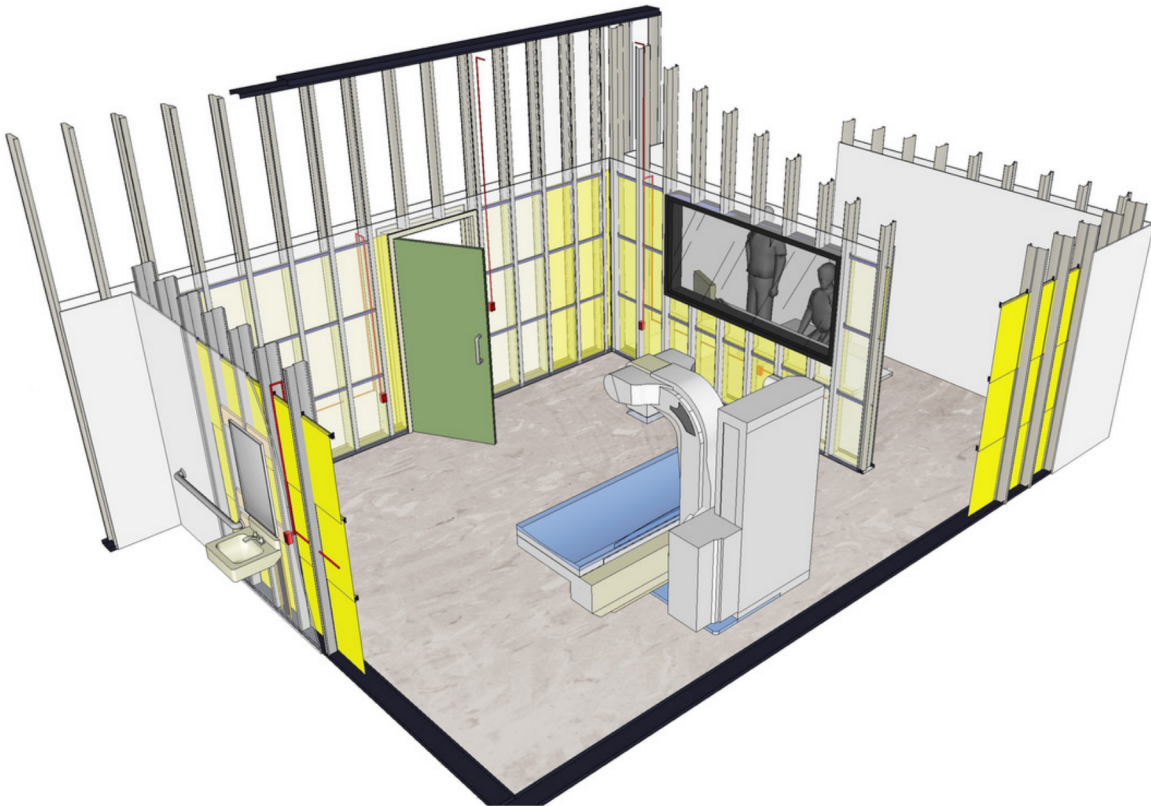




Designed and Engineered by
Advanced Radiation Shielding Protection

ARSP RADIATION PROTECTION/SHIELDING BARRIERS

Ensure radiation health and safety on all project's involving
ionizing radiation (X-Ray or Gamma)



Call Toll Free: 1-866-224-9940

GUARANTEED RADIATION CONTAINMENT USING ARSP SYSTEMS

DESIGN AND ENGINEERED BY ADVANCED RADIATION SHIELDING PROTECTION (ARSP)

By implementing the **ARSP System**; Architects, Designers and Constructors of Healthcare Facilities will ensure their project meets **ALL** the legislated requirements as laid out in Section 134900 – Radiation Protection/Shielding. Let **ARSP** take responsibility, to ensure compliance of radiation protection/shielding and safety codes are achieved on your project.

The **ARSP System** is a patented, GHG conscious, radiation attenuating barrier; designed with the safety of diagnostic imaging professionals in mind. The **ARSP System** provides 100% guaranteed protection from damaging ionizing radiation (X-Rays), emitted from diagnostic imaging equipment, by uniquely placing **un-pierced** lead shielding plates within the wall structures of diagnostic imaging suites.

Special considerations were taken into account during the design process to ensure all requirements of the **NCRP** Reports 49 and 147, along with **Health Canada** safety codes 35 and 33 have been adhered to; guaranteeing the radiation attenuation integrity is achieved (especially at the most vulnerable locations), where the radiation shielded glazing and door frames join the radiation shielding wall system as well as where the radiation shielding inside and outside corners meet the radiation shielding wall partition.

The **ARSP System** has been designed to contain ionizing radiation through the use of **penetration-free** lead (Pb) plate systems. It will maintain the integrity of the radiation

shielded room, by placing lead barriers away from the surfaces of the wall-board, alleviating the possibilities of fastening punctures, while providing many **benefits** for the Design Architects and Contractors involved with x-ray departments.

Radiation health and safety officers can now easily inspect the radiation shielding barriers for compliance, as each installed **ARSP** lead-plate is color coded if specified to identify each different lead thickness or weight.

By choosing the **ARSP System** for your Diagnostic Imaging Department, you can have peace of mind knowing the staff, the patients and the public will be protected from the damaging effects of ionizing radiation, generated by the diagnostic imaging (x-ray) equipment.

The **ARSP System** is constructed of patented components; providing a **penetration-free**, radiation shielding barrier. Guaranteed to attenuate the ionizing radiation to a safe level, as specified.

FIGURE 1: PATENTED ARSP System


NOTE A

Lead-plate support bars (blue) fastened to **ARSP** shielding studs (beige) at specific locations. There are 3 bars installed per stud section

 Lead-plate support bars


NOTE B

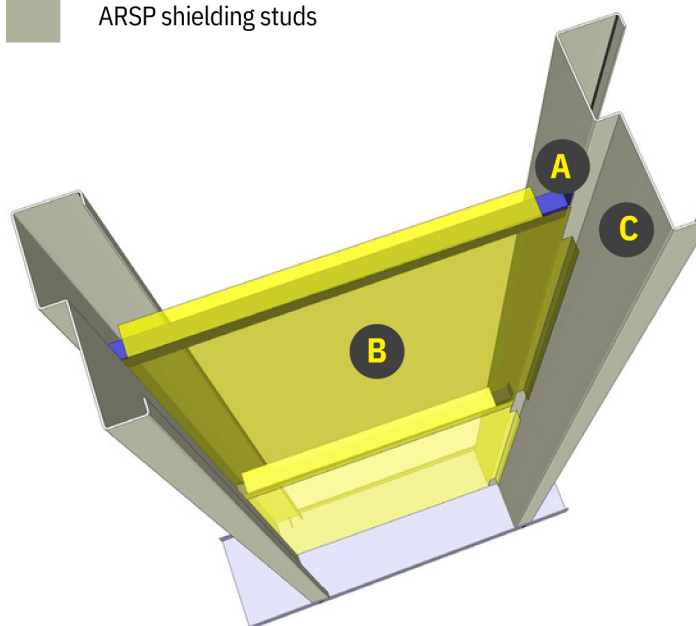
Unique **ARSP** color coded un-pierced lead radiation shielding Pb plates (yellow) are fastened to each support bar (blue).

 ARSP lead shielding plates

NOTE C

ARSP studs (beige) installed 16 inch o/c into std. 6 inch floor and ceiling tracks. 6 inch floor ceiling tracks supplied and installed by Section 092116 gypsum board assemblies.

 ARSP shielding studs



The patented **ARSP Radiation Shielding Studs** (Figure 1, Note C) are the same depth as standard 6 inch (152 mm) metal studs, allowing our **ARSP** walls to mold seamlessly into new or existing building structures that use typical 6 inch (150mm) metal floor and ceiling tracks.

Note: Very important: *The top and bottom tracks of the radiation shielding partitions are **laid-out, supplied and installed by the gypsum board contractor**, at the same time they layout the non-shielded, interior partition walls. This ensures continuity of all interior wall locations, as laid-out on the architectural [floor plan] drawings.*

Our **ARSP Stabilizer-Support Bars** [as shown in Figure 1, Note A], are installed into pre-punched locations between the **patented ARSP Studs**. The **ARSP** radiation shielding studs [installed at 16 inch O/C], have three (3) support bars installed between each patented stud. Our pre-manufactured, patented **ARSP lead shielding plates** [Figure 1, Note B], are then easily installed onto each support bar, in each section to create an un-pierced, over-lapped, fully shielded **lead barrier**.

Each patented **ARSP** lead plate, when specified, is individually color coded to reflect the specific thickness/ weight of the lead installed, making it simple and easy to identify during the inspection processes. Our coloring process also **seals the lead**, making it inert and safe to handle; eliminating dust and contamination concerns for workers during construction or renovation phases. The lead plates are installed near the center of the wall partition, away from either surface of the gypsum wall board (GWB); safely away from drywall/gypsum board fastening penetrations that would cause radiation leaks through the barrier.

ARSP LEGEND Color Coded Lead Weights	
	2 lbs/sqft or 0.79mm
	4 lbs/sqft or 1.60mm
	6 lbs/sqft or 2.40mm
	8 lbs/sqft or 3.20mm
	10 lbs/sqft or 4.00mm

The **ARSP System** being 100% leak proof, guarantees radiation protection/shielding for the life of the installation. Our **ARSP** lead-plates, together with patented **ARSP** metal studs are designed to automatically provide the required overlapping of joints, to ensure full radiation protection/ shielding. The lead plates are mechanically attached to the top of each support-bar, with no screws through the face of the plate; thus no penetrations and no radiation leaks. Each plate is also vertically over-lapped from the plate above as shown in Figure 4 on page 9. Our connection system allows for each lead-plate to remain un-pierced, allowing it to be re-used when renovations eventually occur.

ARSP lead plates can be removed, upgraded, reused or reinstalled as necessary. They provide the owner with a lasting **intrinsic value**, relating to approximately 2/3 of the initial cost.

Recent Shielding Integrity Testing (SIT¹ surveys), have found radiation-leakage problems in over half of the facilities tested. Table 1 below outlines common problems relating to existing radiation protection/shielding methods.

The **ARSP System** is completely different from existing methods that attach sheet-lead to the surface of standard metal studs. Screw fasteners using this old method, cause direct punctures through the face of the lead as well as causing concerns at joints, where huge gaps typically occur (refer to Figure 2, on page 5 for illustrations identifying serious concerns with existing installation methods). Other areas of concern are the vulnerable wall connections at door and glazing frames where radiation leaks occur around the fastening clips used to secure the frames to the wall. Further,

The ARSP System is 100% leak proof, providing guaranteed radiation protection/shielding for the life of the installation.

when renovations occur in single use lead barriers, the lead shielding cannot be re-used as it is full of holes and has a scrap value only.

Lead-lined gypsum wall board (drywall) is even less environmentally friendly. The lead sheeting glued on the back (of the GWB) is also peppered with holes and cannot be reused due to the numerous mechanical fasteners penetrating through. Before this lead can be recycled, it has to be removed from the drywall; which is a hazardous and labor intensive process. The concern being the lead residue remains on the gypsum wallboard (drywall); the GWB disposed as hazardous material and not as normal building waste.

According to a scientific study in May of 2007, using the then current consumption rates; environmental analyst, Lester Brown suggested the lead supply could run out within 18 years based on an extrapolation of 2% growth per year. Using our patented **ARSP System** would help reduce lead consumption. The un-pierced lead plates can easily be re-used, again and again. Should additional attenuation be required, you can just add another lead plate on top of the previously installed lead plate. No wastage and take advantage of LEED credits through Innovation in Design Strategies.


TABLE 1: TYPICAL DEFECTS FOUND DURING SHIELDING INTEGRITY TESTING

ROOM TYPE TESTED	LEAKAGE DEFECT PROBLEM
<ul style="list-style-type: none"> • Radiographic • Fluoroscopy • CT Room(s) 	<ul style="list-style-type: none"> • Joints in lead-lined gypsum board sections not protected, missing batons • Missing protection behind electrical outlets & control plates. • Insufficient protection in doors/windows • Insufficient protection in doors/windows • No shielding present, lead-lined gypsum board missing/installed incorrectly

¹Reference SCOPE magazine article on Shielding Integrity Testing for Ionizing Radiation Facilities, Aurora Health Physics Services (Jill Reay, Robert Hill and Allan May). September 2010.

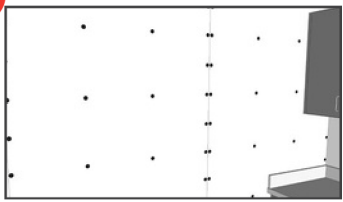
FIGURE 2: EXISTING UNACCEPTABLE RADIATION LEAKING, LEAD LINED WALLS
Typical existing installation methods, **showing inherent flaws** that cause hole and gap issues in the radiation shield. *Do you know what is behind your finished walls?*

1



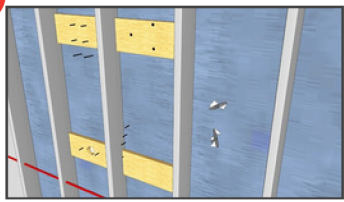
Paper Towel dispensers mounted on the drywall, cause large holes in the lead behind the wall board.

2




Surface mounted lead as well as lead-lined wall board becomes plastered with screw holes (40 per sheet), per manufacturing instructions.

3



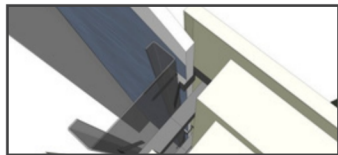
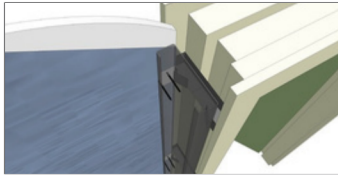
Wood or metal backing used to hold large wall mounted items in an X-Ray room, screw through the lead barrier causing multiple penetrations.

4



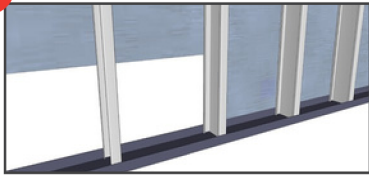
Surface mounted lead along with lead-lined GWB produces a non-flat surface, called "Wavy-Wall" syndrome. Installing counters against this type of wall is labor intensive and difficult to make look appealing. Review the next page that detail the uneven wall surface created.

5

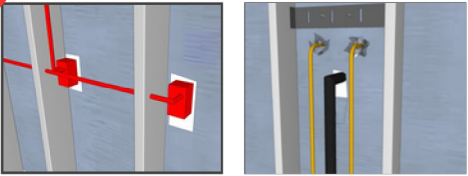
Mounting Clips used to secure lead-lined door and glazing frames to the wall partition, invariably cause gaps and radiation leaks in the lead barrier. The lead is usually only installed up to the clip, with no over-lap.

6



Lead-lined wall board is 8, 9 or 10 ft. tall, but the lead is only 7 ft. It is often installed with the lead at the top, leaving a gap at the bottom. With the weight of the lead-lined wall board along with the 40+ screws used to fasten it in place, the error is often not corrected.

7



Mechanical ducts, plumbing and electrical rough-ins often cause large imperfect holes in the lead barrier that require back-shielding that is never done. These large holes cause radiation leaks in the shielded wall allowing staff and public to be exposed to uncontrolled ionizing radiation.

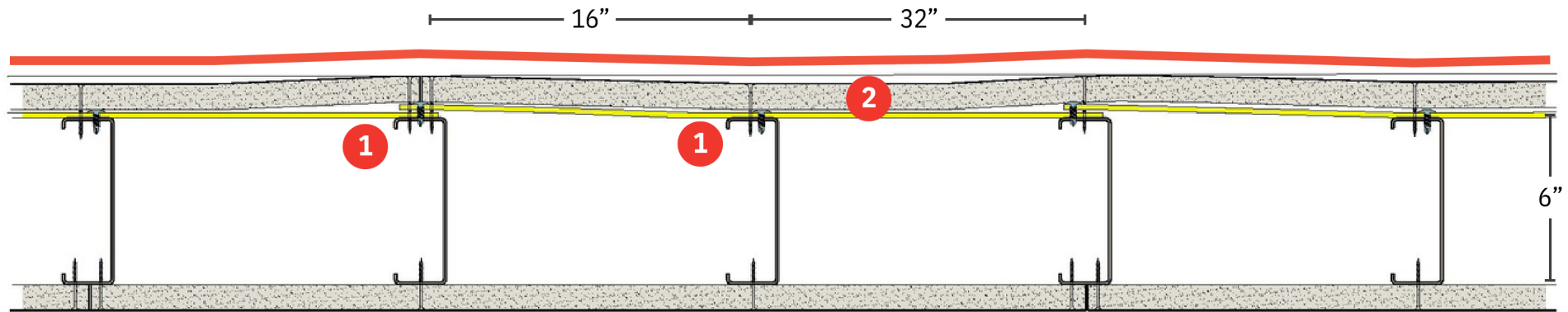
FIGURE 3: IMAGES DEPICTING THREE DIFFERENT INSTALLATION METHODS

Figure 3A and 3B: Two installation methods produce inherent radiation leaking and 'Wavy Walls'.

Figure 3C: The **ARSP** Installation DOES NOT leak nor produce a wavy-wall, but rather a flat finished surface on both sides (page 8)

FIGURE 3A: Standard surface mounted lead to inside wall of a diagnostic imaging (x-ray) room.

Top view of wall cross section



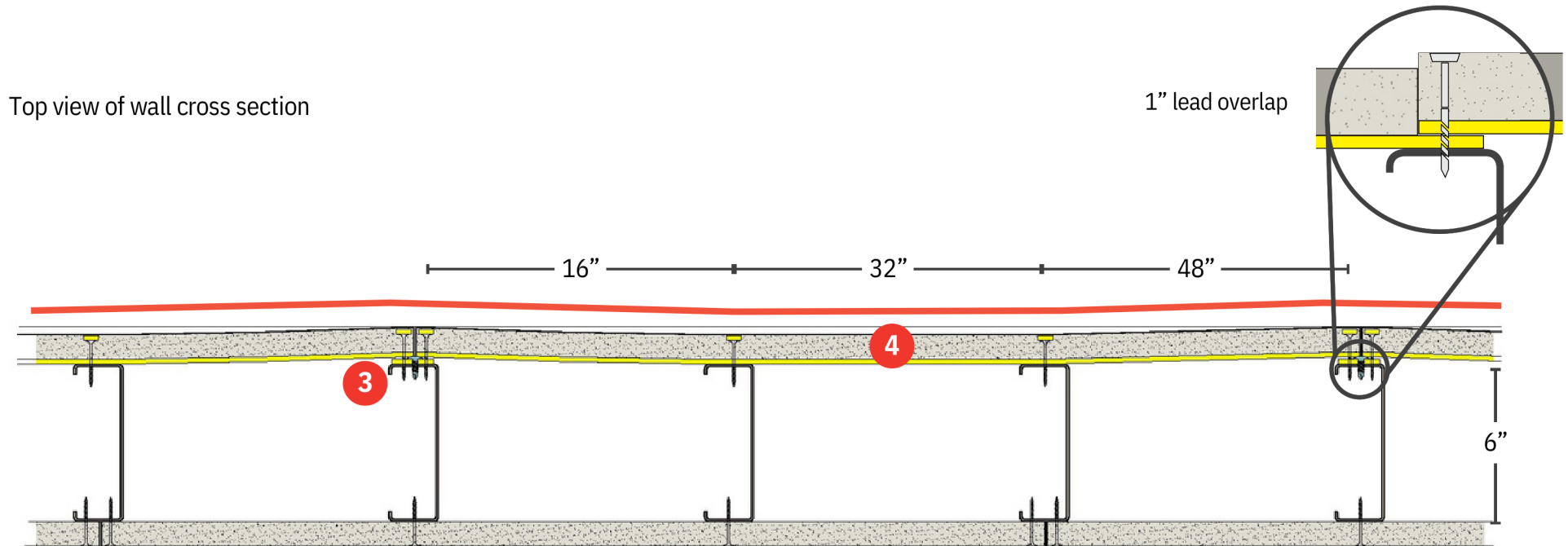
Set studs at 16" c.c./4'-0"




- Lead sheets
- 'Wavy wall' resulting from installation method
- Drywall

Issues with this system:

- 1** Lead joints have to be overlapped. This overlap causes the wall board (drywall) to protrude outwards on that particular stud. On the next stud the wall board is fastened flat to the single layer of lead. This OUT-IN-OUT fastening of the GWB to the studs, cause an uneven wall surface, which is referred to as a 'Wavy-Wall'.
- 2** A dip in the wall surface occurs, caused by the overlapping of the lead sheets; making it difficult for tapers to properly finish the wall surface, especially at the GWB joint.

FIGURE 3B: Lead-lined gypsum wall board (GWB) or drywall installed to inside wall of a diagnostic imaging (x-ray) room.



-  1245mm x 2100mm (49"x84") laminated gypsum board sheets
-  'Wavy wall' resulting from installation method
-  Drywall

Issues with this system:

- 3** Lead-lined wall board must be overlapped. To insure the joint is shielded as required, a 25mm lead (Pb) extension is provided on one side of the laminated wall board, making the lead sheet 1245mm x 2100mm high. Laminated on gypsum boards 4'x8', 9' or 10'. This overlap at the stud will cause the wall board (drywall) to protrude outwards on that particular stud. On the next two studs the lead-lined wall board is fastened flat to the stud. This method of fastening lead-lined GWB to the studs, causes an uneven wall surface as mentioned above [referred to as a 'Wavy-Wall'].
- 4** A dip in the wall surface occurs, caused by the overlapping of the lead sheets; making it difficult for Tapers to properly finish the wall surface, especially at the GWB joint.

FIGURE 3C: **ARSP Systems** installed as wall partitions in diagnostic imaging (x-ray) rooms, allow for 1 and 2 layers of standard 5/8" GWB to be fastened to the surface of an **ARSP** metal stud; creating a flat, finished wall surface on both sides of the radiation shielded room.

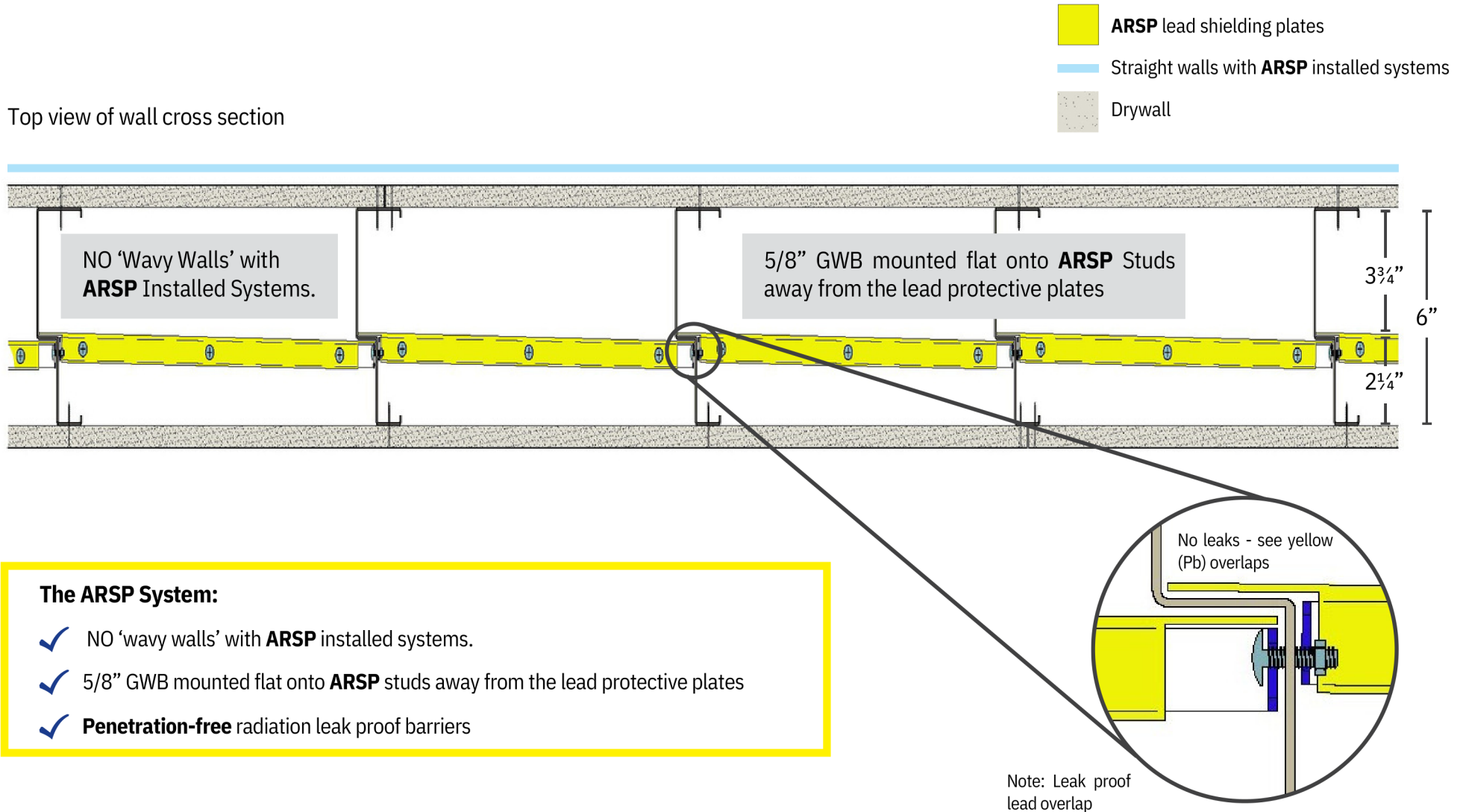
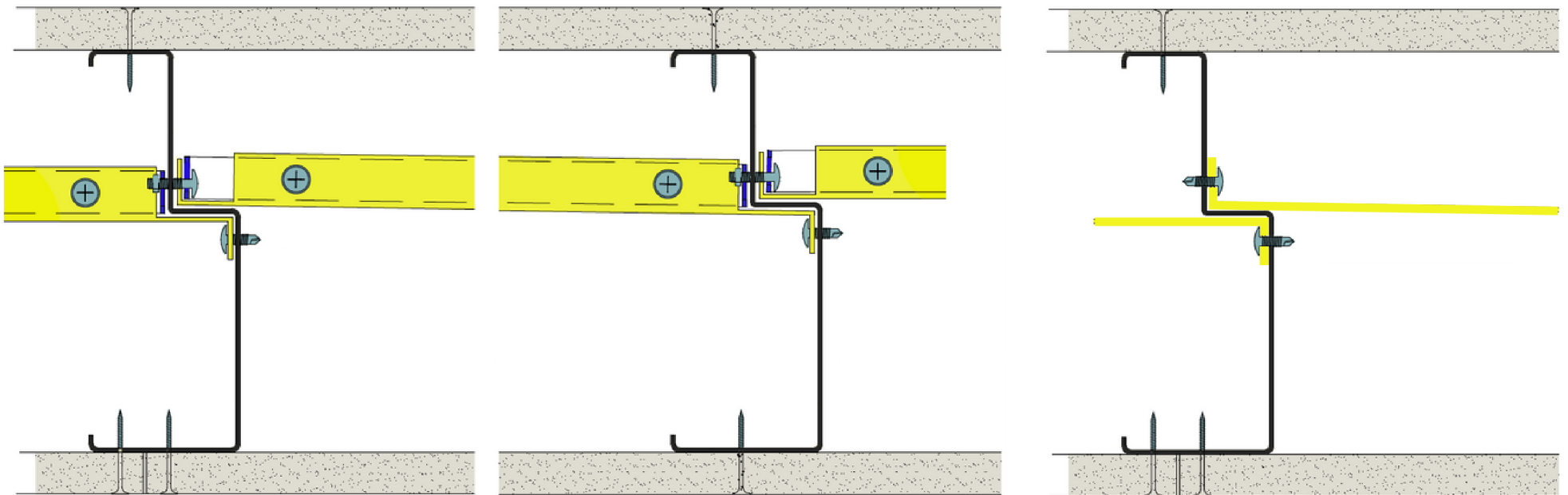


FIGURE 4: ARSP PLATE WITH ADDED FLANGES DESIGN
 (See details F & G on page 10)

Plan details of **ARSP** stud and **ARSP** plate with added lead angle edge
 Provide 3 screws per edge, spaced evenly



DETAIL D
 Above: Plan detail showing top of plate

DETAIL E
 Above: Plan detail at plate midpoint

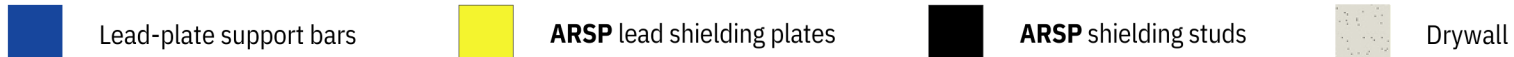
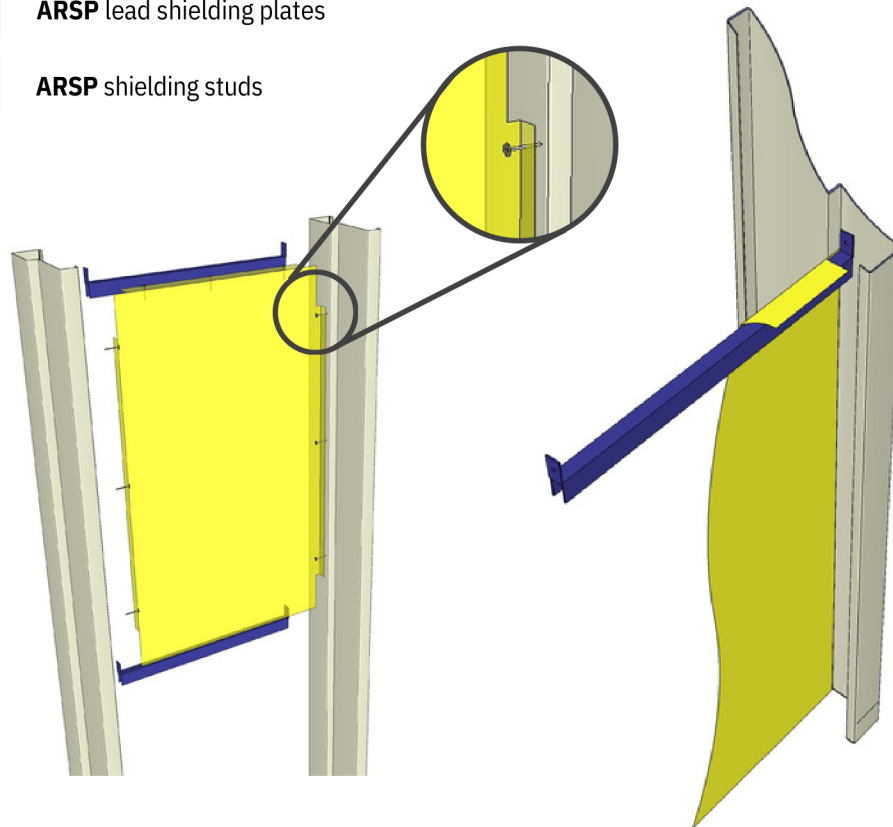


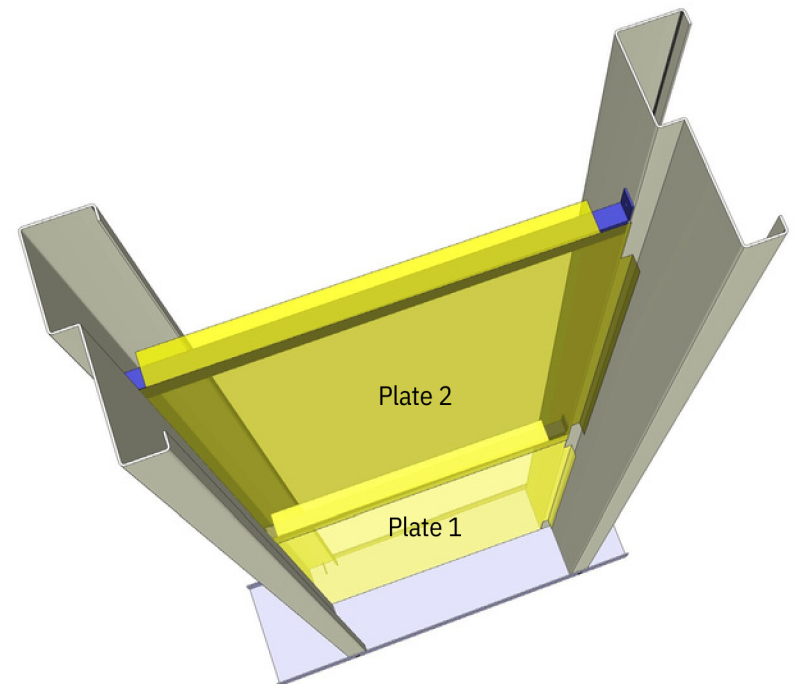
FIGURE 4: ARSP PLATE WITH ADDED FLANGES PLATE DESIGN
(See details D & E on page 9)

- Lead-plate support bars
- ARSP lead shielding plates
- ARSP shielding studs



DETAIL F

Above: 3D view (exploded) of **ARSP** studs and **ARSP** plate with added lead angle edge



DETAIL G

Above: 3D view (exploded) of **ARSP** studs and **ARSP** plate with added lead angle edge (installed; fasteners not shown)

FIGURE 5: VERTICAL OVERLAP AT EACH ARSP STUD BOTH SIDES

- ARSP lead shielding plates
- ARSP shielding
- studs
Drywall

NOTE H
Drywall screws do not penetrate lead barrier.

NOTE J
Wood or metal backing mounted away from surface of lead (Pb)

NOTE I
Vertical overlap of each plate between each patented stud.

NOTE K
Outside wall surface

ARSP Lead Plates have been engineered in size, to work with the natural properties of lead (as it relates to its slump and creep characteristics) and discussed in Report #3 by the Lead Development Association of London, England. The report states, *‘It is satisfactory to provide continuous support along its uppermost edge and leave it hang freely at intervals not larger than 2 ft. 6 inches, irrespective of the thickness*

of the sheet lead’. Coincidentally each of our plates are 28 inches long and are supported horizontally across the top of our support bars mounted between each ARSP metal stud and are draped vertically, guaranteeing not to creep or slump as the lead ages over time.

The illustrations on this page, show plan and section views of the ARSP lead-plates, depicting the overlap at joints and the position of the attenuating barrier plates in relationship to the outside wall surface. **Always overlapped and protected from mechanical fasteners to prevent penetrations of our lead-barrier system (lead plates are a minimum of 2 ¼” (inches) from the finished wall surface).**

ARSP patented studs are the same depth as regular 6 inch wall studs, so they integrate seamlessly into typical institutional metal wall construction projects.

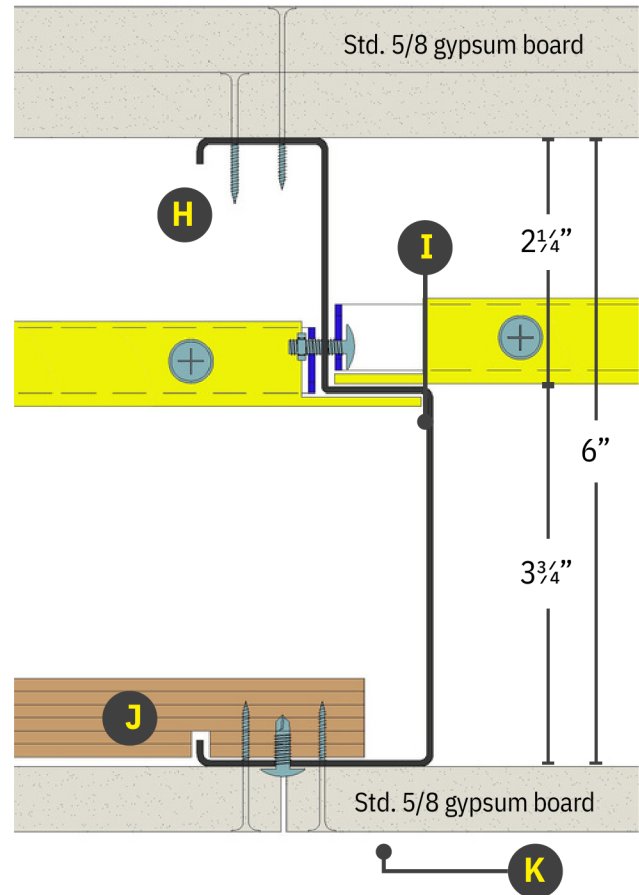


FIGURE 6: HORIZONTAL OVERLAP BETWEEN LEAD-PLATES

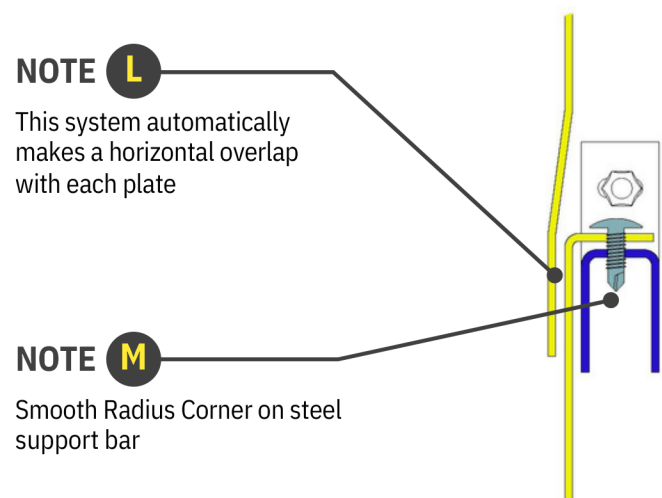
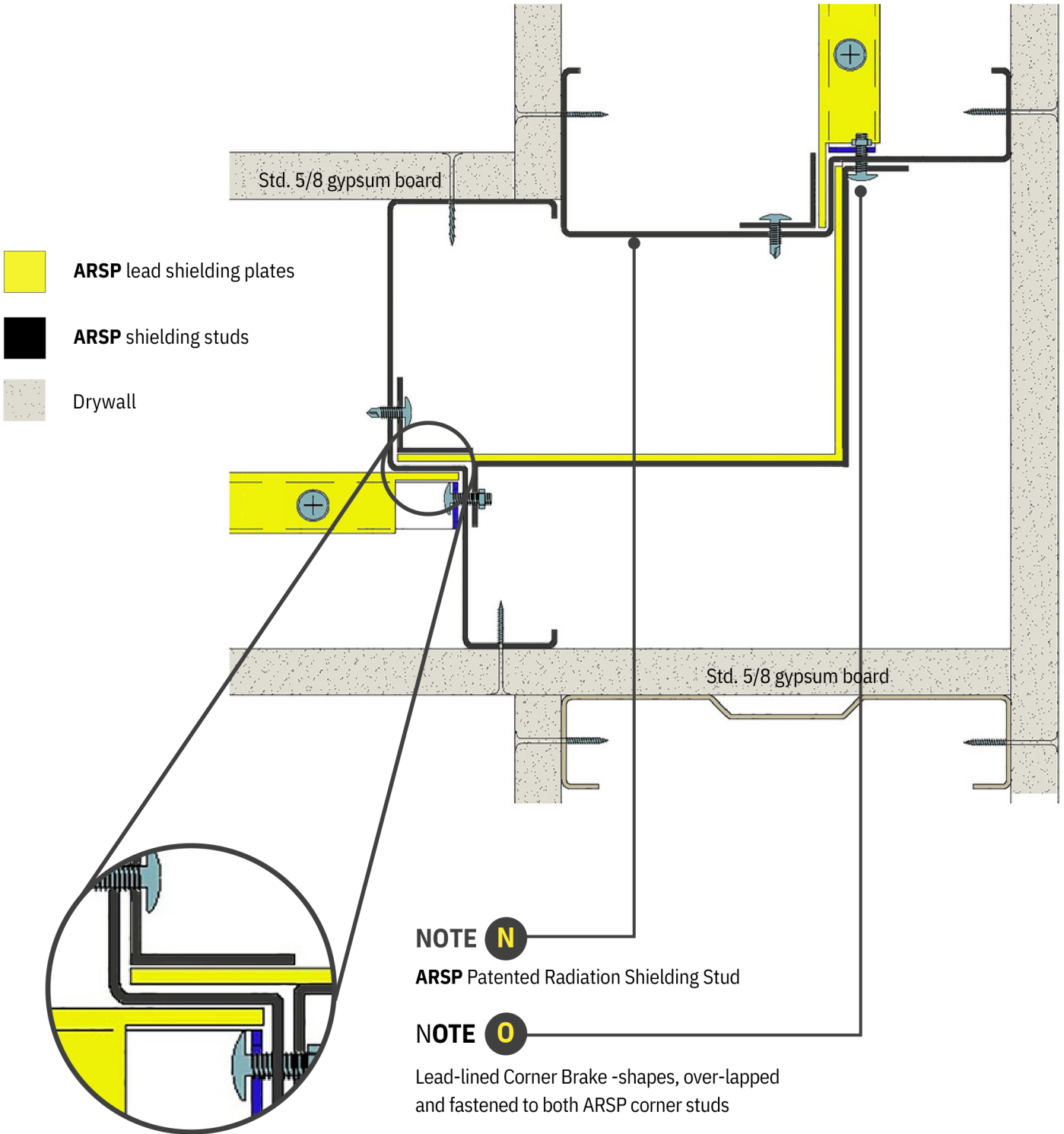


FIGURE 7: TYPICAL 90 DEGREE ARSP CORNER



Note: Radiation shielding overlap

Figure 7 on the previous page along with Figure 8 [Note V], detail our metal corner brake-shapes. They are lead-lined in our factory and engineered to overlap with each corner **ARSP** shielding stud, creating a 100% leak-proof radiation shield or barrier. Our corner brake-shapes can be custom made in numerous configurations and angles

in our factory to suit each specific job. Send us your site specific architectural layout (floor plan) drawings and we will layout our system components to meet your specified shielding requirements. Customized T-corners are also available for adjoining diagnostic imaging rooms, allowing total flexibility for your specific project.

FIGURE 8: TYPICAL MECHANICAL, PLUMBING AND ELECTRICAL LAYOUT

NOTE P
Gypsum Wall Board (Drywall) attached to **ARSP** Stud showing spacing away from lead barrier

NOTE R
Steel Support Bar fastened between each stud

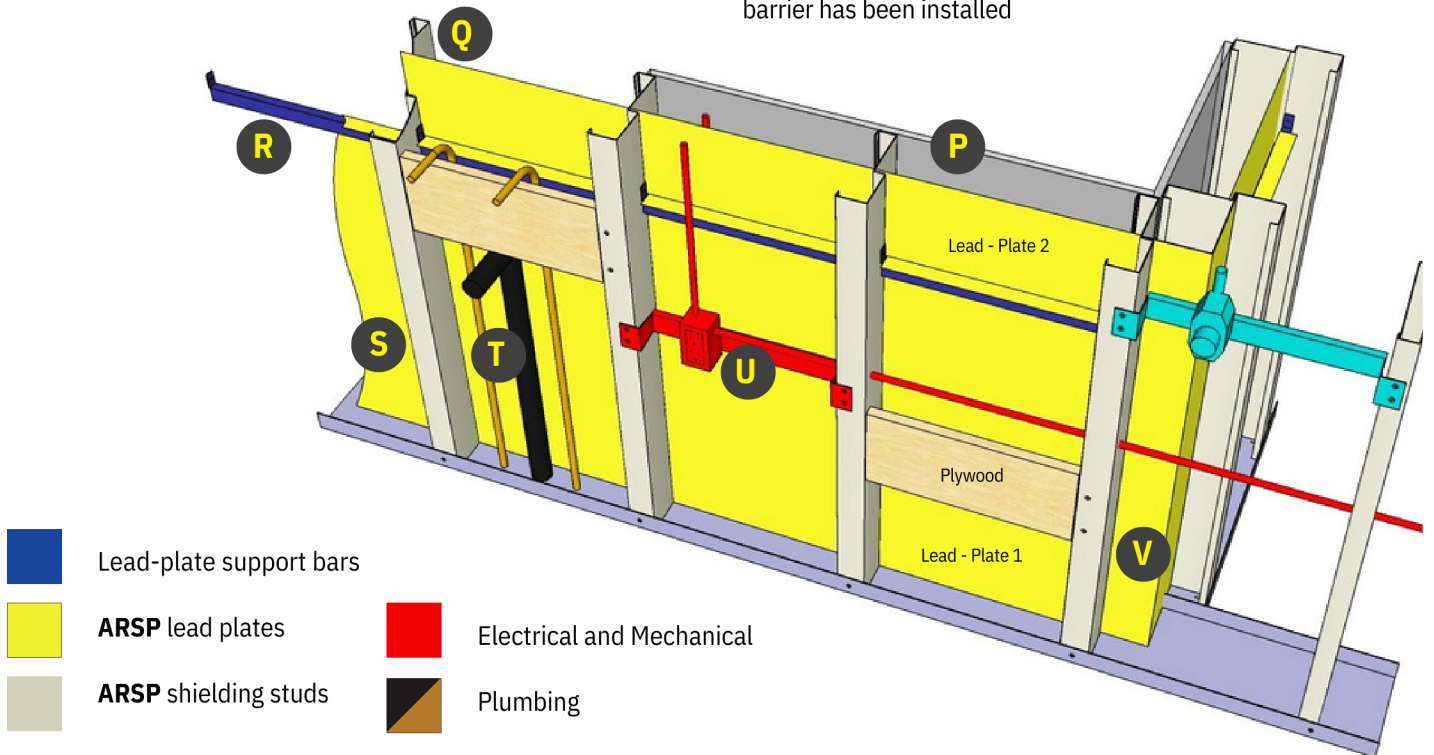
NOTE T
Plumbing & Mechanical rough-ins can be installed on either side of lead plates as required, ensuring no penetrations

NOTE V
Lead-lined Corner Brake shape attached to each **ARSP** stud

NOTE Q
Patented **ARSP**, 20 gauge patented metal stud

NOTE S
Each lead plate is draped over & secured to each support bar

NOTE U
Electrical rough-ins can be installed on either side of the lead plates, after the radiation barrier has been installed

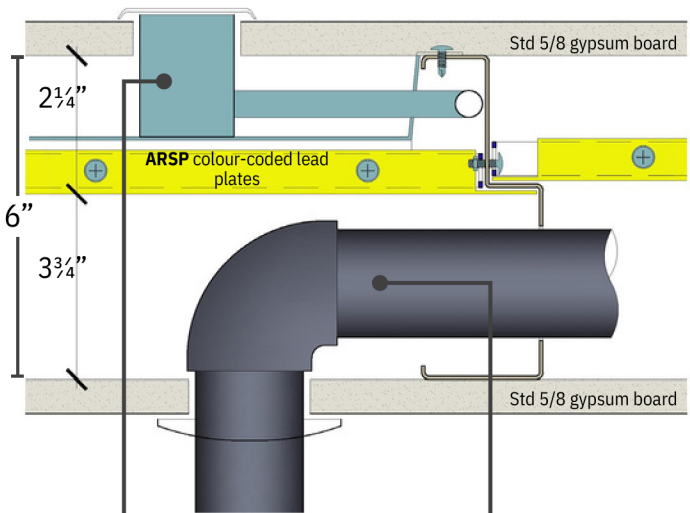


With 3¾" on the room side and 2¼" on the opposite side (as measured from the back of the drywall to the face of the lead plate), **electrical and mechanical** items (Red) or **plumbing** (orange & black) can easily be installed (in the cavities), on either side of the **ARSP** lead plates without affecting the integrity of the radiation shield. Additional Furring Walls can be installed as needed, to accommodate components thicker than 6".

With the **ARSP System**, should the shielding requirements change; Radiation Shielding Plates can be easily upgraded by adding additional layers. Should a building be decommissioned, plates can be sold to another facility or returned to our factory and be donated through our foundation for re-use by developing countries. The drywall can now be recycled using traditional methods instead of having to be landfilled as a hazardous material, as would be necessary with lead laminated gypsum wall board (drywall).

Following the installation of the **ARSP System**, the mechanical/electrical components can easily be roughed-in on either side of the lead plates, without puncturing or causing holes in the radiation barrier. Drywall or other finishing panels can be applied to the studs without the risk of damaging the radiation barrier.

FIGURE 9: MECHANICAL AND ELECTRICAL INSTALLED WITHIN THE CAVITIES CREATED BY THE **ARSP SYSTEM**

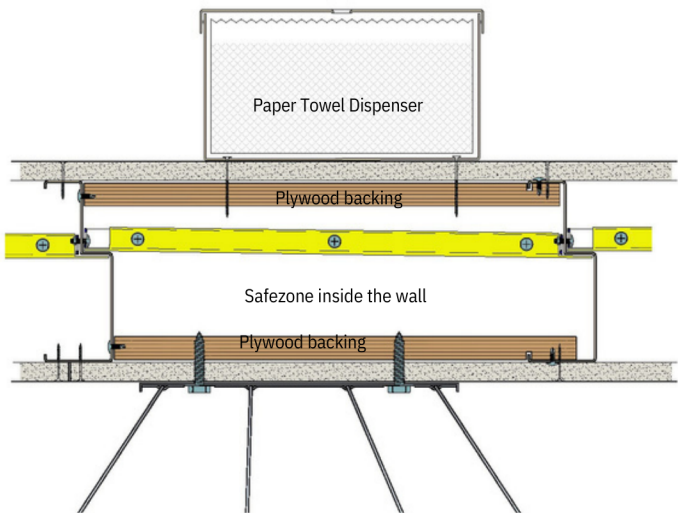


NOTE W
 Receptacle boxes & electrical conduits mounted on support brackets within the cavity, away from the lead barrier

NOTE X
 Plumbing routed through the **ARSP** stud, behind the gypsum board and in front of the radiation barrier, with no penetrations

FIGURE 10: PAPER TOWEL DISPENSERS AND HAND RAILS; MOUNTED TO THE SURFACE OF WALL BOARD WITH NO PENETRATIONS (HOLES) THROUGH THE LEAD BARRIER.

NOTE V
 Below: Illustrating a protected (yellow) lead barrier; away from the wood backing installed for wall fixtures such as Lead Apron hangers, hand-rails and paper towel dispensers.



With the **ARSP System**, should the finished wall be damaged during the life of the building, it can be repaired easily; the radiation shielding barrier remains unaffected because of its placement near the center of the wall partition.

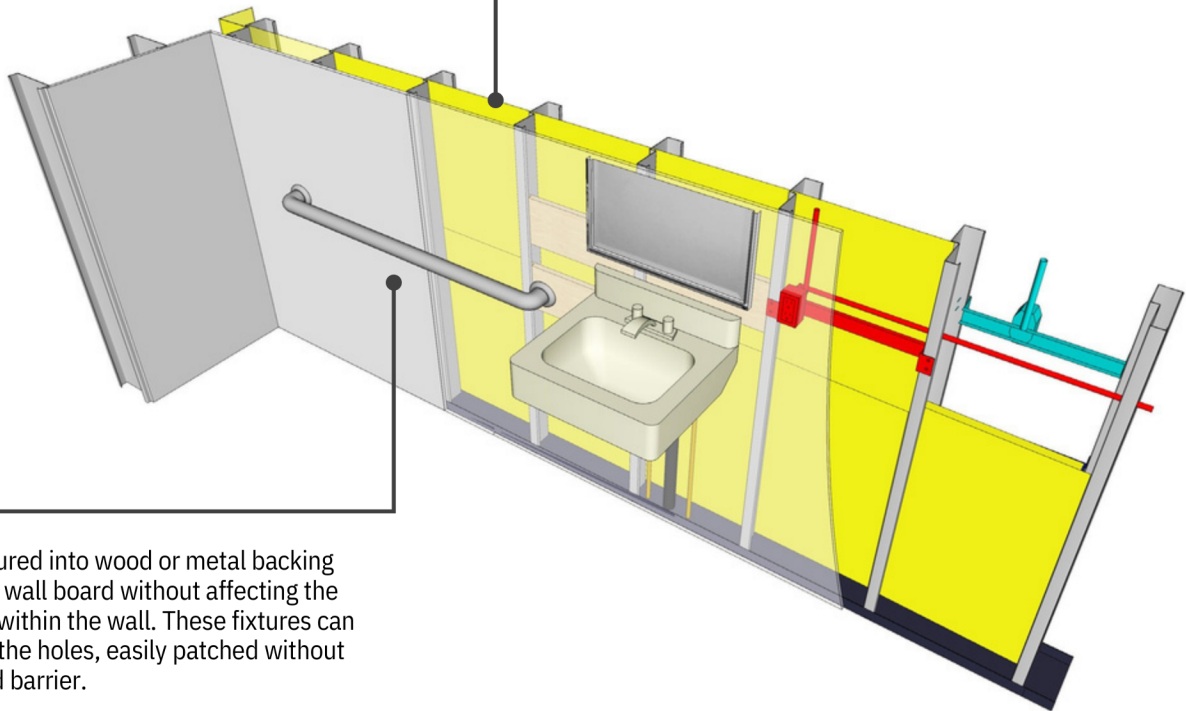
Our lead barrier is not affected by incidental wall damage (punctures) such as picture hanging, or the installation of paper towel dispensers, chair-rails, grab-bars, lead apron racks, millwork or other equipment/fixtures installed on either side of the finished wall.

If a severe (through wall) impact were to occur, each separate lead plate can be repaired or replaced.

FIGURE 11: THE **ARSP** RADIATION SHIELDING BARRIER; IS NOT AFFECTED BY FIXTURES ATTACHED TO THE SURFACE OF THE FINISHED WALL.

NOTE Z

ARSP Color-coded lead plates (3 per section) located near the center of the partition, away from the surface of the wall.



NOTE AA

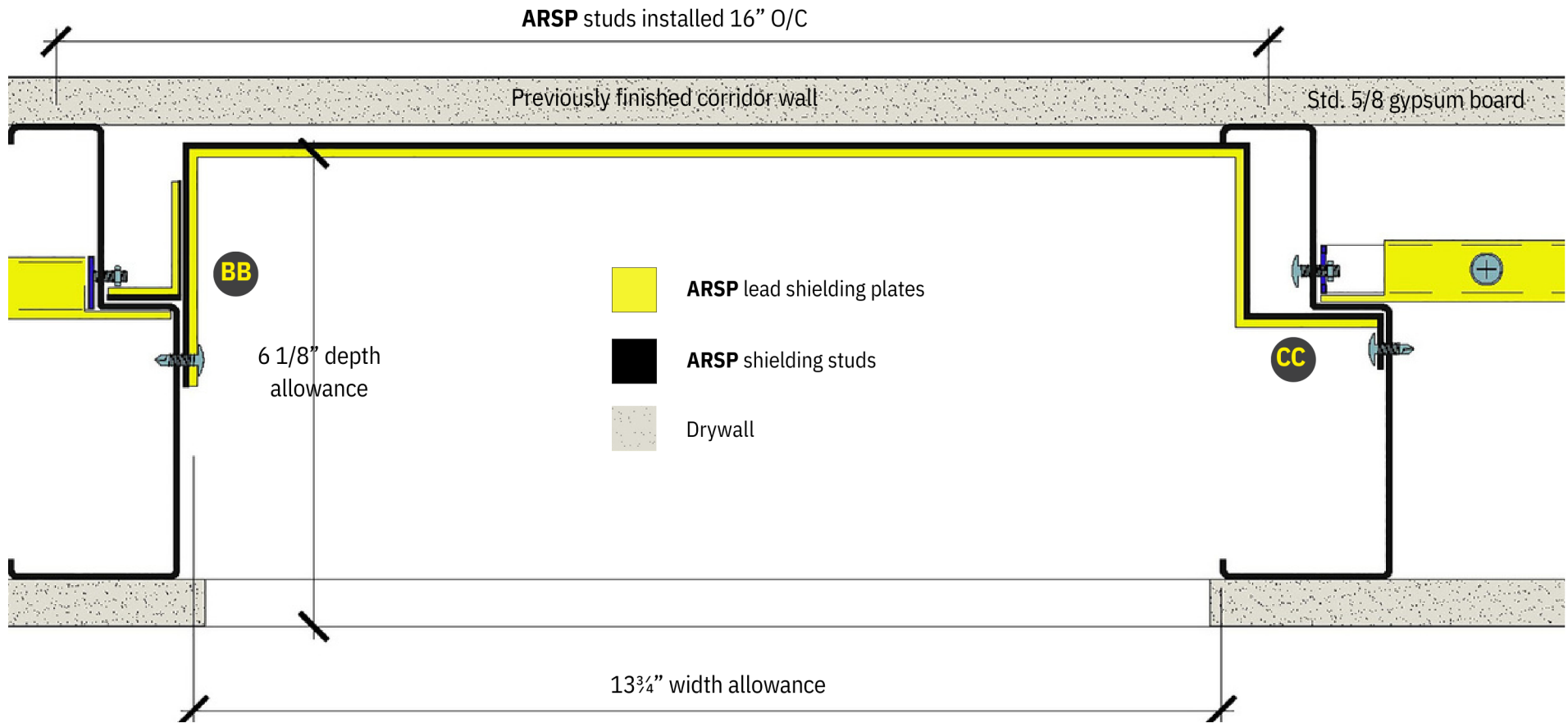
Wall fixtures secured into wood or metal backing onto the finished wall board without affecting the radiation barrier within the wall. These fixtures can be removed and the holes, easily patched without affecting the lead barrier.

ARSP Deep Enclosure Trays

Our Radiation Shielded “*Deep Enclosure Trays*” allow for items as deep as 6” inches to be recessed into our wall partitions, such as: electrical or mechanical plate boxes, large conduits, pipes, etc. An additional furring wall can be framed out on either side of the **ARSP** wall partition to accommodate a deeper box, plate or tray as required. Our deep enclosure trays use a metal backing that protects the attached lead shielding and prevents penetrations that could cause a leak to the shielded partition. The metal plate is full height to match or extend past the lead

shielding to a code height of 2100 AFF and is secured to the side of each **ARSP** stud ensuring an overlap at each joint. Our shielded enclosure trays can be installed into a wall structure that has been completed on one side without affecting the usage of that room or corridor. Simply remove the previously installed **ARSP** lead-plates (3) and insert the shielded enclosure tray into the **ARSP** metal studs. That wall section is now ready for the desired electrical or mechanical hardware (see page 15).

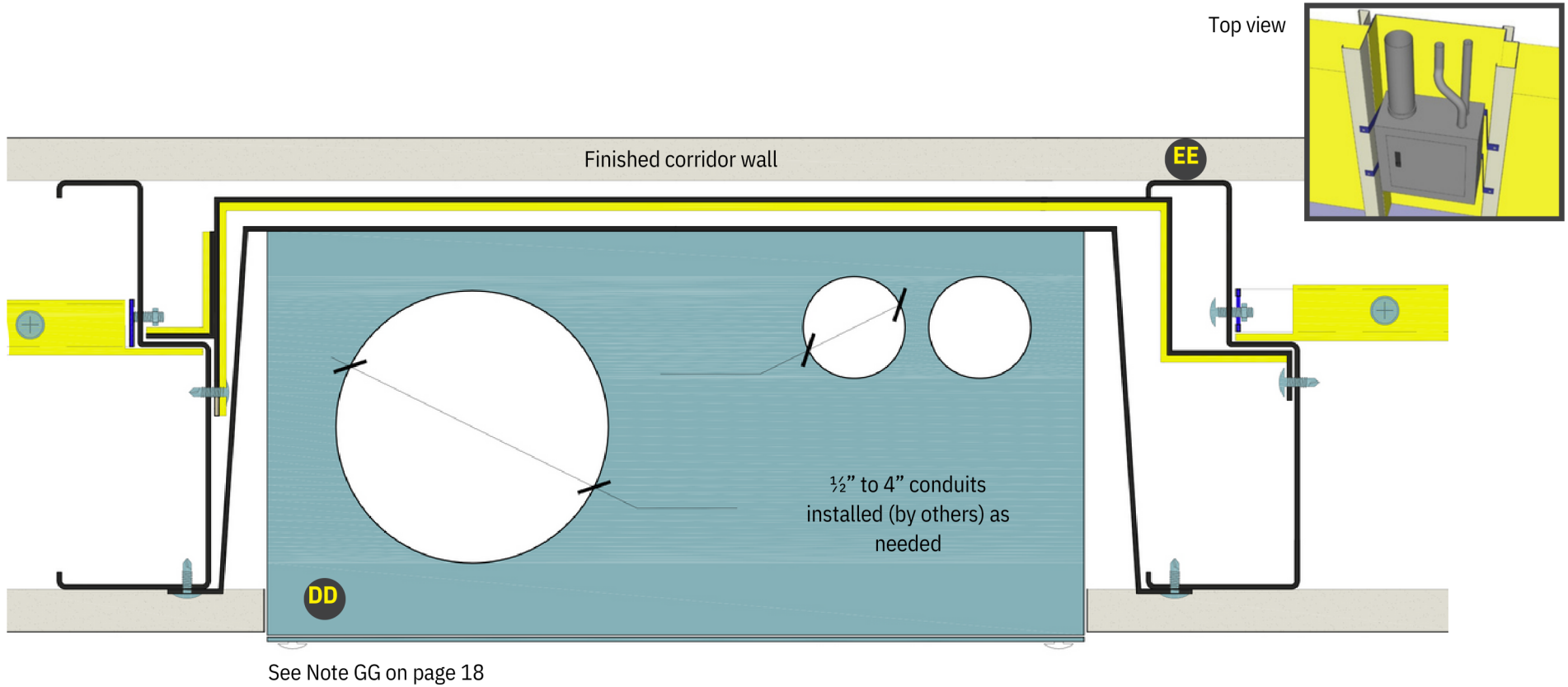
FIGURE 12: ARSP DEEP ENCLOSURE TRAYS



NOTE BB
ARSP "Deep Enclosure Trays" are metal 'lead-lined' barriers integrated into the wall sections for a leak proof barrier that spans 2100 mm A.F.F. (same height as lead wall)

NOTE CC
ARSP enclosure trays can be installed after the **ARSP** wall system has been finished on 1 side. Saving time and money on hording costs.

FIGURE 12B: ASRP DEEP ENCLOSURE TRAYS

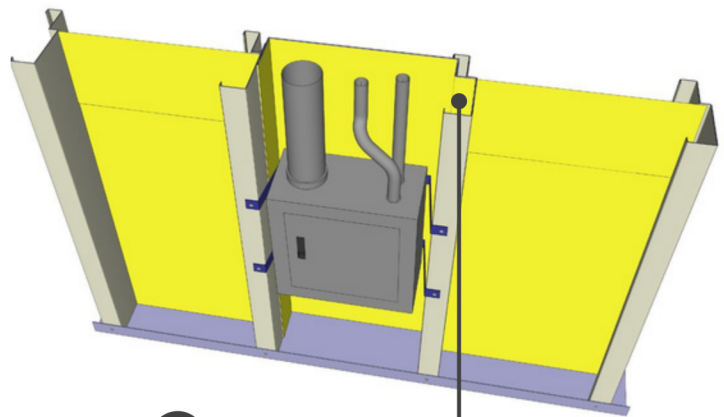
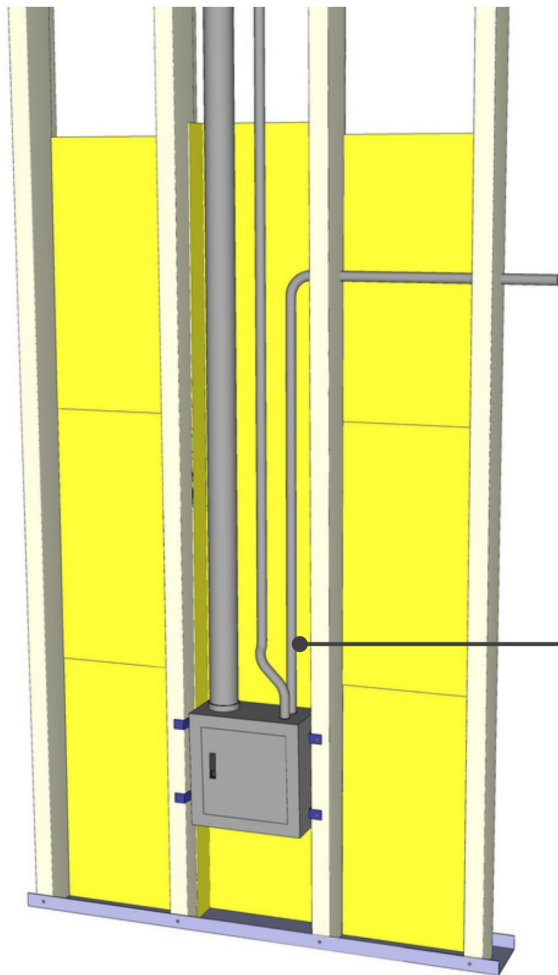


NOTE DD
 12" x 12" x 6" electrical box (supplied by others) shown with conduits as requested by X-Ray equipment manufacturer. Larger trays can be accommodated as needed.

NOTE EE
 ARSP Enclosure Trays can be installed in a 16" Wall Section after a wall has been finished with no disruption to the radiation shield.

- Lead-plate support bars
- ARSP lead shielding plates
- ARSP shielding studs
- Drywall

FIGURE 13: 3D REPRESENTATION OF **ARSP** DEEP ENCLOSURE TRAY, ILLUSTRATING A TYPICAL ELECTRICAL BOX AND MULTIPLE CONDUITS

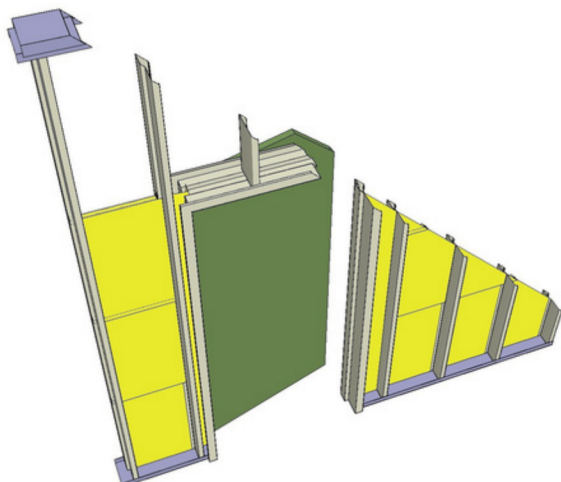


NOTE **FF**

ARSP Radiation Shielded Enclosure Trays are connected into the wall sections and allow electrical and mechanical boxes or ducts to be installed without affecting the integrity of the previously inspected radiation shielding barrier.

NOTE **GG**

ARSP Shielded Enclosure Trays provide flexibility for radiology equipment manufacturers. Upon selection of the desired model, our trays can be inserted easily into wall sections and run the full height of the shielded wall, giving the electrical contractor flexibility to install boxes, trays or conduits to meet the needs of the equipment manufacturer.



Radiation Shielded Glazing and Door Frames are constructed as pre-manufactured sections, then mechanically fastened to the **ARSP** wall studs, ensuring 100% shielding integrity as they are unitized as one, into the complete **ARSP System**. Sections are manufactured using 16" (406mm) O/C stud spacing to better support the different lead barrier weights. Radiation Shielding Doors (lead-lined) are available to suit your specific site requirements. Doors are custom made for each project, based on have several commonly used configurations readily available in our factory.

FIGURE 14: TYPICAL ARSP SHIELDED DOOR FRAME, TOP-VIEW SHOWN INTERCONNECTED WITH ARSP WALL PARTITION

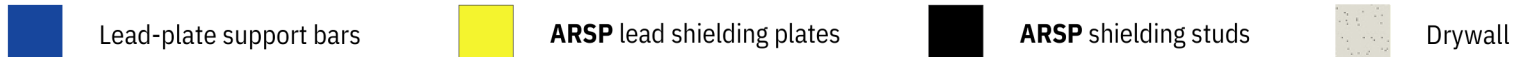
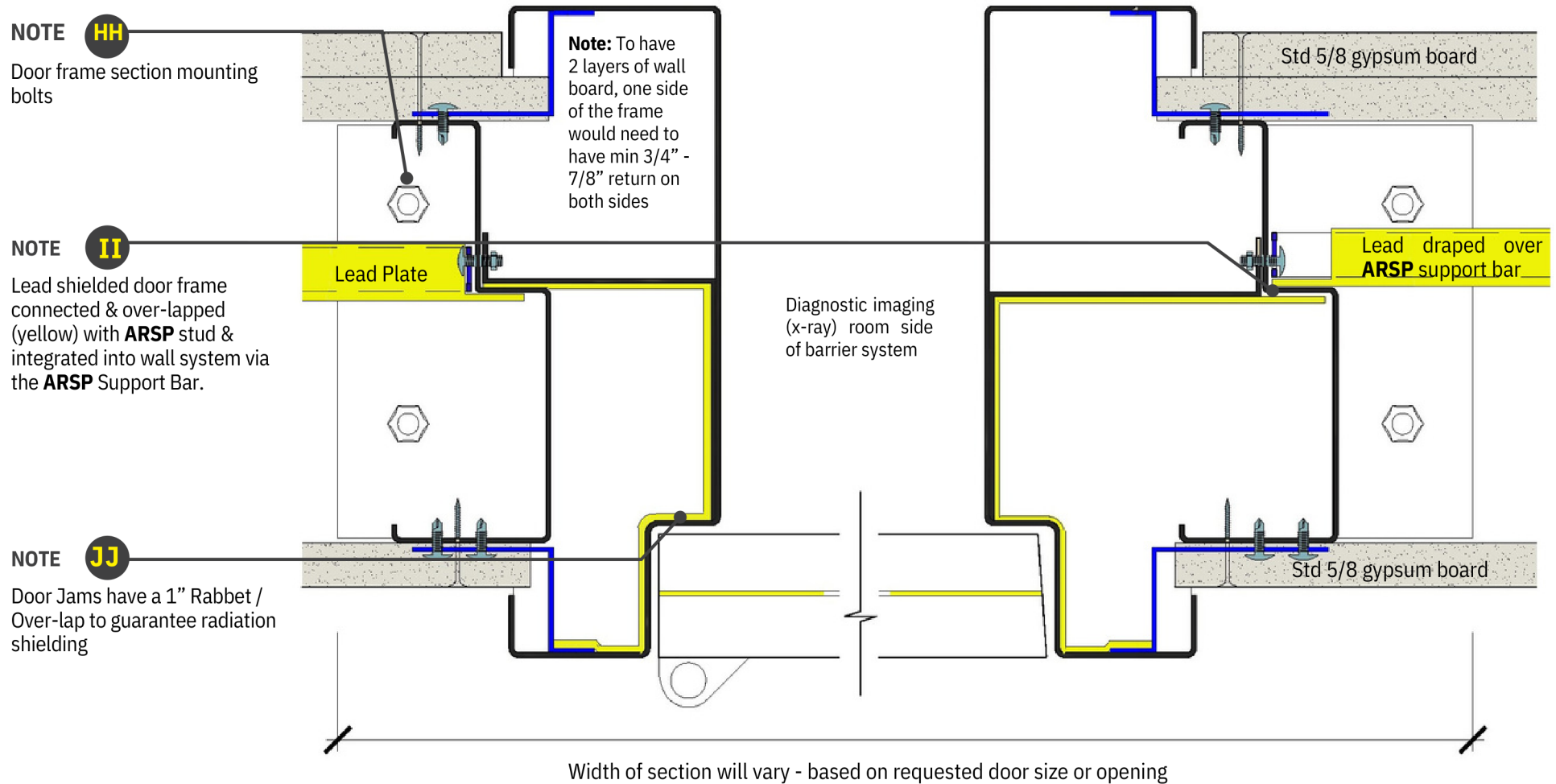
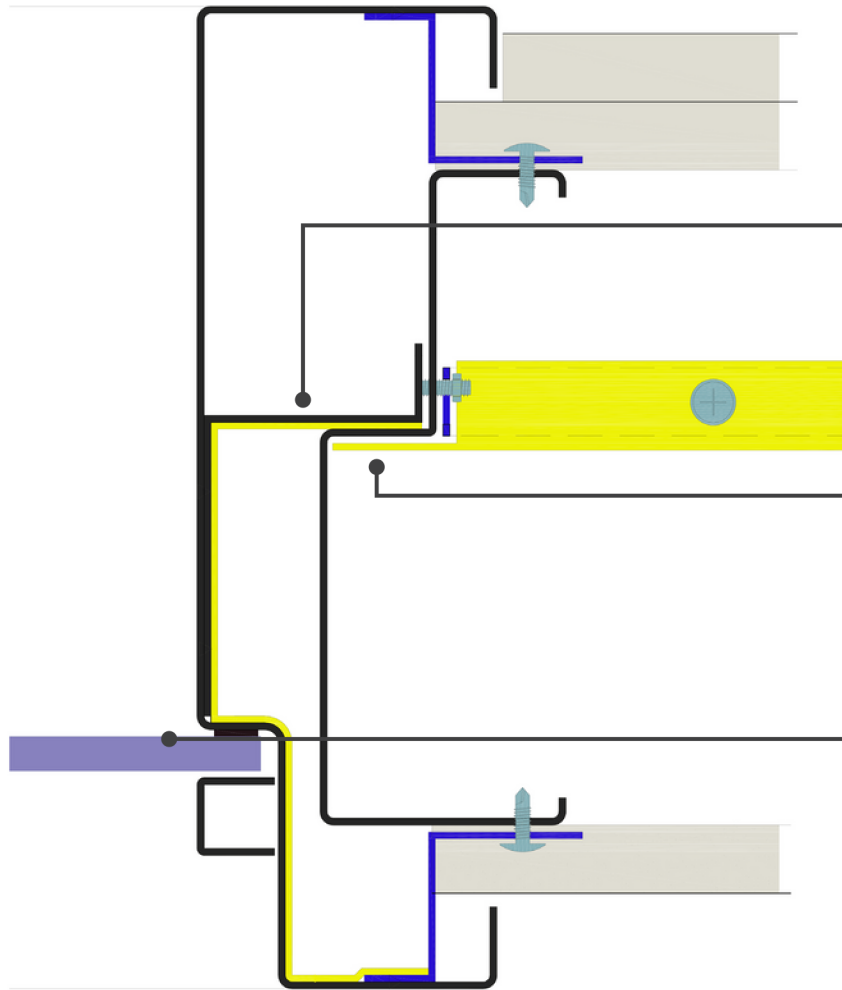


FIGURE 15: ARSP GLAZING FRAME - PLAN VIEW, SIDE JAMB



Shielded Glazing Frame Sections come standard with 39" (1000mm) high shielded glass, with the center line of the glass, located 59" (1500mm) above the finished floor. View frames are available in widths to suit your specific project.

NOTE KK
ARSP Welded Anchor Clips ensure a secure fit onto the wall partition

NOTE LL
ARSP Lead-lined frames are connected & over-lapped (yellow) with ARSP stud & integrated into the wall system via the ARSP support bar.

NOTE MM
X-ray glass seals the radiation barrier through an overlapped connection within our lead-lined glazing frames

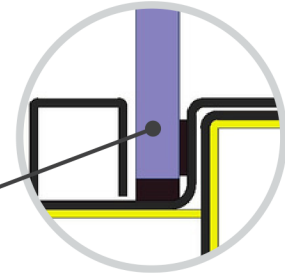
- Lead-plate support bars
- ARSP lead shielding plates
- ARSP shielding studs
- Drywall

FIGURE 16: ARSP GLAZING FRAME - SECTION VIEW, SILL

ARSP metal frames can accept 1 or 2 layers of 5/8" Gypsum Board. Frames can be customized to suit your specific project requirements. Standard throat size is 7¼" (inches) or 185 mm.

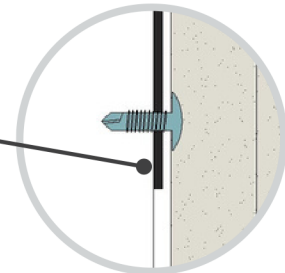
NOTE MM

X-ray glass seals the radiation barrier through an overlapped connection within our lead-lined glazing frames



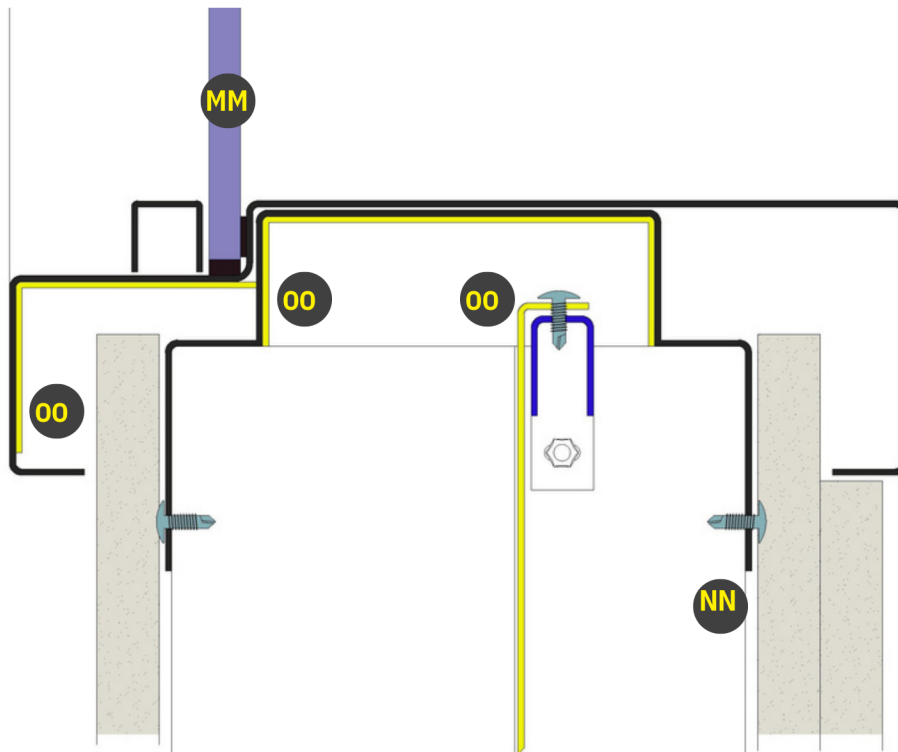
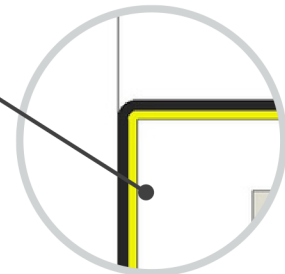
NOTE NN

Metal mounting bracket welded to bottom of frame and fastened to **ARSP** Stud.



NOTE OO

ARSP Lead-lined frames are over-lapped (yellow) at each joint to assure no radiation leak at vulnerable door and window frame locations.



- Lead-plate support bars
- ARSP** lead shielding plates
- Drywall

THE ADVANCED RADIATION SHIELDING PROTECTION SYSTEM

When specifying radiation shielding and protection barriers, review the following checklist to compare other available wall systems. See how they match up against the **ARSP** System.

	ARSP	Other
Provides 100% Shielding Integrity (*as specified)	✓	✗
Readily integrates with existing building components	✓	✗
Allows spacing & flexibility for mechanical and electrical components	✓	✗
Ensures NCRP Report No. 49, 147 and Canadian Safety Code 35 requirements are compiled with	✓	✗
Allows for Imaging Equipment ordering delays – one side wall can be finished	✓	✗
Easily assembled and installed by a qualified radiation shielding contractor	✓	✗
Shielding weights can easily be upgraded with ARSP lead plates as workloads increased	✓	✗
Can be dismantled, removed, re-used – Intrinsic \$\$ Value	✓	✗
Prevents damage to the shielding barrier during construction phases	✓	✗
Reduces Green House Gas Emissions	✓	✗
Unique ARSP Stud integrates in to Std. 6” (152mm) metal floor & ceiling tracks	✓	✗
LEED Credits – Innovative Design and Recycled Content	✓	✗
Eliminates “Wavy-Wall Syndrome” wallboard attached flat on to metal stud	✓	✗
Can be installed to suit any room configuration	✓	✗
Allows for external fastening (accessories) to wall without penetrating lead barrier	✓	✗
Able to be donated through a Charitable Foundation for re-installation	✓	✗

Continued from page 21

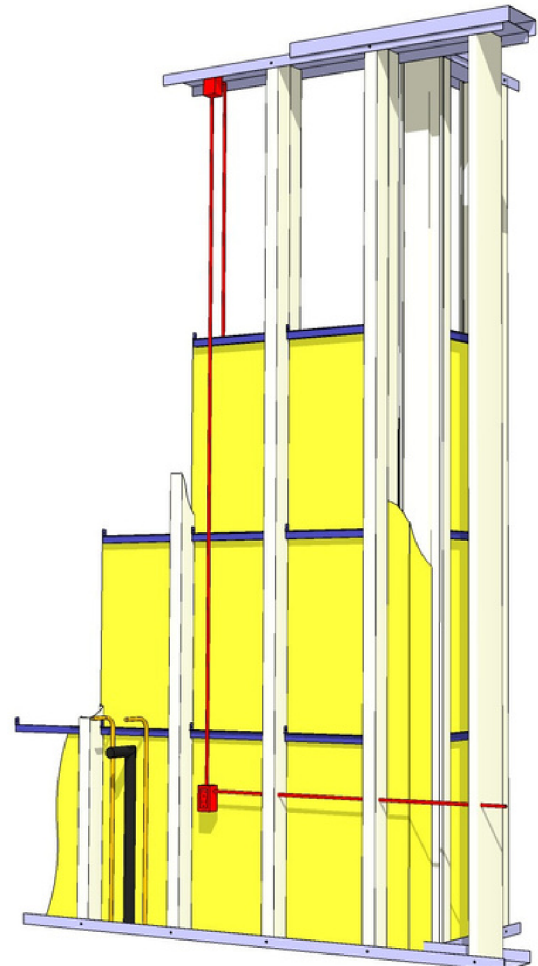
While traditional lead shielding installations can satisfy none of the above requirements; The Advanced Radiation Shielding Protection (**ARSP**) System satisfies 100% of the requirements listed.

The **ARSP System** will alleviate responsibility of existing legislated safety requirements, by transferring liability to a responsible and Qualified Radiation Protection/ Shielding Contractor.

To protect the public from damaging ionizing radiation, governments have legislated the use of ionizing radiation emitting sources (Gamma or X-Rays); generated by Diagnostic Imaging (Radiology) Equipment. Legislation is in place to ensure responsibility and accountability for the controlled use of these radiation emitting devices. This legislation has a list of fines and/ or incarceration periods for those who choose to neglect those responsibilities. These penalties range from mild to severe and expensive legal situations where negligence has been found; when leaks (hot spots) have been allowed to occur in the radiation shielding barrier that should have been prevented during construction of the Diagnostic Imaging (X-Ray) Room.

The Architect (as the Owners' Agent) typically assumes responsibility and legal obligations to ensure that attenuation of the ionizing radiation has been achieved through the installation of proper radiation shielded barriers. To assist and alleviate this responsibility, the Architects may choose to specify a radiation protection/ shielding Section (134900), dedicated to the supply and installation of a "leak-proof" Radiation Protection/Shielding Barrier; passing on the responsibility to a qualified radiation protection/shielding contractor to assure all the legislated radiation shielding requirements have been achieved.

FIGURE 17: ARSP TYPICAL CONSTRUCTED WALL PARTITION *[Illustrating 3 Vertical Lead Plates installed to a height of 2100 mm]*



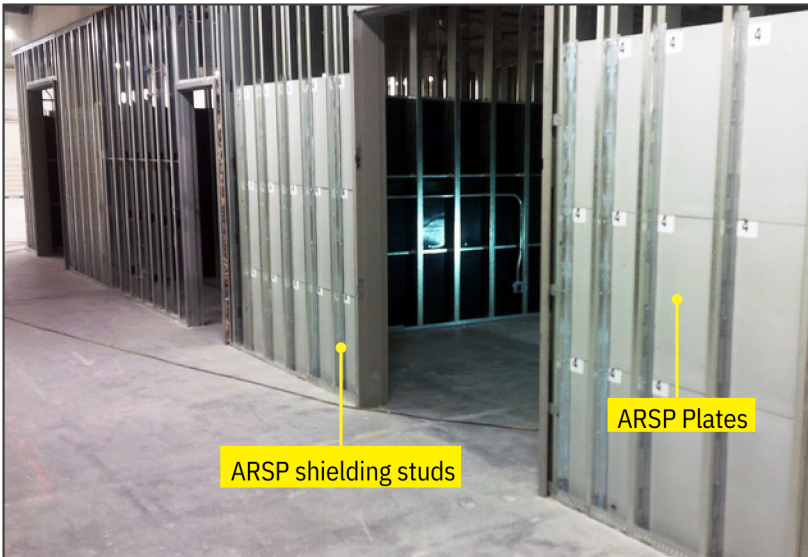
Should alternatives be proposed, make sure written confirmation is provided clearly stating:
100% leak proof radiation shielded barriers

When designing or specifying a radiation shielding enclosure for your Healthcare Facility; Do it right the first time... **Specify ARSP!**

Contact **Advanced Radiation Shielding Protection** to discuss your next radiation protection/ shielding project. Request a copy of our in depth and complete **Radiation Protection/Shielding Construction Specification: 134900**

Toll Free: 1-866-224-9940

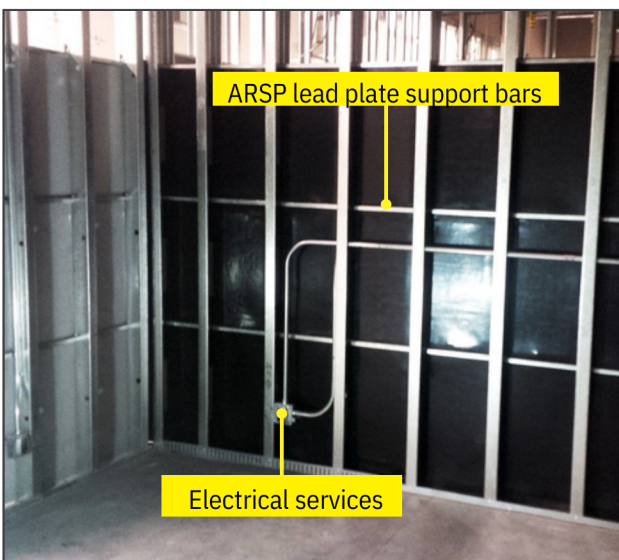
ARSP SYSTEM INSTALLATION PHOTOS



ASRP lead plates installed across multiple rooms.



ASRP lead plates installed before drywall. Our system features clean, straight lines.



ASRP lead plates with electrical services.
Black plates are 5lb lead and silver plates are 4lb lead.



ASRP lead plate installation with entryway shown.

Protected By

The American Radiation Shielding Protection System

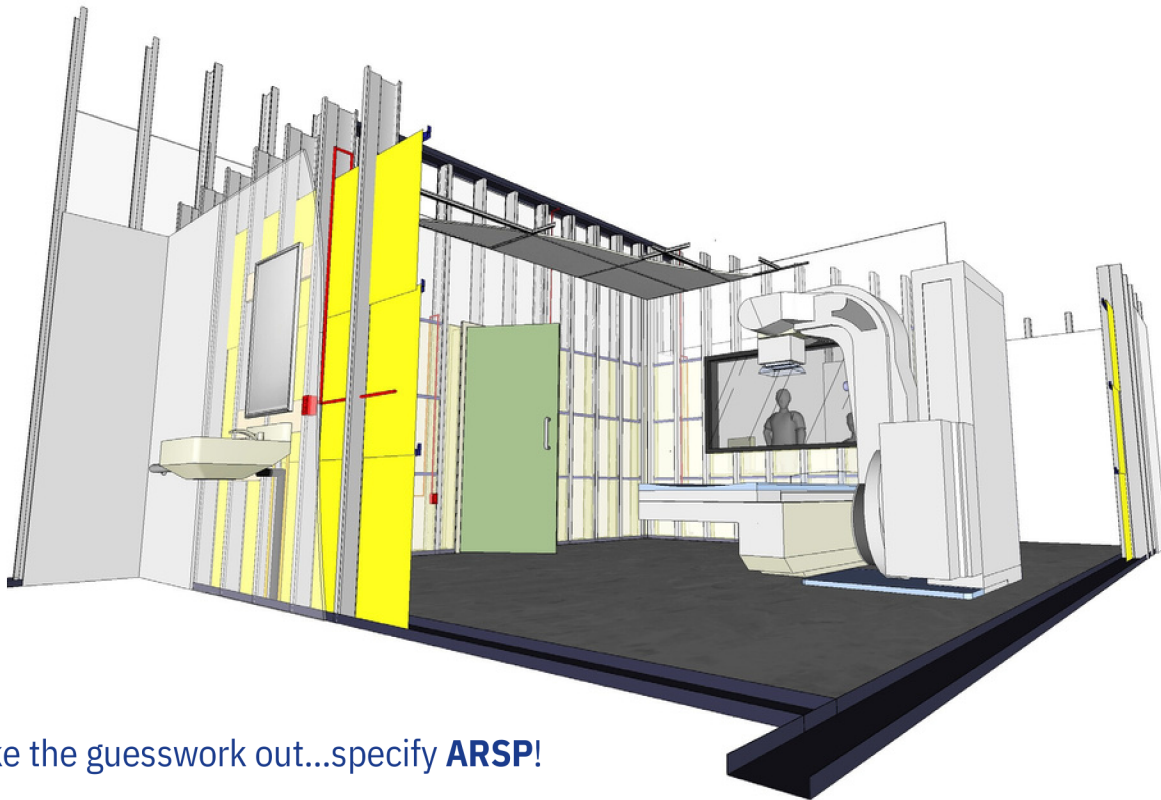
THERE IS NO EQUAL

We can provide additional assistance and support with design detailing as required for different project delivery methods.

For more information on specifying our patented **ARSP System** for your project, please contact us.

Call Toll Free: 1-866-224-9940

Email: Fred@ARSP.com



Take the guesswork out...specify **ARSP!**

Disclaimer

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