

**USG ENSEMBLE™
ACOUSTICAL
DRYWALL CEILING**

DESIGN GUIDE AND WALL SYSTEMS



IT'S YOUR WORLD. BUILD IT.™

Phoenix Suns Mercury Lounge
Architect: SmithGroup
Photo: © Kevin Brost, LLC

ARCHITECTURAL DESIGN GUIDE

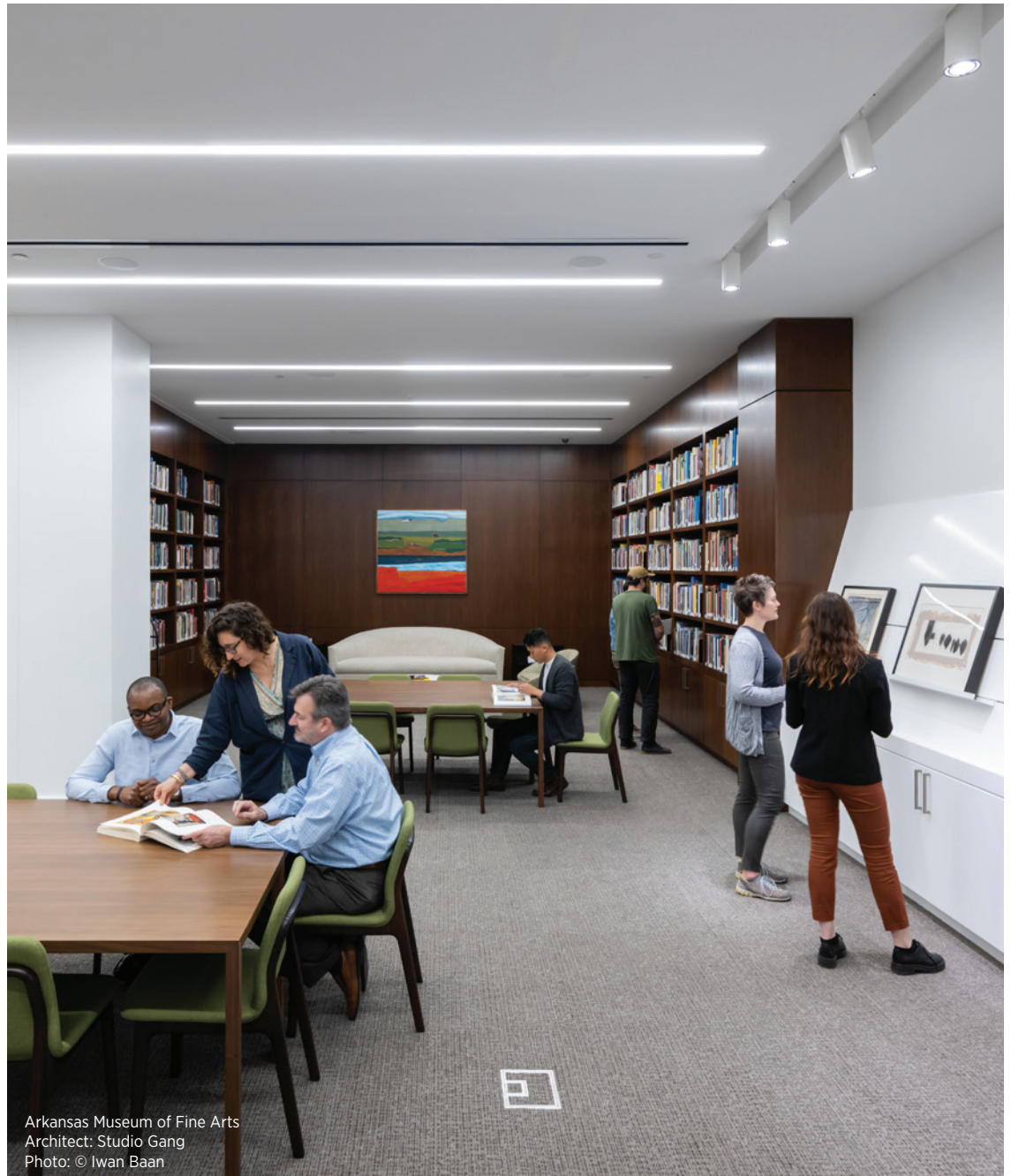
The USG Ensemble® Acoustical Drywall Ceiling is a new solution for interior ceilings that combines the seamless look of drywall with the acoustical properties of tile-and-grid systems. Breakthrough innovations across core USG product technologies come together in one ceiling system to maximize NRC, CAC and LR performance. The bright white finish and monolithic appearance eliminate distracting gridlines. Specify the USG Ensemble® Acoustical Drywall Ceiling—you no longer need to compromise aesthetics for acoustical performance in the spaces you create.

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OVERVIEW

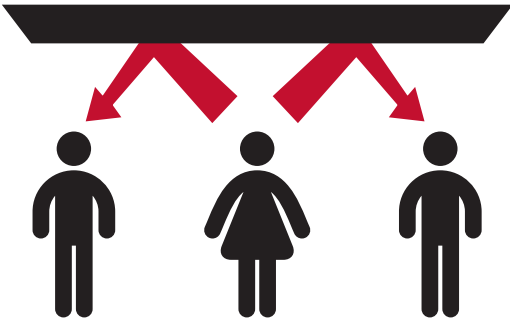
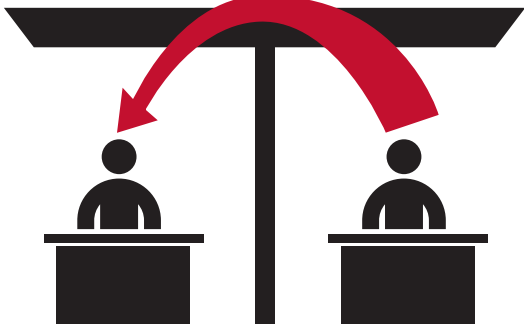
Although aesthetically appealing, hard finishes—such as glass, concrete, stone, wood and drywall—reflect sound and make spaces noisy and difficult to hear in. Until now, the cost-effective solution for sound control has been a traditional acoustical ceiling tile-and-grid system. The USG Ensemble® Acoustical Drywall Ceiling is an innovative solution that integrates technologies from our ceiling tile, wallboard and finishing systems. It installs similarly to traditional drywall, and can be incorporated into spaces where acoustical ceilings and wallboard ceilings would normally be used. It can be intermixed with acoustical ceilings in locations where plenum access is needed, and all typical drywall trims and fixtures are compatible with the system.



Arkansas Museum of Fine Arts
Architect: Studio Gang
Photo: © Iwan Baan

BALANCED ACOUSTICS

Sound is created in the form of pressure traveling in waves through any medium, most commonly air. Noise is excessive or unwanted sound. Hard surfaces like stone, glass and wood may be aesthetically pleasing, but can make for noisy spaces because they reflect sound. Too much noise makes it hard to work, hard to learn and hard to relax.

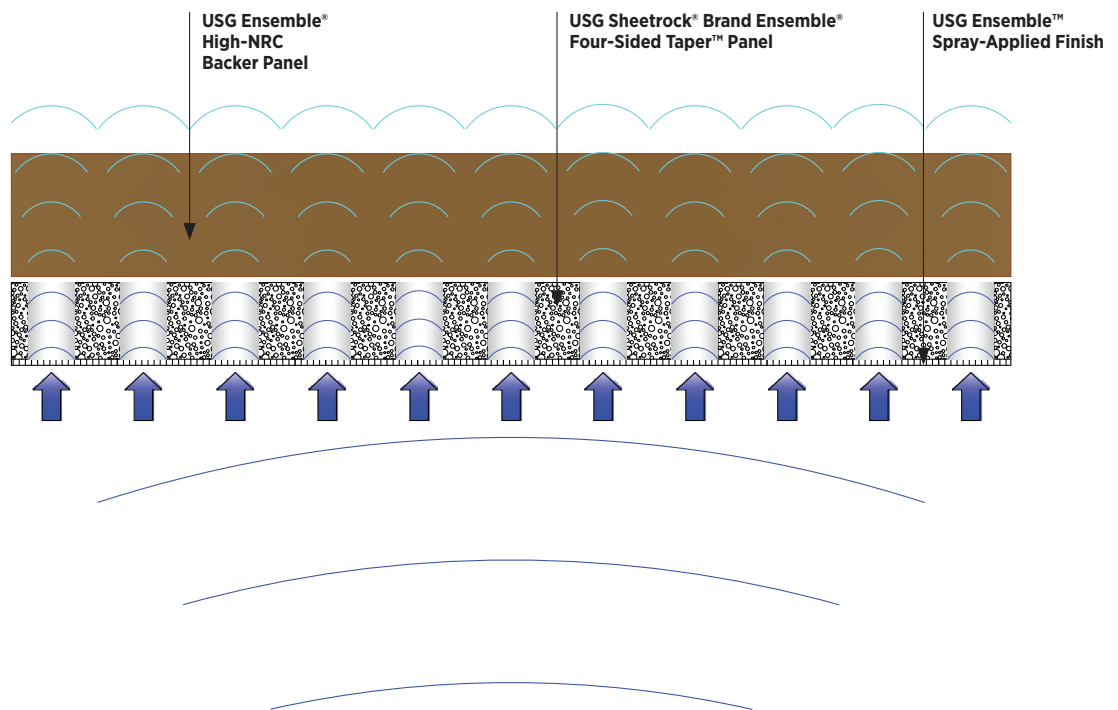
Noise Reduction Coefficient (NRC)	Ceiling Attenuation Class (CAC)
	
<p>NRC: A measure of sound absorption.</p> <p>Noise Reduction Coefficient can be thought of as the rate at which sound dissipates within a space, and is measured in reverberation over time. The higher the NRC value, the shorter the reverberation time. An NRC of 0 indicates perfect reflection; an NRC of 1 indicates perfect absorption. Effective sound absorbers are generally porous, pliable, soft or viscous materials that can rapidly dissipate sound waves. Building materials like acoustical ceiling tiles and fiberglass insulation are effective sound absorbers.</p>	<p>CAC: Applies to the sound attenuation of acoustical ceilings with a shared plenum above horizontally adjacent spaces.</p> <p>Ceiling Attenuation Class measures how well a ceiling blocks sound transmission. Specifically, Ceiling Attenuation Class is a measure of reduction in sound transmission via plenum path above two adjacent rooms. It is a two-pass test, as sound must travel through one ceiling, into the plenum space, and back down through the ceiling into the adjacent room. The performance is expressed in decibel reduction between the two rooms.</p>

A general rule of thumb is that NRC and CAC performance are inversely proportional. The key for balanced acoustics is to develop ceiling systems that perform well in both categories. High-performance ceiling systems with balanced acoustics achieve an NRC of 0.70, and a CAC of 30 or greater, and provide good sound control for many applications.



HOW THE SYSTEM WORKS

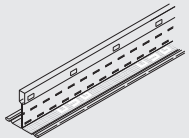
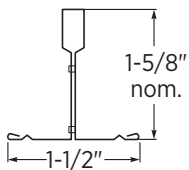
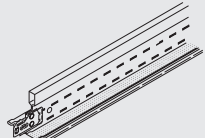
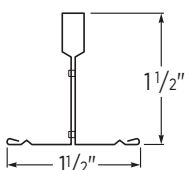
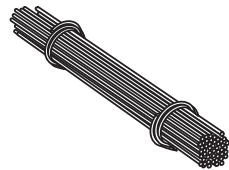
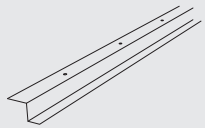
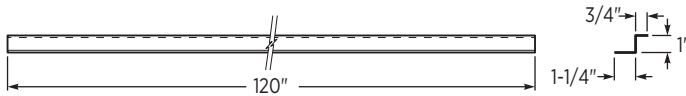

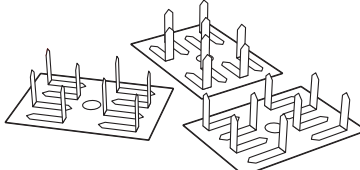
The USG Ensemble™ Spray-Applied Finish has been engineered to allow sound to pass through while at the same time providing a visual that is similar to painted gypsum board. Sound passes through the finish and into the perforations of the USG Sheetrock® Brand Ensemble® Four-Sided Taper™ Panels. From there most of the sound pressure is absorbed by the Ensemble® back scrim and the USG Ensemble® High-NRC Backer Panels. A portion of the sound is trapped in the plenum space where it dissipates, resulting in NRC of 0.80.



The USG Ensemble™ Spray-Applied Finish is engineered to be acoustically permeable. Sound passes through the finish and perforations, where it dissipates into the acoustical backer and plenum.

Note: Care should be taken to maximize the open area of the perforated panels. Excessive joint compound coverage can reduce the acoustical performance of the product. Small spaces (such as conference rooms) with frequent gypsum panel penetrations (e.g. closely spaced light fixtures in a narrow rip of panel) may not be an appropriate application to achieve the published system acoustical performance. Consult your USG architectural representative for details.

SYSTEM COMPONENTS

Image	Item #	Product Name	Description
		DGLW26 USG Drywall Suspension Main Tee	Spaced 48" o.c. Screw attaches USG Sheetrock® Brand Ensemble® 4-Sided Taper™ Panel to underside of flange.
		DGLW424 USG Drywall Suspension 4' Cross Tee	Spaced 24" o.c. Screw attaches USG Sheetrock® Brand Ensemble® 4-Sided Taper™ Panel to underside of flange
		By others 12 gauge hanger wire (by others)	Suspends system from structure above. Attached at 48" o.c. to the ISB109.
		By others 1" Z-Furring 20 ga (by others)	Z-Furring channel manufactured by Clark Dietrich or similar. 3/4" leg attaches to wall or ceiling framing, 1" deep leg, plus 1-1/4" leg for drywall attachment.
		By others 2" Z-Furring 20 ga (by others)	Z-Furring channel manufactured by Clark Dietrich or similar. 3/4" leg attaches to wall or ceiling framing, 2" deep leg, plus 1-1/4" leg for drywall attachment.
		By others Insulation Impaling Clips (by others)	Insulation Impaling and Clip for use with Ensemble® Direct Mount Systems. Use x1 clip for each USG Ensemble® High-NRC Backer Panel in a wall mount application and x2 clips in a ceiling application.

SYSTEM COMPONENTS

BASE PANELS AND BACKER PANELS

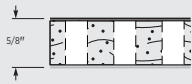


Image	Item #	Product Name	Description
	ENSPNL96	USG Sheetrock® Brand Ensemble® 4-Sided Taper™ Panel 5/8" x 4' x 8'	5/8" USG Sheetrock® Brand Ensemble® Four-Sided Taper™ gypsum panels have been perforated for optimal acoustical performance. Factory laminated with a special white fiberglass scrim on face and back of panel.
	ENSPNL120	5/8" x 4' x 10'	USG Sheetrock® Brand Ensemble® Four-Sided Taper™ Panels eliminate Butt Joints and reduce taping and sanding labor by 20%.
	ENSRPNL96	USG Sheetrock® Brand Ensemble® RAP 4-Sided Taper™ Panel 5/8" x 4' x 8'	5/8" USG Sheetrock® Brand Ensemble® RAP Four-Sided Taper™ gypsum panels have been perforated for optimal acoustical performance. Factory laminated with a special white fiberglass scrim on face and black air barrier film on back of panel.
	ENSRPNL120	5/8" x 4' x 10'	USG Sheetrock® Brand Ensemble® RAP Four-Sided Taper™ Panels eliminate Butt Joints and reduce taping and sanding labor by 20%.
	ENSHINRC	USG Ensemble® High-NRC Backer Panels: 1" x 23.5" x 47.75" 1" x 15.5" x 47.75"	Acoustical backer panel with an unfinished face and a white paint coating on the back side. This panel is critical to creating the High-NRC and High-CAC performance of the system. 1" backer panel for Suspended or Direct Mount System
	By others	2" Thick Fiberglass Board, 6lb/ft³	Acoustical backer by others, Knauf Ecosse® or equal
	By others	3-1/2" Unfaced Fiberglass Insulation (by others)	3-1/2" Unfaced Fiberglass Insulation (by others)






USG TRIMS, TRANSITIONS AND ACCESSORIES

All trims, transitions and accessories designed for use with standard 5/8"-thick gypsum panels can be used with the USG Ensemble® Acoustical Drywall Ceiling. Plastic (PVC and vinyl), metal (steel and aluminum) and paper-faced tape-on beads and trims can be specified. The USG Ensemble™ Spray-Applied Finish bonds well with these types of trims. The finish also bonds well with primed surfaces, but all non-white trims, transitions, or accessories must be primed white with a high solids primer prior to spray application.

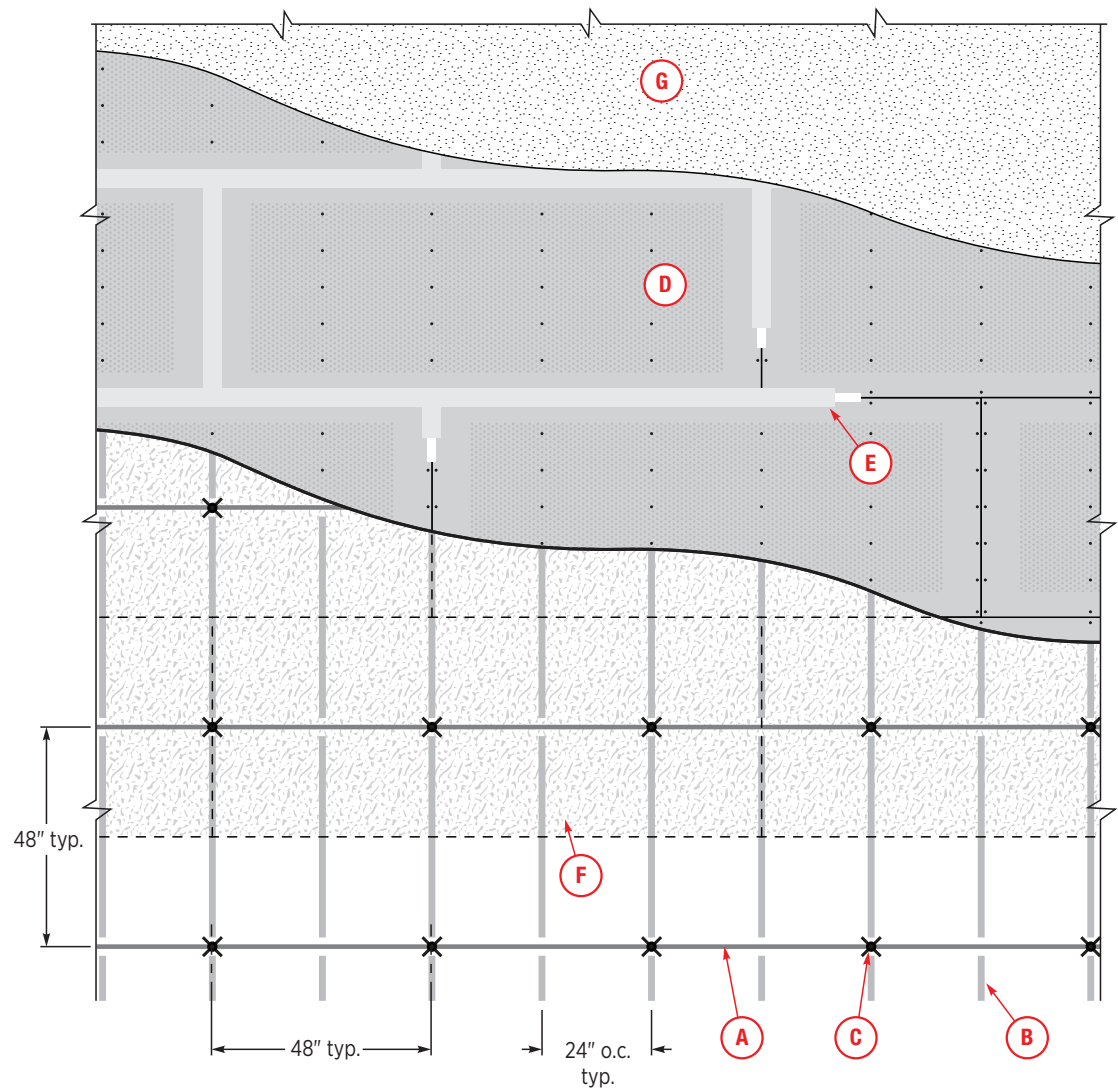
Image	Item #	Product Name	Description
	CPALDWJTXX	USG Compasso™ Elite for Drywall size options: (2.5", 4", 6" & 8")	Used for perimeter fascias on floating island or similar installations. Accepts USG Ensemble™ Spray-Applied Finish without preparation.
	CPDWA9120	USG Donn® Brand Transition Moldings: 12' length 9/16" flange	Steel roll formed trims, painted white, used at transition interface between the USG Ensemble® Acoustical Drywall Ceiling and acoustical tile ceilings.
	CPDWA15120	15/16" flange	
	—	USG Sheetrock® or Beadex® Brand paper-faced metal beads and trims	Laminated paper face for better joint treatment bond and reduced edge cracking.

SYSTEM COMPONENTS

FINISHING PRODUCTS

Image	Item #	Product Name	Description
	383640	USG Sheetrock® Brand Plus 3® Joint Compound	All-purpose compound weighs up to 25% less than conventional-weight compounds so handling and applying are simpler, easier and faster.
	USAPJC	USG Sheetrock® Brand All Purpose Joint Compound	Joint Compound with superior bond strength. Ideal for embedding paper joint tape for the USG Ensemble® Acoustical Drywall Ceiling.
	—	USG Sheetrock® Brand Easy Sand™ Lightweight Setting-Type Joint Compound	High strength bond and very low shrinkage setting-type joint compound ideal for prefilling joints as needed the USG Ensemble® Acoustical Drywall Ceiling.
	250	USG Sheetrock® Brand Paper Joint Tape	High strength paper joint tape made wafer-thin for easier joint treatment. Roughened surface for superior bond. NEVER use fiberglass mesh joint tape for the USG Ensemble® Acoustical Drywall Ceiling.
	ENSSPRAF	USG Ensemble™ Spray-Applied Finish	Highly engineered, acoustically transparent spray-applied finish. Installs with pneumatic spray texture equipment and yields a fine finish, with a monolithic appearance. Available in white (standard), black and custom colors. Note: Drying times may increase for black and custom colors.

REFLECTED CEILING PLAN



- | | |
|--|---|
| (A) — DGLW26 main tee | (E) — joints |
| (B) — cross tee | (F) — USG Ensemble® High-NRC Backer Panels |
| (C) — 12-gauge hanger wire | (G) — USG Ensemble™ Spray-Applied Finish |
| (D) — USG Sheetrock® Brand Ensemble® Four-Sided Taper™ Panels | |

DESIGN CONSIDERATIONS

APPLICATIONS

The USG Ensemble® Acoustical Drywall Ceiling is ideal for simple, flat, sloped, or curved ceilings without excessive penetrations or recessed light fixtures. This is so the perforated acoustical field area is maximized and joint finishing and accessories are minimized. Ceilings with multiple terminations, penetrations and flush-mounted fixtures all must be finished with joint compound, which reduces the perforated acoustical area and the sound performance.

LIGHTING CONDITIONS

Understanding the type of lighting source and illumination direction is crucial when selecting ceiling systems. Light sources that illuminate at oblique angles can magnify imperfections across any surface. This is especially true for ceilings because they are often adjacent to windows, where natural light enters the space obliquely in the morning and evening. Light that shines perpendicular (either up or down) is more forgiving and can be beneficial in a ceilings application. Indirect lighting that shines on the ceiling and reflects off at multiple angles minimizes surface imperfections and can create a warm glow within the space. USG Ensemble® Acoustical Drywall Ceiling is well-suited for applications with direct and indirect lighting.

SOUND PERFORMANCE REQUIREMENTS

The USG Ensemble® Acoustical Drywall Ceiling offers excellent acoustical performance when high NRC/CAC is needed to meet the project requirements. However, NRC system performance can be affected by the plenum space. The industry standard sound performance test, ASTM C423, is conducted with a 16" plenum depth. When framing Ensemble with USG Drywall Suspension System components, ASTM C423 "E-400" mounting test results should be used. When installing Ensemble with Z-furring or alternate framing for Direct Mount installations: ASTM C423, "A-mount" test data should be used.

STRUCTURE AND PLENUM CONDITIONS

Frequently the acoustical performance of ceiling systems tested per ASTM C423 are negatively affected by a shallow plenum. USG Ensemble® performs excellent in both scenarios. When either framed with a drywall suspension system with a deep plenum or direct attached to a solid substrate, Ensemble achieves a 0.80 NRC with 1" backer panels.

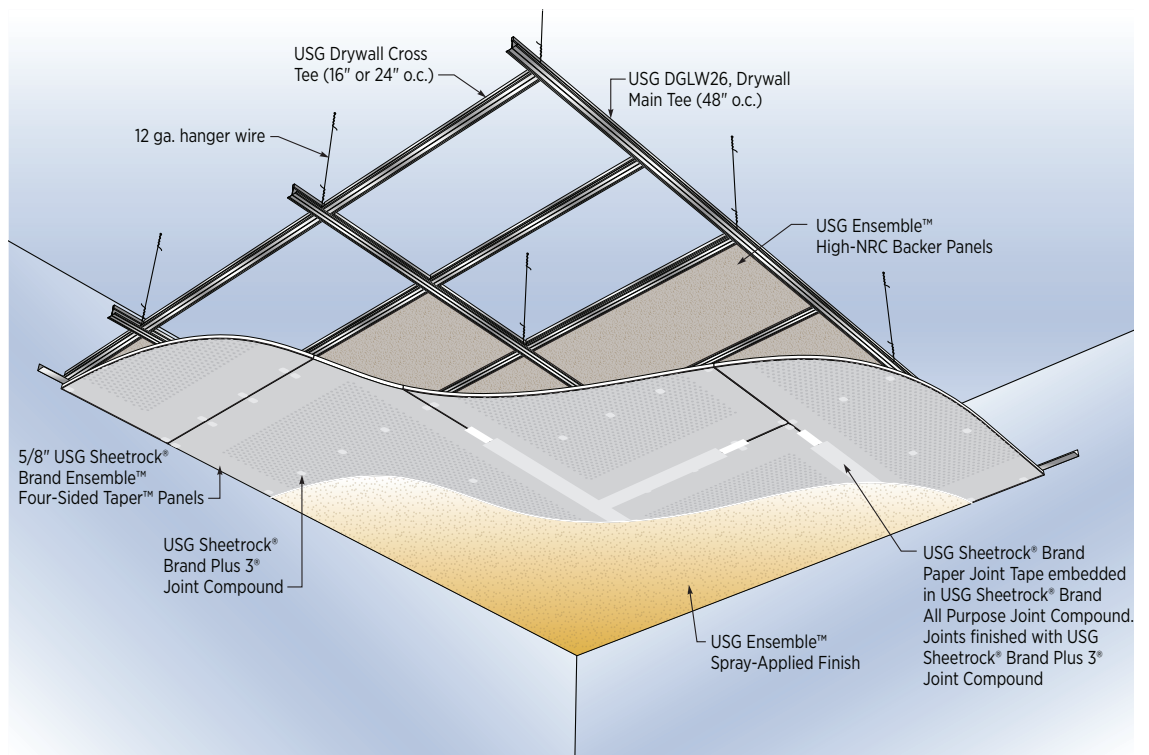
Note: For all design and system performance options, see: *USG Ensemble™ Acoustical Drywall Ceiling Systems Selector Guide*, SC365856.

DETAILS

USG ENSEMBLE® - SUSPENDED SYSTEM

1. USG ENSEMBLE® ACOUSTICAL DRYWALL CEILING ON SUSPENDED USG DRYWALL T-BAR SYSTEM

The USG Ensemble® Acoustical Drywall Ceiling has the appearance of drywall yet performs like an acoustical ceiling. Installation is very much like a lay-in acoustical tile-and-grid system. Then the highly engineered USG Sheetrock® Brand Ensemble® Four-Sided Taper™ Panels are screw-attached to the bottom of the suspended USG Drywall T-Bar System framing members. Joints are finished like drywall. Then acoustically transparent finish coatings are applied to the surface as the final decoration.

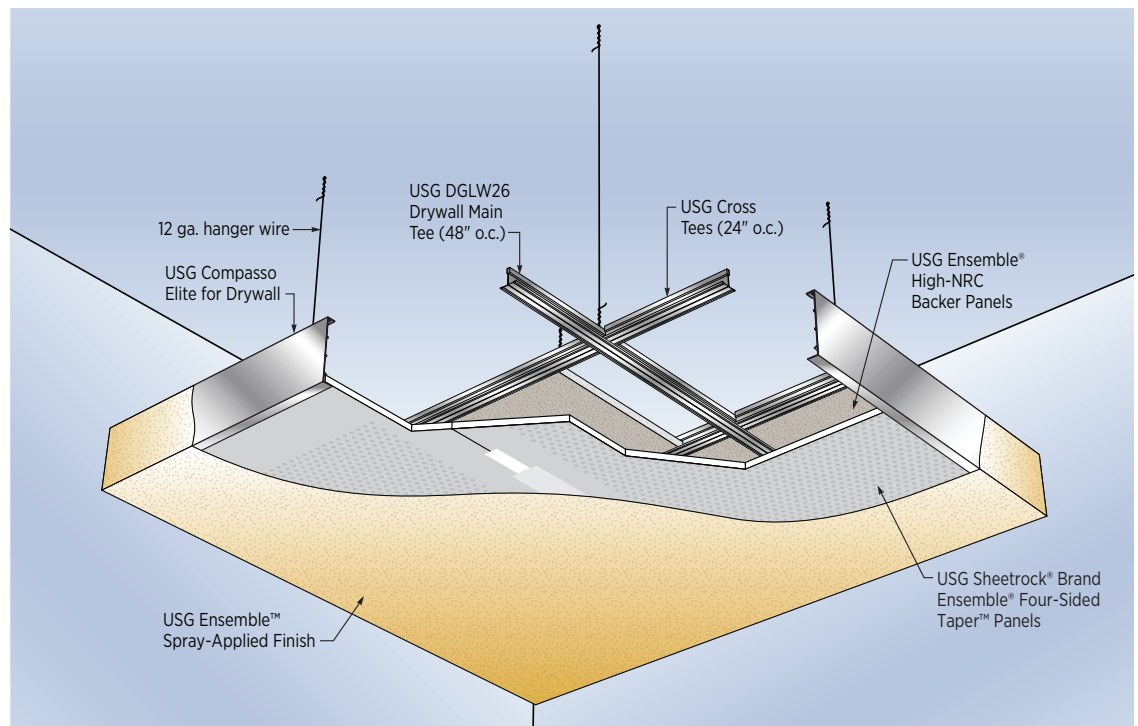


DETAILS

USG ENSEMBLE® - SUSPENDED SYSTEM

2. USG ENSEMBLE® PENINSULA OR ISLAND TRIMMED WITH USG COMPASSO™ ELITE FOR DRYWALL

Floating clouds or peninsula ceilings can be created with the USG Ensemble® Acoustical Drywall Ceiling. Specify USG Compäso™ Elite Trim for Drywall (straight and radiused available) to have a finished edge. The factory-painted trim can be left unfinished, but it is more desirable to spray-coat with the USG Ensemble™ Spray-Applied Finish.



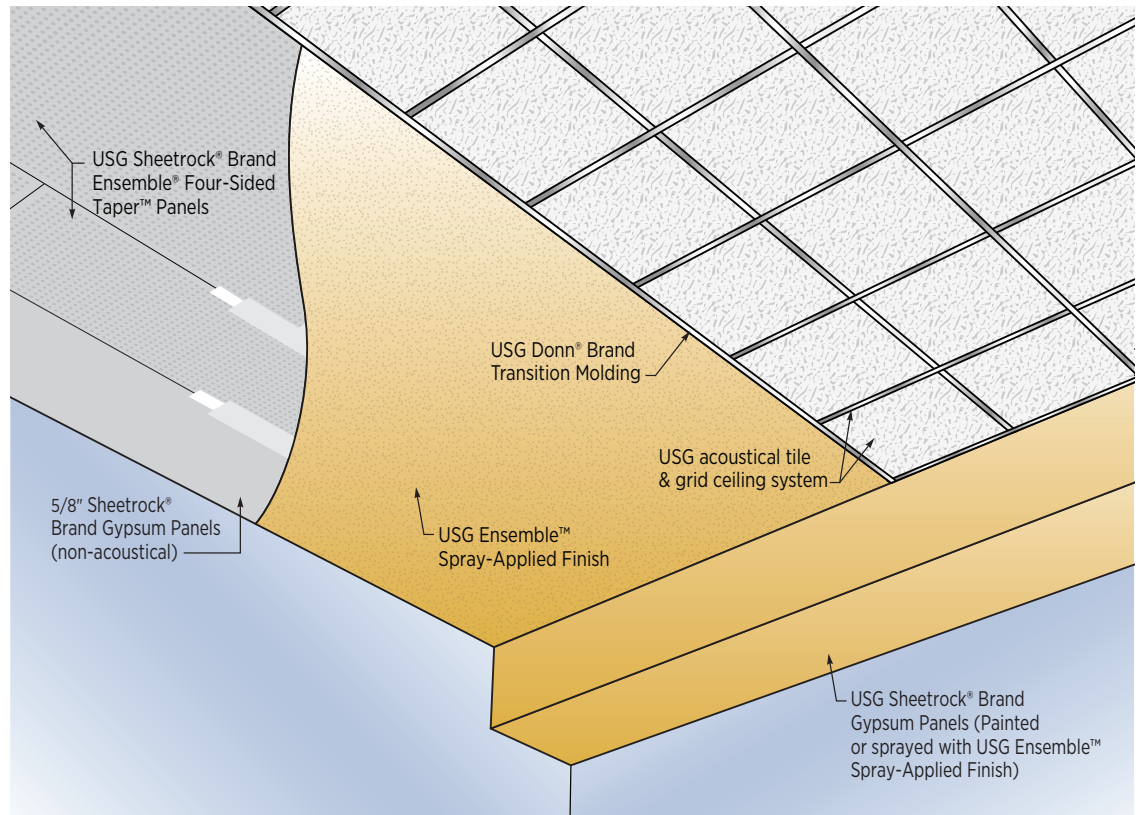
Hanger wires must be placed on framing members within 12" of the floating perimeter.
For more information see detail #19.

DETAILS

USG ENSEMBLE® - SUSPENDED SYSTEM

3. TRANSITION FROM USG ENSEMBLE® CEILING TO ACOUSTICAL PANEL CEILING OR TO NON-ACOUSTICAL DRYWALL CEILING

The suspended USG Drywall T-Bar Grid System (used to install the USG Ensemble® Ceiling), is fully compatible with USG Donn® Brand DX®/DXL™, Centricitee™ DXT™, Identitee® DXI™, Fineline® DXF™, and other USG acoustical tile and suspension systems. This makes it easy to transition between flat USG Ensemble® ceilings and acoustical ceilings or drywall ceilings. When transitioning to flat drywall ceiling areas or bulkheads and soffits, finishing with the USG Ensemble™ Spray-Applied Finish creates a seamless and consistent aesthetic. Standard gypsum panels (non-acoustical) can be coated with the USG Ensemble™ Spray-Applied Finish (for an aesthetic match). Standard gypsum panels require priming with a high-solids primer before application of the USG Ensemble™ Spray-Applied Finish.



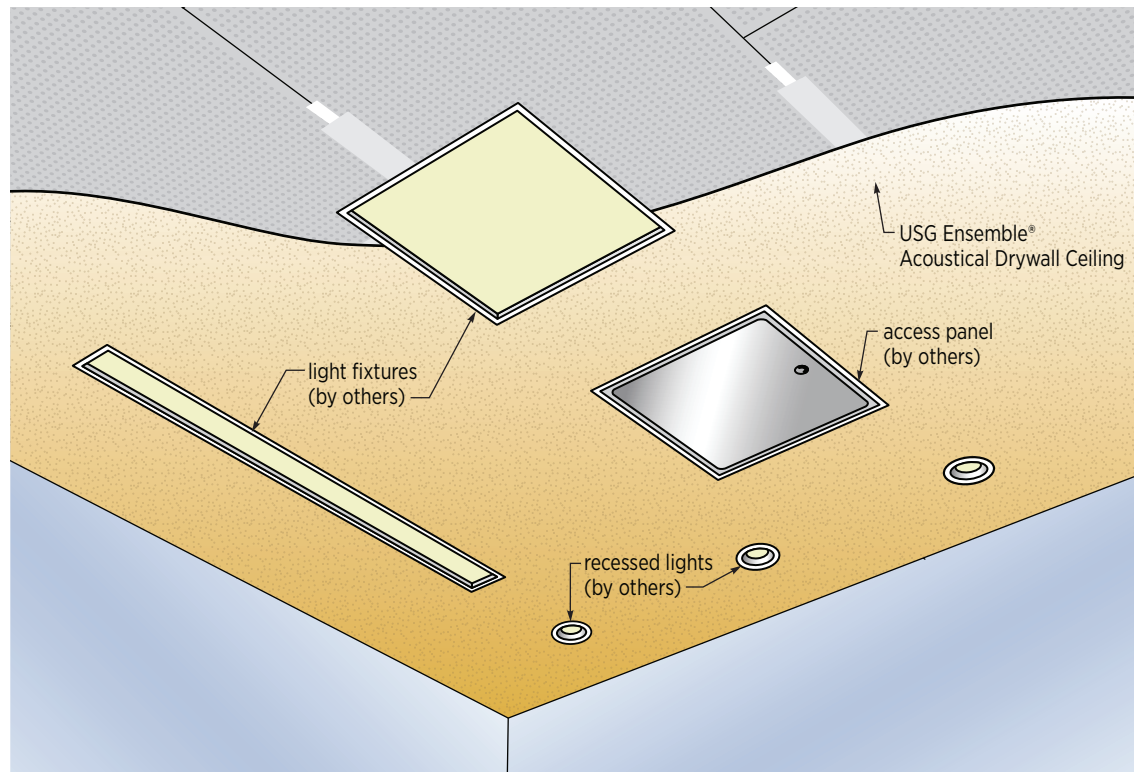
For more information refer to detail #11.

DETAILS

USG ENSEMBLE® - SUSPENDED SYSTEM

4. UTILITY INTERFACES AND ACCESS PANELS

The USG Drywall T-bar System, used to frame the suspended USG Ensemble® ceiling, easily accommodates conventional or recessed light fixtures, linear light fixtures, access doors or HVAC ceiling diffusers. USG Ensemble™ Spray-Applied Finish can be used to coat most primed or painted metal access doors for an improved aesthetic that matches the ceiling.



“Virtually Invisible” style access panels work great for drywall and Ensemble® as they blend in with the ceiling. For areas needing a little more frequent access, key-access doors or concealed access doors (frame, latch and hinge) are a good fit. For very frequently accessed panels, do not coat with Ensemble™ Spray-Applied Finish.

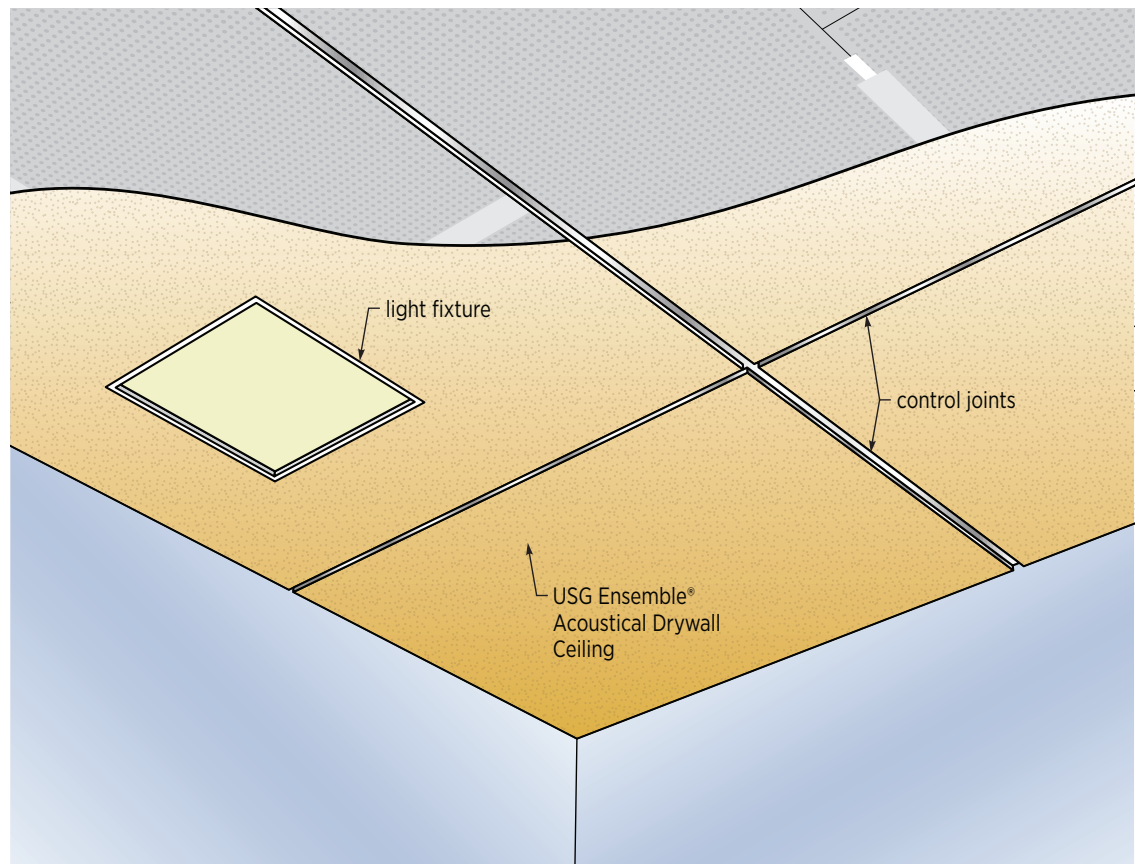


DETAILS

USG ENSEMBLE® - SUSPENDED SYSTEM

5. PERSPECTIVE— CONTROL JOINTS

Control joints are used to control stress caused by expansion and contraction across the control joint in large ceiling expanses in drywall systems. USG Ensemble® ceilings have the same requirements for control joints as drywall ceilings. Control joints are needed for USG Ensemble® ceilings that exceed 50 feet (2,500 sq. ft.) with perimeter relief, and 30 feet (900 sq. ft.) without perimeter relief. Use continuous main tees parallel and on either side of the control joint.

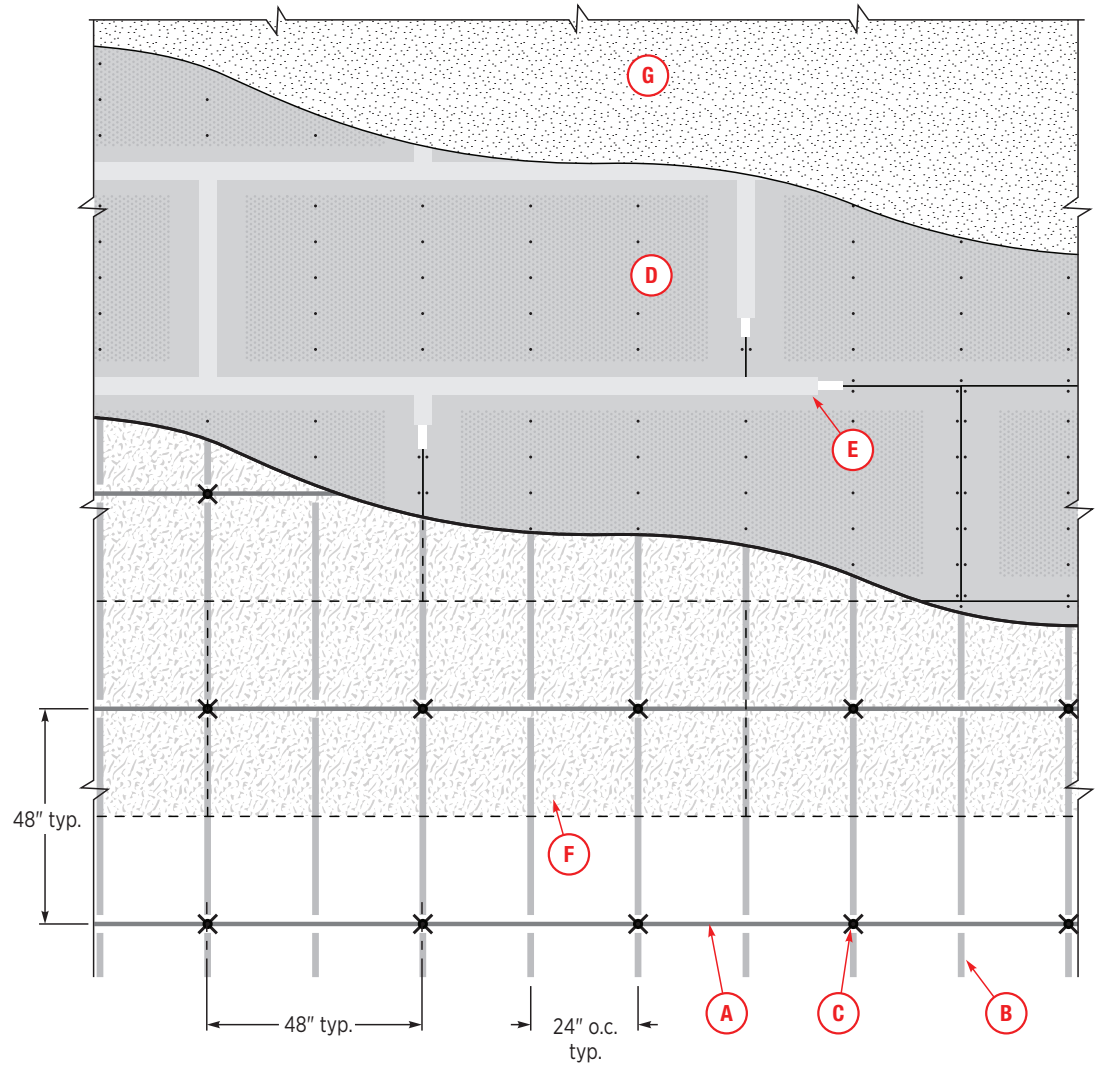


See details #16 and #16A for more information on control joint options.
See details #15 and #15A for ceiling to partition interface options.

DETAILS

USG ENSEMBLE® - SUSPENDED SYSTEM

6. TYPICAL REFLECTED CEILING PLAN



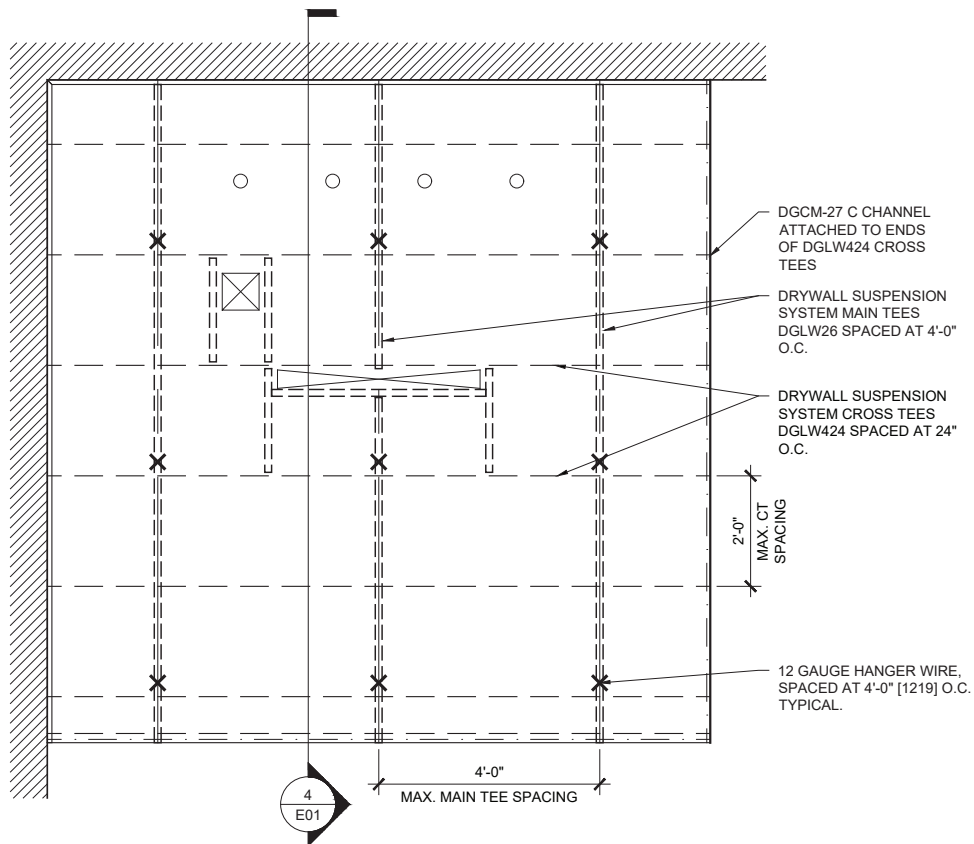
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| (A) — DGLW26 main tee | (E) — joints |
| (B) — cross tee | (F) — USG Ensemble® High-NRC Backer Panels |
| (C) — 12-gauge hanger wire | (G) — USG Ensemble™ Spray-Applied Finish |
| (D) — USG Sheetrock® Brand Ensemble® Four-Sided Taper™ Panels | |

DETAILS

USG ENSEMBLE® - SUSPENDED SYSTEM

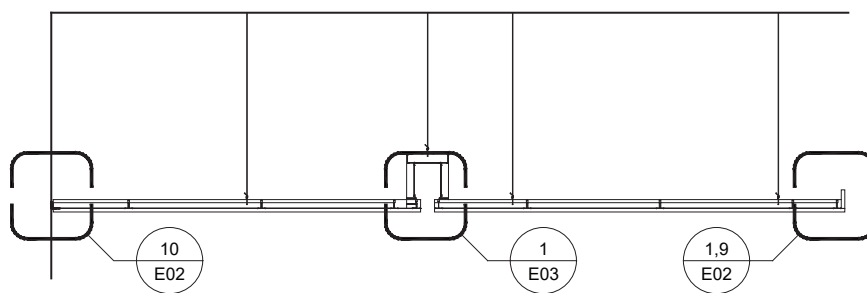
7. TYPICAL GRID LAYOUT

USG Ensemble® integrates with lights, diffusers and other ceiling utilities the same way that drywall ceilings do.



8. TYPICAL GRID ELEVATION

Linear lights and diffusers integrate with USG Ensemble®. A USG Logix™ Yoke can be used to assist with embedding the linear fixtures into the USG Drywall T-Bar System framing.

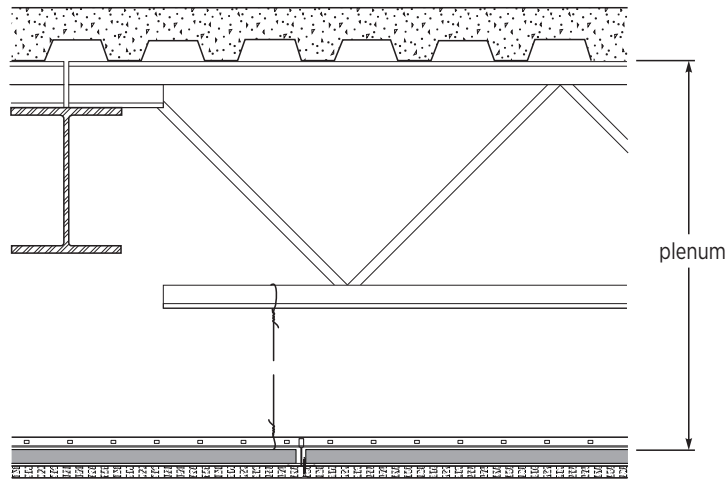


DETAILS

USG ENSEMBLE® - SUSPENDED SYSTEM

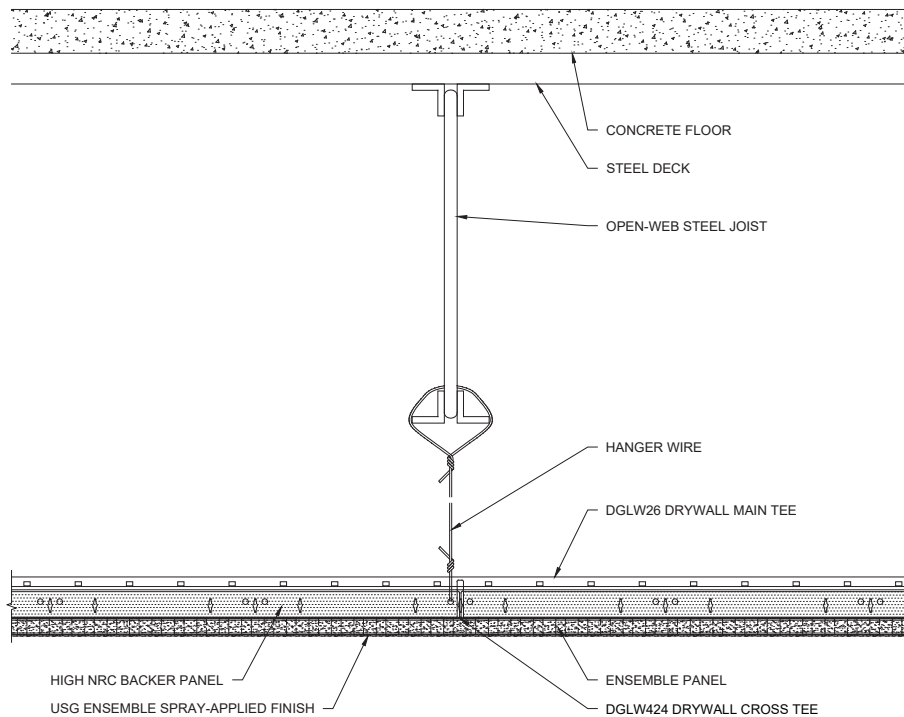
9. SECTION THROUGH CEILING PLENUM

USG Ensemble® is framed with USG Drywall T-Bar System using 12-gauge wires and suspended from structure. 12-gauge hanger wires should be installed per ASTM C636.



10. CROSS-SECTION THROUGH CEILING PLENUM

12-gauge hanger wires should be installed per ASTM C636.

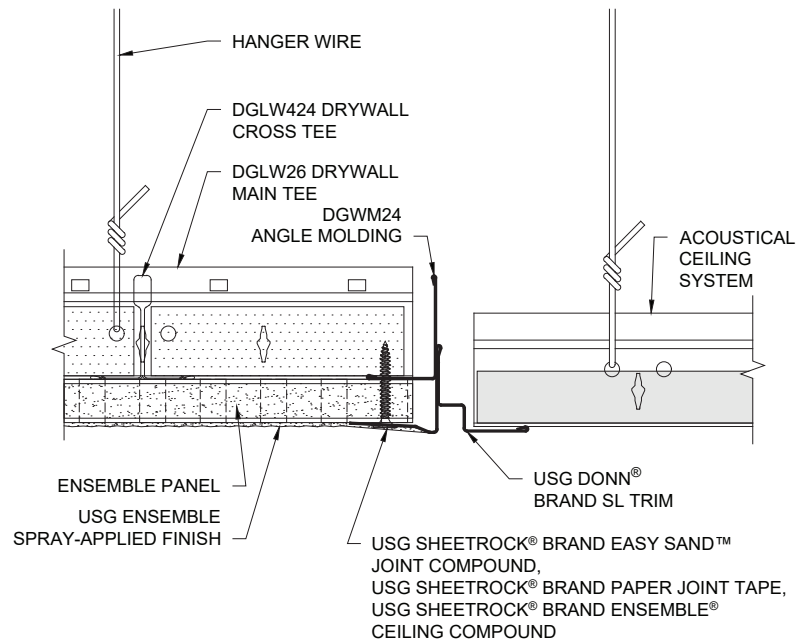


DETAILS

USG ENSEMBLE® - SUSPENDED SYSTEM

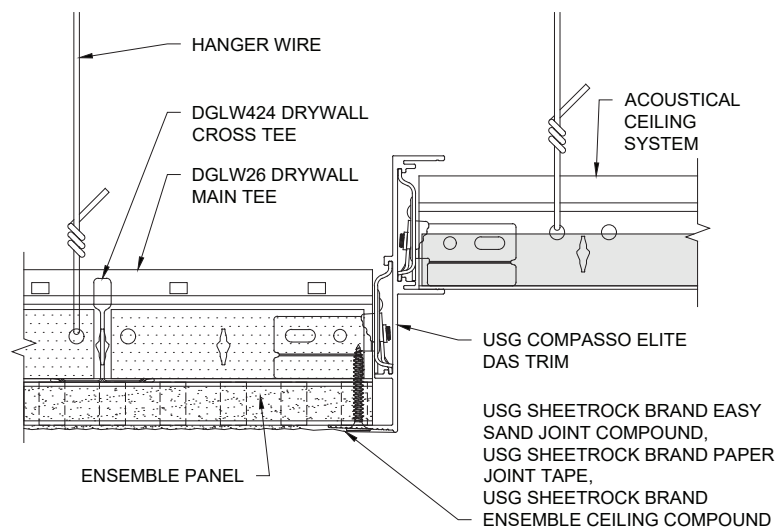
11. TRANSITION DETAIL AT USG ENSEMBLE® CEILING TO TILE-AND- GRID CEILING

USG Ensemble® can transition easily to an acoustical ceiling system. The transition is very clean when a USG Donn® Brand Transition Molding is used.



12. HEIGHT CHANGE TRANSITION DETAIL AT USG ENSEMBLE® CEILING TO TILE-AND- GRID CEILING

Fine details like a ceiling height change can be easily and cleanly done with a USG Compasso™ Elite DAS trim.

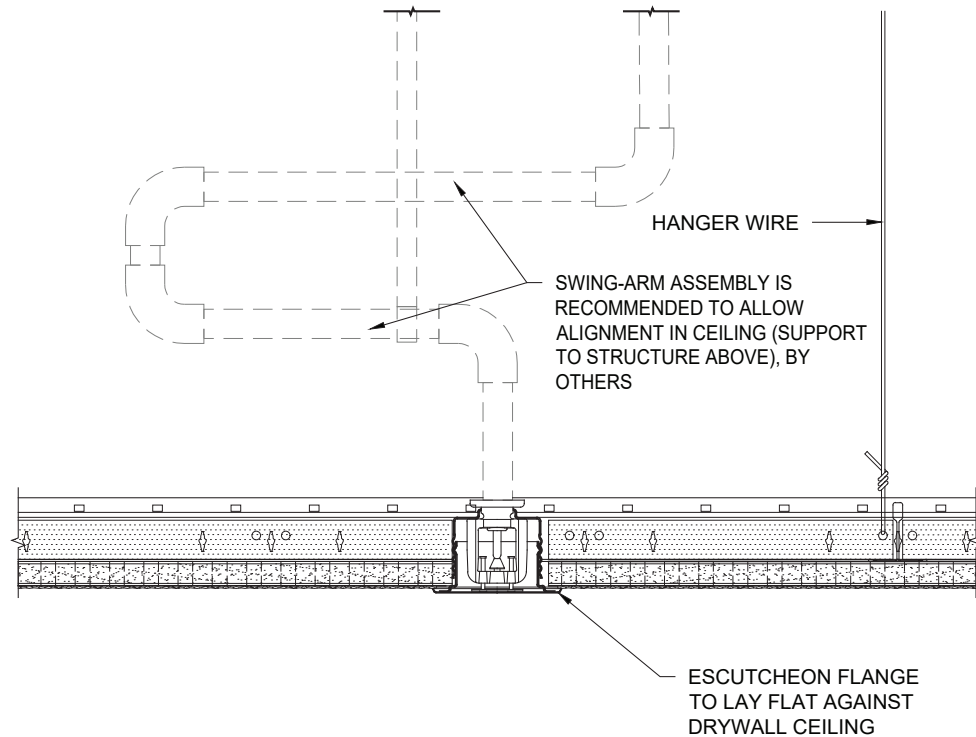


DETAILS

USG ENSEMBLE® - SUSPENDED SYSTEM

13. SPRINKLER HEAD INTEGRATION

Sprinkler heads integrate with USG Ensemble® ceiling system the same way as with a suspended drywall T-Bar grid system.



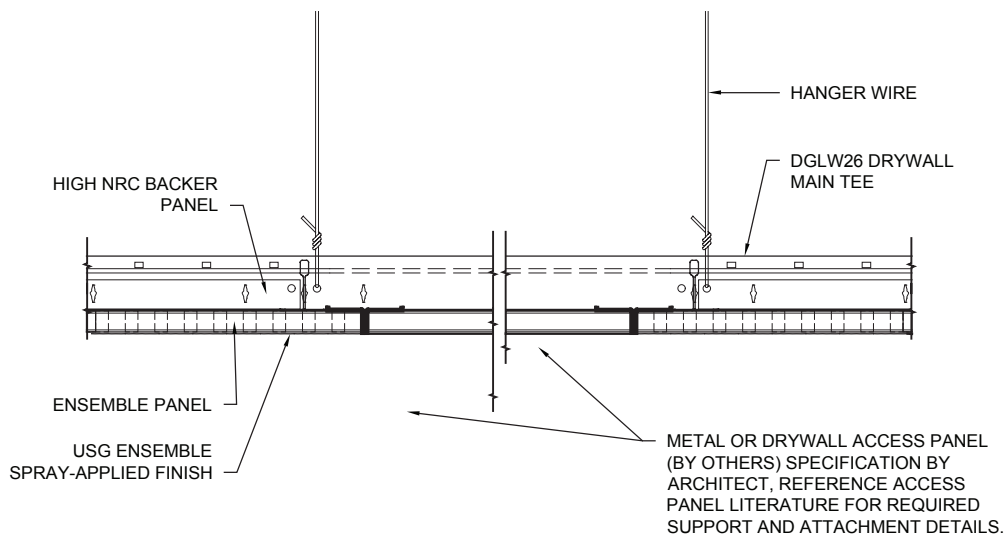
DETAILS

USG ENSEMBLE® - SUSPENDED SYSTEM

14. ACCESS PANEL INTEGRATION

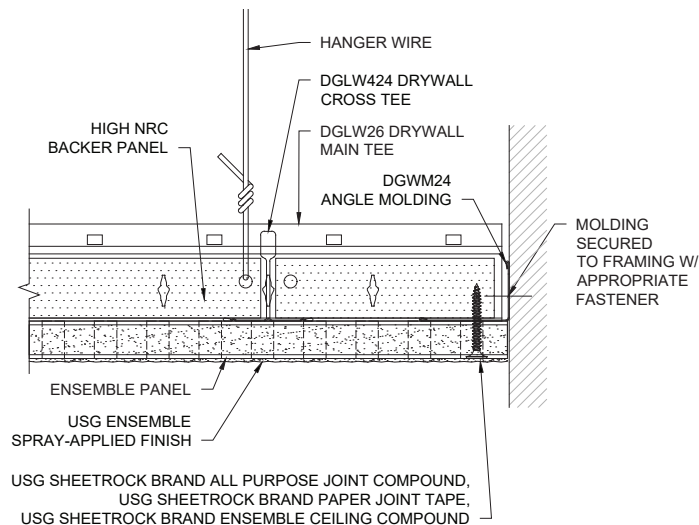
Access panels can be installed in USG Ensemble® wherever plenum access is needed. Most access panels will work and can be coated directly with the USG Ensemble™ Spray-Applied Finish. The best type of access panel for USG Ensemble® meets the following criteria:

1. Has a primed or low-sheen painted finish.
2. Is white in color or is primed or painted white on site before coating.
3. Latch and key access panels work well for reducing damage when opening/closing.



15. CEILING TO PARTITION INTERFACE WITH FINISHED CORNER AT PERIMETER

One method of finishing the USG Ensemble® ceiling is to tape the intersection of wall and ceiling with USG Sheetrock® Brand Paper Joint Tape embedded in USG All Purpose Joint Compound and finished with USG Sheetrock® Brand Ensemble™ Ceiling Compound

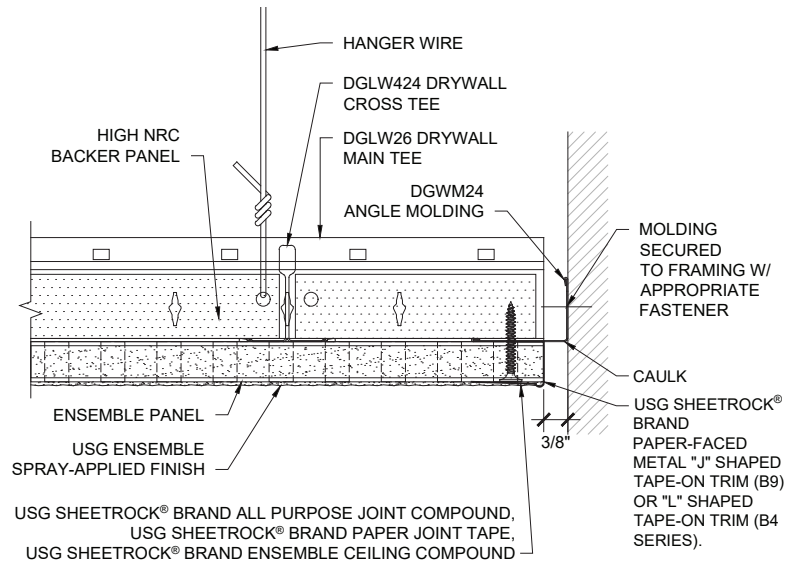


DETAILS

USG ENSEMBLE® - SUSPENDED SYSTEM

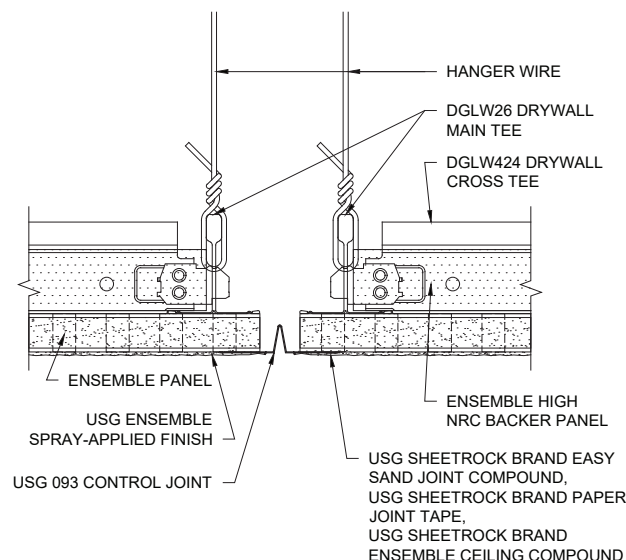
15A. ALTERNATE CEILING TO PARTITION INTERFACE WITH REVEAL PERIMETER

Another method of detailing the USG Ensemble® ceiling is to create a reveal at the perimeter by using a drywall L-trim or J-stop. By providing this “perimeter relief” detail, the need for control joints is reduced. Control joints would be needed every 50 linear feet or every 2,500 square feet.



16. TYPICAL CONTROL JOINT

Control joint requirements for USG Ensemble® are the same as for drywall ceilings: Every 30 linear feet or every 900 square feet without perimeter relief. With perimeter relief, every 50 linear feet or every 2,500 square feet.

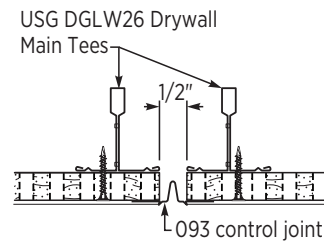


DETAILS

USG ENSEMBLE® - SUSPENDED SYSTEM

16A. ALTERNATE SECTION—CONTROL JOINTS

Ideally, control joints should include a break in the framing. Here, DGLW-26 main tees run parallel with a small separation to fit the control joint. Control joint requirements for USG Ensemble® are the same as for drywall ceilings: Every 30 linear feet or every 900 square feet without perimeter relief. With perimeter relief, every 50 linear feet or every 2,500 square feet.

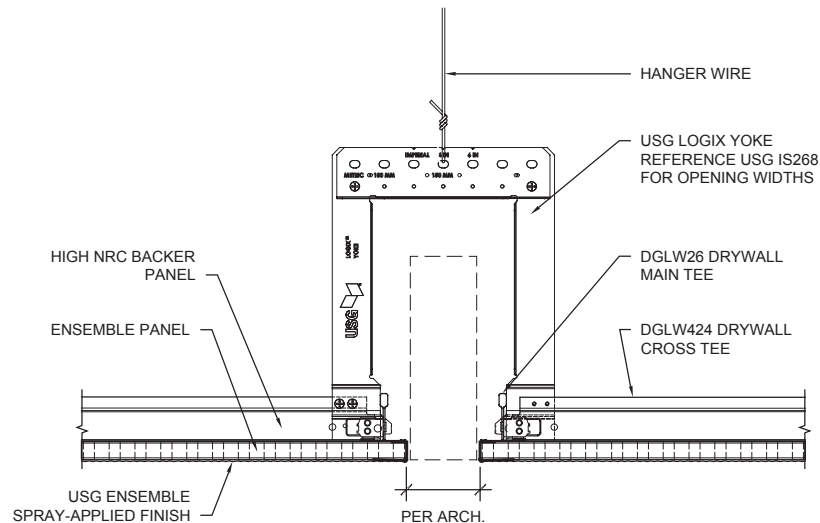


Special Note: Location of control and expansion joints are the responsibility of the design professional. USG gypsum panel surfaces should be isolated with control joints, caulk or other means where:

- Ceiling or soffit abuts a structural element, column, partition or other vertical penetration.
- Construction changes within a plane of the ceiling.
- Ceiling dimensions exceed 50' in either direction (2,500 sq. ft.) with perimeter relief or 30' (900 sq. ft.) without relief.
- Soffit exceeds 30' in either direction.
- Wings of "L", "U" and "T" shaped ceilings areas are joined.

17. LINEAR OPENING USING USG LOGIX™ YOKE

Linear lights and diffusers can also be installed in a USG Ensemble® ceiling. A USG Logix™ Yoke can be used to interrupt and support the framing and to accommodate the linear fixtures (by others).

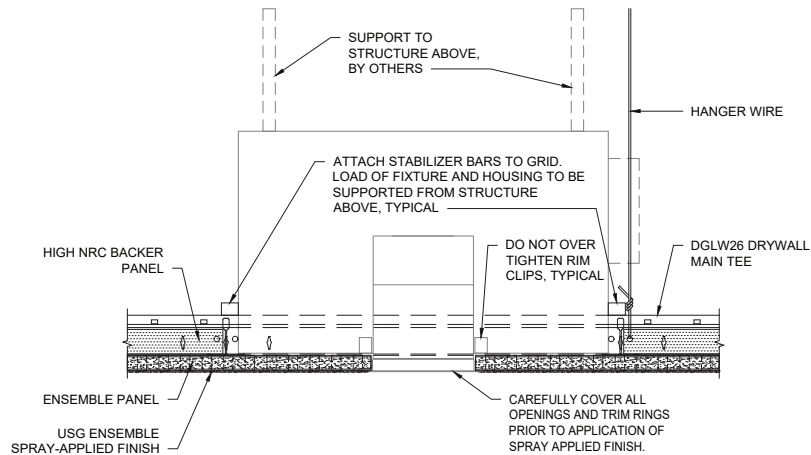


DETAILS

USG ENSEMBLE® - SUSPENDED SYSTEM

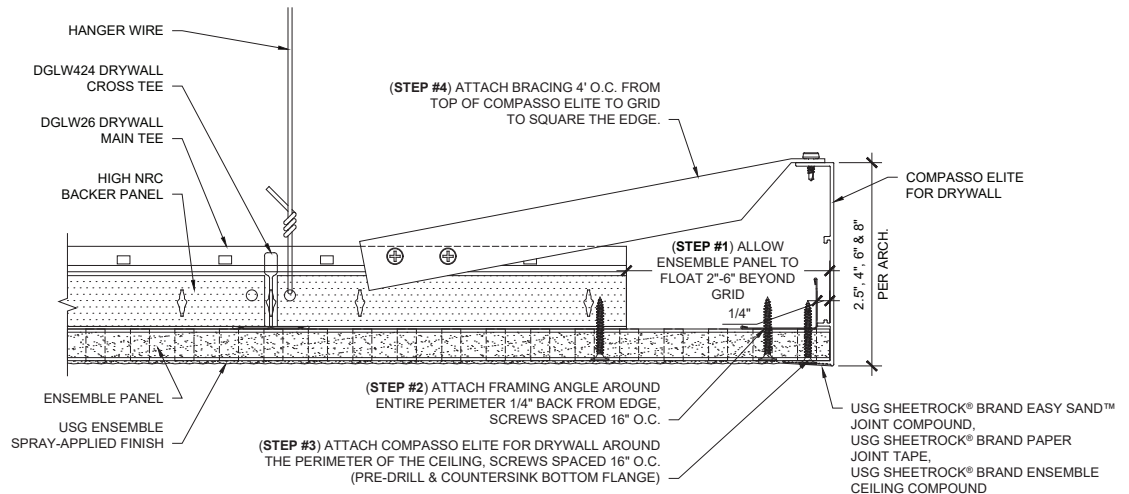
18. RECESSED DOWN LIGHT AT INTEGRATION

Point light fixtures can integrate easily with USG Ensemble®. Either trimless or trimmed fixtures will work.



19. PERIMETER EDGE TERMINATION USING USG COMPÄSSO™ ELITE FOR DRYWALL

USG Compäso™ Elite drywall trim can be used for USG Ensemble® “floating islands” and “peninsulas” for a clean, finished edge detail. The bottom flange is designed to be covered with joint compound for a seamless edge. The face of the trim can be coated at job site with the USG Ensemble™ Spray-Applied Finish or left factory-painted white.

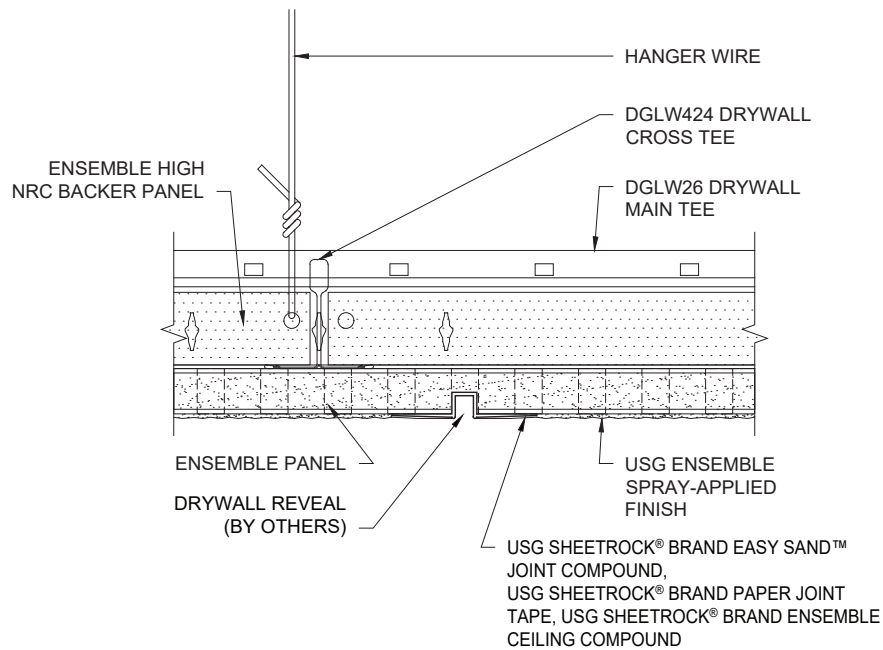


DETAILS

USG ENSEMBLE® - SUSPENDED SYSTEM

20. TYPICAL REVEAL TRIM INSTALLATION

Reveal trims can easily be integrated with USG Ensemble® to create a unique aesthetic.

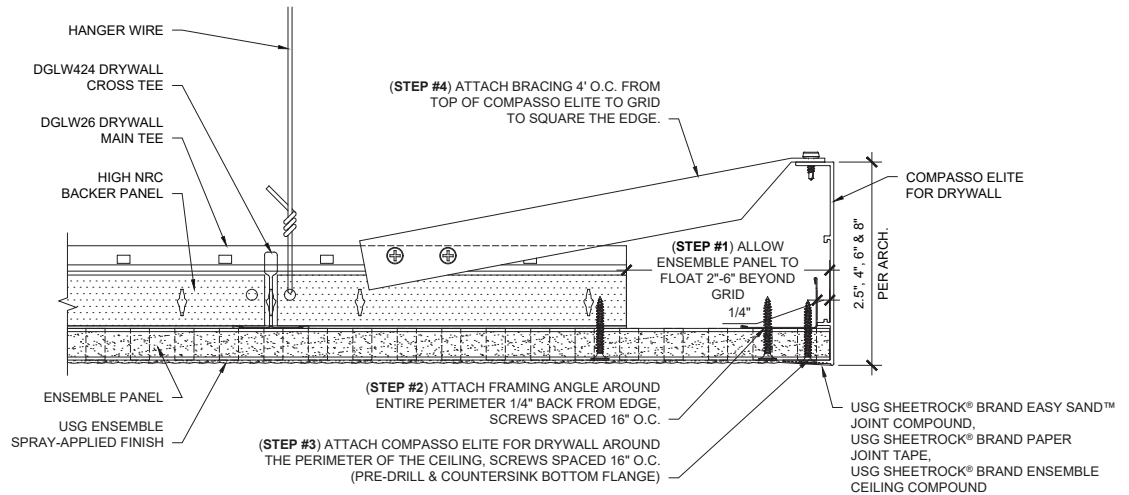


DETAILS

USG ENSEMBLE® - SUSPENDED SYSTEM

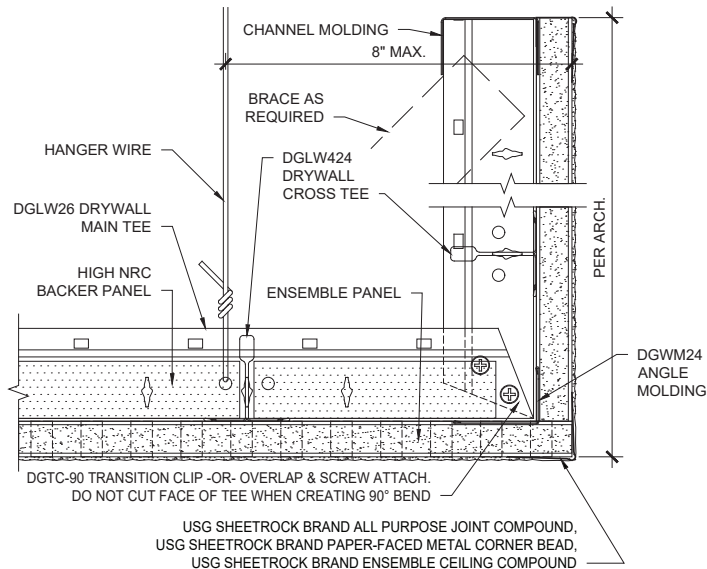
21. PERIMETER EDGE TERMINATION USING USG COMPÄSSO™ ELITE FOR DRYWALL

USG Compässon™ Elite drywall trim attaches both parallel and perpendicular to drywall tees.



21A. ALTERNATE PERIMETER EDGE TERMINATION USING GYPSUM PANELS

In lieu of USG Compässon™ Elite Drywall Trims, a field-fabricated gypsum panel edge can be used to finish edges of "floating" or "island" ceilings.

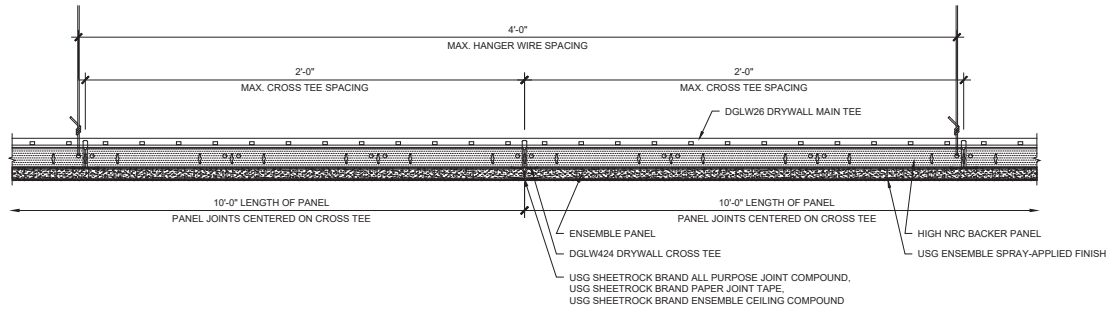


DETAILS

USG ENSEMBLE® - SUSPENDED SYSTEM

22. USG ENSEMBLE® TYPICAL FRAMING DETAIL—USG DRYWALL T-BAR

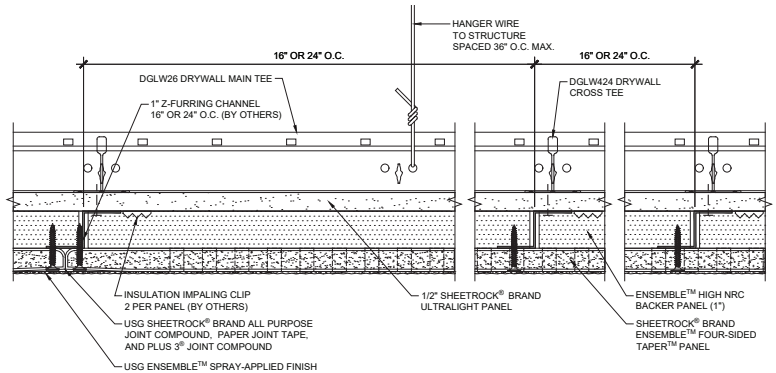
The USG Ensemble® Suspended Drywall T-Bar Framing system utilizes 12-gauge hanger wires at 48" o.c. max., USG DGLW-26 Drywall Main Tees at 48" o.c., and USG DGLW-424 Drywall Cross Tees at 24" o.c.



USG ENSEMBLE® - DIRECT MOUNT RETURN AIR PLENUM

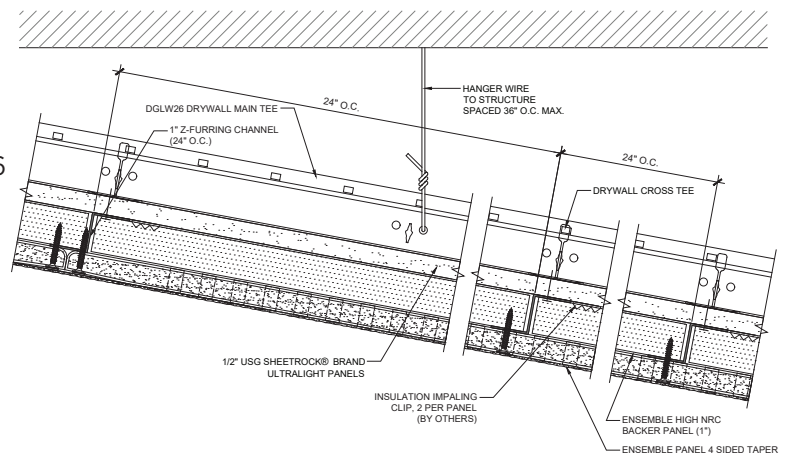
23. USG ENSEMBLE® TYPICAL FRAMING DETAIL FOR RETURN AIR PLENUM - USG DRYWALL SUSPENSION (FLAT)

The USG Ensemble® Direct Mount Suspended Drywall T-Bar Framing system utilizes 12-gauge hanger wires at 36" o.c. max., USG DGLW-26 Main Tees at 48" o.c., and USG DGL-424 Drywall Cross Tees at 24" o.c. The added layer of 1/2" USG Sheetrock® Brand UltraLight Panels are tapped in to create an air barrier between the plenum and Ensemble® ceiling, making it a suitable option for a return air plenum ceiling design.



24. USG ENSEMBLE® TYPICAL FRAMING DETAIL FOR RETURN AIR PLENUM - USG DRYWALL SUSPENSION (SLOPE)

The USG Ensemble® Direct Mount Suspended Drywall T-Bar Framing system can be installed on a slope, which utilizes 12-gauge hanger wires at 36" o.c. max., USG DGLW-26 Main Tees at 48" o.c., and USG DGL-424 Drywall Cross Tees at 24" o.c. The added layer of 1/2" USG Sheetrock® Brand UltraLight Panels are tapped in to create an air barrier between the plenum and Ensemble® ceiling, making it a suitable option for a return air plenum ceiling design.

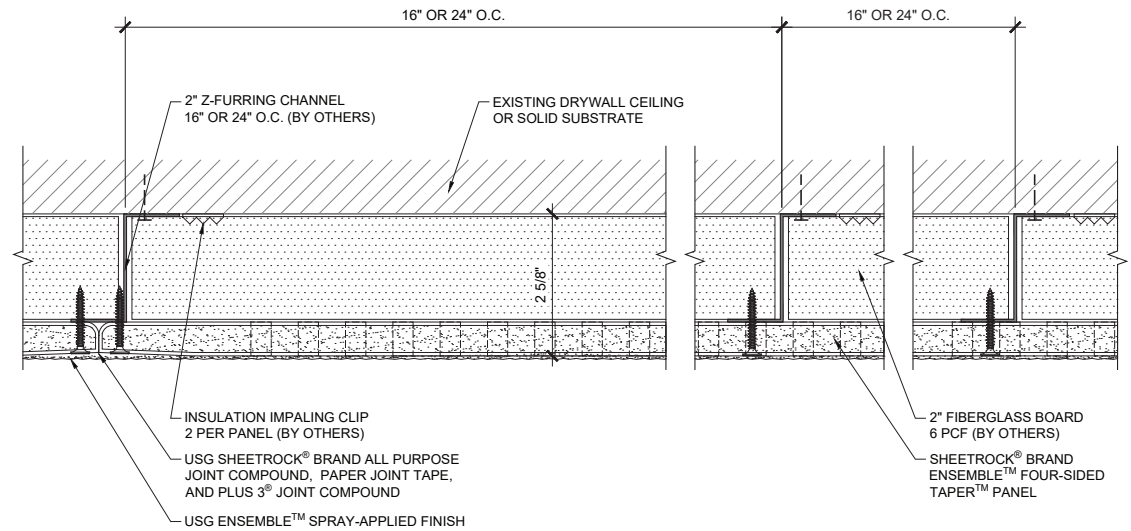


DETAILS

USG ENSEMBLE® - DIRECT MOUNT SYSTEM

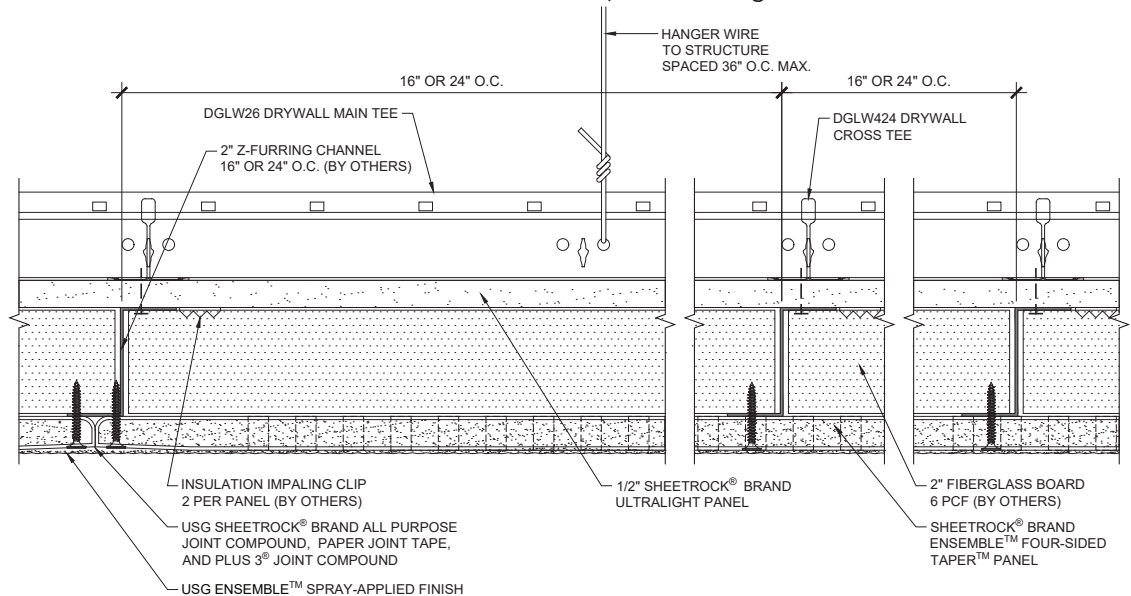
25. USG ENSEMBLE® TYPICAL FRAMING DETAIL FOR DIRECT MOUNT W/ 2" Z-FURRING

USG Ensemble® - Direct Mount w/ 2" Z-Furring.



26. USG ENSEMBLE® TYPICAL FRAMING DETAIL FOR RETURN AIR PLENUM - USG DRYWALL SUSPENSION W/ DIRECT MOUNT 2" Z-FURRING

USG Ensemble® - Direct Mount Return Air Plenum w/ 2" Z-Furring.

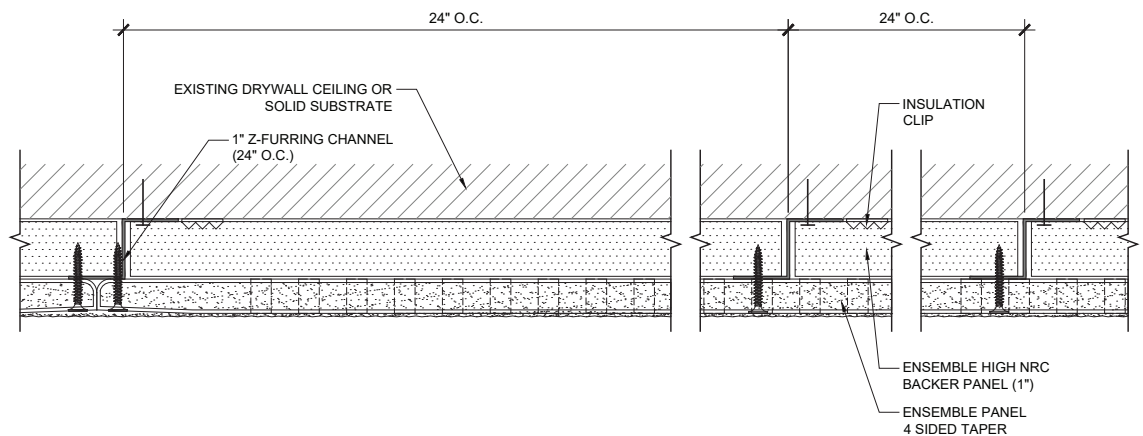


DETAILS

USG ENSEMBLE® - DIRECT MOUNT SYSTEM

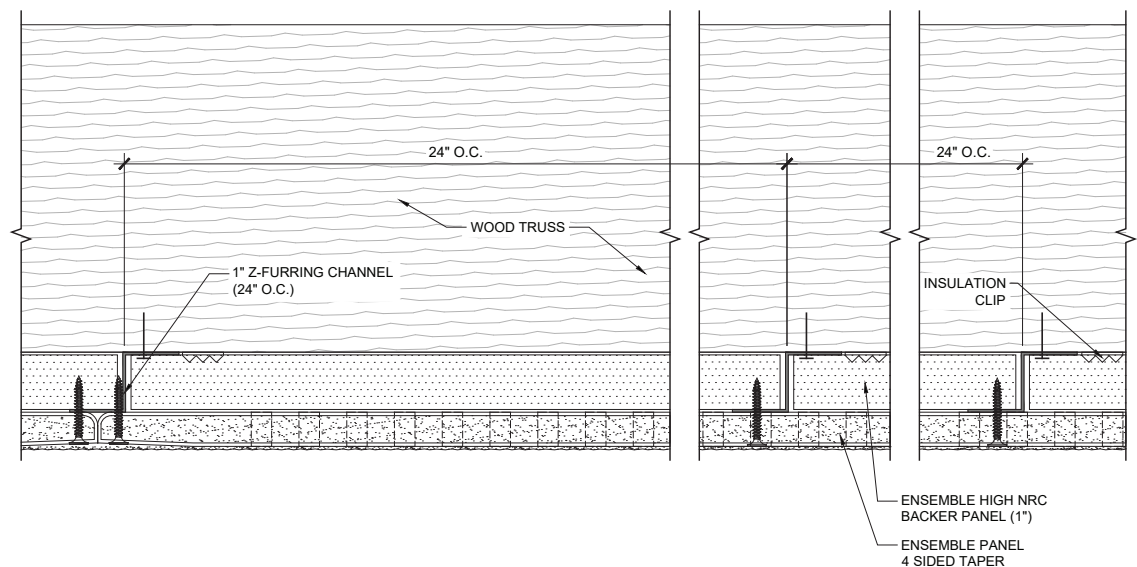
27. USG ENSEMBLE® DIRECT MOUNT TO EXISTING CEILING OR STORAGE

For low-clearance applications, or attaching directly to an existing ceiling substrate or for overhead structure, USG Ensemble® Acoustical Drywall Ceiling can be directly mounted using 1" deep Z-Furring. Various depth Z-Furring can also be used to allow more room for junction boxes or utilities.



28. USG ENSEMBLE® DIRECT MOUNT TO WOOD STRUCTURE OR FRAMING

USG Ensemble® - Direct Mount System can be attached directly to the underside of wooden floor or roof joists or other wood framing or structures (not shown).

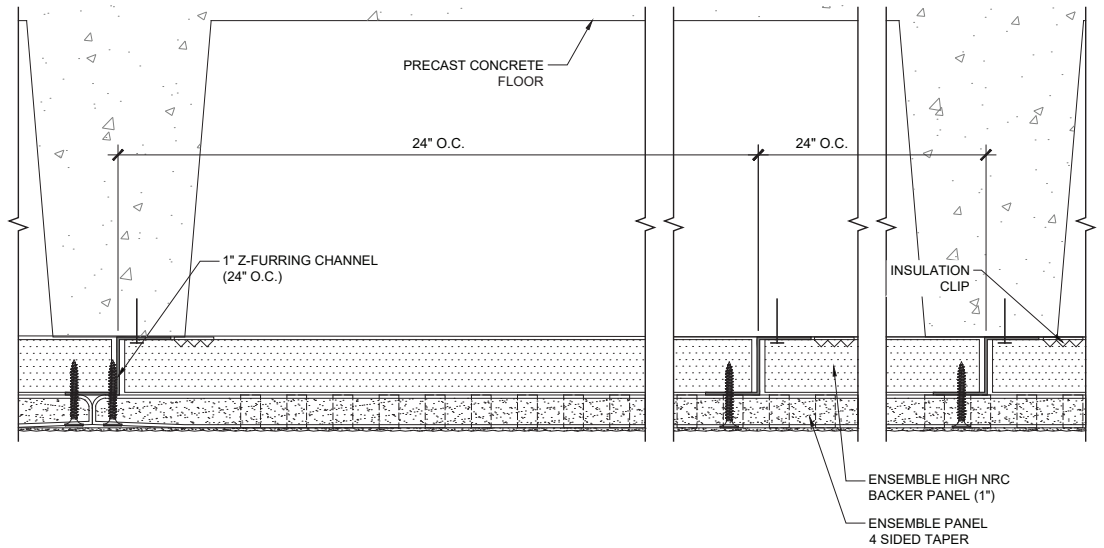


DETAILS

USG ENSEMBLE® - DIRECT MOUNT SYSTEM

29. USG ENSEMBLE® DIRECT MOUNT TO PRECAST CONCRETE

USG Ensemble® - Direct Mount System can also be attached directly to concrete, masonry or even concrete coffers.

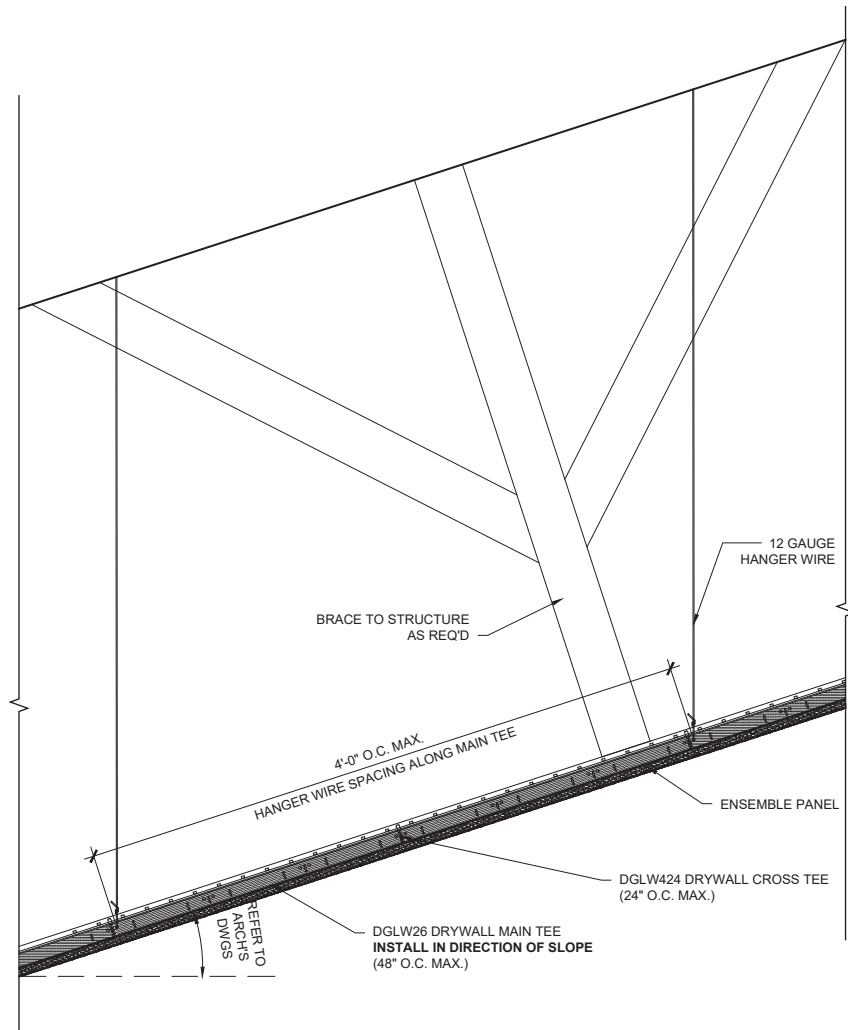


DETAILS

USG ENSEMBLE® - DIRECT MOUNT SYSTEM

30. USG ENSEMBLE® HORIZONTAL DIRECT MOUNT TO SLOPED DRYWALL T-BAR GRID

USG Ensemble® - Direct Mount System can also be used to frame a sloped ceiling. It can be attached directly to a USG suspended drywall T-Bar system (as shown below) or to sloped light-gauge metal framing (not shown).

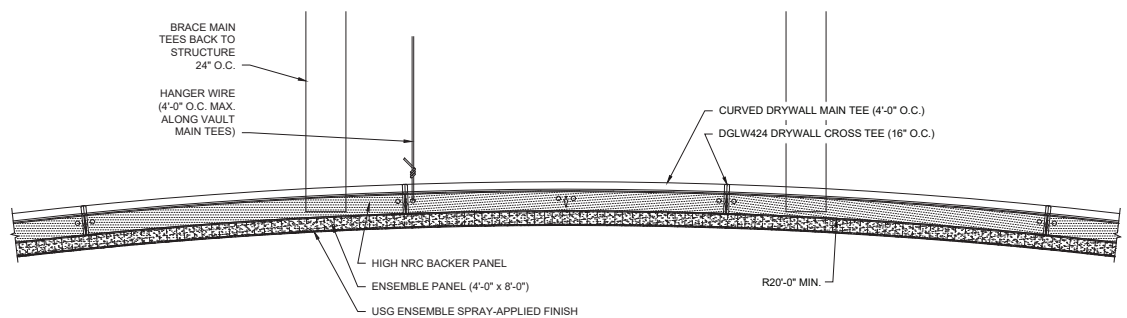


DETAILS

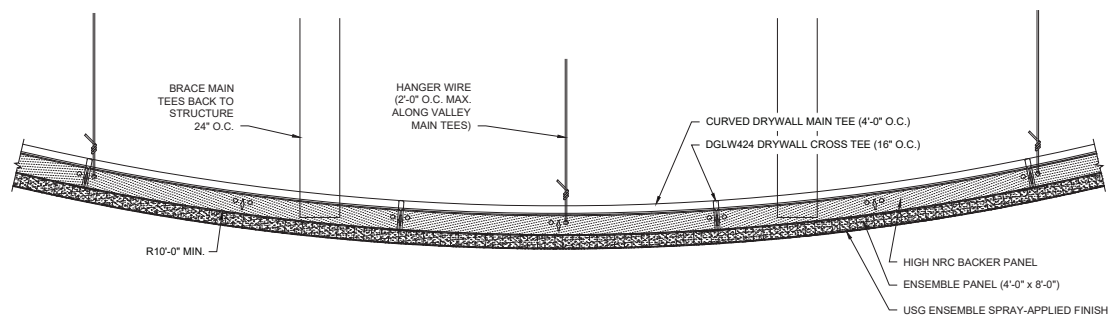
USG ENSEMBLE® - CURVED APPLICATIONS (VAULT/ VALLEY)

31. USG ENSEMBLE® TYPICAL FRAMING DETAIL FOR CURVED CEILING (VAULT 20' MINIMUM RADIUS)

The USG Ensemble® Curved System uses pre-engineered, factory curved drywall main tees for consistent, uniform radii. The Main Tees are spaced 48" o.c. and can be spliced together with DGSP180 clips, and the Cross Tees are spaced 16" o.c. The Ceiling system is supported by 12-gauge hanger wires spaced 48" o.c. max. and hard bracing every 24" o.c. The 10'x4' Ensemble panels can be field curved to a minimum radius of 20' vault and 10' valley. (If the length of the curve is exceeds 20', an additional cross tee will be required to support the butt joint on every other panel.)



32. USG ENSEMBLE® TYPICAL FRAMING DETAIL FOR CURVED CEILING (VALLEY 10' MINIMUM RADIUS)

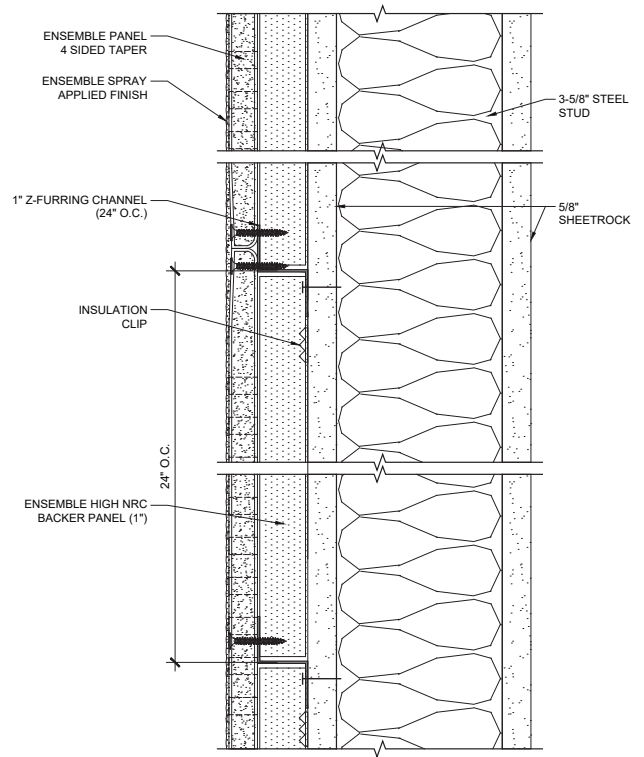


DETAILS

USG ENSEMBLE® - DIRECT MOUNT SYSTEM

33. USG ENSEMBLE® DIRECT MOUNT TO INTERIOR STUD AND DRYWALL PARTITION

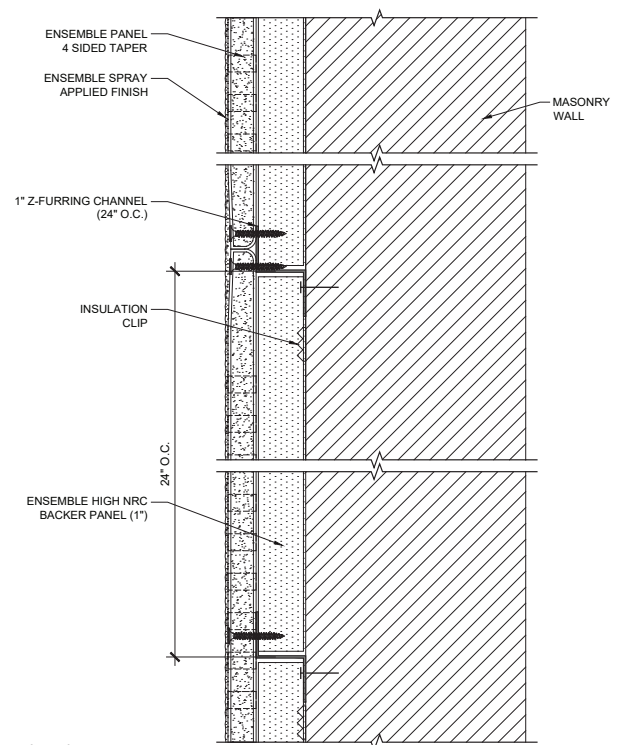
USG Ensemble® - Direct Mount System can be direct mounted to a vertical surface and used as an acoustical treatment on interior partitions above seven feet. It can be attached directly to a new or existing wood stud drywall partition to reduce reverberation.



Note: Install above 7' to avoid contact or damage.

34. USG ENSEMBLE® DIRECT MOUNT TO INTERIOR MASONRY PARTITION

USG Ensemble® can also be directly mounted to a vertical surface and used as an acoustical treatment on interior partitions above seven feet. It can be attached directly to a new or existing masonry partition to reduce reverberation.



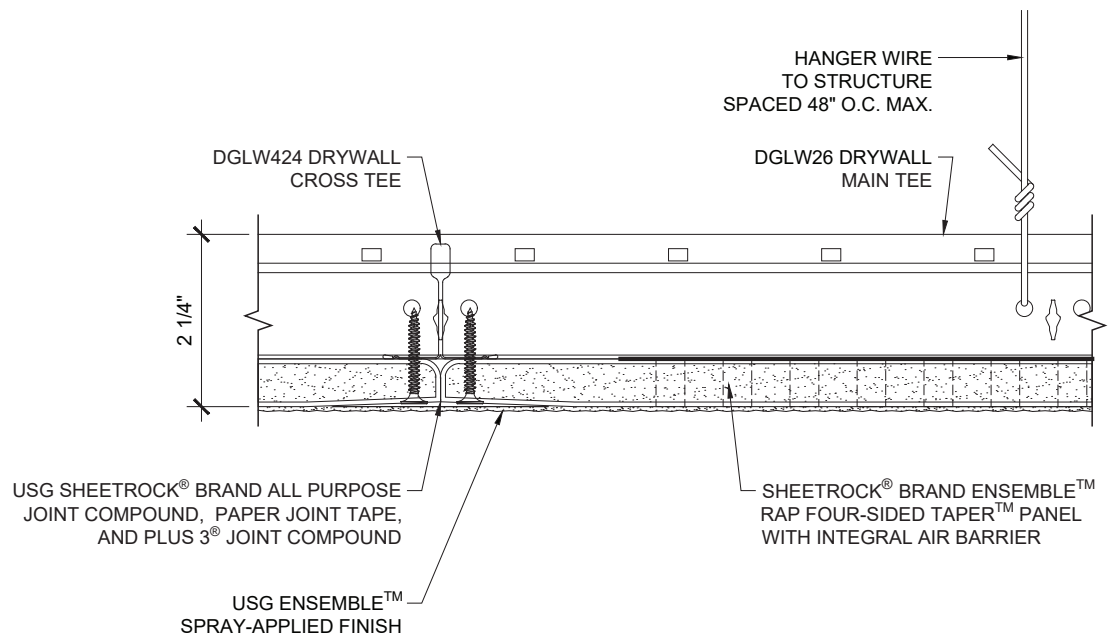
Note: Install above 7' to avoid contact or damage.

DETAILS

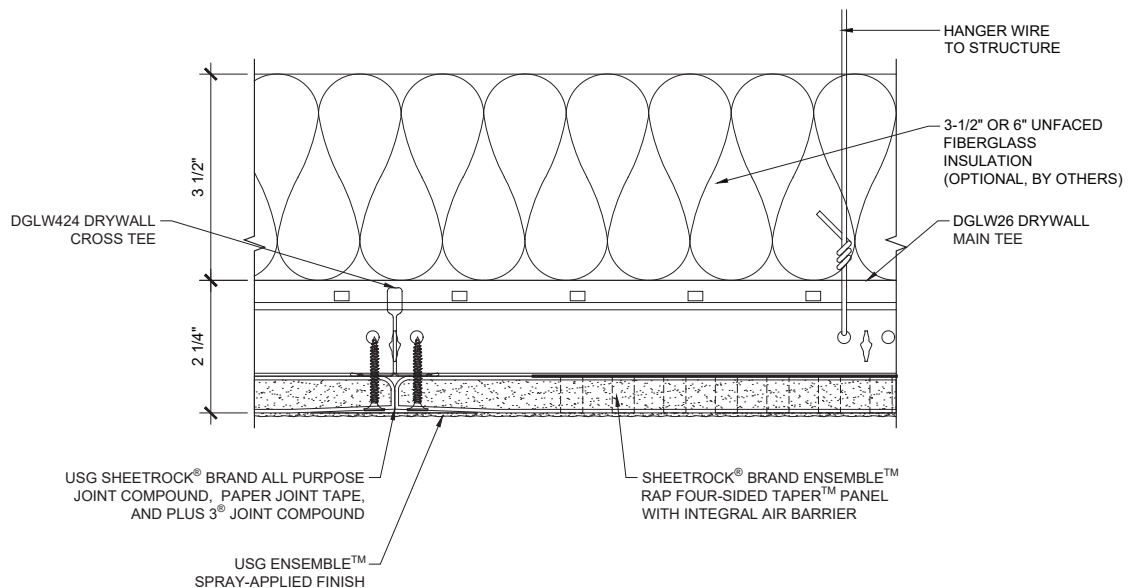
USG ENSEMBLE® RAP - SUSPENDED SYSTEM

35. USG ENSEMBLE® RAP TYPICAL FRAMING DETAIL – USG DRYWALL SUSPENSION

USG Ensemble® RAP - Designed for use in Return Air Plenum applications.



36. USG ENSEMBLE® RAP TYPICAL FRAMING DETAIL – USG DRYWALL SUSPENSION AND INSULATION

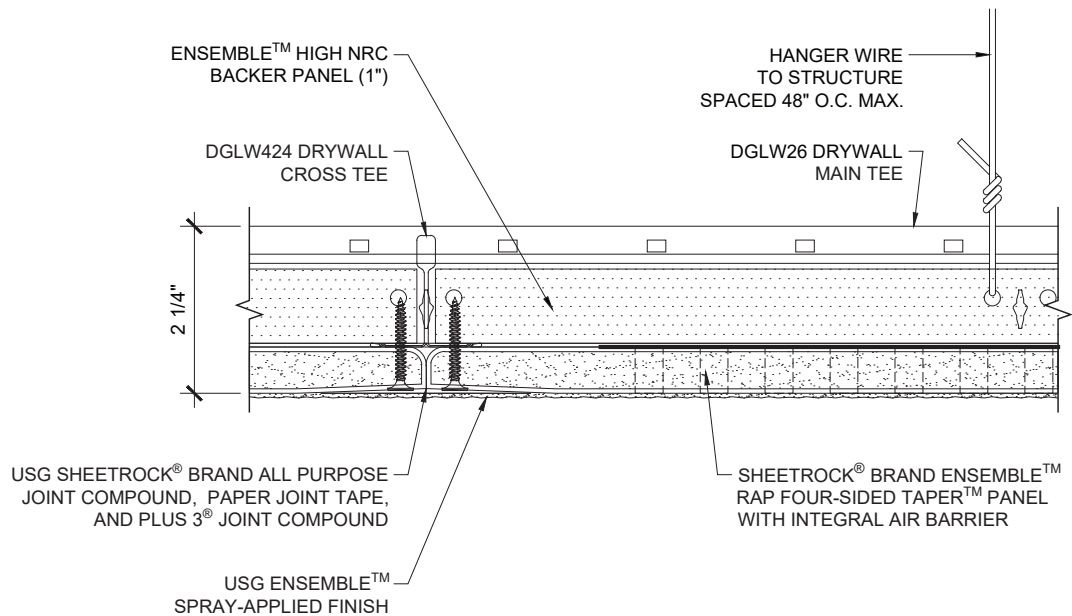


DETAILS

USG ENSEMBLE® RAP - SUSPENDED SYSTEM

37. USG ENSEMBLE® RAP TYPICAL FRAMING DETAIL - USG DRYWALL SUSPENSION AND BACKER PANEL

USG Ensemble® RAP - Designed for use in Return Air Plenum applications.



COLOR PROGRAM

HOW THE PROGRAM WORKS:

The USG Ensemble® Acoustical Drywall Ceiling and Wall systems are available in white and by custom color matching through the following companies:

- Benjamin Moore®
- Sherwin Williams®
- PANTONE®

1. Request customer color samples through your local USG Ensemble® sales representative.
2. Allow three weeks to receive customer color sample.
3. Once the color sample is approved and order placed by purchaser, allow three weeks for the custom-colored USG Ensemble™ Spray-Applied Finish ship with the USG Ensemble® acoustical drywall order.
4. The USG Ensemble™ Spray-Applied Finish is similar to flat finish paint in sheen. Different sheens are not offered at this time.
5. Certain very deep tone colors or certain very bright colors may not be possible to match. USG will be able to determine at the time of custom-color sample request.

** The trademark BENJAMIN MOORE is a registered trademark of Benjamin Moore & Co.
The trademark SHERWIN-WILLIAMS is a registered trademark of the The Sherwin-Williams Company.
The trademark PANTONE is the property of Pantone LLC.



USG Ensemble® Acoustical Drywall Ceiling in custom color, Crown Block at the Reunion Tower
Architect: Beck Group, Photo: © Wade Griffith

NOTES

PRODUCT INFORMATION

For the most up-to-date technical information,
visit usgdesignstudio.com or cgcdesignstudio.com

CUSTOMER SERVICE

USG: 800 950-3839

CGC: 800 387-2690

TECHNICAL SERVICE

800 USG.4YOU (874-4968)

WEBSITES

usg.com

cgcinc.com

usgdesignstudio.com

cgcdesignstudio.com

SAMPLES/LITERATURE/FAX

USG: 866 528-7089

CGC: Contact Local Sales Rep

NOTE

Products described here may not be available in all geographic markets. Consult your USG/CGC Company sales office or representative for information.

NOTICE

We shall not be liable for incidental and consequential damages, directly or indirectly sustained, nor for any loss caused by application of these goods not in accordance with current printed instructions or for other than the intended use. Our liability is expressly limited to replacement of defective goods. Any claim shall be deemed waived unless made in writing to us within thirty (30) days from date it was or reasonably should have been discovered.

SAFETY FIRST!

Follow good safety and industrial hygiene practices during handling and installation of all products and systems. Take necessary precautions and wear the appropriate personal protective equipment as needed. Read Safety Data Sheets and related literature on products before specification and/or installation.

Phoenix Suns Mercury Lounge

Architect: SmithGroup

Photo: © Kevin Brost, LLC

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