

# ARCHITECTURAL MATERIAL SALIENT CHARACTERISTICS

ITEM	QUANTITY	UNIT	ITEM DESCRIPTION
			<b>METAL STUDS/TRACK/SLIP TRACK (see Section 09 22 16 Non-Structural Metal Framing on page 3 &amp; 4 for specifications)</b>
1	100	LF	4" STUD 162 33MIL G90
2	100	LF	4" STUD 162 43MIL G90
3	100	LF	4" STUD 162 54MIL G90
4	100	LF	4" TRACK 150 33MIL G90
5	100	LF	4" TRACK 150 43MIL G90
6	100	LF	4" TRACK 150 54MIL G90
7	100	LF	4" SLOTTED TRACK 250 33MIL G90
8	100	LF	4" SLOTTED TRACK 250 43MIL G90
9	100	LF	4" SLOTTED TRACK 250 54MIL G90
10	100	LF	6" STUD 162 33MIL G90
11	100	LF	6" STUD 162 43MIL G90
12	100	LF	6" STUD 162 54MIL G90
13	100	LF	6" TRACK 150 33MIL G90
14	100	LF	6" TRACK 150 43MIL G90
15	100	LF	6" TRACK 150 54MIL G90
16	100	LF	6" SLOTTED TRACK 250 33MIL G90
17	100	LF	6" SLOTTED TRACK 250 43MIL G90
18	100	LF	6" SLOTTED TRACK 250 54MIL G90
			<b>FURRING (see Section 09 22 16 Non-Structural Metal Framing on page 3 &amp; 4 for specifications)</b>
19	100	LF	7/8" FURRING 125 33MIL G90
20	100	LF	7/8" FURRING 125 43MIL G90
21	100	LF	7/8" FURRING 125 54MIL G90
22	100	LF	1 1/2" FURRING 125 33MIL G90
23	100	LF	1 1/2" FURRING 125 43MIL G90
			<b>FLAT STOCK (see Section 09 22 16 Non-Structural Metal Framing on page 3 &amp; 4 for specifications)</b>
24	100	LF	2" FLAT STOCK 33MIL G90
25	100	LF	2" FLAT STOCK 43MIL G90
26	100	LF	2" FLAT STOCK 54MIL G90
27	100	LF	3" FLAT STOCK 33MIL G90
28	100	LF	3" FLAT STOCK 43MIL G90
29	100	LF	3" FLAT STOCK 54MIL G90
30	100	LF	6" FLAT STOCK 33MIL G90
31	100	LF	6" FLAT STOCK 43MIL G90
32	100	LF	6" FLAT STOCK 54MIL G90
			<b>SPECIALTY (see Section 09 22 16 Non-Structural Metal Framing on page 3 &amp; 4 for specifications)</b>
33	100	LF	4" IS SHAFTWALL 33MIL G90
34	100	LF	4" IS SHAFTWALL 43MIL G90
35	100	LF	6" IS SHAFTWALL 33MIL G90
36	100	LF	6" IS SHAFTWALL 43MIL G90
37	100	LF	1/2" SERENITY RESILIENT CHANNEL
38	100	LF	RC-1 1/2" RESILIENT CHANNEL
39	1	EA	RADIUS TRACK 4" X 1-1/4" X 10' - 20 GA.
40	1	EA	RADIUS TRACK 6" X 1-1/4" X 10' - 20 GA.
41	100	LF	4" HD HEADER ASSEMBLY 54 MIL G90
42	100	LF	6" HD HEADER ASSEMBLY 54 MIL G90
43	100	LF	1 1/2" COLD ROLL CH 050 54MIL G60
44	1	EA	3 3/8" Bridging & Bracing Clip 33 mil
45	1	EA	5 3/4" Bridging & Bracing Clip 54 mil
46	1	EA	5 1/2" BYPASS SLAB SLIDE CLIP 68MIL W/SCREWS (35/BKT)
47	1	EA	3 1/2" BYPASS SLAB SLIDE CLIP 68MIL W/SCREWS (35/BKT)
			<b>DRYWALL (see Section 09 29 00 Gypsum Board on page 5 &amp; 6 for specifications)</b>
48	1,536	SF	5/8" X 4' X 8' GYPSUM, TYPE X
49	1,920	SF	5/8" X 4' X 10' GYPSUM, TYPE X
50	2,304	SF	5/8" X 4' X 12' GYPSUM, TYPE X
51	1,600	SF	5/8" x 4' x 8' QRES Type X (EZ-SNAP QuiteRock)
52	1,600	SF	5/8" x 4' x 9' QRES Type X (EZ-SNAP QuiteRock)
53	1,600	SF	5/8" x 4' x 10' QRES Type X (EZ-SNAP QuiteRock)
54	1,024	SF	5/8" X 4' X 8' CEMENT BOARD
55	48	PALLET	USG ALL-PURPOSE 4 GAL BOX
56	64	PALLET	USG PLUS 3 ALL-PURPOSE JOINT COMPOUND

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57	48	PALLET	USG TAPING JOINT COMPOUND 3.5 GAL BOX
58	48	PALLET	USG TOPPING JOINT COMPOUND 3.5 GAL BOX
59	120	PALLET	USG EASY SAND 5 MIN
60	120	PALLET	USG EASY SAND 20 MIN
61	120	PALLET	USG EASY SAND 45 MIN
62	850	PALLET	DRYWALL TAPE 500' ROLL
63	100	PALLET	2" X 300' ROLL YELLOW MESH TAPE
64	10	PALLET	10 X 3/4 WAFFER S/D ZINC (5M/BX)
65	50	BOX	90 DEG EVEN LEG XTRA WIDE OUTSIDE CORNER 8'
66	50	BOX	90 DEG EVEN LEG XTRA WIDE OUTSIDE CORNER 10'
67	50	BOX	8' NAIL ON CORNERBEAD
68	50	BOX	10' NAIL ON CORNERBEAD
<b>FASTNERS (see Section 09 22 16 Non-Structural Metal Framing on page 3 &amp; 4 for specifications)</b>			
69	1	EA	#8 X 1/2" ZINC PLATED K-LATH TRUSS SELF DRILLING SCREW 5LB/BOX
70	1	EA	#6 X 1-1/4" SELF-DRILLING DRYWALL SCREW / PHILLIPS / BUGLE HEAD / STEEL / BLACK PHOS / 8,000 PER BOX
71	1	EA	#6 X 1-5/8" SELF-DRILLING DRYWALL SCREW / PHILLIPS / BUGLE HEAD / STEEL / BLACK PHOS / 5,000 PER BOX
72	1	EA	#6 X 1-3/4" SELF-DRILLING DRYWALL SCREW / PHILLIPS / BUGLE HEAD / STEEL / BLACK PHOS / 4,000 PER BOX
73	1	EA	#6 X 2" SELF-DRILLING DRYWALL SCREW / PHILLIPS / BUGLE HEAD / STEEL / BLACK PHOS / 4,000 PER BOX
74	1	EA	#6 X 2-1/4" SELF-DRILLING DRYWALL SCREW / PHILLIPS / BUGLE HEAD / STEEL / BLACK PHOS / 4,000 PER BOX
75	1	EA	#6 X 2-1/2" SELF-DRILLING DRYWALL SCREW / PHILLIPS / BUGLE HEAD / STEEL / BLACK PHOS / 3,000 PER BOX
<b>CEILING SYSTEM (see Ceiling System on page 7 &amp; 8 for specifications)</b>			
76	40	BOX	ARMSTRONG MESA 686 ANGLED REGULAR TILE
77	20	BOX	ARMSTRONG 7301 MAIN BEAMS
78	60	BOX	ARMSTRONG XL7342 AND XL 7328 CROSS TEES
79	30	BOX	ARMSTRONG 7800 ANGLE MOLDING
80	1000	BOX	1/8" ALUMINUM POP RIVETS, WHITE COLOR
81	100	BOX	1/4" X 1-1/2" WEDGE TIE ANCHORS, CARBON STEEL, ZINC PLATED FOR USE IN CONCRETE
82	100	BUNDLE	12 GAUGE STRAIGHT WIRE, ASTM A641, 12' LENGTH
83	200	BOX	Armstrong BERC 2 Retaining Clip (200/BKT)

# ARCHITECTURAL MATERIAL SALIENT CHARACTERISTICS

## SECTION 09 22 16

### Non-Structural Metal Framing

#### APPLICABLE PUBLICATIONS

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation only.
- B. American Society for Testing and Materials (ASTM)
- A641-09.....Zinc-Coated (Galvanized) Carbon Steel Wire
- A653/653M-11.....Specification for Steel Sheet, Zinc Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by Hot-Dip Process.
- C11-10.....Terminology Relating to Gypsum and Related Building Materials and Systems
- C635-07.....Manufacture, Performance, and Testing of Metal Suspension System for Acoustical Tile and Lay-in Panel Ceilings
- C645-09.....Non-Structural Steel Framing Members
- C954-10.....Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Steel Studs from 0.033 in. (0.84 mm) to 0.112 in. (2.84 mm) in Thickness

#### PROTECTIVE COATING

Galvanize steel studs, runners (track), rigid (hat section) furring channels, "Z" shaped furring channels, and resilient furring channels, with coating designation of G90 or equivalent.

#### STEEL STUDS AND RUNNERS (TRACK)

- A. ASTM C645, modified for thickness specified and sizes as shown.
1. Use C 645 steel, 0.75 mm (0.0296-inch) minimum base-metal (30 mil).
  2. Runners same thickness as studs.
  3. Exception: Members that can show certified third party testing with gypsum board in accordance with ICC ES AC86 (Approved May 2012) need not meet the minimum thickness limitation or minimum section properties set forth in ASTM C 645. The submission of an evaluation report is acceptable to show conformance to this requirement. Use C 645 steel, 0.48mm (0.019 inch) minimum base-metal (19 mil).

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- B. Provide not less than two cutouts in web of each stud, approximately 300 mm (12 inches) from each end, and intermediate cutouts on approximately 600 mm (24-inch) centers.
- C. Studs 3600 mm (12 feet) or less in length shall be in one piece.

## **FURRING CHANNELS**

- A. Rigid furring channels (hat shape): ASTM C645.
- B. Resilient furring channels:
  - 1. Not less than 0.45 mm (0.0179-inch) thick bare metal.
  - 2. Semi-hat shape, only one flange for anchorage with channel web leg slotted on anchorage side, channel web leg on other side stiffens fastener surface but shall not contact anchorage surface other channel leg is attached to.
- C. "Z" Furring Channels:
  - 1. Not less than 0.45 mm (0.0179-inch) -thick base metal, with 32 mm (1-1/4 inch) and 19 mm (3/4-inch) flanges.
  - 2. Web furring depth to suit thickness of insulation.
- D. Rolled Steel Channels: ASTM C754, cold rolled; or, ASTM C841, cold rolled.

## **FASTENERS, CLIPS, AND OTHER METAL ACCESSORIES**

- A. ASTM C754, except as otherwise specified.
- B. Fasteners for steel studs thicker than 0.84 mm (0.033-inch) thick. Use ASTM C954 steel drill screws of size and type recommended by the manufacturer of the material being fastened.
- C. Clips: ASTM C841 (paragraph 6.11), manufacturer's standard items. Clips used in lieu of tie wire shall have holding power equivalent to that provided by the tie wire for the specific application.
- D. Concrete ceiling hanger inserts (anchorage for hanger wire and hanger straps): Steel, zinc-coated (galvanized), manufacturers standard items, designed to support twice the hanger loads imposed and the type of hanger used.
- E. Tie Wire and Hanger Wire:
  - 1. ASTM A641, soft temper, Class 1 coating.
  - 2. Gage (diameter) as specified in ASTM C754 or ASTM C841.
- F. Attachments for Wall Furring:
  - 1. Manufacturers standard items fabricated from zinc-coated (galvanized) steel sheet.

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## SECTION 09 29 00 GYPSUM BOARD

### APPLICABLE PUBLICATIONS

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation only.
- B. American Society for Testing and Materials (ASTM):
- C11-08.....Terminology Relating to Gypsum and Related Building Materials and Systems
  - C475-02.....Joint Compound and Joint Tape for Finishing Gypsum Board
  - C954-07.....Steel Drill Screws for the Application of Gypsum Board or Metal Plaster Bases to Steel Stud from 0.033 in. (0.84mm) to 0.112 in. (2.84mm) in thickness
  - C1002-07.....Steel Self-Piercing Tapping Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs
  - C1047-05.....Accessories for Gypsum Wallboard and Gypsum Veneer Base
  - C1396-06.....Gypsum Board
  - E84-08.....Surface Burning Characteristics of Building Materials
- C. Underwriters Laboratories Inc. (UL):
- Latest Edition.....Fire Resistance Directory
- D. Inchcape Testing Services (ITS):
- Latest Editions.....Certification Listings

### GYPSUM BOARD

- A. Gypsum Board: ASTM C1396, Type X, 16 mm (5/8 inch) thick unless shown otherwise. Shall contain a minimum of 20 percent recycled gypsum.
- B. Coreboard or Shaft Wall Liner Panels.
1. ASTM C1396, Type X.
  2. ASTM C1658: Glass Mat Gypsum Panels,
  3. Coreboard for shaft walls 300, 400, 600 mm (12, 16, or 24 inches) wide by required lengths 25 mm (one inch) thick with paper faces treated to resist moisture.

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- C. Water Resistant Gypsum Backing Board: ASTM C620, Type X, 16 mm (5/8 inch) thick.
- D. Gypsum cores shall contain maximum percentage of postindustrial recycled gypsum content available in the area (a minimum of 95 percent postindustrial recycled gypsum content). Paper facings shall contain 100 percent post-consumer recycled paper content.

## **2.2 GYPSUM SHEATHING BOARD**

- A. ASTM C1396, Type X, water-resistant core, 16 mm (5/8 inch) thick.
- B. ASTM C1177, Type X.

## **2.3 ACCESSORIES**

- A. ASTM C1047, except form of 0.39 mm (0.015 inch) thick zinc coated steel sheet or rigid PVC plastic.
- B. Flanges not less than 22 mm (7/8 inch) wide with punch outs or deformations as required to provide compound bond.

## **2.4 FASTENERS**

- A. ASTM C1002 and ASTM C840, except as otherwise specified.
- B. ASTM C954, for steel studs thicker than 0.04 mm (0.33 inch).
- C. Select screws of size and type recommended by the manufacturer of the material being fastened.
- E. Clips: Zinc-coated (galvanized) steel; gypsum board manufacturer's standard items.

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## Product Specifications – Ceiling System

Location: VACCHCS Fresno, CA.

Date: December 12, 2017

Provide ceiling materials to meet specifications and requirements as described below. Required products are Armstrong Mesa 686 Angled Tegular ceiling tile with Armstrong Prelude XL 15/16" Exposed Tee System, using 7301 main beams, XL 7342 and XL 7328 cross tees and Armstrong 7800 angle molding. Provide Simpson Strong Tie TWD25112 wedge tie-wire anchors and other miscellaneous items as described below. All materials shall be as specified **(NO SUBSTITUTES)**, to match existing building standard. Include marked-up product cut sheets for each item with proposal. Submit product samples if requested. The ceiling system will be installed by others at VACCHCS Fresno, CA.

### Commercial ceiling tile to meet the following requirements:

- Armstrong Mesa 686 Angled Tegular Tile
- USDA Bio-preferred product
- Composition – Mineral fiber
- Surface Finish – Factory applied vinyl latex
- Surface Texture - Fine
- Color – White
- Tile size – 24"X 24" X 3/4"
- Edge profile – 15/16" Angled Tegular for interface with 15/16" Exposed Tee
- Light Reflectance (LR) White Panel - ASTM E1477 – Minimum 0.85
- Noise Reduction Coefficient (NRC) ASTM C 423 - Minimum 0.60
- Ceiling Attenuation Class (CAC) ASTM C 1414 - Minimum 40
- Surface burning – Class as per ASTM E 1264.
- Flame Characteristics – spread 25 or under, UL labeled
- Class 'A' Flame Spread – ASTM 84
- Insulation Value – Average R factor at 75 degrees – 1.6 BTU Units

### Commercial main beams to meet the following requirements:

- Armstrong 7301 main beams
- Heavy duty classification – ASTM C635
- Double web construction, web height 1-11/16"
- Grid Face Dimension – 15/16"
- Surface Finish – Baked polyester paint or anodized
- Material – Hot dipped galvanized steel
- Color – White
- Profile – Exposed tee
- End Detail – staked on clip
- Pull out – Cross tees must meet or exceed 330 lbs. in both compression and tension
- Length – 144", routs 6" OC

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## Commercial cross tees to meet the following requirements:

- Armstrong XL7342 and XL 7328 cross tees
- Double web construction, web height 1-1/2" (48" length) with routs 12" OC
- Double web construction, web height 1-3/8" (24" length)
- Grid Face Dimension 15/16"
- Surface Finish – Baked polyester paint or anodized
- Material – Hot dipped galvanized steel
- Color – White
- Profile – Exposed tee
- End Detail – staked on clip
- Pull out – Cross tees must exceed 300 lbs. in both compression and tension

## Commercial angle molding to meet or exceed the following requirements:

- Armstrong 7800 angle molding
- Material – Hot dipped galvanized steel
- Surface Finish – Baked polyester paint or anodized
- Hemmed with prefinished exposed edges
- Color – White
- Flange/Height Dimension – 7/8" x 7/8"
- Length – 144"

## Miscellaneous

- 1/8" aluminum pop rivets – white color
- 1/4" x 1 1/2" wedge tie wire anchors – carbon steel – zinc plated for use in concrete
- 12-gauge steel straight wire- ASTM A641 – 12' length

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