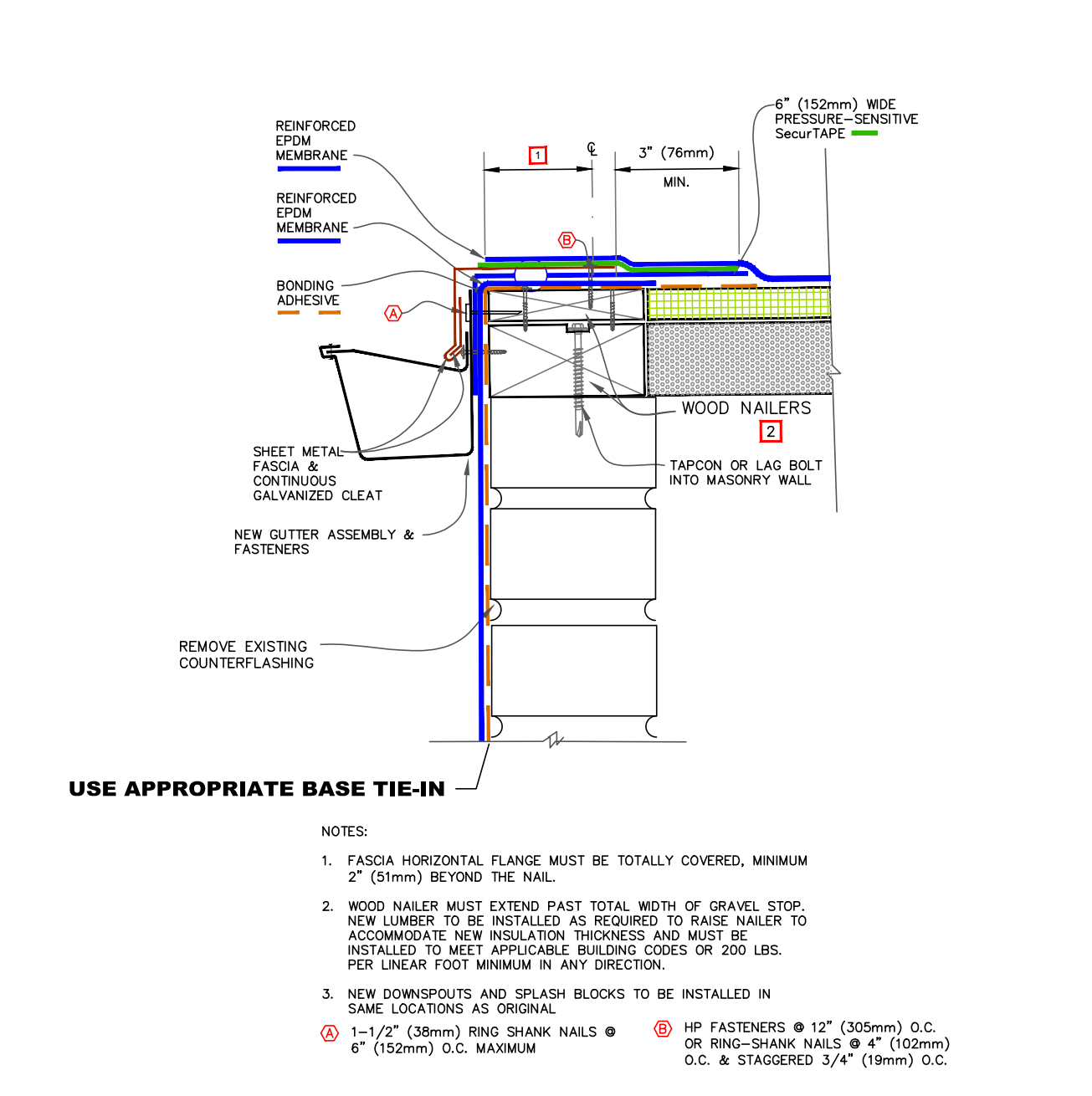
**2** THROUGH WALL COUNTERFLASHING SYSTEM  
D1 NOT TO SCALE



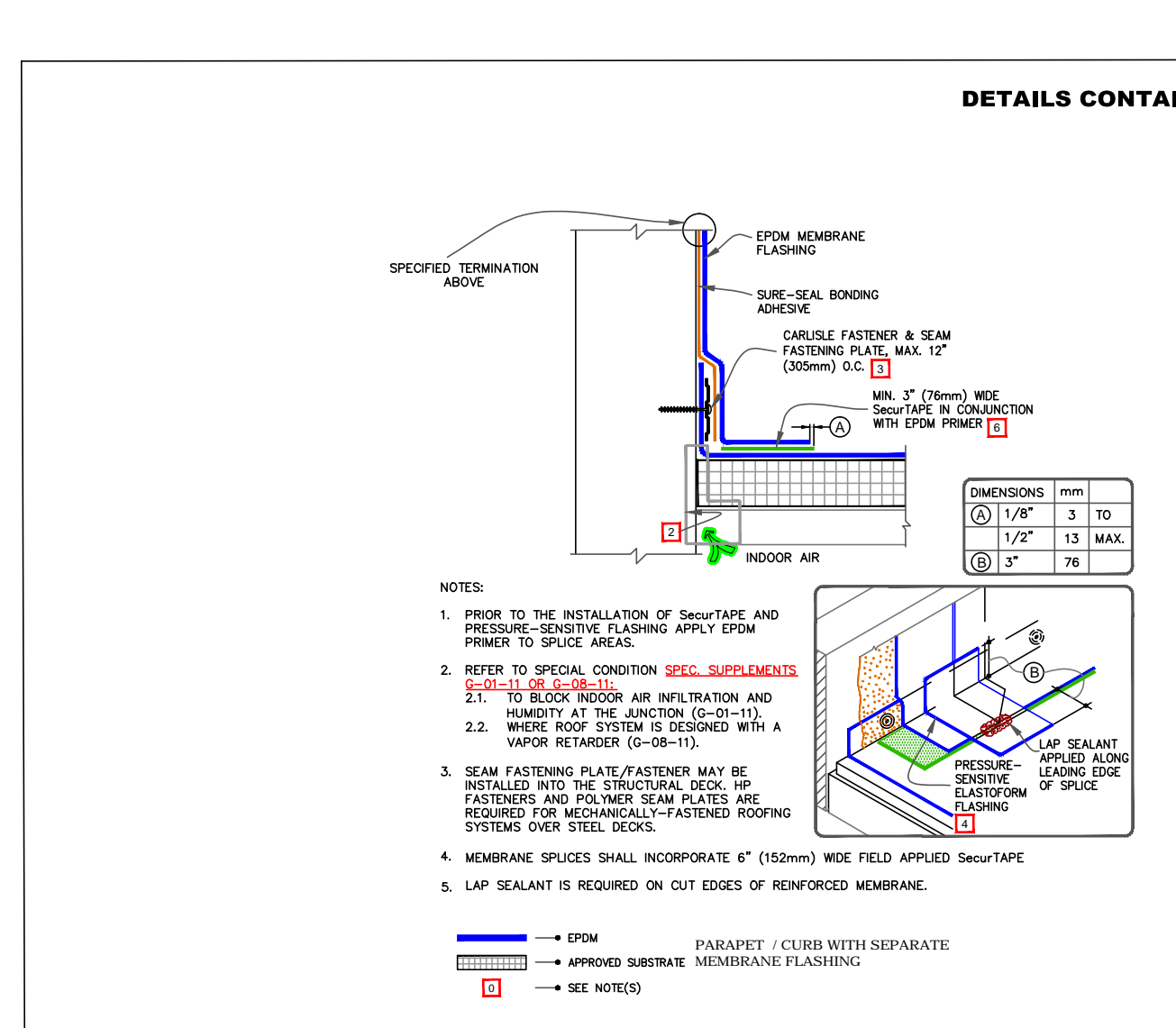
**3** METAL EDGE - BASIS OF DESIGN: CARLISLE SECURE EDGE 300  
D1 NOT TO SCALE



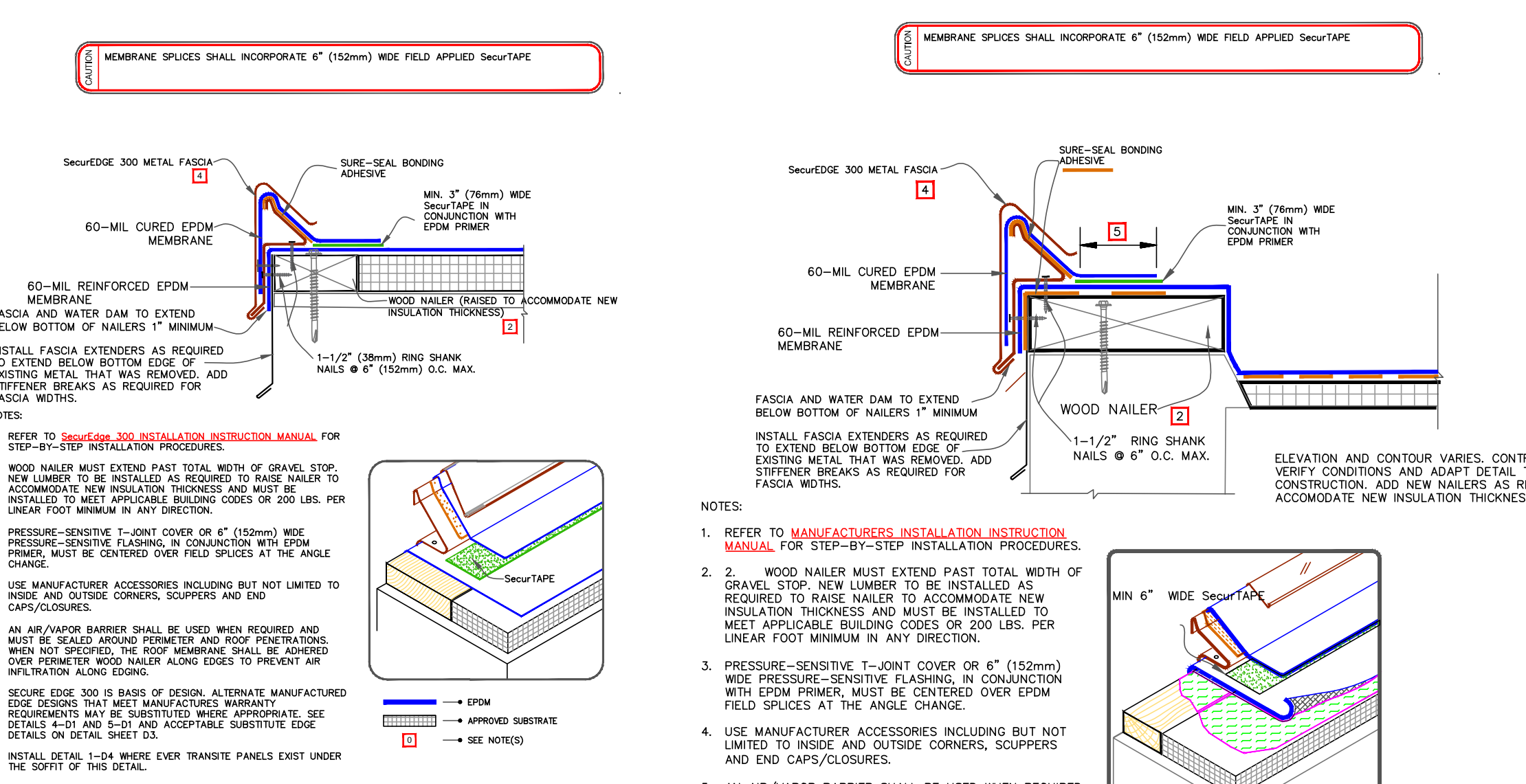
**5** BASE FLASHING TIED IN UNDER RAISED METAL EDGE - BASIS OF DESIGN: CARLISLE SECURE EDGE 300  
D1 NOT TO SCALE



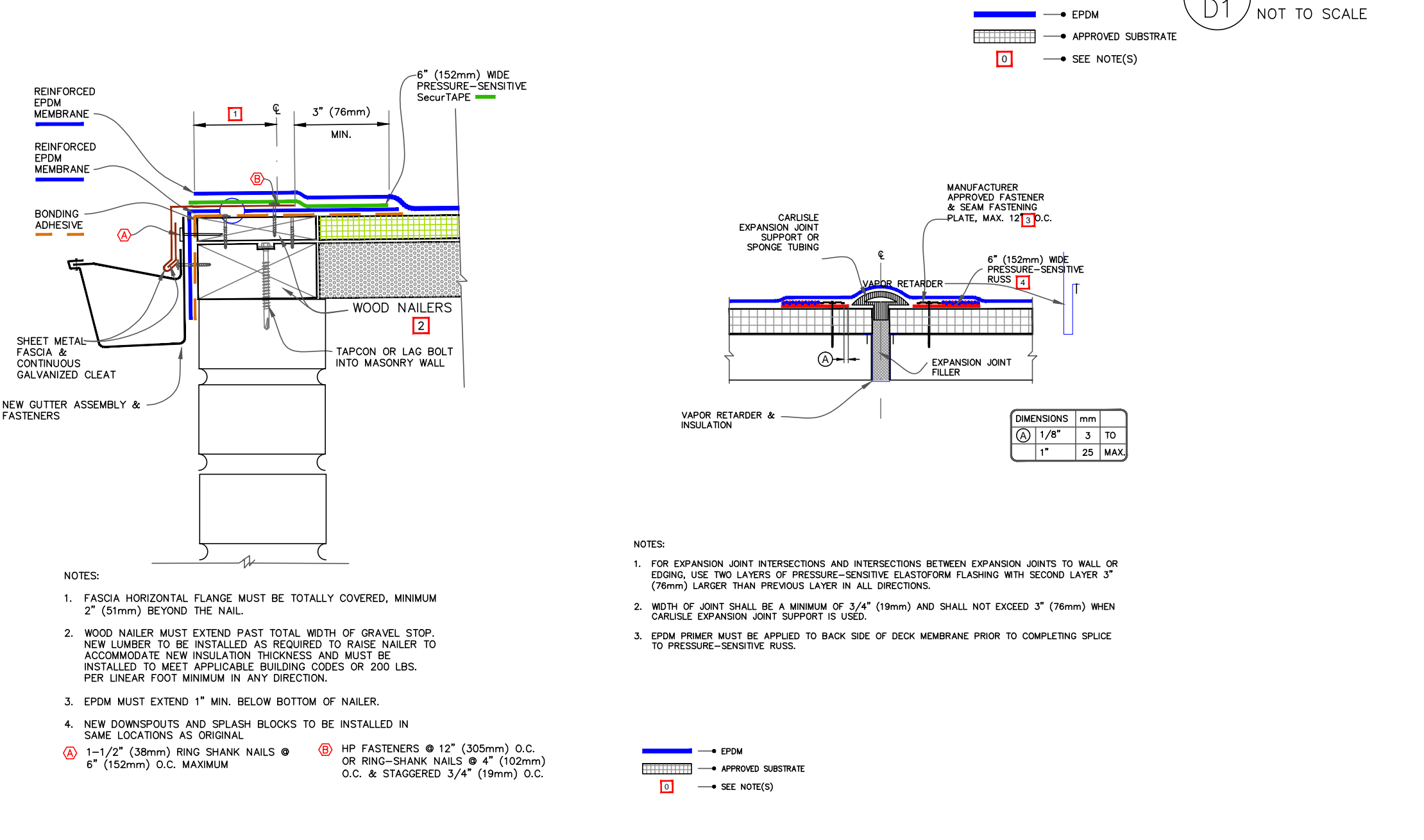
**6** BASE FLASHING TIED IN UNDER GUTTER EDGE  
D1 NOT TO SCALE



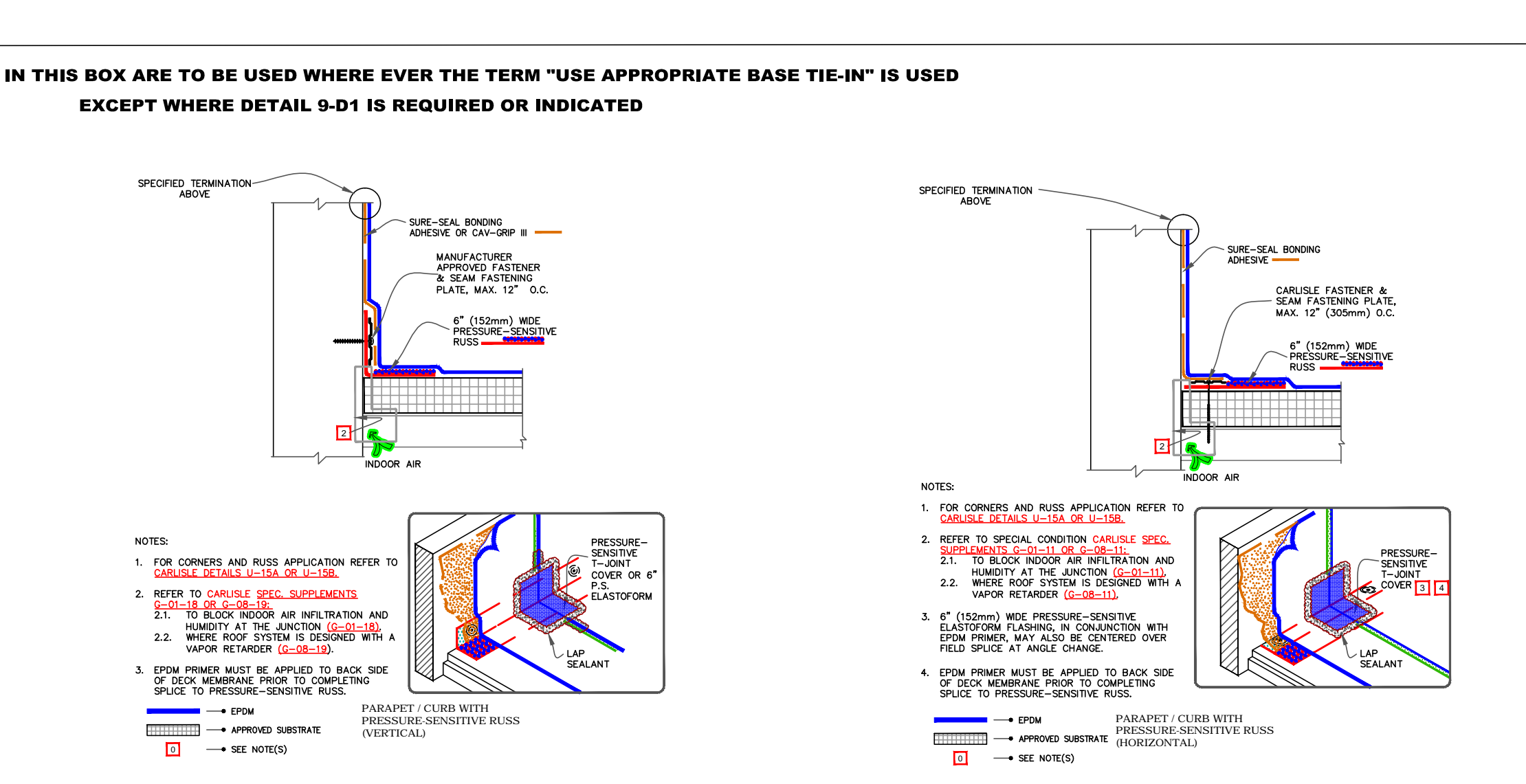
**7** GUTTER EDGE  
D1 NOT TO SCALE



**8** DECK TO DECK EXPANSION JOINT. BASIS OF DESIGN: CARLISLE  
D1 NOT TO SCALE

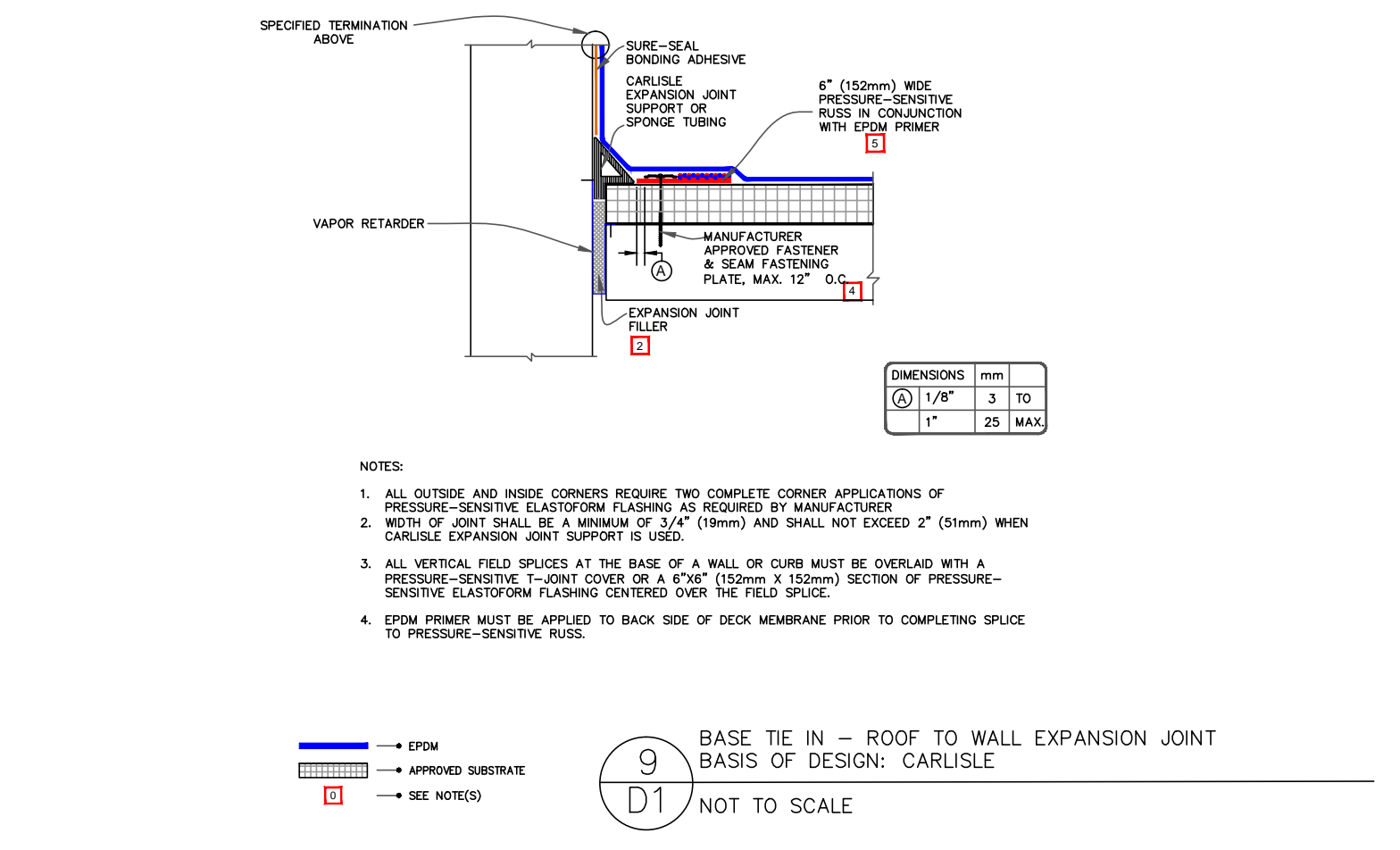


**9** BASE TIE IN - ROOF TO WALL EXPANSION JOINT  
D1 NOT TO SCALE

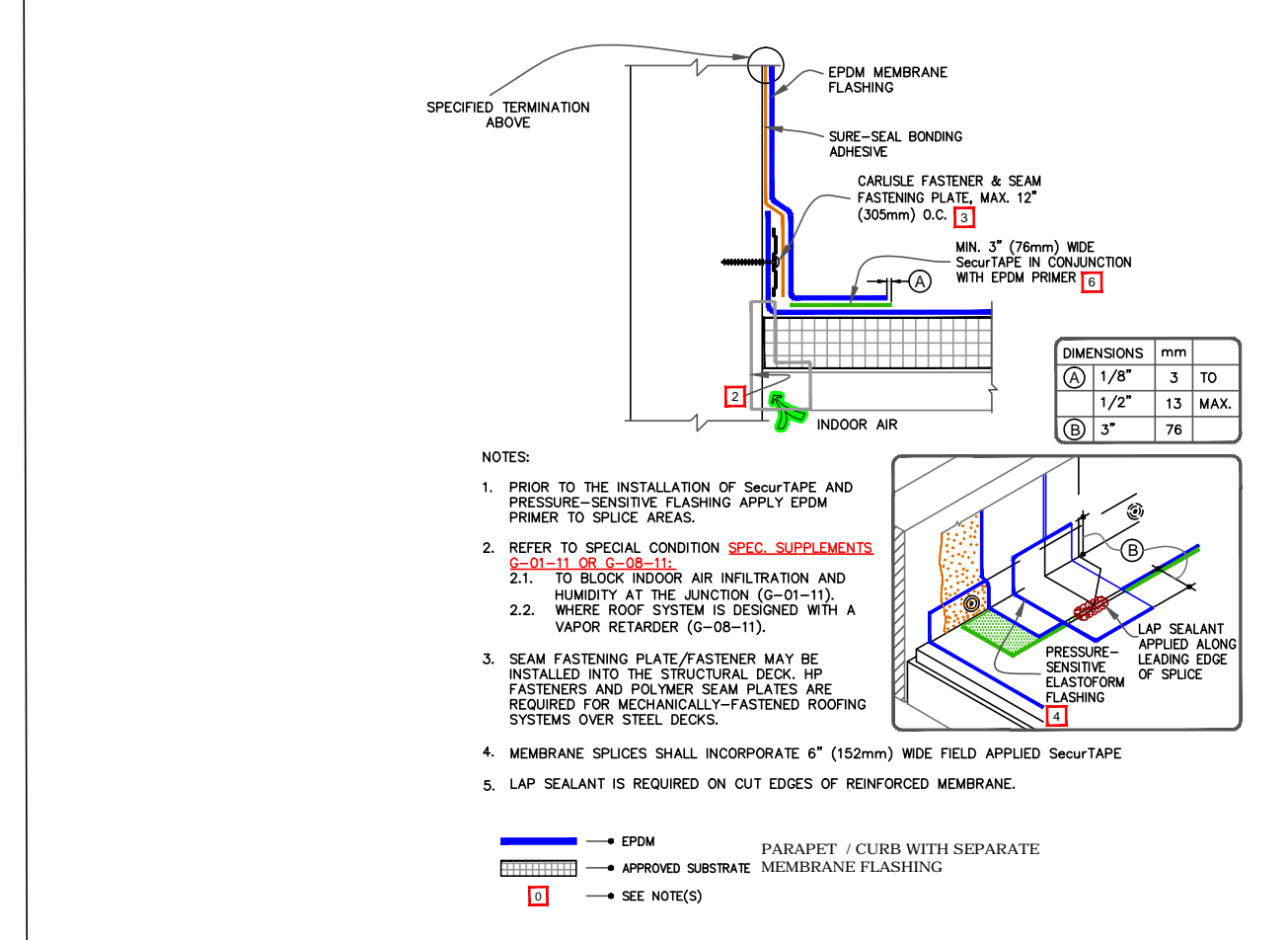


**PARAPET CURB WITH PRESSURE SENSITIVE RUSS (HORIZONTAL)**

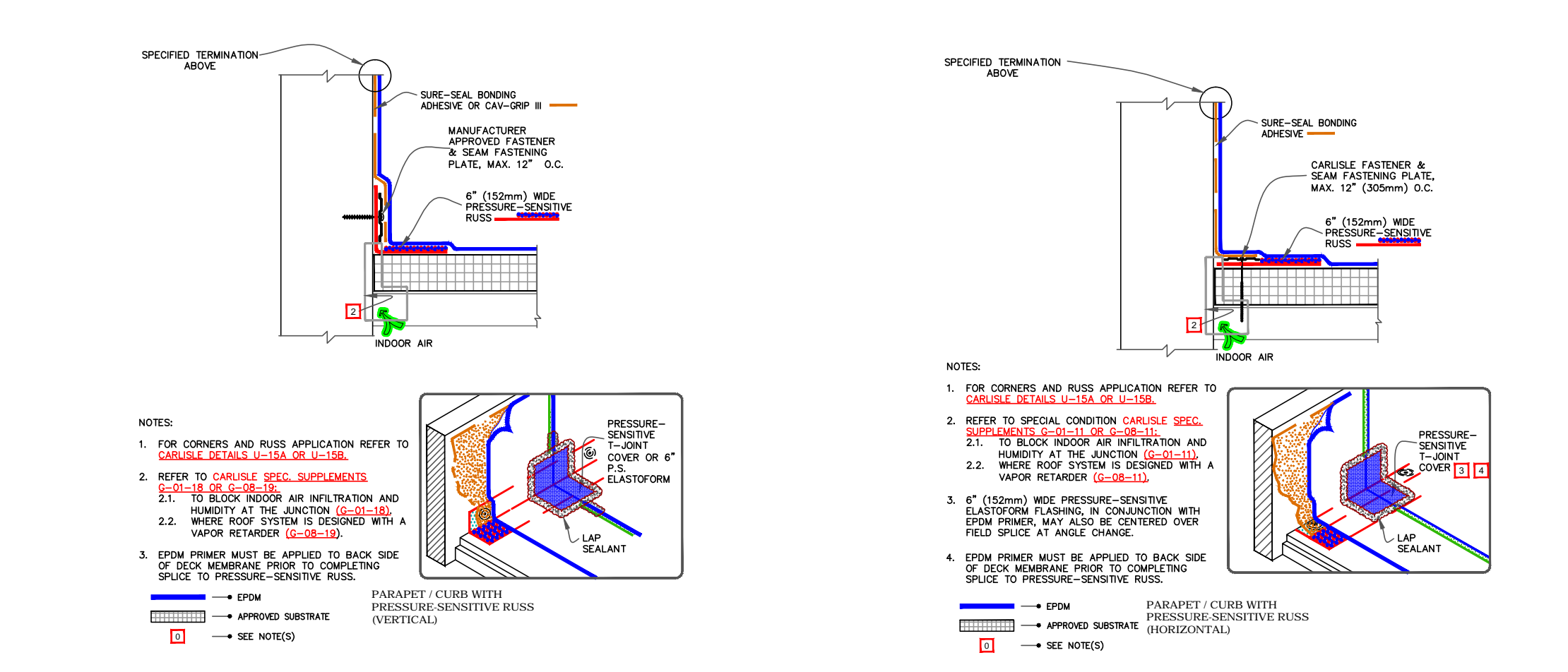
**DETAILS CONTAINED IN THIS BOX ARE TO BE USED WHERE EVER THE TERM "USE APPROPRIATE BASE TIE-IN" IS USED EXCEPT WHERE DETAIL 9-D1 IS REQUIRED OR INDICATED**



**10** EXPANSION JOINT INTERSECTION  
D1 NOT TO SCALE



**11** EXPANSION JOINT INTERSECTION  
D1 NOT TO SCALE



**12** EXPANSION JOINT INTERSECTION  
D1 NOT TO SCALE

**GENERAL NOTES FOR ALL DETAILS:**

- DETAILS USE CARLISLE STANDARDS AS THE BASIS OF DESIGN
- ALL EDGE METAL COMPONENTS SHALL COMPLY WITH THE LATEST VERSION OF ANSIPR/IFM 4335 ES-1 FOR WIND UPLIFT RESISTANCE
- PRIMER: WHERE NOT SHOWN OR INDICATED ON DETAIL DRAWINGS, REFER TO MATERIAL PRODUCT DATA SHEETS FOR PRIMER APPLICATION REQUIREMENTS.
- FLASHING PLIES MUST EXTEND VERTICALLY A MINIMUM OF 8" FROM ROOF SURFACE.
- THE JOINTS IN THE SHEET METAL COUNTERFLASHING SHOULD NOT BE SOLDERED EXCEPT AT INSIDE AND OUTSIDE CORNERS.
- DO NOT OBSTRUCT OR FLASH OVER WEEP HOLES.

Drawing Title:  
**Detail Sheet 1**

Scale NTS	Sheet
Date 3.29.21	<b>D1</b>

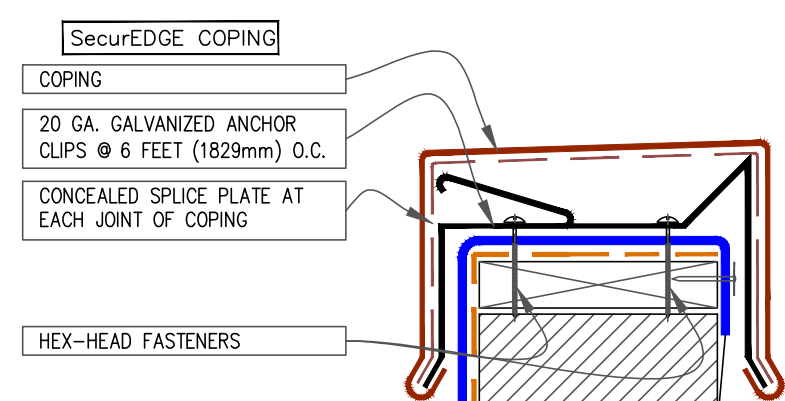


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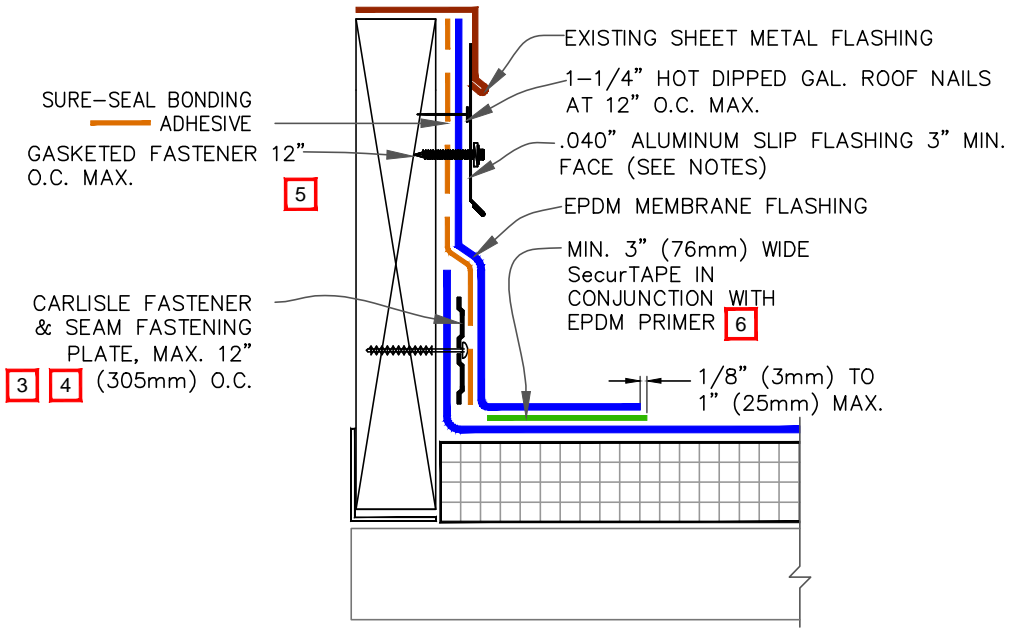
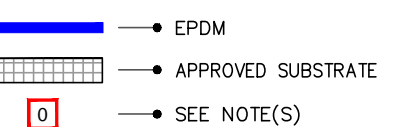


- NOTES:
- MEMBRANE MUST BE EXTENDED AT CORNERS TO PROVIDE COMPLETE COVERAGE OF THE TOP WALL SURFACE. REFER TO DETAIL U-58.
  - REFER TO SecurEDGE COPING INSTALLATION INSTRUCTION MANUAL FOR STEP-BY-STEP INSTRUCTION PROCEDURES.
  - WOOD NAILER MUST BE INSTALLED TO MATCH WALL THICKNESS AND MUST BE INSTALLED TO MEET APPLICABLE BUILDING CODES OR 200 LBS. PER LINEAR FOOT IN ANY DIRECTION

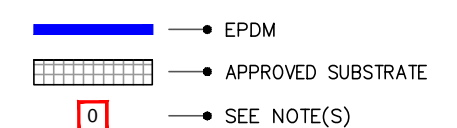
**USE APPROPRIATE BASE TIE-IN**

**USE APPROPRIATE BASE TIE IN ON BOTH SIDES OF WALL WHERE WALL SEPARATES TWO ROOF AREAS**

**1**  
D2 METAL COPING. BASIS OF DESIGN: CARLISLE  
NOT TO SCALE

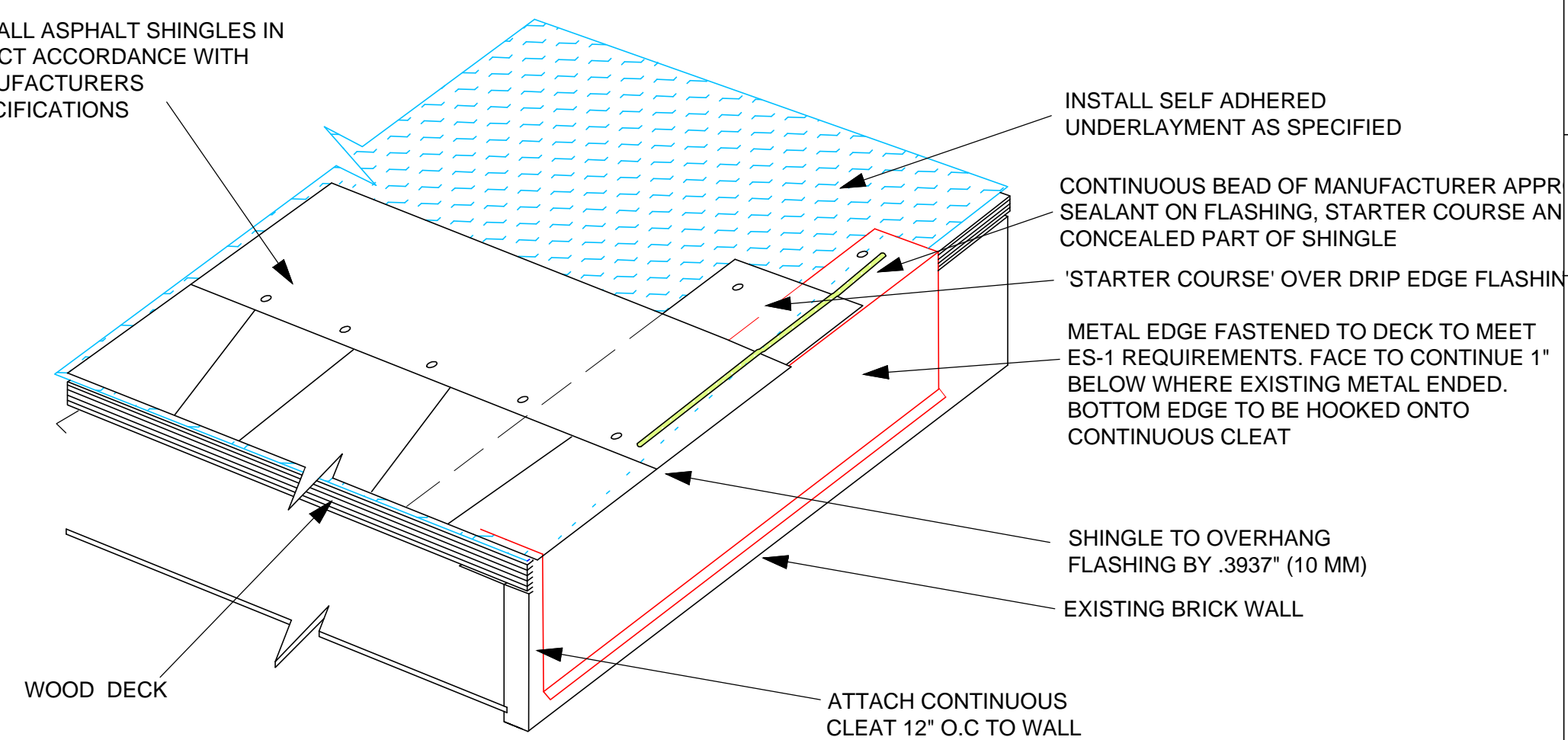


- NOTES:
- IF THE VERTICAL SPICE ON THE CURB FLASHING IS NOT LOCATED AT THE CORNER, 6" (152mm) WIDE PRESSURE-SENSITIVE ELASTOFORM OR T-JOINT FLASHING, IN CONJUNCTION WITH EPDM PRIMER, MUST BE CENTERED OVER FIELD SPICE AT ANGLE CHANGE.
  - LAP SEALANT IS REQUIRED ON CUT-EDGES OF REINFORCED MEMBRANE.
  - SEAM FASTENING PLATES/FASTENERS MAY BE INSTALLED INTO THE STRUCTURAL DECK.
  - WHEN SEAM FASTENING PLATES/FASTENERS ARE INSTALLED HORIZONTALLY, HP FASTENERS AND POLYMER SEAM PLATES ARE REQUIRED FOR MECHANICALLY-FASTENED ROOFING SYSTEMS OVER STEEL DECKS.
  - WHEN MECHANICAL FASTENERS ARE USED TO PENETRATE THE METAL COUNTER-FLASHING, USE EPDM WASHERS, APPLY WATER CUT-OFF MASTIC UNDER THE COUNTER-FLASHING OR CAULK THE FASTENER HEADS.
  - MEMBRANE SPLICES SHALL INCORPORATE 6" (152mm) WIDE FIELD APPLIED SecurTAPE.

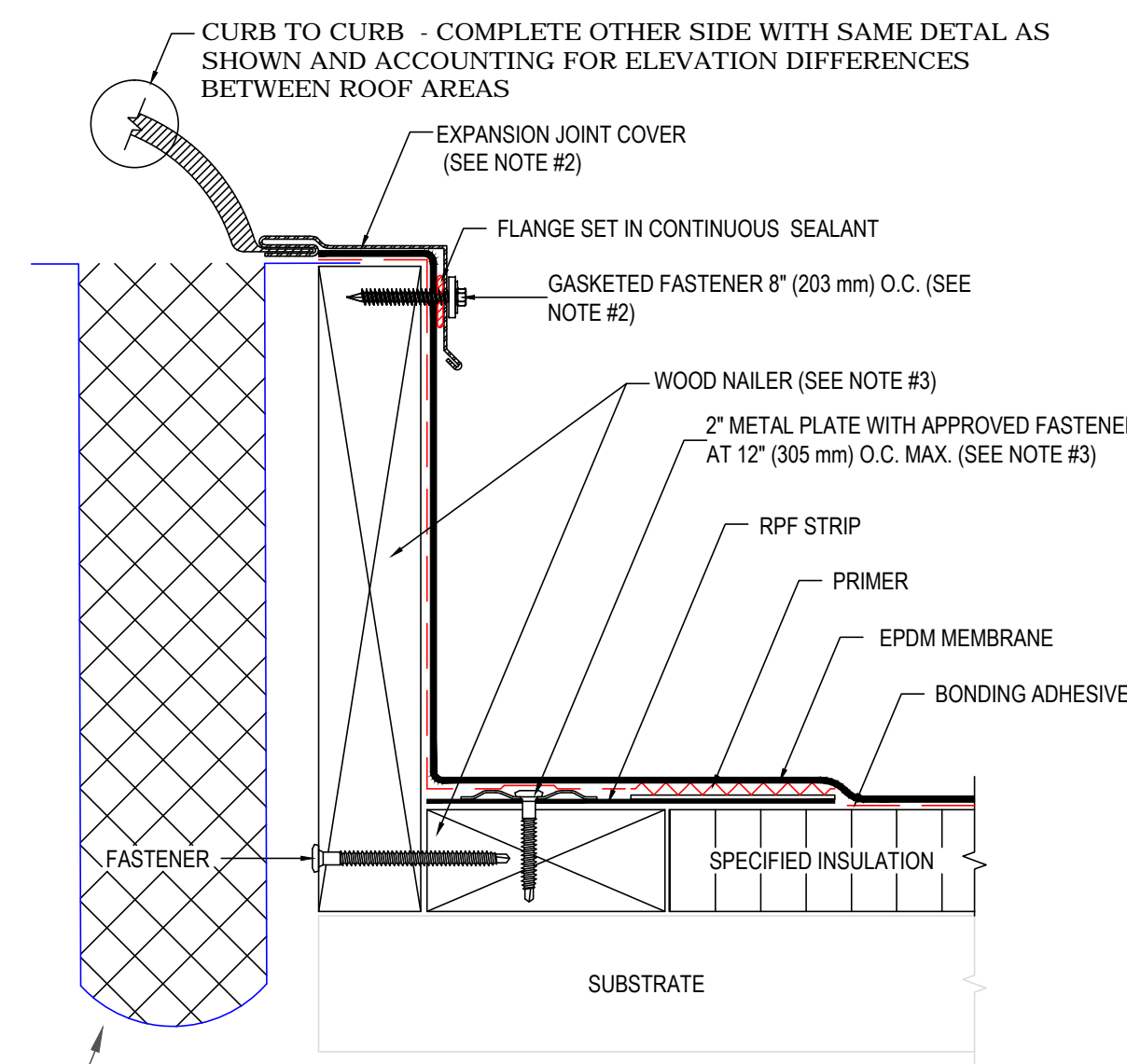


**2**  
D2 SLIP METAL CURB FLASHING BASIS OF DESIGN: CARLISLE  
NOT TO SCALE

INSTALL ASPHALT SHINGLES IN STRICT ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS

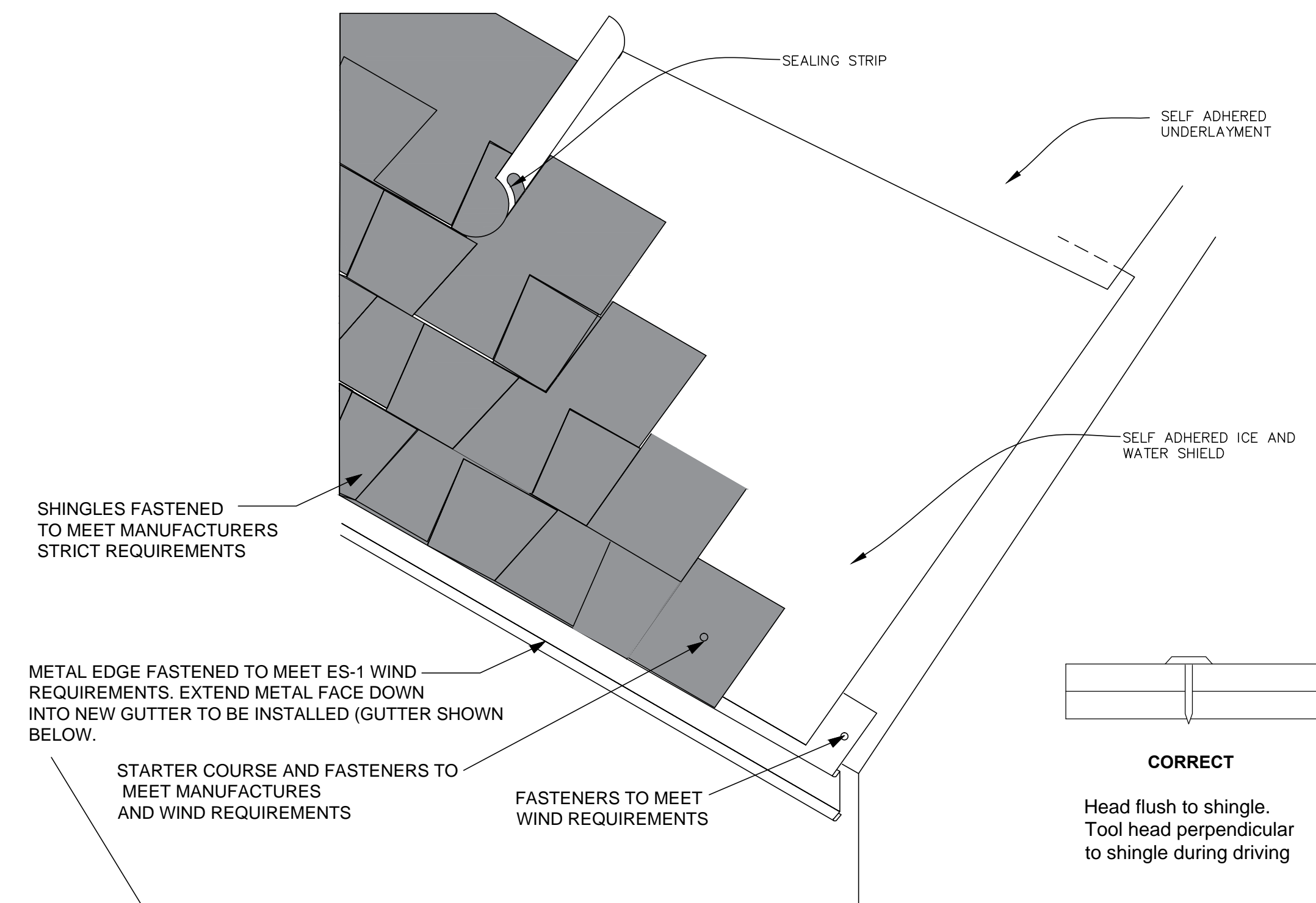


**3**  
D2 METAL EDGE WITH CLEAT AT RAKE EDGE  
NOT TO SCALE

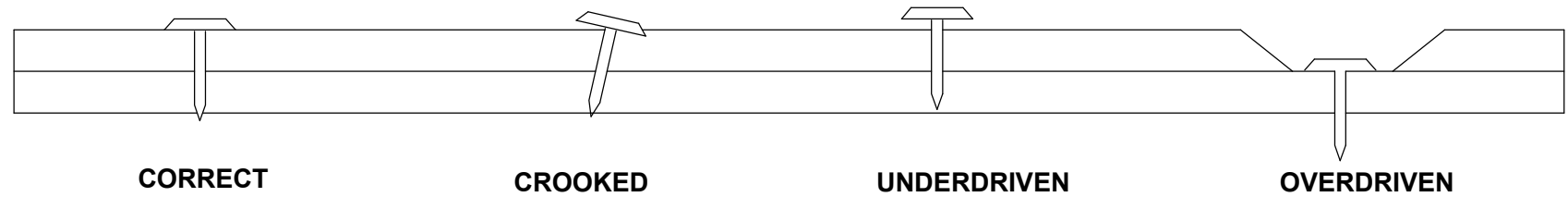


- NOTES:
- REFER TO MANUFACTURERS WEBSITE FOR MOST CURRENT INFORMATION.
  - EXPANSION JOINT COVER INSTALLED AND SECURED PER MANUFACTURER'S RECOMMENDATIONS.
  - WOOD NAILER MUST BE INSTALLED TO MEET APPLICABLE BUILDING CODES OR 200 LBS PER LINEAR FOOT MINIMUM IN ANY GIVEN DIRECTION.
  - BATTEN STRIP MAY BE USED IN LIEU OF 2" METAL PLATES. REFER TO MANUFACTURERS DETAILS FOR SPECIFIC BASE TIE-IN INFORMATION, REQUIREMENTS, AND OPTIONS.

**5**  
D2 ROOF TO ROOF EXPANSION JOINT  
NOT TO SCALE



**4**  
D2 METAL EDGE AND GUTTER AT SHINGLE ROOF  
NOT TO SCALE



- REPAIR NOTE 1:**  
FLATTEN NAIL HEAD TO PREVENT INTERFERENCE WITH NEXT SHINGLE
- REPAIR NOTE 2:**  
DRIVE ANOTHER NAIL NEARBY. SEAL OVERDRIVEN NAIL WITH MANUFACTURERS APPROVED ASPHALT MASTIC
- FASTENERS**

While nailing is the required method for fastening shingles.

**Always nail through the fastener line.**

NAILS: 10mm Head 12 gauge, 30mm roofing nails.  
**NOTE:** an improperly adjusted nail gun can result in under driven nails that can cause a fish mouthed appearance and can prevent sealing

**Asphalt Shingles  
Fastening method (NTS)**

**GENERAL NOTES FOR ALL DETAILS:**

- DETAILS USE CARLISLE STANDARDS AS THE BASIS OF DESIGN
- ALL EDGE METAL COMPONENTS SHALL COMPLY WITH THE LATEST VERSION OF ANSI/SPRI/FM 4335 ES-1 FOR WIND UPLIFT RESISTANCE
- PRIMER: WHERE NOT SHOWN OR INDICATED ON DETAIL DRAWINGS, REFER TO MATERIAL PRODUCT DATA SHEETS FOR PRIMER APPLICATION REQUIREMENTS.
- FLASHING PLIES MUST EXTEND VERTICALLY A MINIMUM OF 8" FROM ROOF SURFACE.
- THE JOINTS IN THE SHEET METAL COUNTERFLASHING SHOULD NOT BE SOLDERED EXCEPT AT INSIDE AND OUTSIDE CORNERS.
- DO NOT OBSTRUCT OR FLASH OVER WEEP HOLES.

**Drawing Title:  
Detail Sheet 2**

Scale NTS	Sheet
Date 3.29.21	<b>D2</b>



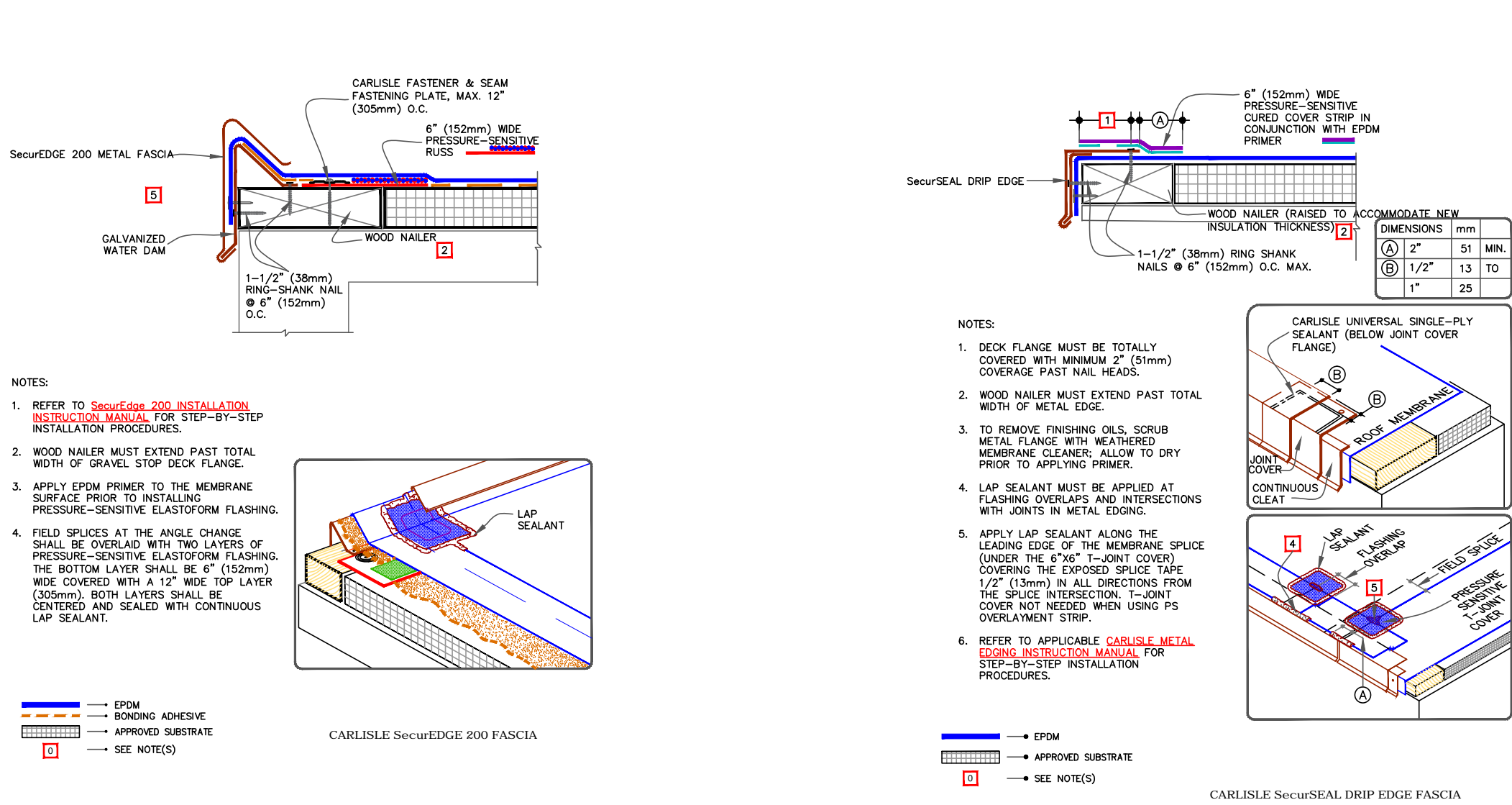
**CHARDON SCHOOLS  
2021 ROOF PROJECT  
Project # BB201216**

**Project Contacts**

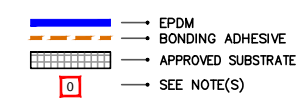
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Email: tomc@adambradleyinc.com

**Bill Bare**  
Adam Bradley Enterprises Inc.  
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Email: roofpro@sbglobal.net

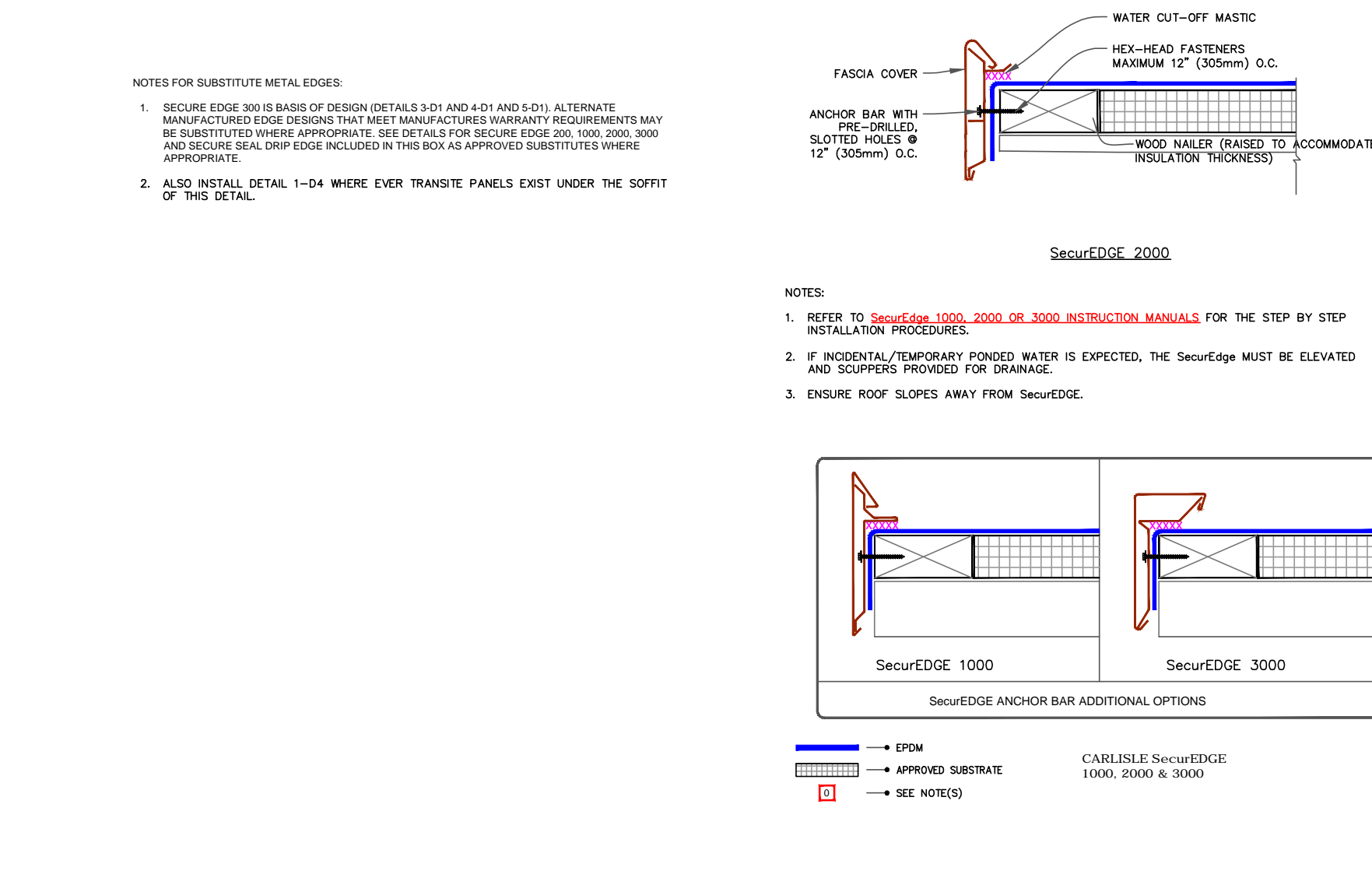
**Steve Kofol**  
Chardon Local Schools  
Email: steven.kofol@chardonschools.org



- NOTES:
- REFER TO **SecurEDGE 200 INSTALLATION INSTRUCTION MANUAL** FOR STEP-BY-STEP INSTALLATION PROCEDURES.
  - WOOD NAILER MUST EXTEND PAST TOTAL WIDTH OF GRAVEL STOP DECK FLANGE.
  - APPLY EPDM PRIMER TO THE MEMBRANE SURFACE PRIOR TO INSTALLING PRESSURE-SENSITIVE ELASTOFORM FLASHING.
  - FIELD SPICES AT THE ANGLE CHANGE SHALL BE OVERLAP WITH TWO LAYERS OF PRESSURE-SENSITIVE ELASTOFORM FLASHING. THE BOTTOM LAYER SHALL BE 6\"/>



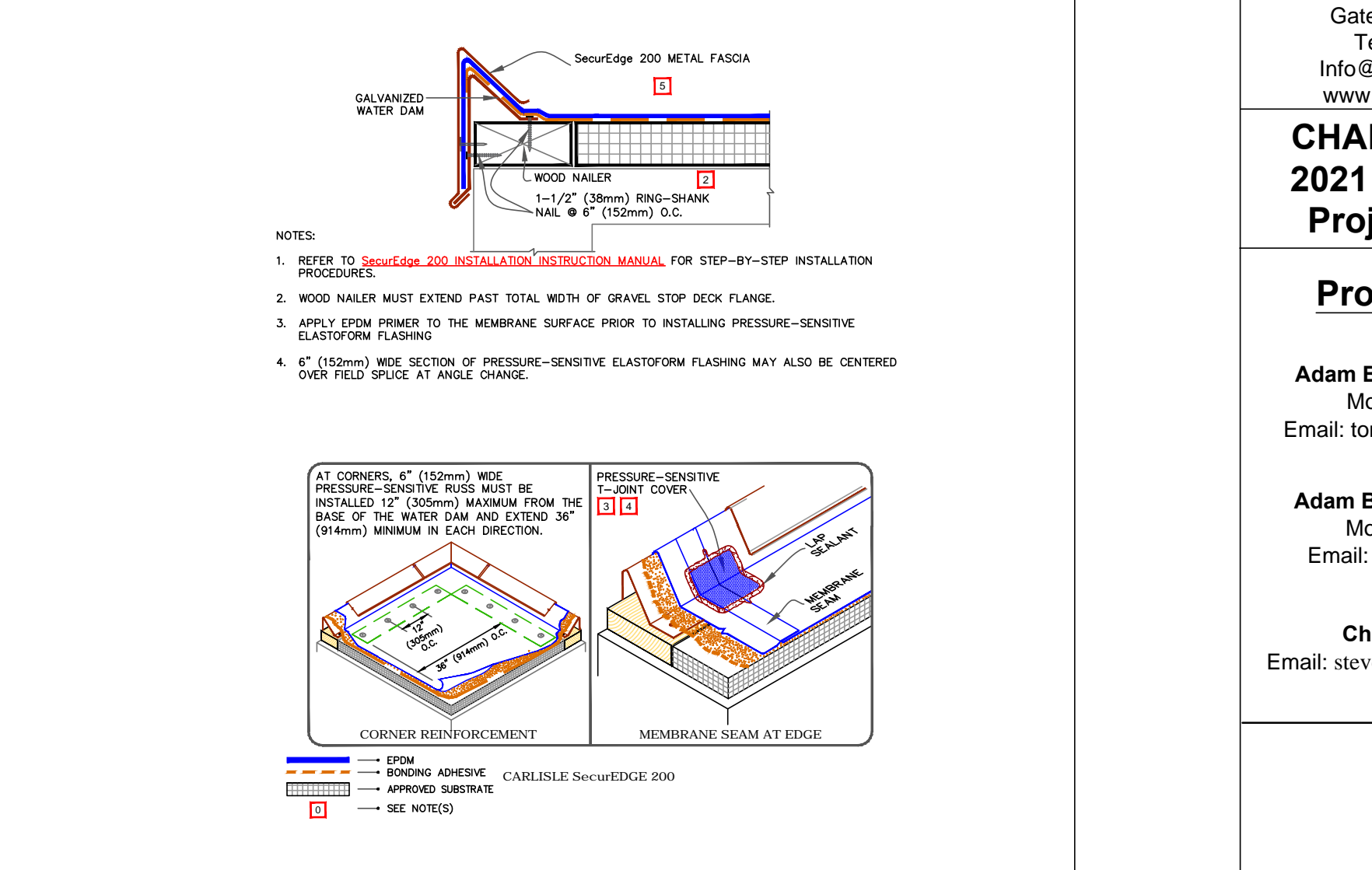
CARLISLE SecurEDGE 200 FASOIA



- NOTES:
- SECURE EDGE 200 IS BASED ON BASIS OF DESIGN DETAILS 3-D1 AND 4-D1 AND 5-D1. ALTERNATE MANUFACTURER EDGE DESIGNS THAT MEET MANUFACTURER WARRANTY REQUIREMENTS MAY BE SUBSTITUTED WHERE APPROPRIATE. SEE DETAILS FOR SECURE EDGE 200, 1000, 2000, 3000 AND SECURE SEAL DRIP EDGE INCLUDED IN THIS BOX AS APPROVED SUBSTITUTES WHERE APPROPRIATE.
  - ALSO INSTALL DETAIL 1-D4 WHERE EVER TRANSITE PANELS EXIST UNDER THE SOFFIT OF THIS DETAIL.



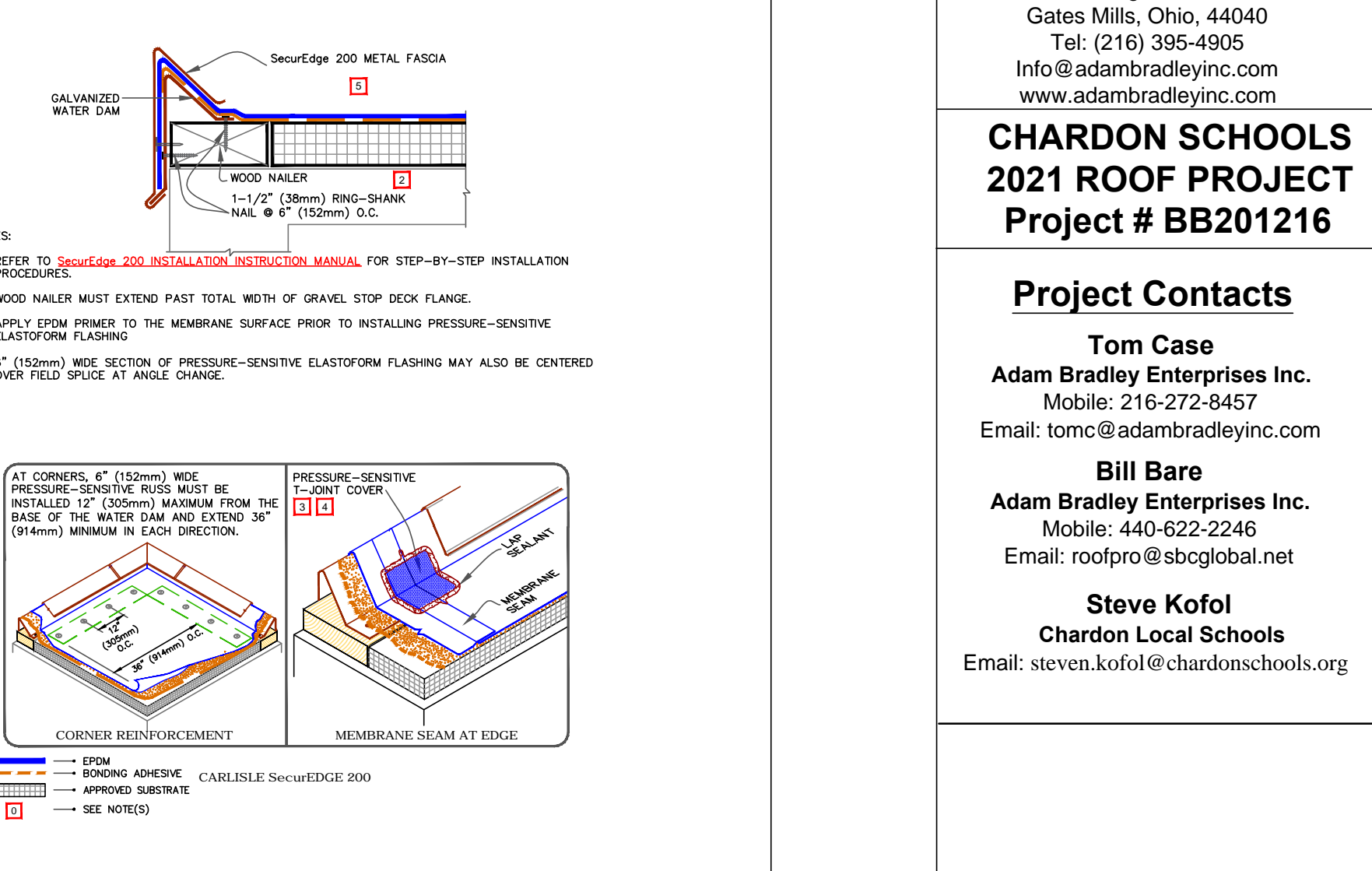
CARLISLE SecurEDGE 2000 FASOIA



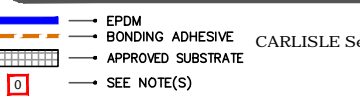
- NOTES:
- REFER TO **SecurEDGE 1000, 2000 OR 3000 INSTALLATION MANUALS** FOR THE STEP BY STEP INSTALLATION PROCEDURES.
  - IF INCIDENTAL/TEMPORARY PONDED WATER IS EXPECTED, THE SecurEDGE MUST BE ELEVATED AND SCUPPERS PROVIDED FOR DRAINAGE.
  - ENSURE ROOF SLOPES AWAY FROM SecurEDGE.



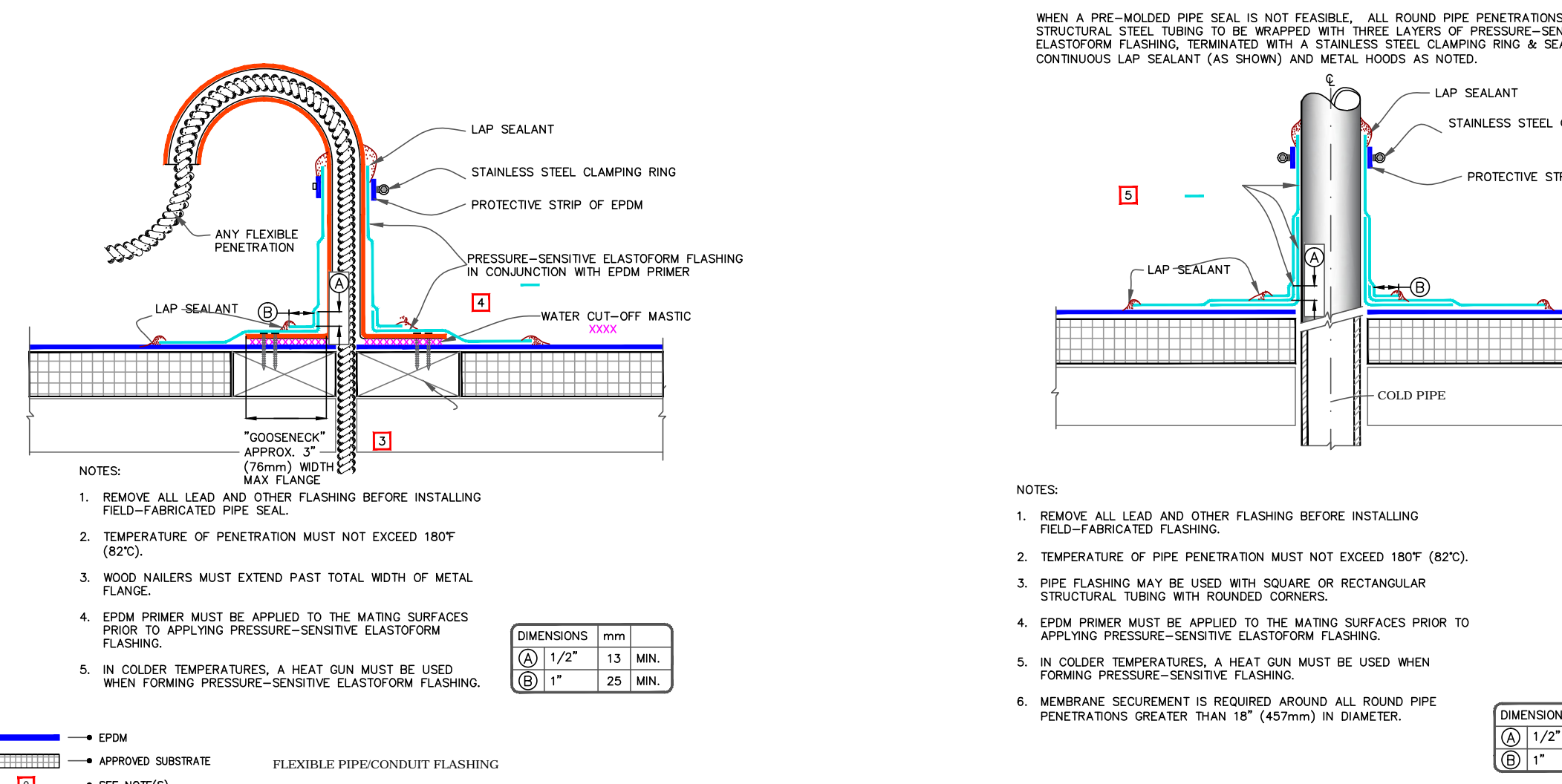
CARLISLE SecurEDGE 1000, 2000 & 3000



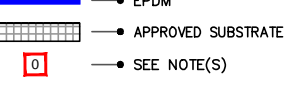
- NOTES:
- REFER TO **SecurEDGE 200 INSTALLATION INSTRUCTION MANUAL** FOR STEP-BY-STEP INSTALLATION PROCEDURES.
  - WOOD NAILER MUST EXTEND PAST TOTAL WIDTH OF GRAVEL STOP DECK FLANGE.
  - APPLY EPDM PRIMER TO THE MEMBRANE SURFACE PRIOR TO INSTALLING PRESSURE-SENSITIVE ELASTOFORM FLASHING.
  - 6\"/>



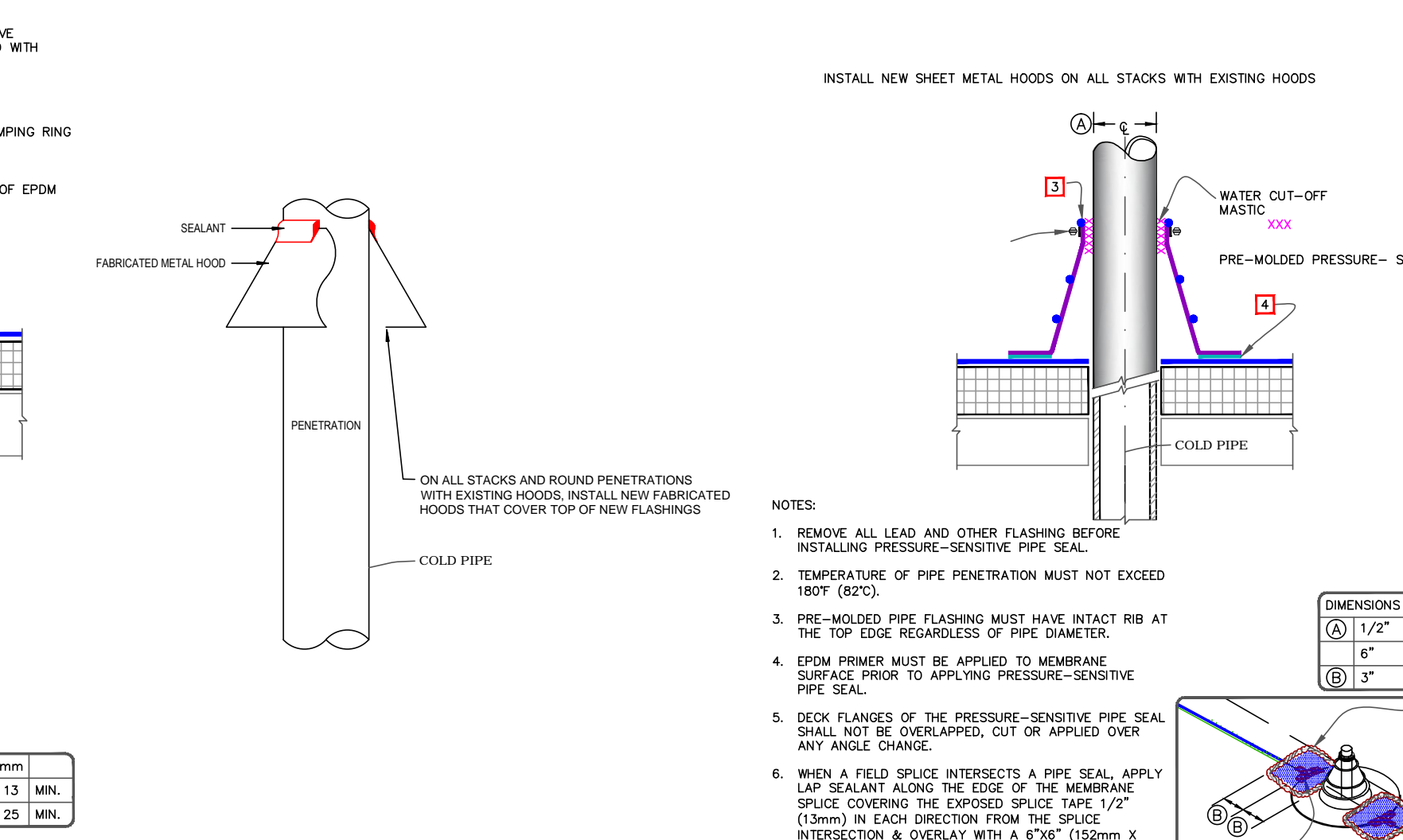
CARLISLE SecurEDGE 200



- NOTES:
- REMOVE ALL LEAD AND OTHER FLASHING BEFORE INSTALLING FIELD-FABRICATED PIPE SEAL.
  - TEMPERATURE OF PENETRATION MUST NOT EXCEED 180°F (82°C).
  - WOOD NAILERS MUST EXTEND PAST TOTAL WIDTH OF METAL FLANGE.
  - EPDM PRIMER MUST BE APPLIED TO THE MATING SURFACES PRIOR TO APPLYING PRESSURE-SENSITIVE ELASTOFORM FLASHING.
  - IN COLDER TEMPERATURES, A HEAT GUN MUST BE USED WHEN FORMING PRESSURE-SENSITIVE ELASTOFORM FLASHING.



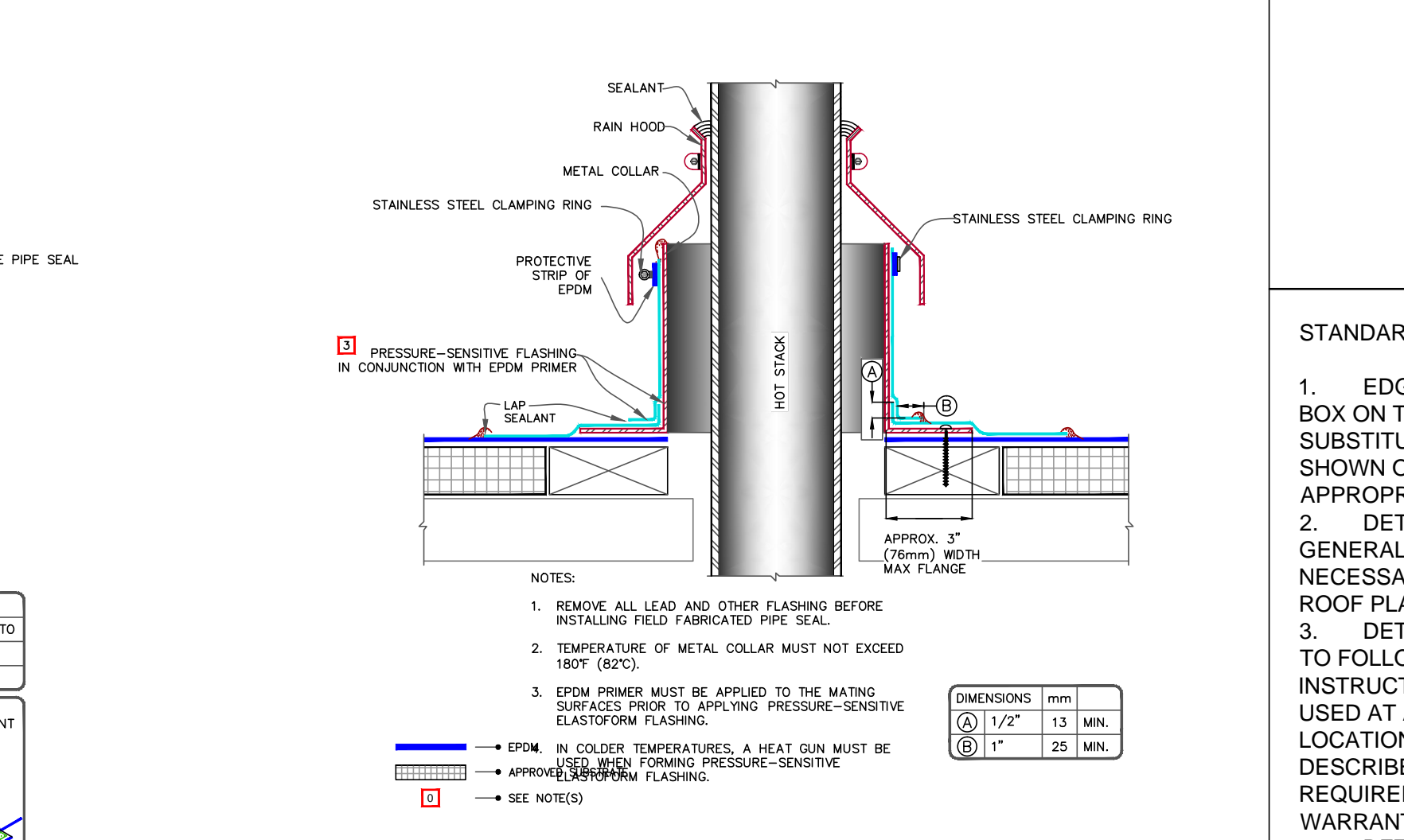
FLEXIBLE PIPE/CONDUIT FLASHING



- NOTES:
- REMOVE ALL LEAD AND OTHER FLASHING BEFORE INSTALLING FIELD-FABRICATED FLASHING.
  - TEMPERATURE OF PIPE PENETRATION MUST NOT EXCEED 180°F (82°C).
  - PIPE FLASHING MAY BE USED WITH SQUARE OR RECTANGULAR STRUCTURAL TUBING WITH ROUNDED CORNERS.
  - EPDM PRIMER MUST BE APPLIED TO THE MATING SURFACES PRIOR TO APPLYING PRESSURE-SENSITIVE ELASTOFORM FLASHING.
  - IN COLDER TEMPERATURES, A HEAT GUN MUST BE USED WHEN FORMING PRESSURE-SENSITIVE FLASHING.
  - MEMBRANE SECUREMENT IS REQUIRED AROUND ALL ROUND PIPE PENETRATIONS GREATER THAN 18\"/>



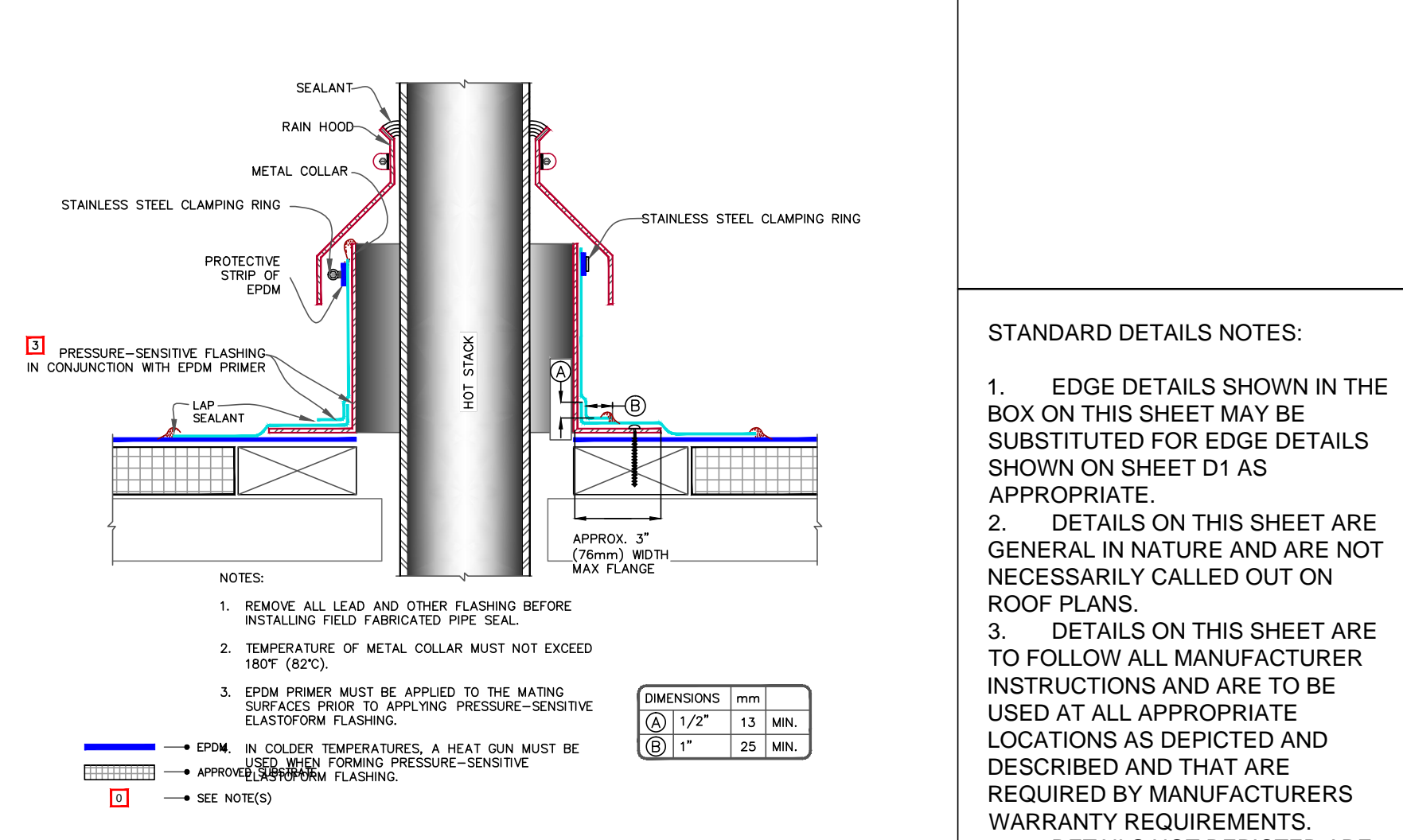
FIELD FABRICATED PIPE/STRUCTURAL STEEL TUBE FLASHING



- NOTES:
- REMOVE ALL LEAD AND OTHER FLASHING BEFORE INSTALLING PRESSURE-SENSITIVE PIPE SEAL.
  - TEMPERATURE OF PIPE PENETRATION MUST NOT EXCEED 180°F (82°C).
  - PRE-MOLDED PIPE FLASHING MUST HAVE INTACT RIB AT THE TOP EDGE REGARDLESS OF PIPE DIAMETER.
  - EPDM PRIMER MUST BE APPLIED TO MEMBRANE SURFACE PRIOR TO APPLYING PRESSURE-SENSITIVE PIPE SEAL.
  - DECK FLANGES OF THE PRESSURE-SENSITIVE PIPE SEAL SHALL NOT BE OVERLAPPED, CUT OR APPLIED OVER ANY ANGLE CHANGE.
  - WHEN A FIELD SPICE INTERSECTS A PIPE SEAL, APPLY LAP SEALANT ALONG THE EDGE OF THE MEMBRANE SPICE COVERING THE EXPOSED SPICE TAPE 1/2\"/>



PRE-MOLDED PRESSURE-SENSITIVE PIPE SEAL



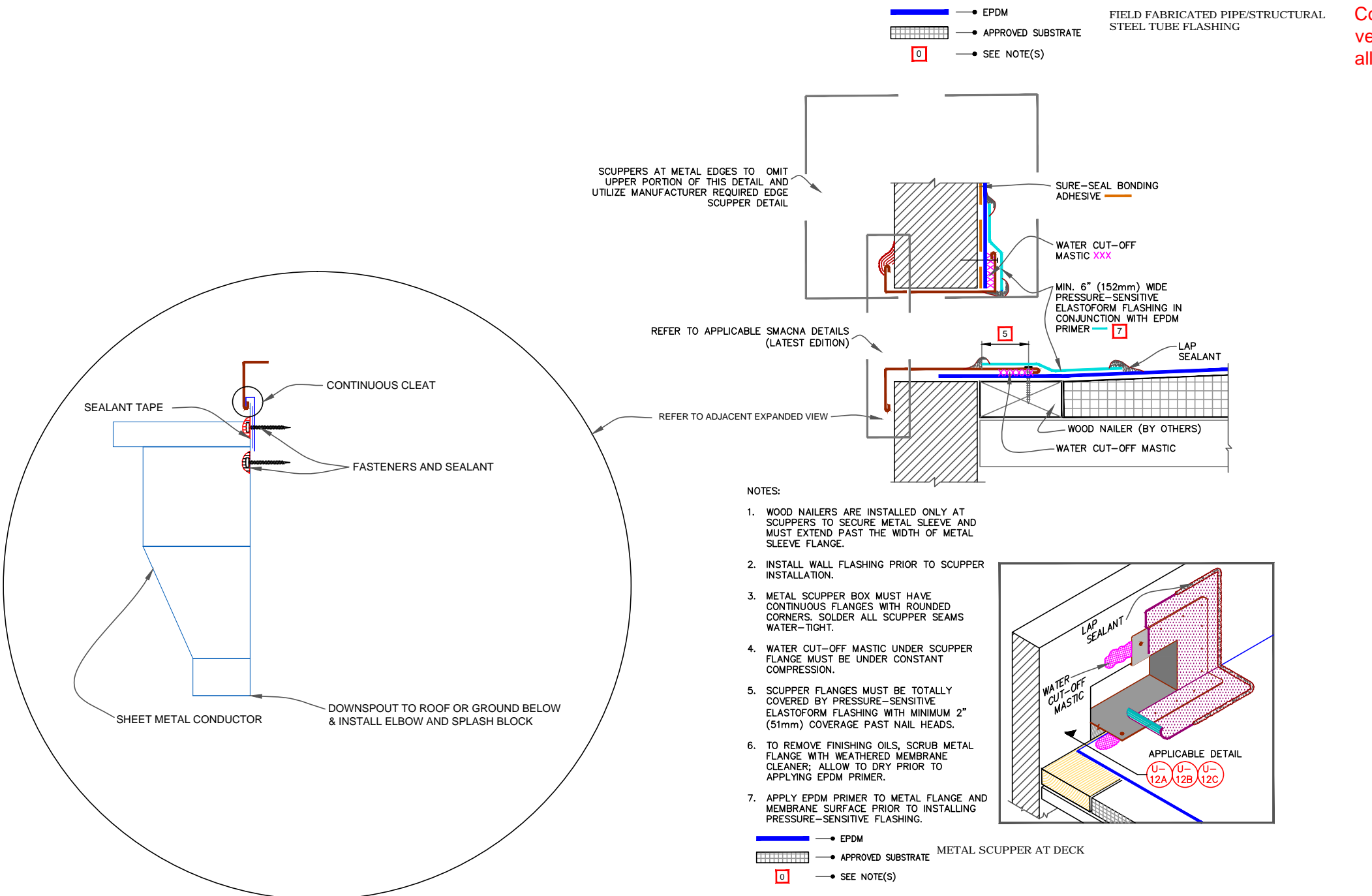
- NOTES:
- REMOVE ALL LEAD AND OTHER FLASHING BEFORE INSTALLING FIELD FABRICATED PIPE SEAL.
  - TEMPERATURE OF METAL COLLAR MUST NOT EXCEED 180°F (82°C).
  - EPDM PRIMER MUST BE APPLIED TO THE MATING SURFACES PRIOR TO APPLYING PRESSURE-SENSITIVE ELASTOFORM FLASHING.
  - IN COLDER TEMPERATURES, A HEAT GUN MUST BE USED WHEN FORMING PRESSURE-SENSITIVE ELASTOFORM FLASHING.



FIELD FABRICATED HOT STACK

Contractor shall inspect and extend all existing roof vents to ensure top of vent pipe is a minimum of 12' above the new finished roof surface. Replace all rusted, broken or damaged vent stacks

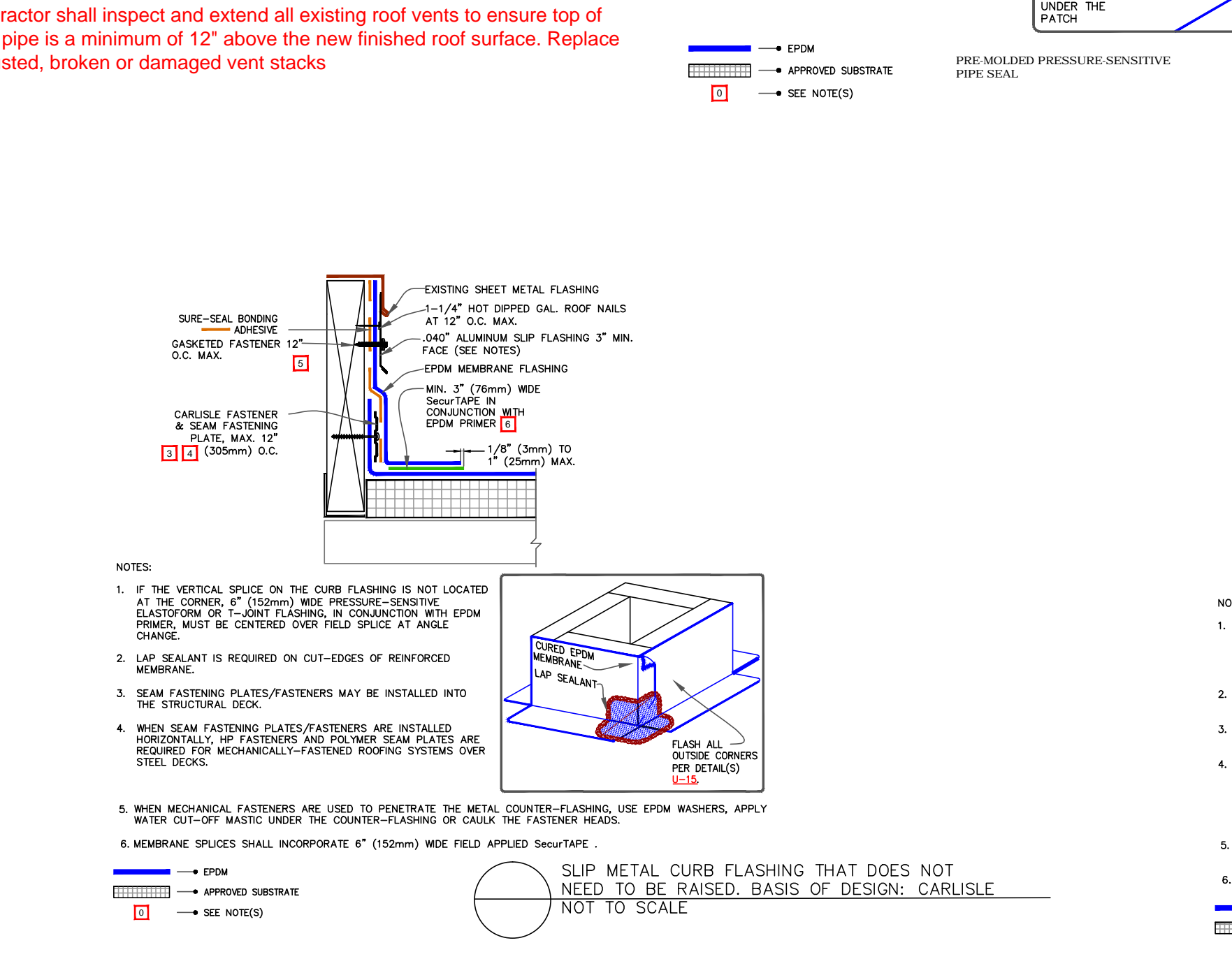
Contractor shall inspect and extend all existing roof vents to ensure top of vent pipe is a minimum of 12' above the new finished roof surface. Replace all rusted, broken or damaged vent stacks



- NOTES:
- WOOD NAILERS ARE INSTALLED ONLY AT SCUPPERS TO SECURE METAL SLEEVE AND MUST EXTEND PAST THE WIDTH OF METAL SLEEVE FLANGE.
  - INSTALL WALL FLASHING PRIOR TO SCUPPER INSTALLATION.
  - METAL SCUPPER BOX MUST HAVE CONTINUOUS FLANGES WITH ROUNDED CORNERS. SOLDER ALL SCUPPER SEAMS WATER-TIGHT.
  - WATER CUT-OFF MASTIC UNDER SCUPPER FLANGE MUST BE UNDER CONSTANT COMPRESSION.
  - SCUPPER FLANGES MUST BE TOTALLY COVERED BY PRESSURE-SENSITIVE ELASTOFORM FLASHING WITH MINIMUM 2\"/>



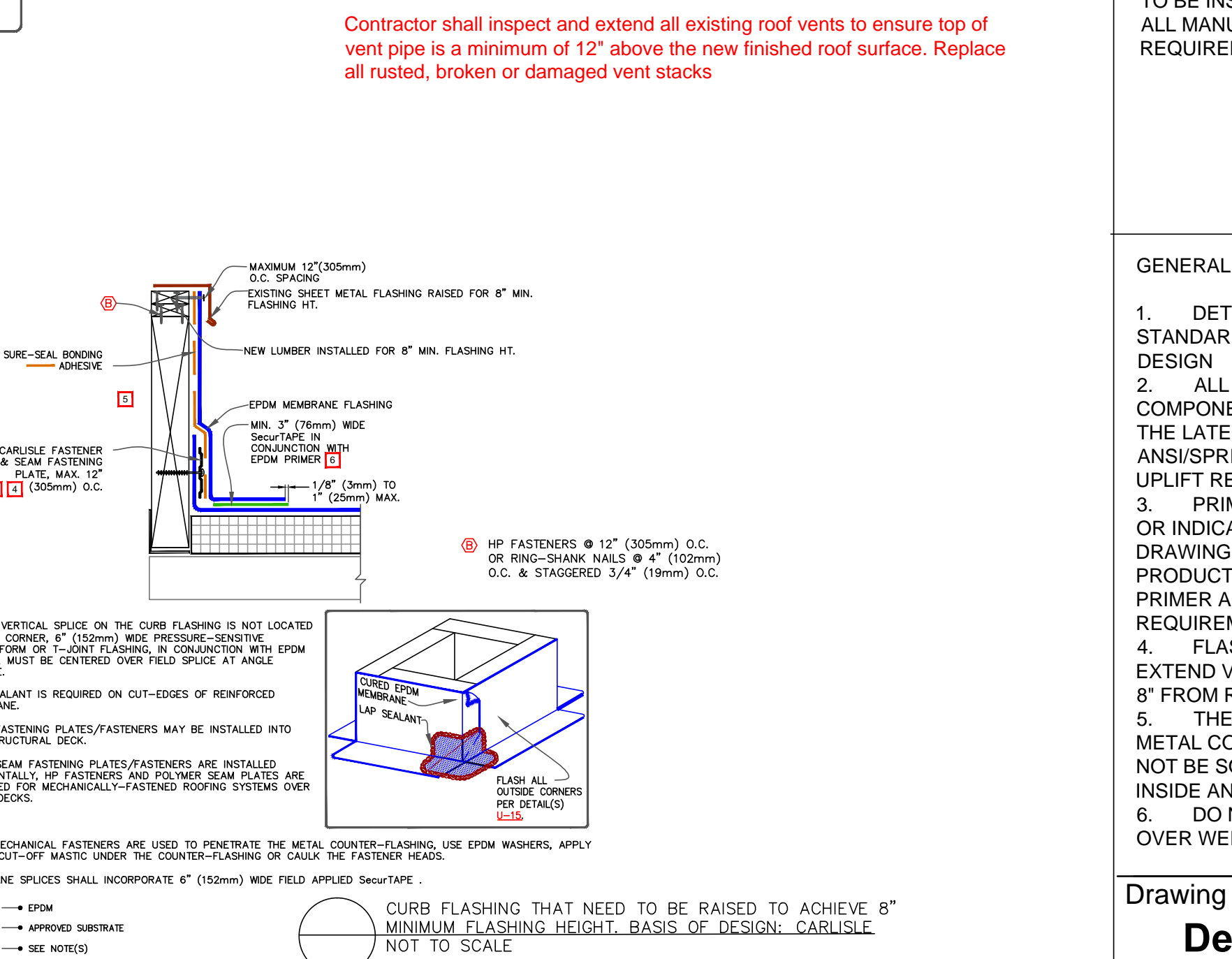
METAL SCUPPER AT DECK



- NOTES:
- IF THE VERTICAL SPICE ON THE CURB FLASHING IS NOT LOCATED AT THE CORNER, 6\"/>



SLIP METAL CURB FLASHING THAT DOES NOT NEED TO BE RAISED. BASIS OF DESIGN: CARLISLE NOT TO SCALE



- NOTES:
- IF THE VERTICAL SPICE ON THE CURB FLASHING IS NOT LOCATED AT THE CORNER, 6\"/>



CURB FLASHING THAT NEED TO BE RAISED TO ACHIEVE 8\"/>

STANDARD DETAILS NOTES:

- EDGE DETAILS SHOWN IN THE BOX ON THIS SHEET MAY BE SUBSTITUTED FOR EDGE DETAILS SHOWN ON SHEET D1 AS APPROPRIATE.
- DETAILS ON THIS SHEET ARE GENERAL IN NATURE AND ARE NOT NECESSARILY CALLED OUT ON ROOF PLANS.
- DETAILS ON THIS SHEET ARE TO FOLLOW ALL MANUFACTURER INSTRUCTIONS AND ARE TO BE USED AT ALL APPROPRIATE LOCATIONS AS DEPICTED AND DESCRIBED AND THAT ARE REQUIRED BY MANUFACTURERS WARRANTY REQUIREMENTS.
- DETAILS NOT DEPICTED ARE TO BE INSTALLED TO COMPLY WITH ALL MANUFACTURER REQUIREMENTS.

GENERAL NOTES FOR ALL DETAILS:

- DETAILS USE CARLISLE STANDARDS AS THE BASIS OF DESIGN
- ALL EDGE METAL COMPONENTS SHALL COMPLY WITH THE LATEST VERSION OF ANSI/SPRI/FM 4335 ES-1 FOR WIND UPLIFT RESISTANCE
- PRIMER: WHERE NOT SHOWN OR INDICATED ON DETAIL DRAWINGS, REFER TO MATERIAL PRODUCT DATA SHEETS FOR PRIMER APPLICATION REQUIREMENTS.
- FLASHING PLIES MUST EXTEND VERTICALLY A MINIMUM OF 8\"/>

Drawing Title:

**Detail Sheet 3**

Scale NTS	Sheet
Date 3.29.21	<b>D3</b>



**CHARDON SCHOOLS  
2021 ROOF PROJECT  
Project # BB201216**

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Mobile: 216-272-8457  
Email: tomc@adambradleyinc.com

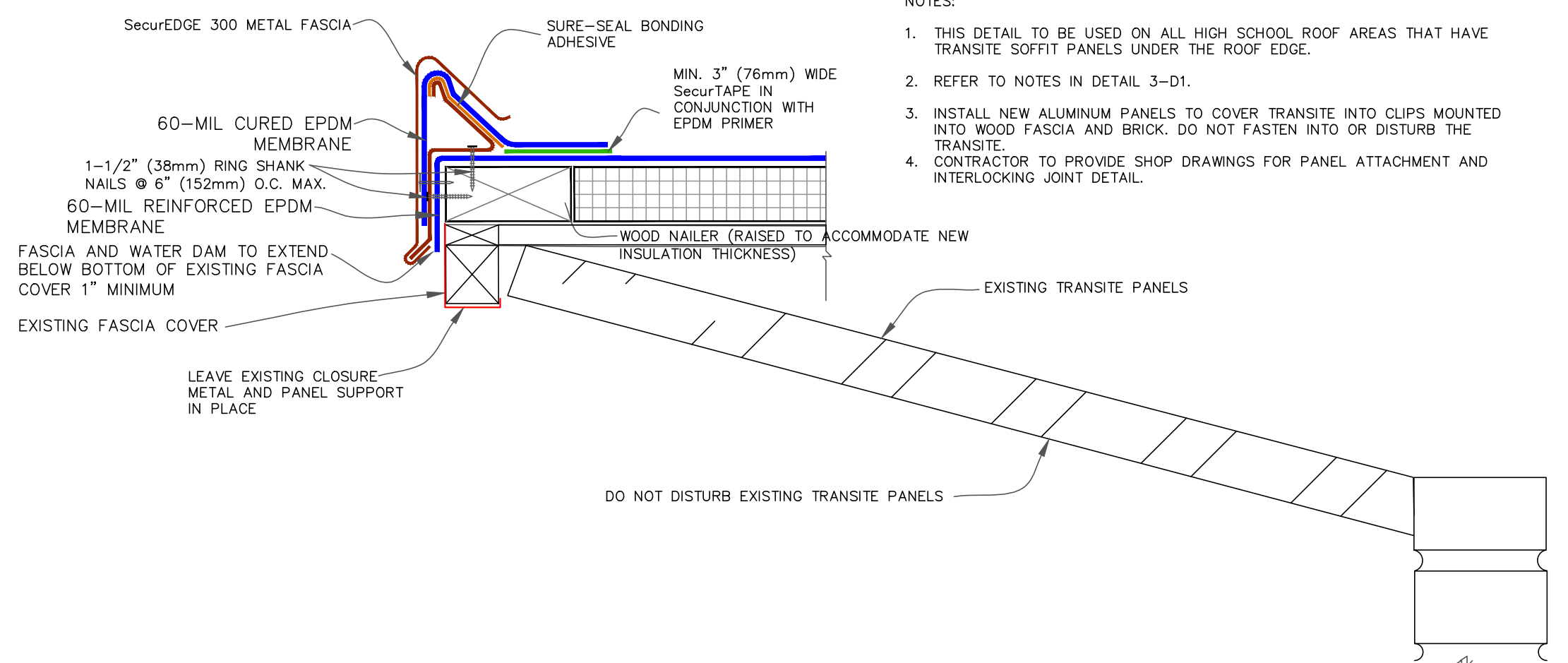
**Bill Bare**  
Adam Bradley Enterprises Inc.  
Mobile: 440-622-2246  
Email: roofpro@sbcglobal.net

**Steve Kofol**  
Chardon Local Schools  
Email: steven.kofol@chardonschools.org

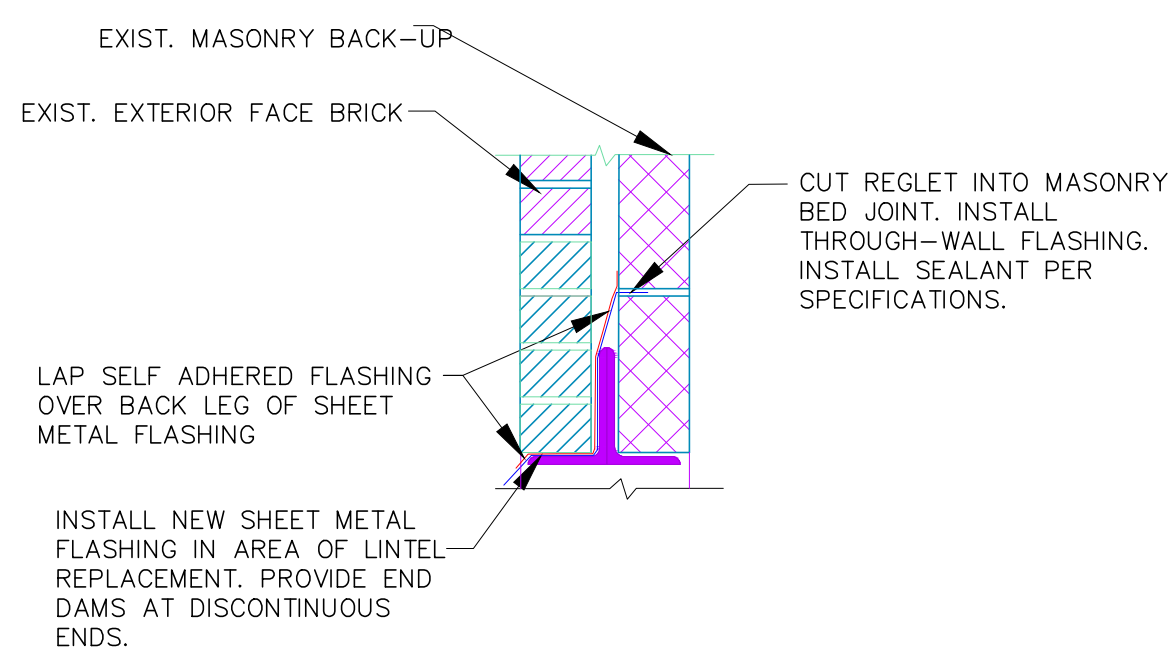
**CAUTION** MEMBRANE SPLICES SHALL INCORPORATE 6" (152mm) WIDE FIELD APPLIED SecurTAPE

**NOTES:**

1. THIS DETAIL TO BE USED ON ALL HIGH SCHOOL ROOF AREAS THAT HAVE TRANSITE SOFFIT PANELS UNDER THE ROOF EDGE.
2. REFER TO NOTES IN DETAIL 3-D1.
3. INSTALL NEW ALUMINUM PANELS TO COVER TRANSITE INTO CLIPS MOUNTED INTO WOOD FASCIA AND BRICK. DO NOT FASTEN INTO OR DISTURB THE TRANSITE.
4. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR PANEL ATTACHMENT AND INTERLOCKING JOINT DETAIL.

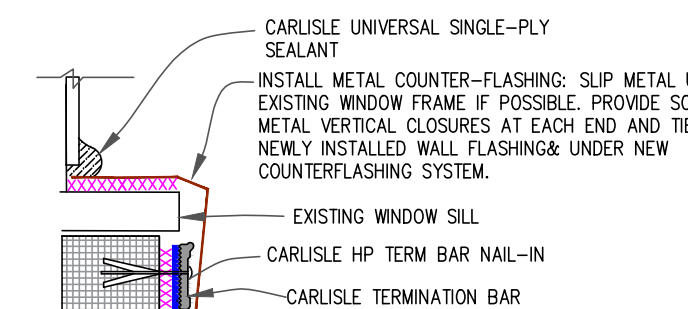


**1**  
D4 TRANSITE PANEL RECOVER  
NOT TO SCALE



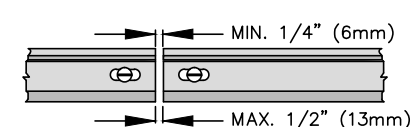
**4**  
D4 WALL LINTEL FLASHING  
NOT TO SCALE

**MECHANICAL TERMINATION WITH COUNTER FLASHING AT WINDOWS**

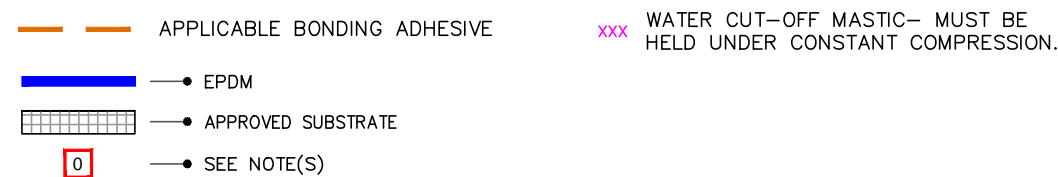


**NOTES:**

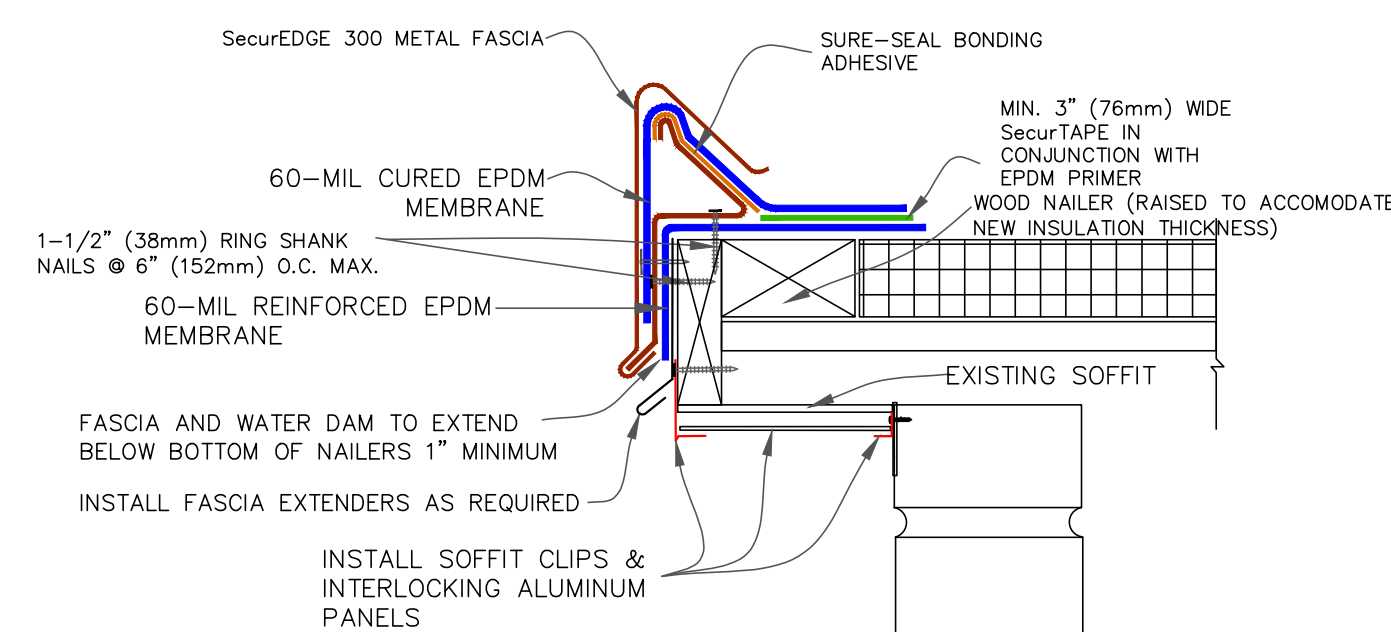
1. APPLY ON HARD SMOOTH SURFACE ONLY; NOT FOR USE ON EXPOSED WOOD.
2. DO NOT WRAP TERMINATION BAR AROUND CORNERS.



**USE APPROPRIATE BASE TIE-IN**



**2**  
D4 FLASHINGS/COUNTERFLASHING UNDER WINDOWS  
NOT TO SCALE



**NOTES:**

1. REFER TO NOTES IN DETAIL 3-D1.
2. INSTALL NEW ALUMINUM PANELS INTO CLIPS MOUNTED INTO WOOD FASCIA AND BRICK. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR PANEL ATTACHMENT AND INTERLOCKING JOINT DETAIL.

**3**  
D4 NEW FASCIA & SOFFIT PANEL CLIP  
NOT TO SCALE

**STANDARD DETAILS NOTES:**

1. DETAILS ON THIS SHEET ARE GENERAL IN NATURE AND ARE NOT NECESSARILY CALLED OUT ON ROOF PLANS.
2. DETAILS ON THIS SHEET ARE TO FOLLOW ALL MANUFACTURER INSTRUCTIONS AND ARE TO BE USED AT ALL APPROPRIATE LOCATIONS AS DEPICTED AND DESCRIBED AND THAT ARE REQUIRED BY MANUFACTURERS WARRANTY REQUIREMENTS.
3. DETAILS NOT DEPICTED ARE TO BE INSTALLED TO COMPLY WITH ALL MANUFACTURER REQUIREMENTS.

**GENERAL NOTES FOR ALL DETAILS:**

1. DETAILS USE CARLISLE STANDARDS AS THE BASIS OF DESIGN
2. ALL EDGE METAL COMPONENTS SHALL COMPLY WITH THE LATEST VERSION OF ANSI/SPRI/FM 4335 ES-1 FOR WIND UPLIFT RESISTANCE
3. PRIMER: WHERE NOT SHOWN OR INDICATED ON DETAIL DRAWINGS, REFER TO MATERIAL PRODUCT DATA SHEETS FOR PRIMER APPLICATION REQUIREMENTS.
4. FLASHING PLIES MUST EXTEND VERTICALLY A MINIMUM OF 8" FROM ROOF SURFACE.
5. THE JOINTS IN THE SHEET METAL COUNTERFLASHING SHOULD NOT BE SOLDERED EXCEPT AT INSIDE AND OUTSIDE CORNERS.
6. DO NOT OBSTRUCT OR FLASH OVER WEEP HOLES.

Drawing Title:

**Detail Sheet 4**

Scale NTS	Sheet
Date 3.29.21	<b>D4</b>



**CHARDON SCHOOLS  
2021 ROOF PROJECT  
Project # BB201216**

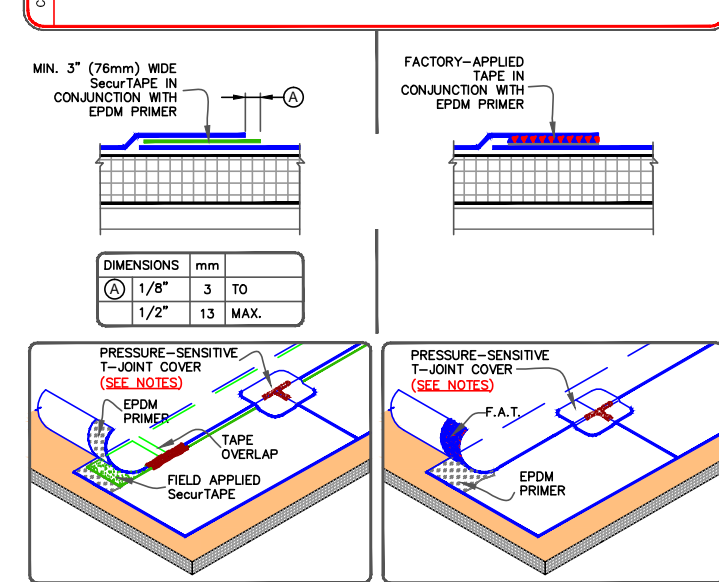
**Project Contacts**

**Tom Case**  
Adam Bradley Enterprises Inc.  
Mobile: 216-272-8457  
Email: tomc@adambradleyinc.com

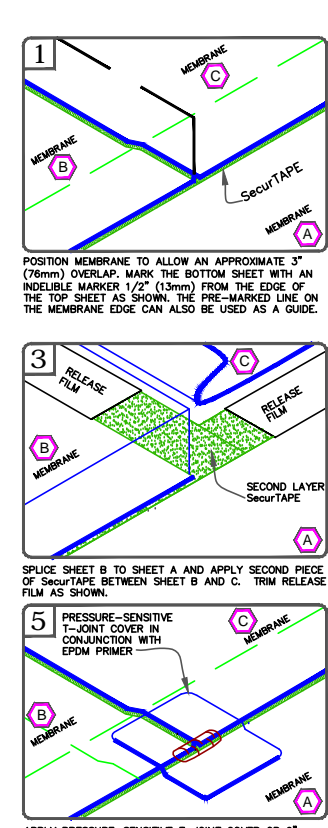
**Bill Bare**  
Adam Bradley Enterprises Inc.  
Mobile: 440-622-2246  
Email: roofpro@sbgglobal.net

**Steve Kofol**  
Chardon Local Schools  
Email: steven.kofol@chardonschools.org

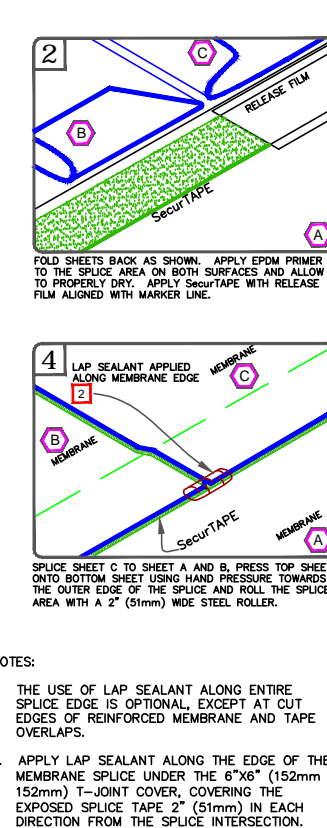
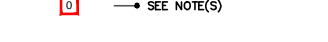
PROJECTS WITH 20-YEAR WARRANTIES (MAXIMUM MEMBRANE THICKNESS TO-HILL, TAPE SPLICES MUST BE A MINIMUM 3" WIDE FACTORY-APPLIED TAPE (FAT) OR A MINIMUM OF 6" FIELD APPLIED SCURTAPE.



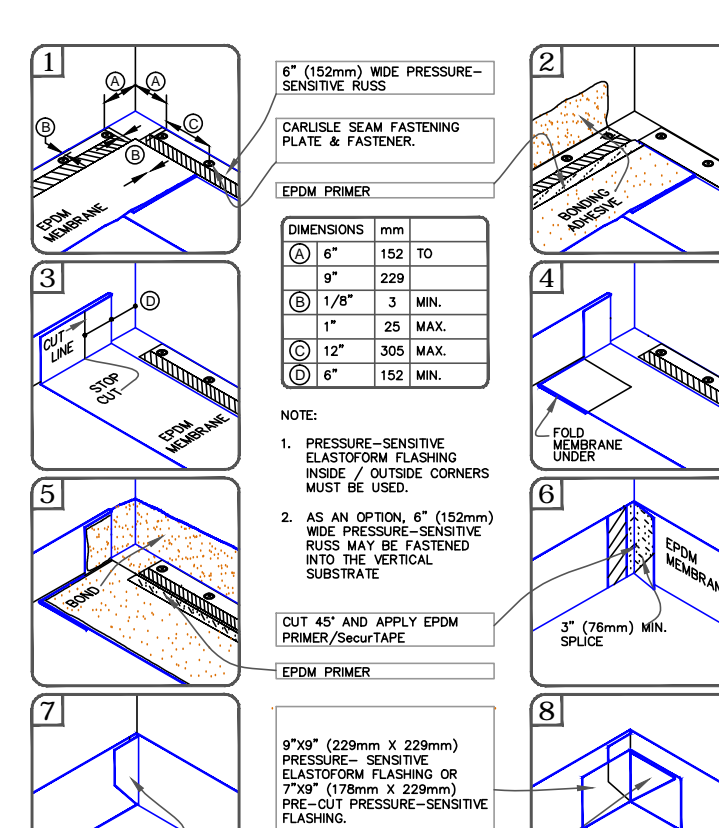
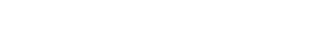
- NOTES:
- FIELD APPLIED SCURTAPE IS TO BE OVERLAPPED A MINIMUM OF 4" (102mm) AT THE ENDS OF EACH CUT PIECE. APPLY LAP SEALANT AT TAPE OVERLAPS 2" (51mm) IN ALL DIRECTIONS AS SHOWN.
  - APPLY LAP SEALANT ALONG THE LEADING EDGE OF THE MEMBRANE SPLICE UNDER THE 4" (102mm) X 150mm T-JOINT COVER COVERING THE EXPOSED SPACE TAPE 2" (51mm) IN ALL DIRECTIONS FROM THE SPLICE INTERSECTION.
  - 4" (102mm) WIDE PRESSURE-SENSITIVE ELASTOFORM FLASHING IN CONJUNCTION WITH EPDM PRIMER SHALL ALSO BE CONTINUED OVER THE INTERSECTING POINT OF THE LEADING EDGES OF THE FIELD SPLICE INTERSECTION.
  - LAP SEALANT IS REQUIRED ON OUT EDGES OF REINFORCED EPDM MEMBRANE.



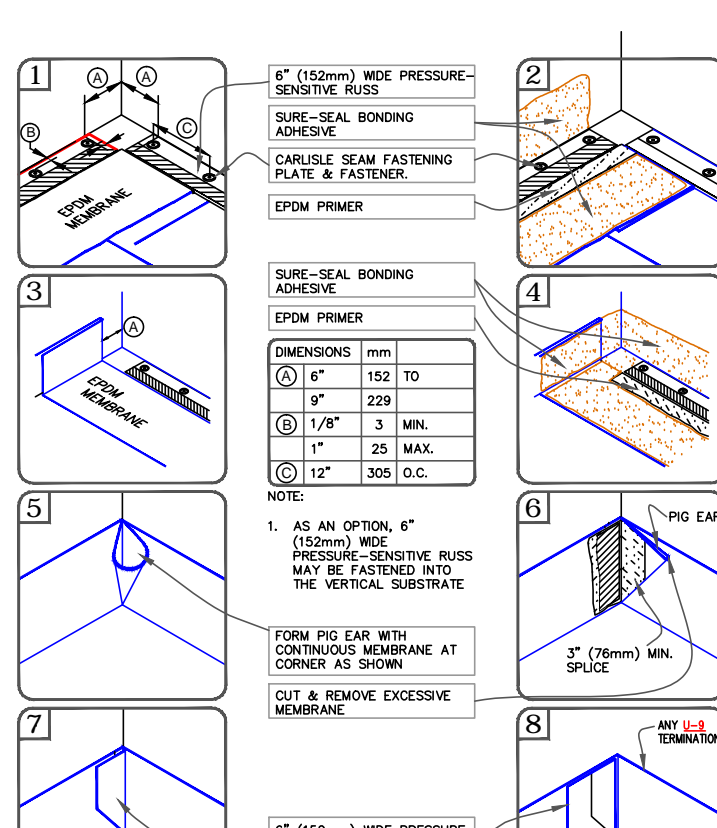
- NOTES:
- USE OF LAP SEALANT ALONG ENTIRE LEADING EDGE IS OPTIONAL. EXCEPT AT CUT EDGES OF REINFORCED MEMBRANE AND TAPE OVERLAPS.
  - APPLY LAP SEALANT ALONG THE EDGE OF THE MEMBRANE SPLICE UNDER THE 4" (102mm) X 150mm T-JOINT COVER COVERING THE EXPOSED SPACE TAPE 2" (51mm) IN ALL DIRECTIONS FROM THE SPLICE INTERSECTION.
  - APPLY PRESSURE-SENSITIVE T-JOINT COVER ON 4" (102mm) X 150mm T-JOINT COVER COVERING THE EXPOSED SPACE TAPE 2" (51mm) IN ALL DIRECTIONS FROM THE SPLICE INTERSECTION.



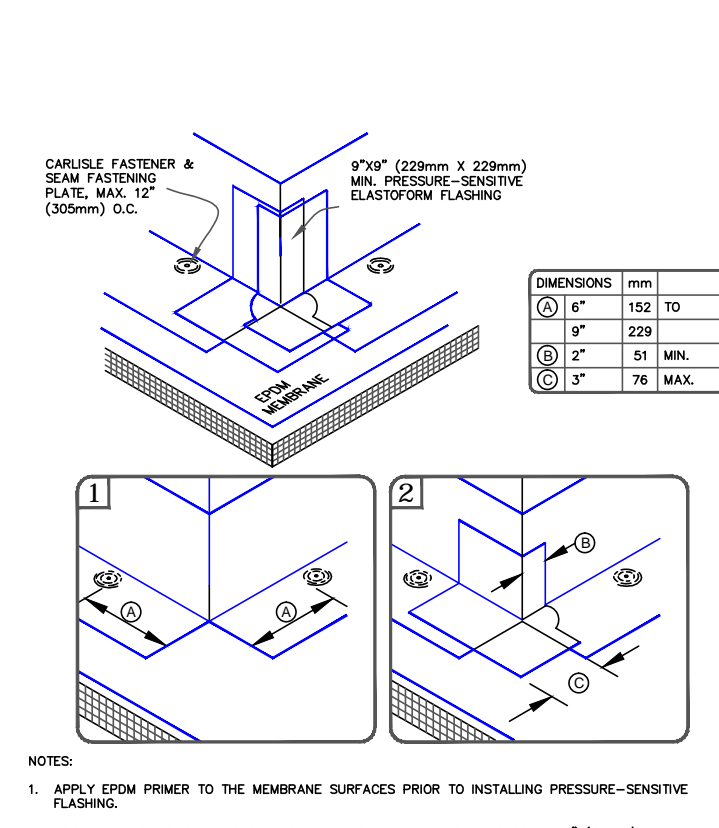
- NOTES:
- USE OF LAP SEALANT ALONG ENTIRE LEADING EDGE IS OPTIONAL. EXCEPT AT CUT EDGES OF REINFORCED MEMBRANE AND TAPE OVERLAPS.
  - APPLY LAP SEALANT ALONG THE EDGE OF THE MEMBRANE SPLICE UNDER THE 4" (102mm) X 150mm T-JOINT COVER COVERING THE EXPOSED SPACE TAPE 2" (51mm) IN ALL DIRECTIONS FROM THE SPLICE INTERSECTION.
  - APPLY PRESSURE-SENSITIVE T-JOINT COVER ON 4" (102mm) X 150mm T-JOINT COVER COVERING THE EXPOSED SPACE TAPE 2" (51mm) IN ALL DIRECTIONS FROM THE SPLICE INTERSECTION.



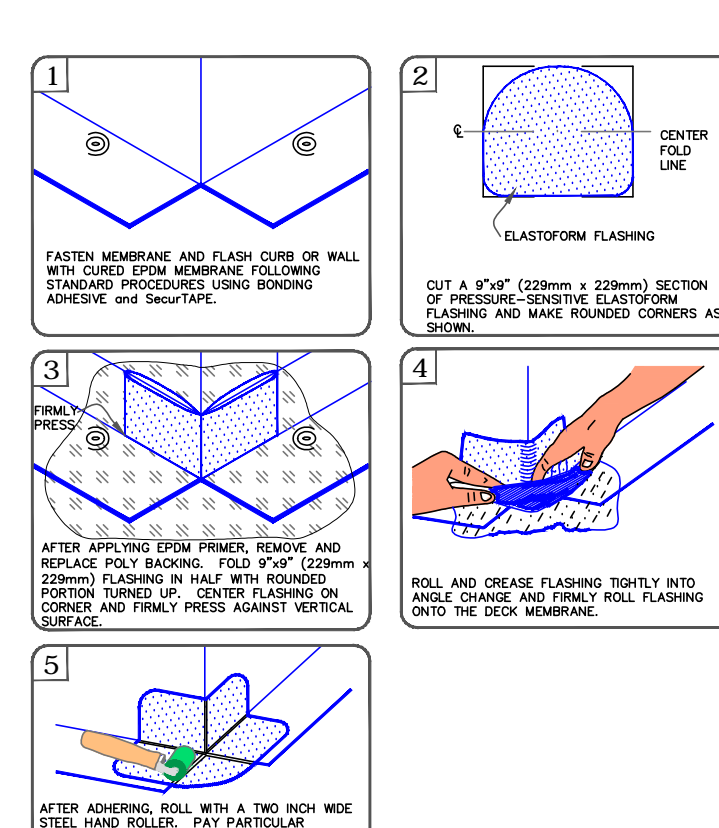
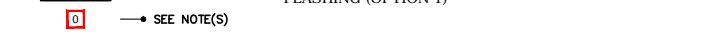
- NOTES:
- PRESSURE-SENSITIVE ELASTOFORM FLASHING MUST BE USED.
  - AS AN OPTION, 6" (152mm) WIDE PRESSURE-SENSITIVE RUSSES MAY BE FASTENED INTO THE VERTICAL SUBSTRATE.
  - CUT 4" (102mm) WIDE PRESSURE-SENSITIVE ELASTOFORM FLASHING IN CONJUNCTION WITH EPDM PRIMER.
  - INSIDE CORNER WITH RUSSES (OPTION 1)



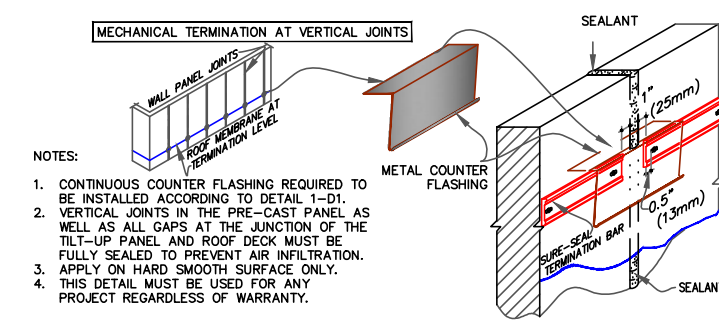
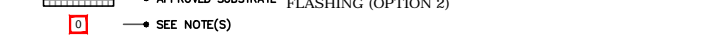
- NOTES:
- PRESSURE-SENSITIVE ELASTOFORM FLASHING MUST BE USED.
  - AS AN OPTION, 6" (152mm) WIDE PRESSURE-SENSITIVE RUSSES MAY BE FASTENED INTO THE VERTICAL SUBSTRATE.
  - CUT 4" (102mm) WIDE PRESSURE-SENSITIVE ELASTOFORM FLASHING IN CONJUNCTION WITH EPDM PRIMER.
  - INSIDE CORNER WITH RUSSES (OPTION 2)



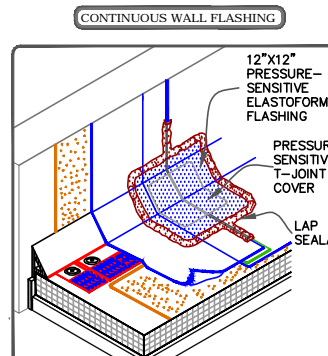
- NOTES:
- APPLY EPDM PRIMER TO THE MEMBRANE SURFACES PRIOR TO INSTALLING PRESSURE-SENSITIVE FLASHING.
  - PRESSURE-SENSITIVE ELASTOFORM FLASHING TO OVERLAP DECK MEMBRANE 3" (76mm) MINIMUM AND EXTEND 2" (51mm) MINIMUM AROUND CORNERS.
  - IN COLDER TEMPERATURES, A HEAT GUN MUST BE USED WHEN FORMING PRESSURE-SENSITIVE ELASTOFORM FLASHING.
  - OUTSIDE CORNER WITH PRESSURE-SENSITIVE ELASTOFORM FLASHING (OPTION 1)



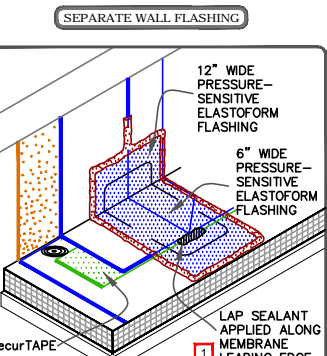
- NOTES:
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  - PRESSURE-SENSITIVE ELASTOFORM FLASHING TO OVERLAP DECK MEMBRANE 3" (76mm) MINIMUM AND EXTEND 2" (51mm) MINIMUM AROUND CORNERS.
  - IN COLDER TEMPERATURES, A HEAT GUN MUST BE USED WHEN FORMING PRESSURE-SENSITIVE ELASTOFORM FLASHING.
  - OUTSIDE CORNER WITH PRESSURE-SENSITIVE ELASTOFORM FLASHING (OPTION 2)



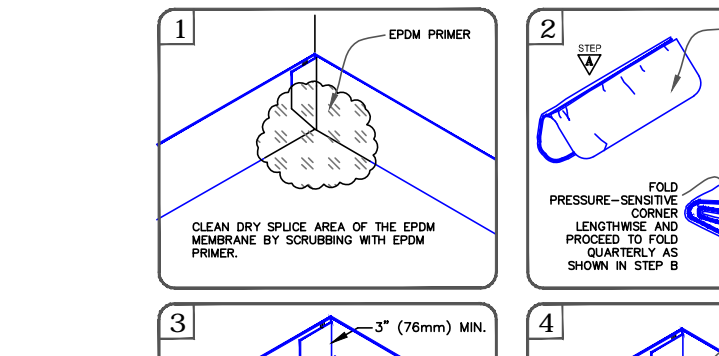
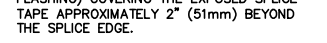
- NOTES:
- CONTINUOUS COUNTER FLASHING REQUIRED TO BE INSTALLED ACCORDING TO DETAIL 11-21.
  - VERTICAL JOINTS IN THE PRE-CAST PANELS AS WELL AS ALL JOINTS AT THE JOINTION OF THE TELL-TO PANEL AND JOINT MUST BE FULLY SEALED TO PREVENT AIR INFILTRATION.
  - APPLY ON HARD SMOOTH SURFACE ONLY.
  - THIS DETAIL MUST BE USED FOR ANY PRODUCT REGARDLESS OF WARRANTY.



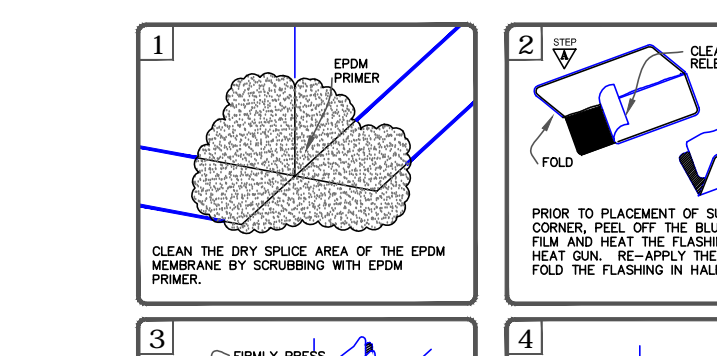
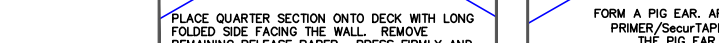
- NOTES:
- APPLY LAP SEALANT ALONG THE LEADING EDGE OF THE MEMBRANE SPLICE UNDER THE 4" (102mm) X 150mm T-JOINT COVER COVERING THE EXPOSED SPACE TAPE 2" (51mm) BEYOND THE SPLICE EDGE.
  - PRESSURE-SENSITIVE T-JOINT COVER OR 4" (102mm) WIDE PRESSURE-SENSITIVE ELASTOFORM FLASHING IN CONJUNCTION WITH EPDM PRIMER MUST BE CONTINUED OVER THE FIELD SPLICES AT THE ANGLE CHANGE.



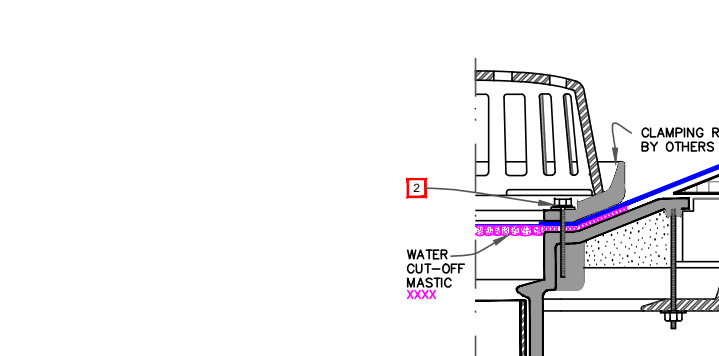
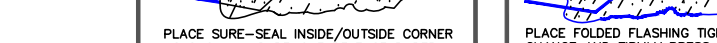
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  - PRESSURE-SENSITIVE T-JOINT COVER OR 4" (102mm) WIDE PRESSURE-SENSITIVE ELASTOFORM FLASHING IN CONJUNCTION WITH EPDM PRIMER MUST BE CONTINUED OVER THE FIELD SPLICES AT THE ANGLE CHANGE.



- NOTES:
- EPDM PRIMER MUST BE APPLIED TO ALL SPLICE AREAS AND FOR EACH LAYER OF PRESSURE-SENSITIVE FLASHING.
  - INSIDE CORNER WITH CONTINUOUS EPDM WALL FLASHING.



- NOTES:
- APPLY EPDM PRIMER TO THE MEMBRANE SURFACES PRIOR TO INSTALLING PRESSURE-SENSITIVE FLASHING.
  - PRESSURE-SENSITIVE ELASTOFORM FLASHING TO OVERLAP DECK MEMBRANE 3" (76mm) MINIMUM AND EXTEND 2" (51mm) MINIMUM AROUND CORNERS.
  - IN COLDER TEMPERATURES, A HEAT GUN MUST BE USED WHEN FORMING PRESSURE-SENSITIVE ELASTOFORM FLASHING.
  - OUTSIDE CORNER WITH PRE-CUT PRESSURE-SENSITIVE FLASHING.



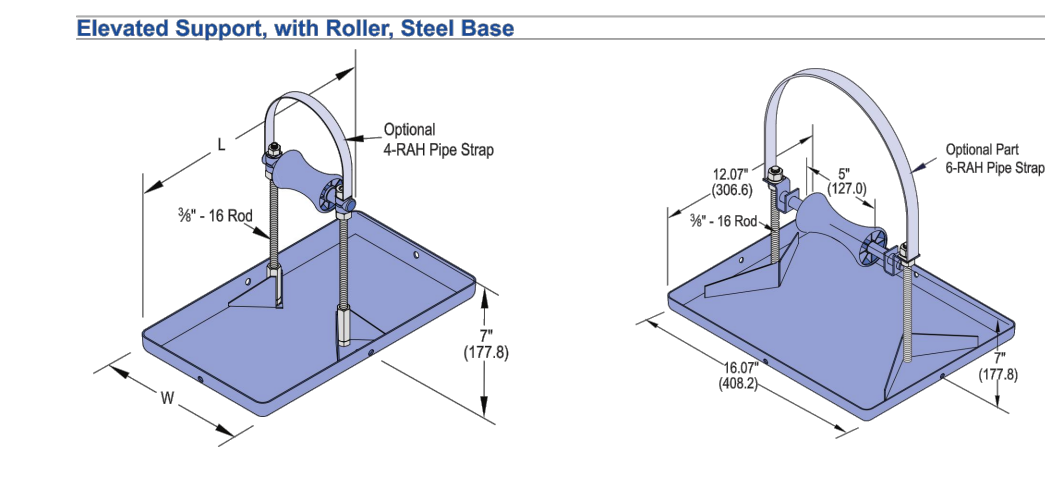
- NOTES:
- ROOF DRAIN SIZE AND NUMBER OF DRAINS SHALL BE IN ACCORDANCE WITH THE LOCAL CODES.
  - ALL BOLTS OR CLAMPS MUST BE IN PLACE TO PROVIDE CONSTANT COMPRESSION ON WATER CUT-OFF MASTIC.
  - THE HOLE IN THE MEMBRANE SHALL EXCEED THE DIAMETER OF THE DRAIN PIPE BUT SHALL BE NO LESS THAN 1/2" (12mm) FROM THE ATTACHMENT POINTS OF THE DRAIN CLAMPING RING.
  - REMOVE EXISTING LEAD FLASHING MATERIAL & ENSURE THE DRAIN RING IS COMPLETELY CLEAN DOWN TO BARE METAL.
  - FIELD SPLICES MUST BE LOCATED AT LEAST 4" (102mm) OUTSIDE THE DRAIN SHAWL.
  - INSULATION TAPER SHALL NOT BE GREATER HORIZONTAL.
  - NEW DRAINS AND DRAIN REPLACEMENTS MUST BE INSULATED FROM BELOW.



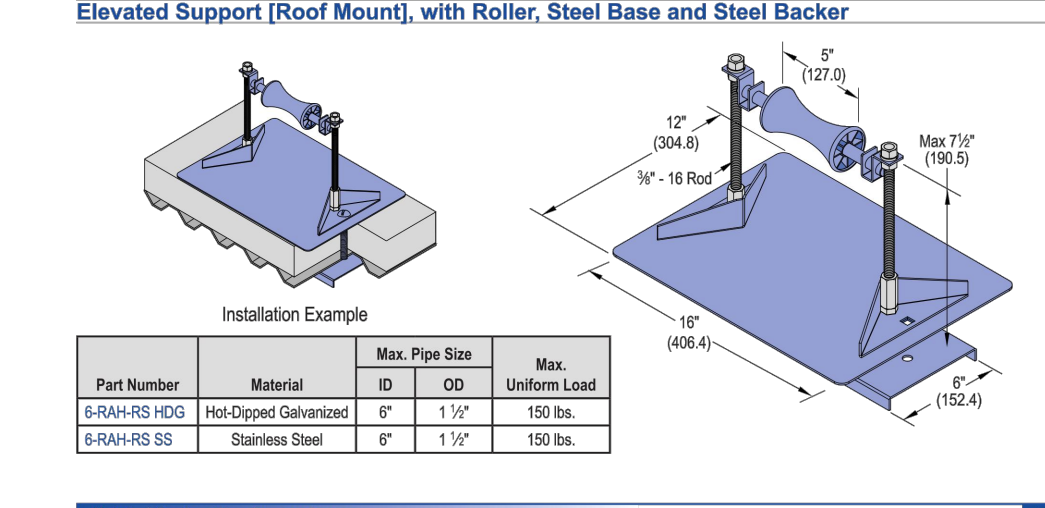
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  - IN COLDER TEMPERATURES, A HEAT GUN MUST BE USED WHEN FORMING PRESSURE-SENSITIVE ELASTOFORM FLASHING.
  - OUTSIDE CORNER WITH PRE-CUT PRESSURE-SENSITIVE FLASHING (OPTION 2)



**UNISTRUT**  
Unipler® Rooftop Pipe Support System - Gas & Mechanical Support

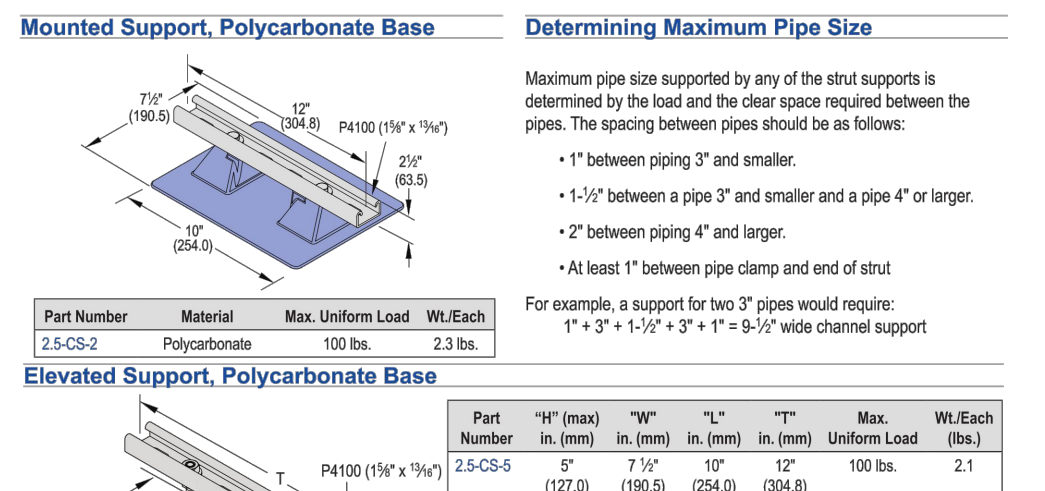


Part Number	"W" (mm)	"L" (mm)	Roller	Material	Max. Capacity	Max. Load	Wt. Each
3-RAH-7 HDG	8"	14"	3"	Hot-Dipped Galvanized	3" ID	100 lbs.	3.3
3-RAH-7 SS	8"	14"	3"	Stainless Steel	3" ID	100 lbs.	3.3
4-RAH-7 HDG	12.07"	16.07"	5"	Hot-Dipped Galvanized	4" ID	150 lbs.	6.8
4-RAH-7 SS	12.07"	16.07"	5"	Stainless Steel	4" ID	150 lbs.	6.8

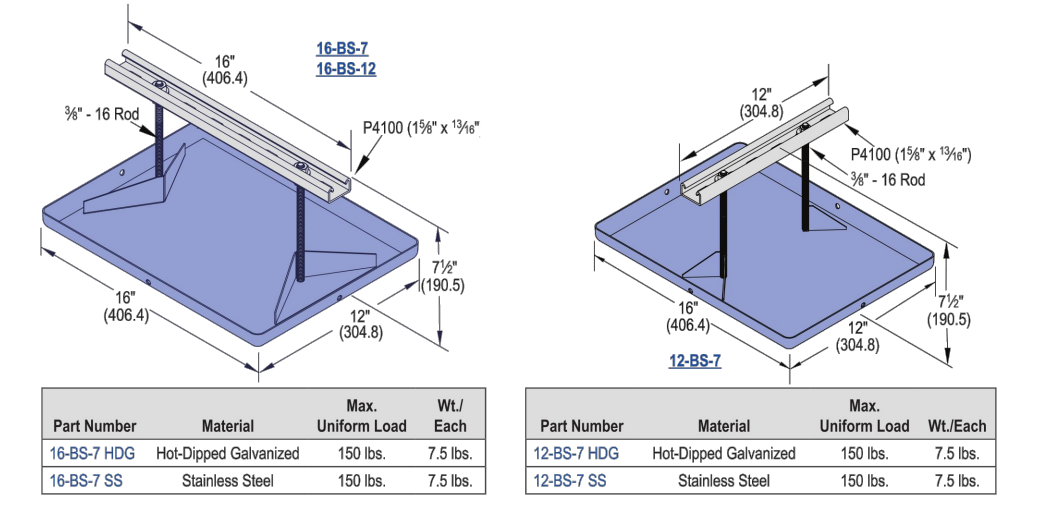


Part Number	Material	Max. Pipe Size	Max. Uniform Load
3-RAH-7 HDG	Hot-Dipped Galvanized	8"	100 lbs.
3-RAH-7 SS	Stainless Steel	8"	100 lbs.

**UNISTRUT**  
Unipler® Rooftop Pipe Support System - Conduit Support



Part Number	"H" (max) (in.)	"W" (in.)	"L" (in.)	"T" (in.)	Max. Uniform Load	Wt. Each
2.5-CS-6	9"	7 1/2"	12"	12"	100 lbs.	2.1
2.5-CS-7	7 1/2"	7 1/2"	12"	12"	100 lbs.	2.5
2.5-CS-12	12"	9"	15 1/4"	12"	100 lbs.	4.0
16-BS-7	7"	9"	15 1/4"	12"	125 lbs.	5.0
16-BS-12	12"	9"	15 1/4"	16"	125 lbs.	7.5
20-BS-7	7"	16"	18"	20"	250 lbs.	9.8
20-BS-12	12"	16"	18"	20"	150 lbs.	14.5



Part Number	Material	Max. Uniform Load	Wt. Each
16-BS-7 HDG	Hot-Dipped Galvanized	150 lbs.	7.5 lbs.
16-BS-7 SS	Stainless Steel	150 lbs.	7.5 lbs.

NEC Table 352.30 indicates max. PVC conduit support spacing as follows:  
 1/2" 1" conduit 3 ft. o.c.  
 1 1/4" 2" conduit 5 ft. o.c.  
 2 1/2" 3" conduit 6 ft. o.c.  
 3 1/2" 4" conduit 7 ft. o.c.  
 6" conduit 8 ft. o.c.  
 NEC Table 352.44 states that the coefficient of expansion for PVC conduit is 3.38 x 0.00001 inches per inch/degree Fahrenheit (temp. change), which is .04056 inches per ft. for a 100 degree temp. range and 4.06 inches for a 100 ft. conduit length).  
 Expansion fittings are required to accommodate expansion expected for temp. change and conduit length

STANDARD DETAILS NOTES:

- DETAILS ON THIS SHEET ARE GENERAL IN NATURE AND ARE NOT NECESSARILY CALLED OUT ON ROOF PLANS.
- DETAILS ON THIS SHEET ARE TO FOLLOW ALL MANUFACTURER INSTRUCTIONS AND ARE TO BE USED AT ALL APPROPRIATE LOCATIONS AS DEPICTED AND DESCRIBED AND THAT ARE REQUIRED BY MANUFACTURERS WARRANTY REQUIREMENTS.
- DETAILS NOT DEPICTED ARE TO BE INSTALLED TO COMPLY WITH ALL MANUFACTURER REQUIREMENTS.

GENERAL NOTES FOR ALL DETAILS:

- DETAILS USE CARLISLE STANDARDS AS THE BASIS OF DESIGN
- ALL EDGE METAL COMPONENTS SHALL COMPLY WITH THE LATEST VERSION OF ANSI/SPRI/FM 4335 ES-1 FOR WIND UPLIFT RESISTANCE
- PRIMER: WHERE NOT SHOWN OR INDICATED ON DETAIL DRAWINGS, REFER TO MATERIAL PRODUCT DATA SHEETS FOR PRIMER APPLICATION REQUIREMENTS.
- FLASHING PLIES MUST EXTEND VERTICALLY A MINIMUM OF 8" FROM ROOF SURFACE.
- THE JOINTS IN THE SHEET METAL COUNTERFLASHING SHOULD NOT BE SOLDERED EXCEPT AT INSIDE AND OUTSIDE CORNERS.
- DO NOT OBSTRUCT OR FLASH OVER WEEP HOLES.

Drawing Title:

Scale	Sheet
NTS	
Date	D5
3.29.21	