2012 Utility Catalogue



Cable Troughs
Pulling Vaults
Concrete Fencing
and
Other Utility Products





C&M PRECAST
CONCRETE COMPANY

Ph: (830)-367-5988
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110 Cedar Mill
Kerrville, TX 78028

Call today for more info or visit our website at:
www.candmprecast.com

Toll Free:
1-(888)-211-5877



C&M PRECAST
CONCRETE COMPANY



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Introduction

Over 30 years ago C&M Precast Concrete Co. started producing precast concrete products for the Texas hill country. C&M, still family owned and operated, has grown into a well-respected company which now serves all of Texas and surrounding states. Our philosophy, "In all that we do, we'll do it right," has served C&M and our customers well. We are proud to have loyal customers that expect quality products and exceptional service.



C&M Precast Concrete is certified by the National Precast Concrete Association (NPCA), which means our manufacturing plant operates at the highest standards of production and quality control. In addition to our many standard precast concrete products, C&M offers the flexibility to design, engineer, and produce custom precast products to meet your needs and specifications.





Advantages / Specifications

- 5000 psi concrete
- Steel and fiber reinforced
- Customizable to fit your project
- One-Piece design
- Accessible for maintenance and future expansion
- H-20 load rating available

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Ordering Process

This catalogue has most of the products that C & M manufactures for all types of utility pojects . To make requirements for a project more suitable and get more accurate pricing in a quotation, let C & M handle the design of the project.

Contact C & M with the requirements for the project. Send a copy of the plans and time-line. Consider what types of maintenance may be required and the possibility of future expansion.

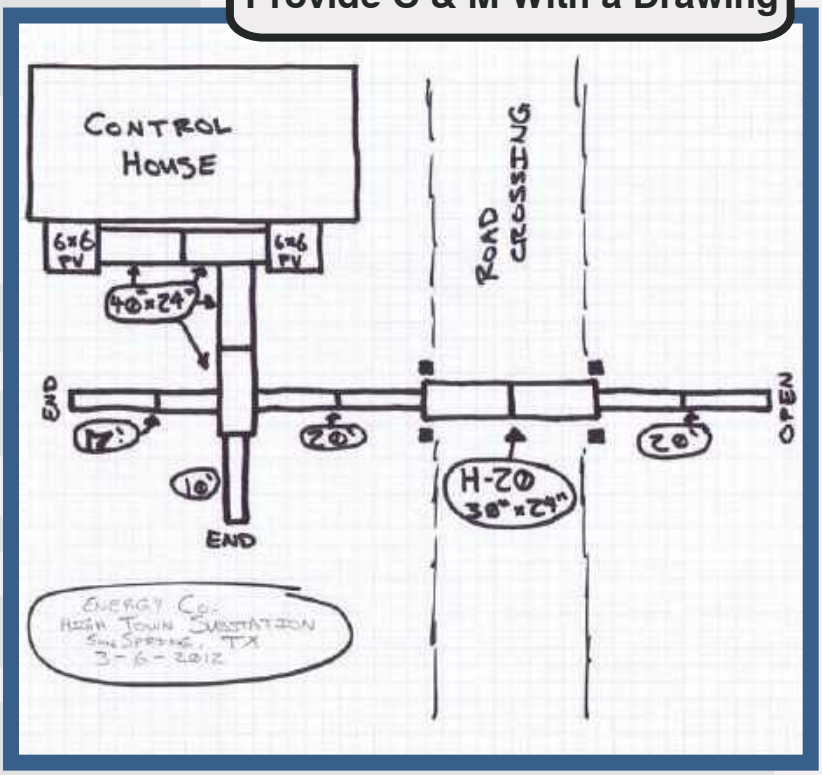
A **Quotation** will be provided for the project.

Place the **Order** for the project.

C & M will provide **Drawings** for your review and approval.

Review the drawings C & M provides and approve for construction.

Provide C & M With a Drawing



C & M accepts many different file formats in order to view the site layout. Here is a list of preferred file types:

- *** AutoCAD Drawing Files**
- *** Adobe Illustrator, InDesign, and Photoshop**
- *** SolidWorks, SketchUp 3d Files**
- *** .pdf / .jpeg / .tif / .png**
- *** Most any common everyday file types**

Production will commence once approval is received. Coordinate delivery and/or customer pick-up.

Develop a **Relationship** with C & M. Creating satisfied customers is what C & M thrives on.

Cable Trough Overview



Cable troughs may be used for various reasons and are becoming more demanding with their simple installation and easy accessibility for future expansion and maintenance. Cable troughs provided by C & M have many options, all of which are customizable to your project needs. C & M offers two main types of cable troughs in various sizes; Medium Duty Pedestrian and Heavy Duty H-20 Road Crossing. All cable troughs offered by C & M are designed as a one piece section in different widths and depths (see size charts in each section).

Cable trough sections are manufactured in standard lengths of 10 feet. Shorter lengths may be needed for a project at which C & M will cast a custom size to fulfill the order. Two window openings are cast in the bottom of the troughs in the Medium Duty cable troughs. Heavy Duty cable troughs are cast with a solid bottom for structural purposes in roadway crossings. Optional drain hole may be cast in upon request.

Always consider what type of lid coverings will be needed to complete the cable trough sections. C & M offers various styles of galvanized steel lid coverings and precast concrete lid coverings. The galvanized steel has a higher durability and lighter weight, but the concrete has a lower cost.

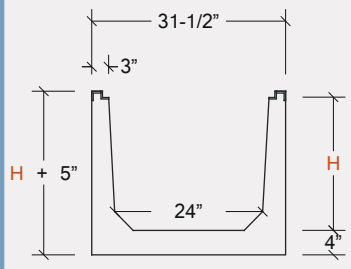
Cable troughs may also be installed above grade since they have a design to stand-alone. This may be useful in an area where excavation is not possible or an area where above ground troughs are preferred.



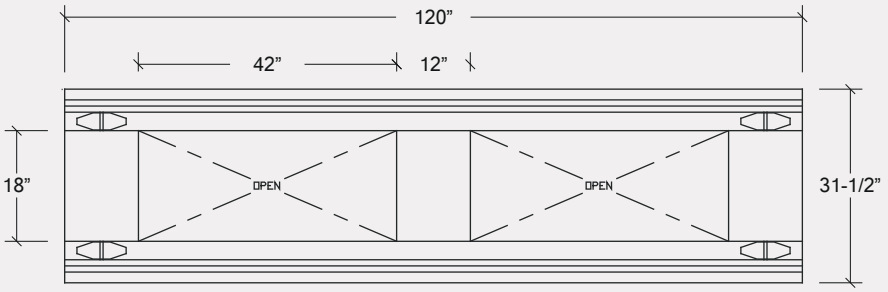
Consider whether a steel lid or a concrete lid is needed along with solid floor or a open window floor for drainage. All cable troughs with the galvanized steel lids have a grounding strap that attaches to the top of the trough and runs down to the bottom inside of the trough.

C & M will customize most any order to satisfy the customer's needs. Feel free to contact C & M with any questions.

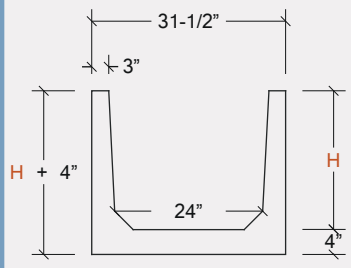
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Galvanized Steel Top
24”-MD Cable Trough
(End View)



24”-MD Cable Trough
(Plan View)



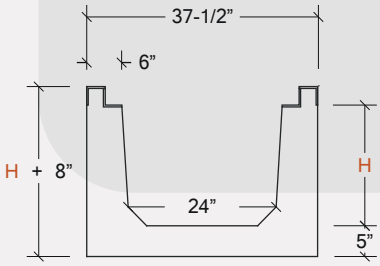
Concrete Top
24”-MD Cable Trough
(End View)

Specifications

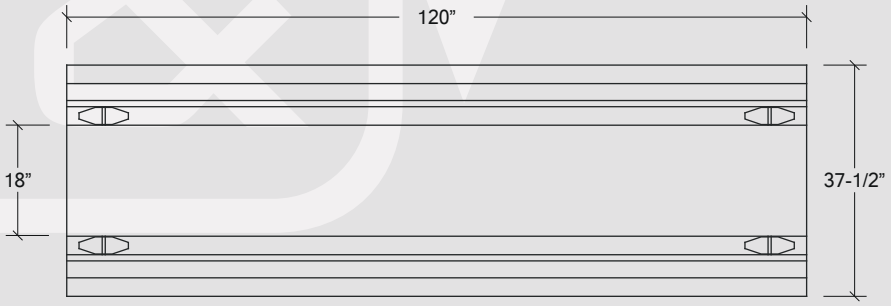
* One-Piece Design
* Supports 200 pounds per foot live load for pedestrian traffic
* Available with steel or concrete covers
* 4-way lifting anchors cast into each corner for safe handling
* Grounding straps are installed into each trough and attached to galvanized angle
* Openings in bottom of trough

H	Solid	Open Bottom
12"	CT-2412-MD-S	CT-2412-MD-W
	2271 lbs.	1753 lbs.
15"	CT-2415-MD-S	CT-2415-MD-W
	2469 lbs.	1951 lbs.
24"	CT-2424-MD-S	CT-2424-MD-W
	2923 lbs.	2405 lbs.

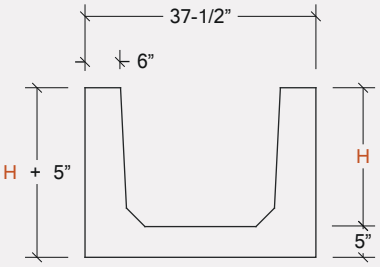
24” Medium Duty Cable Trough



Galvanized Steel Top
24”-HD Cable Trough
(End View)



24”-HD Cable Trough
(Plan View)



Concrete Top
24”-HD Cable Trough
(End View)

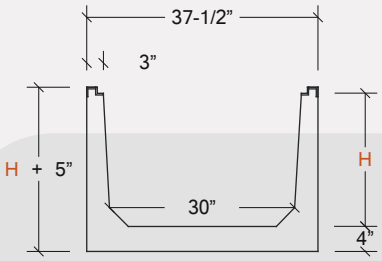
Specifications

* One-Piece Design
* Supports heavy traffic loading set forth by AASHTO H-20
* Available with steel or concrete covers
* 4-way lifting anchors cast into each corner for safe handling
* Grounding straps are installed into each trough and attached to galvanized angle
* No openings in bottom of trough for strength requirements

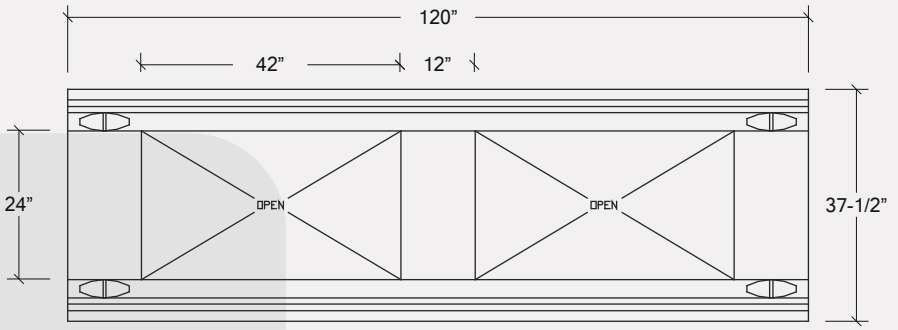
H	Solid
12"	CT-2412-HD-S
	3258 lbs.
15"	CT-2415-HD-S
	3642 lbs.
24"	CT-2424-HD-S
	4944 lbs.

24” Heavy Duty Cable Trough

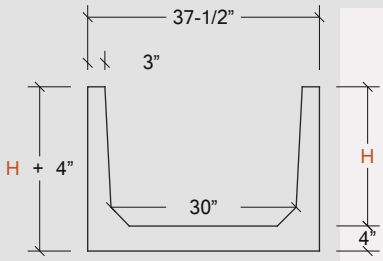
30” Medium Duty Cable Trough



Galvanized Steel Top 30”-MD Cable Trough
(End View)



30”-MD Cable Trough
(Plan View)



Concrete Top 30”-MD Cable Trough
(End View)

Specifications

* One-Piece Design
* Supports 200 pounds per foot live load for pedestrian traffic
* Available with steel or concrete covers
* 4-way lifting anchors cast into each corner for safe handling
* Grounding straps are installed into each trough and attached to galvanized angle
* Openings in bottom of trough

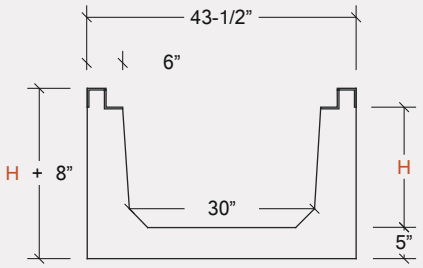
H	Solid	Open Bottom
12"	CT-3012-MD-S	CT-3012-MD-W
	2518 lbs.	1827 lbs.
15"	CT-3015-MD-S	CT-3015-MD-W
	2716 lbs.	2025 lbs.
24"	CT-3024-MD-S	CT-3024-MD-W
	3170 lbs.	2479 lbs.

30” Heavy Duty Cable Trough

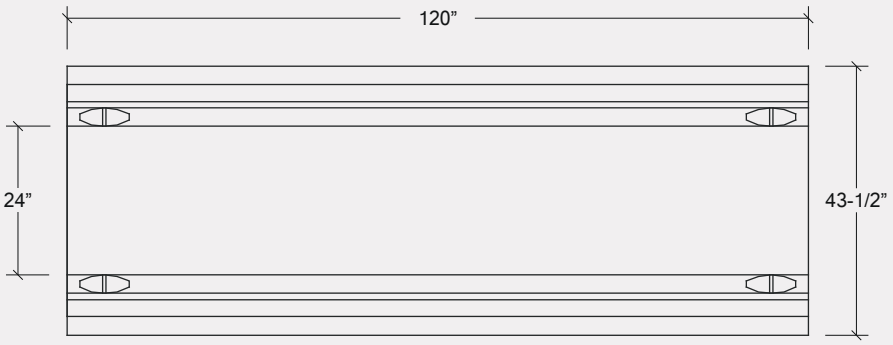
H	Solid
12"	CT-3012-HD-S
	3505 lbs.
15"	CT-3015-HD-S
	3889 lbs.
24"	CT-3024-HD-S
	5253 lbs.

Specifications

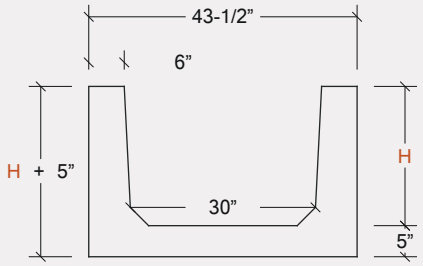
* One-Piece Design
* Supports heavy traffic loading set forth by AASHTO H-20
* Available with steel or concrete covers
* 4-way lifting anchors cast into each corner for safe handling
* Grounding straps are installed into each trough and attached to galvanized angle
* No openings in bottom of trough for strength requirements



Galvanized Steel Top 30”-HD Cable Trough
(End View)



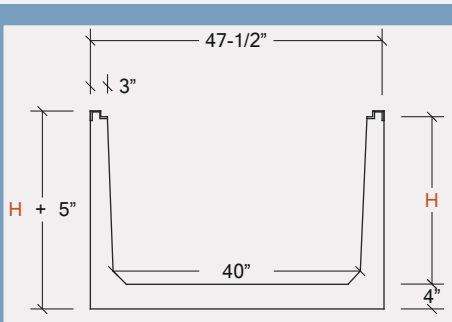
30”-HD Cable Trough
(Plan View)



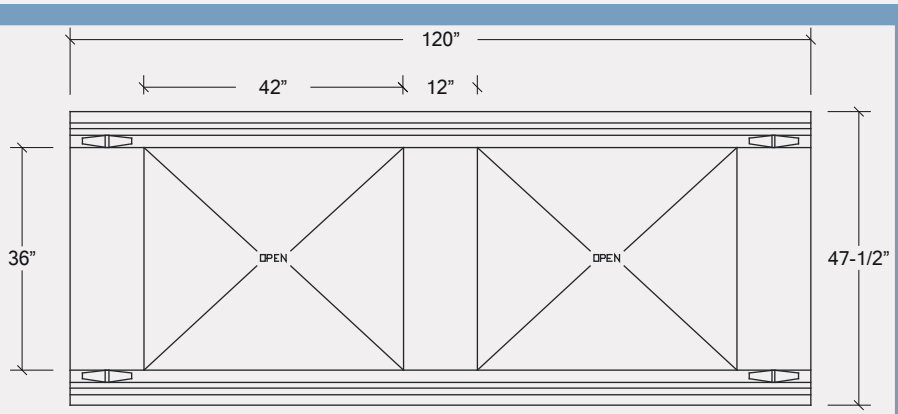
Concrete Top 30”-HD Cable Trough
(End View)

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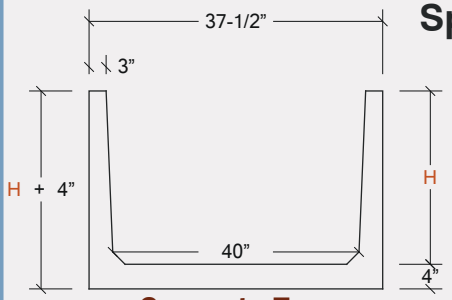
40” Medium Duty Cable Trough



Galvanized Steel Top
40”-MD Cable Trough
(End View)



40”-MD Cable Trough
(Plan View)



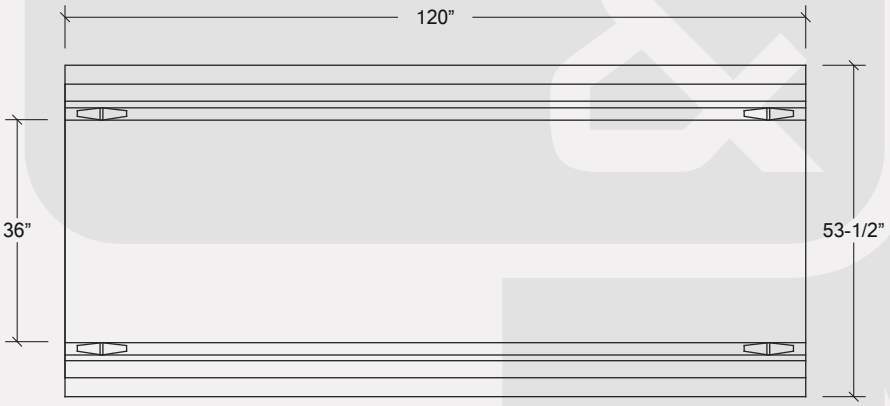
Concrete Top
40”-MD Cable Trough
(End View)

Specifications

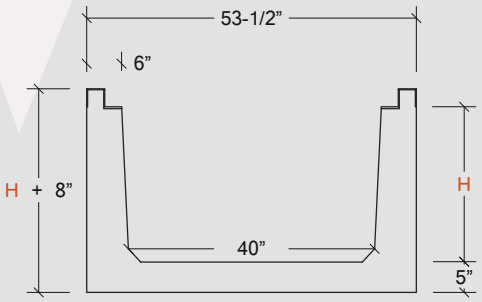
* One-Piece Design
* 200 psf pedestrian load rated
* Steel or concrete covers
* 4-way lifting anchors cast into each corner for safe handling
* Grounding straps attached
* Openings in bottom of trough

H	Solid	Open Bottom
12"	CT-4012-MD-S	CT-4012-MD-W
	2881 lbs.	1844 lbs.
15"	CT-4015-MD-S	CT-4015-MD-W
	3086 lbs.	2049 lbs.
24"	CT-4024-MD-S	CT-4024-MD-W
	3655 lbs.	2618 lbs.
30"	CT-4030-MD-S	CT-4030-MD-W
	3887 lbs.	2850 lbs.

40” Heavy Duty Cable Trough



40”-HD Cable Trough
(Plan View)

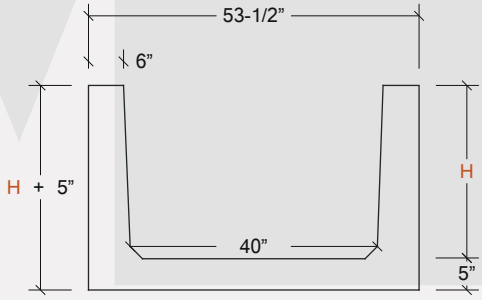


Galvanized Steel Top
40”-HD Cable Trough
(End View)

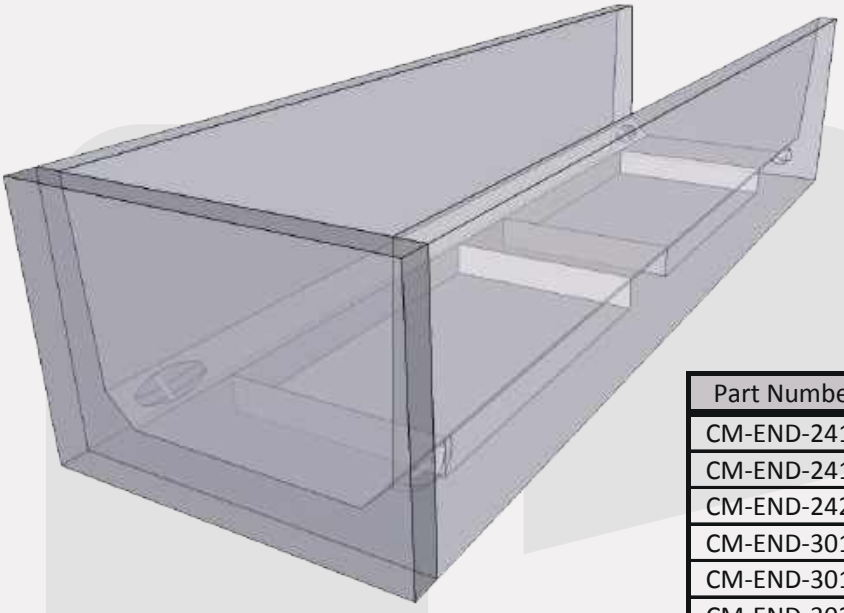
Specifications

* One-Piece Design
* Supports heavy traffic loading set forth by AASHTO H-20
* Available with steel or concrete covers
* 4-way lifting anchors cast into each corner for safe handling
* Grounding straps are installed into each trough and attached to galvanized angle
* No openings in bottom of trough for strength requirements

H	Solid
12"	CT-4012-HD-S
	3868 lbs.
15"	CT-4015-HD-S
	4258 lbs.
24"	CT-4024-HD-S
	5382 lbs.
30"	CT-4030-HD-S
	6412 lbs.



Concrete Top
40”-HD Cable Trough
(End View)



Cable Trough - End Cap
(3d View)

End Caps

End caps provide a simple, clean terminus to a cable trough run while allowing for future expansion. Please note end caps when ordering.

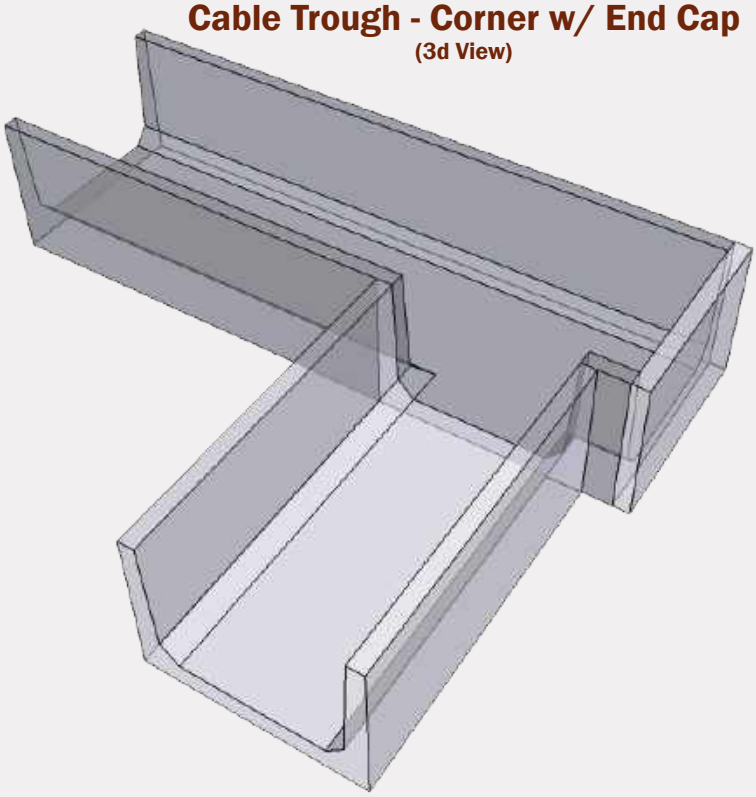
Part Number	Width	Height	Thickness	Weight
CM-END-2412	31.5"	17"	3"	137 lbs.
CM-END-2415	31.5"	20"	3"	162 lbs.
CM-END-2424	31.5"	29"	3"	234 lbs.
CM-END-3012	37.5"	17"	3"	164 lbs.
CM-END-3015	37.5"	20"	3"	193 lbs.
CM-END-3024	37.5"	29"	3"	280 lbs.
CM-END-4012	47.5"	17"	3"	208 lbs.
CM-END-4015	47.5"	20"	3"	244 lbs.
CM-END-4024	47.5"	29"	3"	354 lbs.
CM-END-4030	47.5"	35"	3"	427 lbs.

Corners

The corner is cast with a window opening to fit the size of the adjacent cable trough. Corners can be made to most any length and the opening can be moved to almost any position on the cable trough.



Cable Trough - Corner w/ End Cap
(3d View)

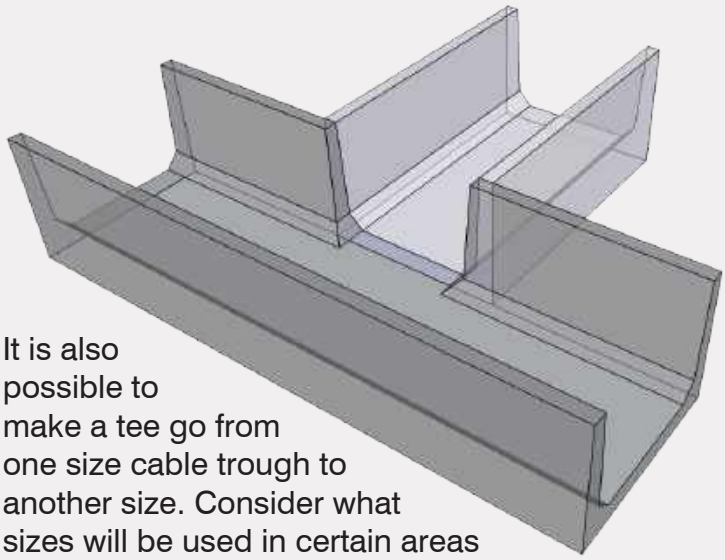


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Tees

There are many instances where either a single cable trough will need to split and go in two directions or where two cable trough runs will need to merge into one. A cable trough tee is a great option to accomplish these requirements. The window opening in a tee can be placed most anywhere on one side of the trough.



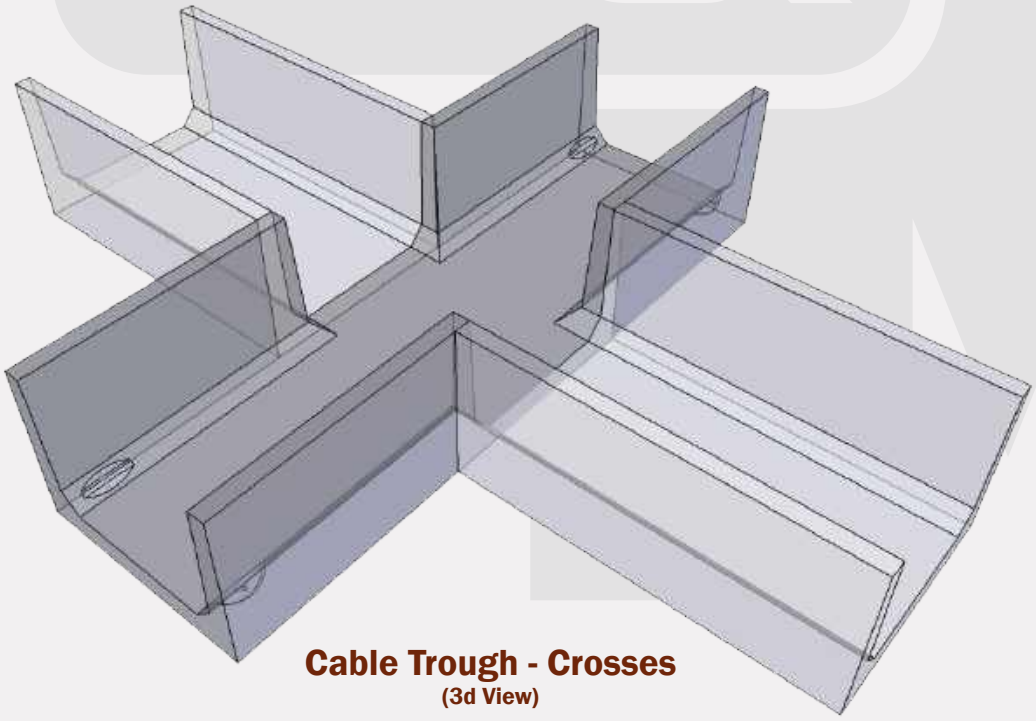


It is also possible to make a tee go from one size cable trough to another size. Consider what sizes will be used in certain areas rather than using all one size trough. This is the case in the picture to the left.

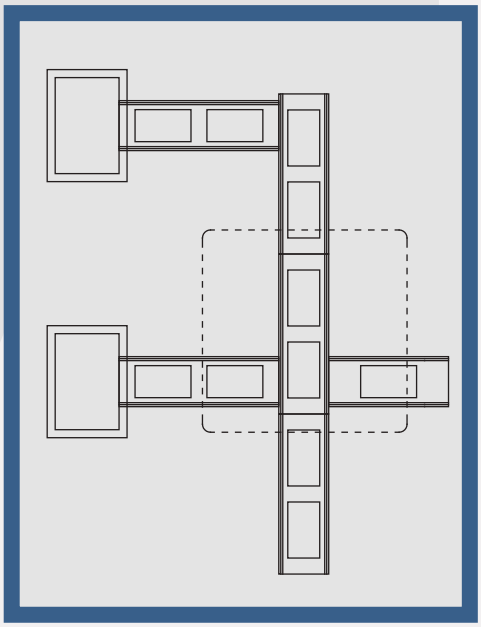
Cable Trough - Tees
(3d View)

Crosses

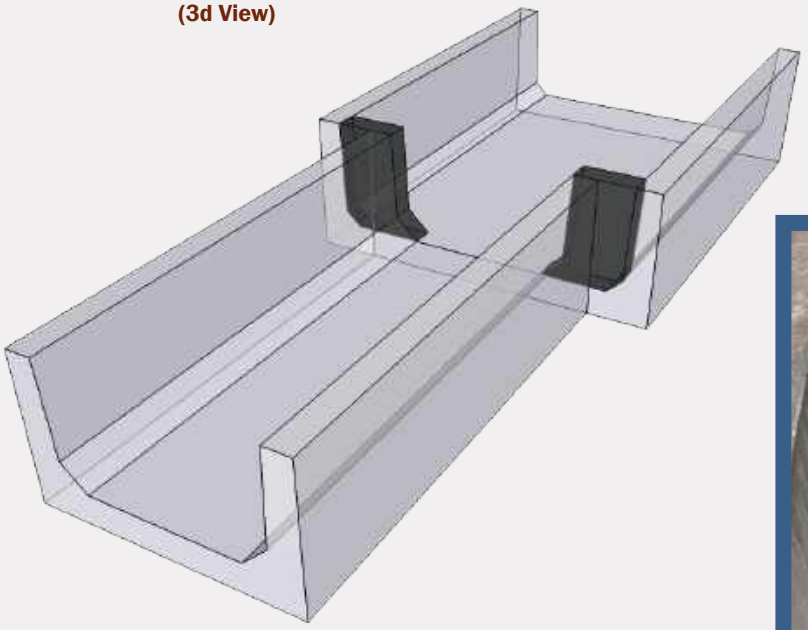
Although crosses can be rare, there are still some scenarios where this is required. Crosses tend to be used in a situation where one cable trough run needs to be split into three separate cable trough runs. Crosses may also be used from one size trough to another size trough.



Cable Trough - Crosses
(3d View)



Cable Trough - Reducer
(3d View)



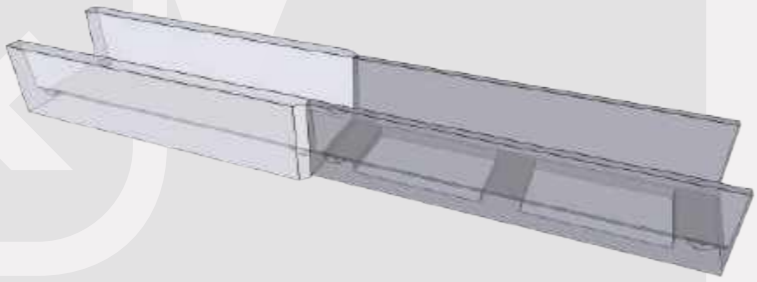
Reducers

C & M produces various sizes of cable troughs and often two cable troughs of different sizes are placed end-to-end. C & M will create a cable trough that has built in reducers to accommodate this transition.



Cable Trough - Transitions







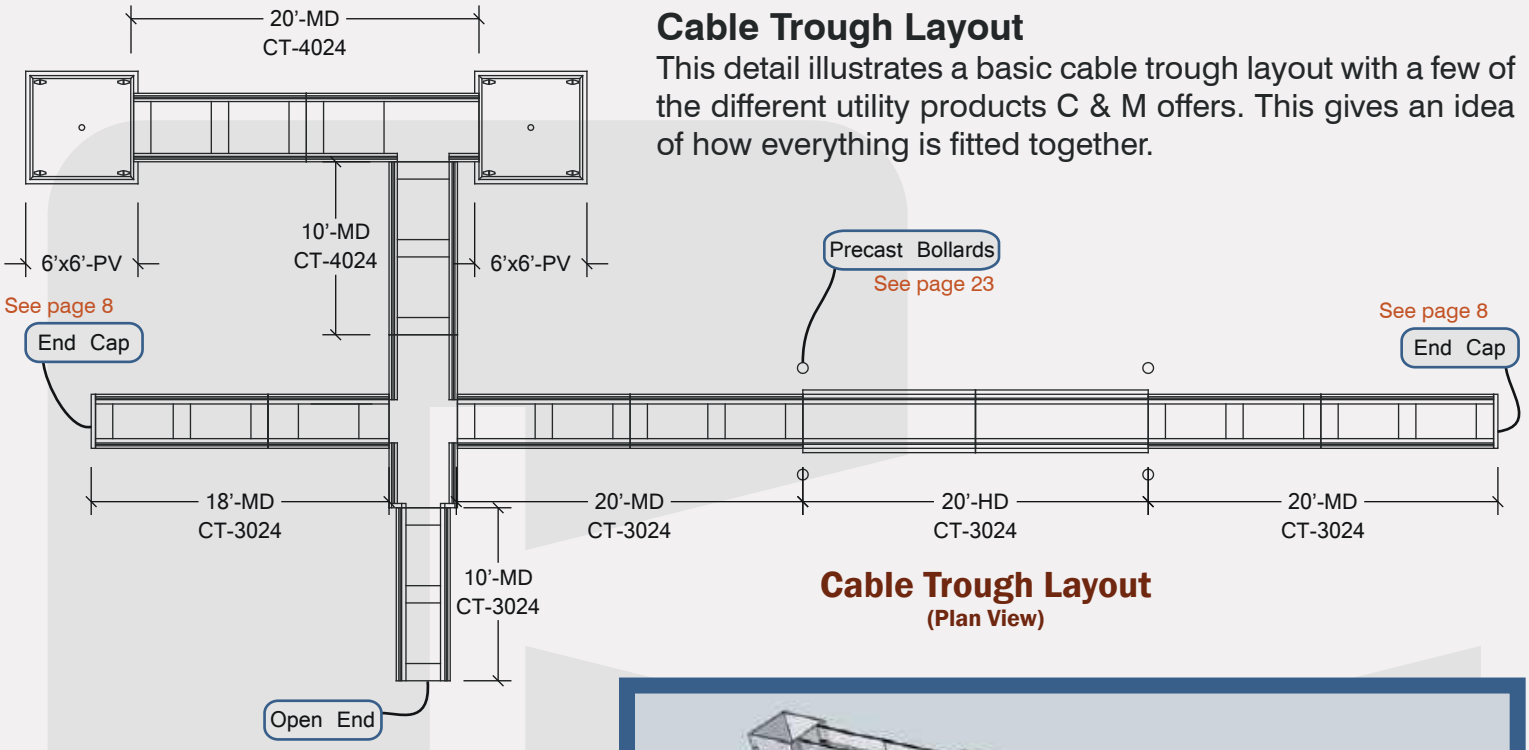
Medium Duty - to - Heavy Duty

In the picture to the right there is a Medium Duty cable trough on the end of a Heavy Duty cable trough. Notice the inside walls line up but the outside walls do not. Heavy Duty cable troughs are generally located at road crossings or areas of heavy traffic.

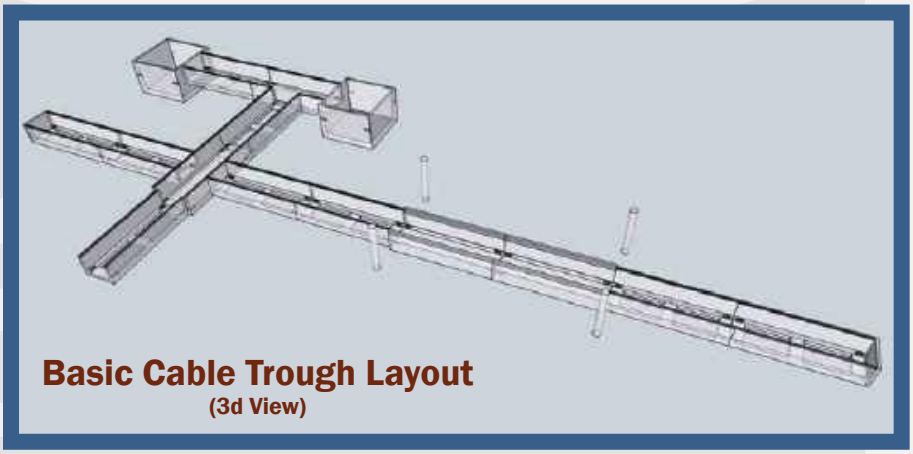
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Cable Trough Layout

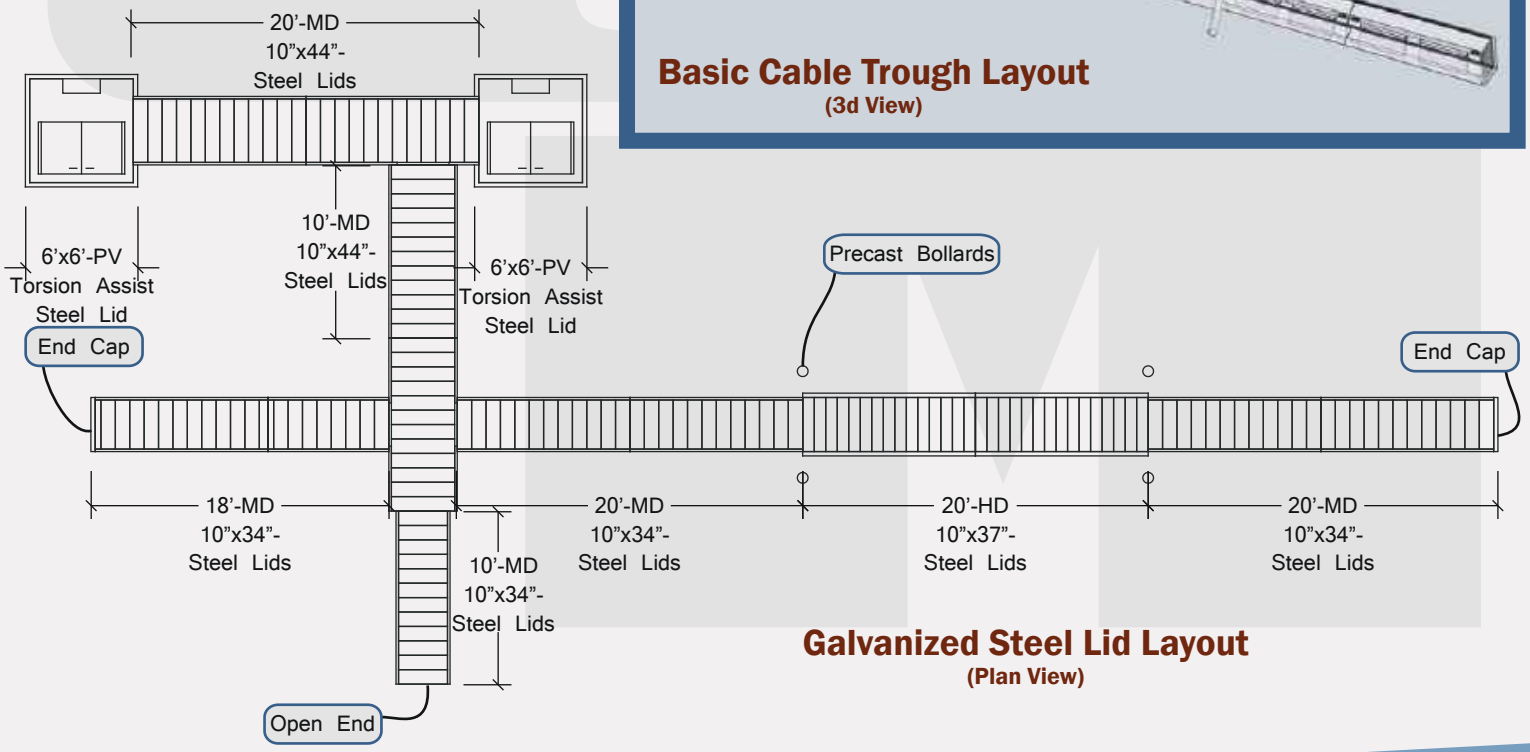
This detail illustrates a basic cable trough layout with a few of the different utility products C & M offers. This gives an idea of how everything is fitted together.



Cable Trough Layout
(Plan View)



Basic Cable Trough Layout
(3d View)



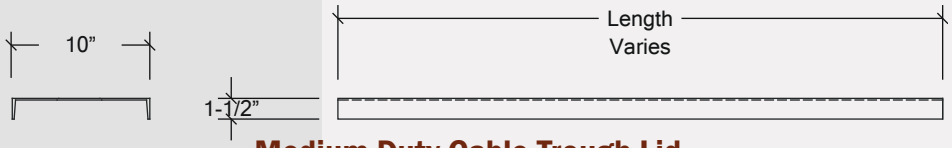
Galvanized Steel Lid Layout
(Plan View)



Specifications

* MC-10 x 8.4 Steel Junior Channel
* Hot Dipped Galvanized





Medium Duty Cable Trough Lid
(Galvanized Steel)

Cable Trough Steel Lids

C & M Precast offers galvanized steel lids for cable troughs. All lids are designed to fit the various sizes of cable troughs that C & M manufactures. The steel lids can be customized. Steel lids can be more costly but are also more popular due to the higher ratings and lighter weight for easier handling. There are two basic steel lids offered, Medium Duty which is for pedestrian traffic, and Heavy Duty for vehicular traffic. Galvanized steel lids are also more durable and longer lasting than other types of lids available. C & M also offers a lockable steel lid which helps prevent intruders from entering cable troughs. More information about the Lock-Down Lids is available in the Lock-Down lid section.

Part Number	Length	Width	Height	Weight
MT-LID-CMCT24-MD	28.5"	10"	1.5"	20 lbs.
MT-LID-CMCT24-HD	31.5"	8"	3"	35 lbs.
MT-LID-CMCT30-MD	34.5"	10"	1.5"	25 lbs.
MT-LID-CMCT30-HD	37.5"	8"	3"	41 lbs.
MT-LID-CMCT40-MD	44.5"	10"	1.5"	32 lbs.
MT-LID-CMCT40-HD	47.5"	8"	3"	52 lbs.

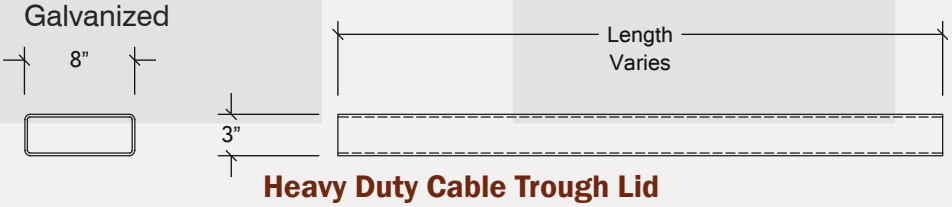




Specifications

* 8 x 3 - 3/16” Rect. Tubing
* Hot Dipped Galvanized





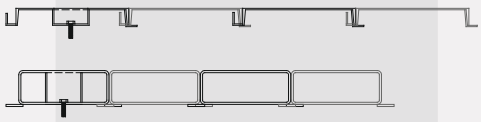
Heavy Duty Cable Trough Lid
(Galvanized Steel)

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Fax: (830)-367-3343

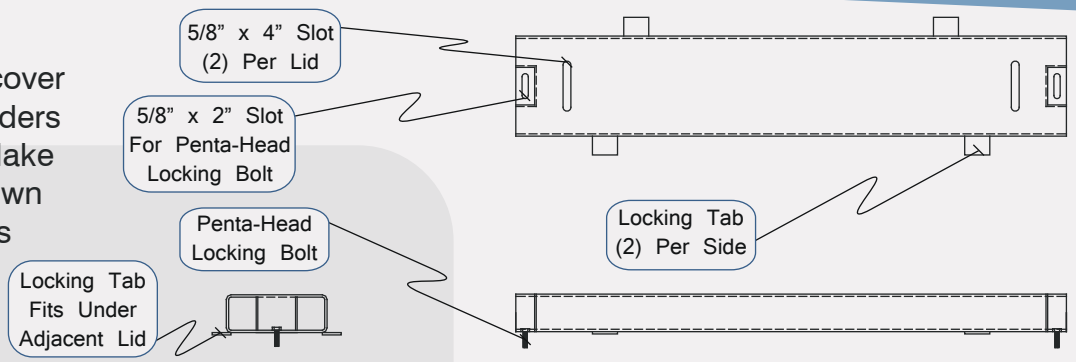
Steel Lock-Down Lids

In some situations a lockable cover is needed to help prevent intruders from entering cable troughs. Make sure to let C & M know lock-down lids are required before order is finalized.

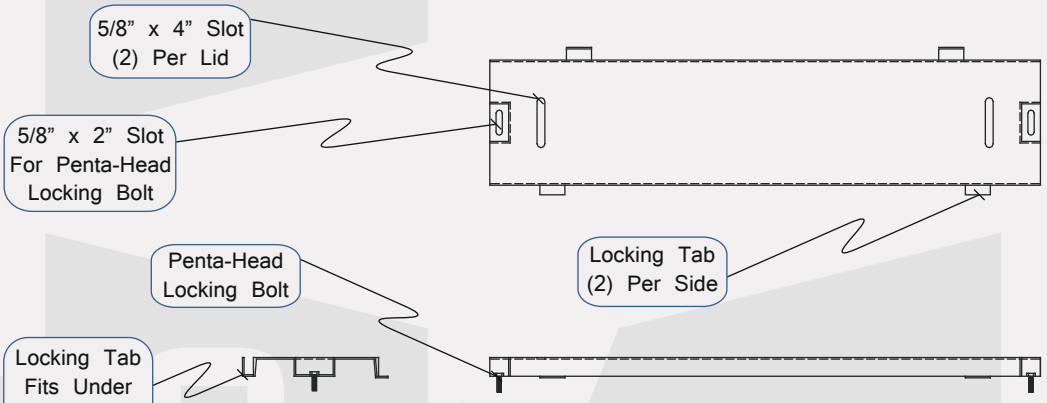




Example of Lock-Down Lid
Side-by-Side (MD & HD)

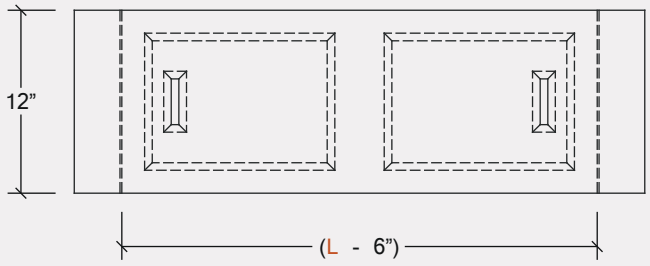


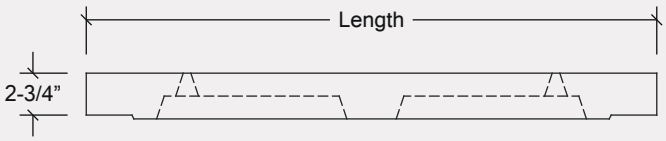
Lock-Down Heavy Duty Steel Lid



Lock-Down Medium Duty Steel Lid

Concrete Lids Detail Drawing



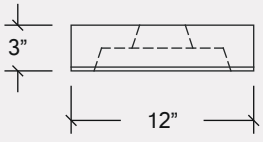


Concrete Lid
(3d View)



Concrete Lids

Concrete lids are available for medium duty cable troughs. Our concrete lids are designed in a way to make weight as light as possible while maintaining minimum strength requirements for pedestrian traffic ratings. (200 psf)







Part Number	Length	Width	Height	Weight
CN-LID-CMCT24	31.5"	12"	3"	75 lbs.
CN-LID-CMCT30	37.5"	12"	3"	87 lbs.
CN-LID-CMCT40	47.5"	12"	3"	107 lbs.





Pulling Vault Overview

C & M offers various sizes of Pulling Vaults with customizable options. Pulling Vaults are available in Medium Duty and Heavy Duty (H-20) ratings.

Pulling Vaults up to 48” tall are a one-piece design, excluding the lid. Riser extensions can be used for vault heights greater than 48”. See the size chart (next page) for weights and dimensions.

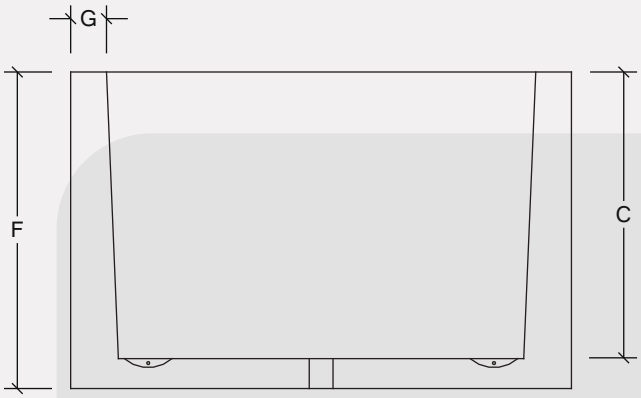
4” drain holes are standard; custom drain options available upon request.



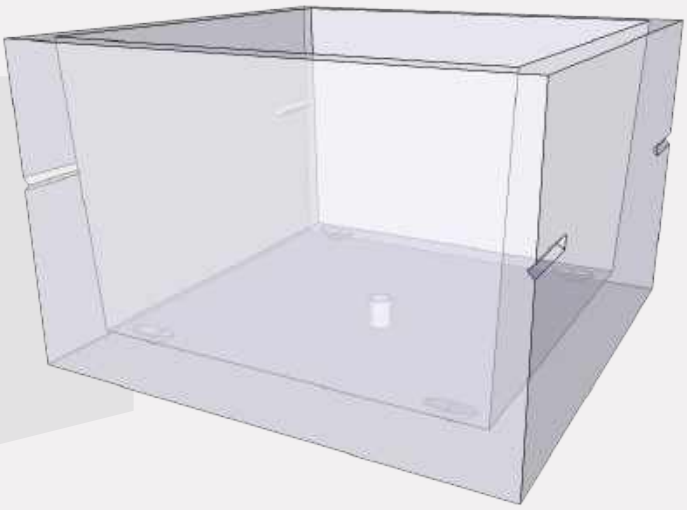
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110 Cedar Mill Dr.
Kerrville, TX 78028
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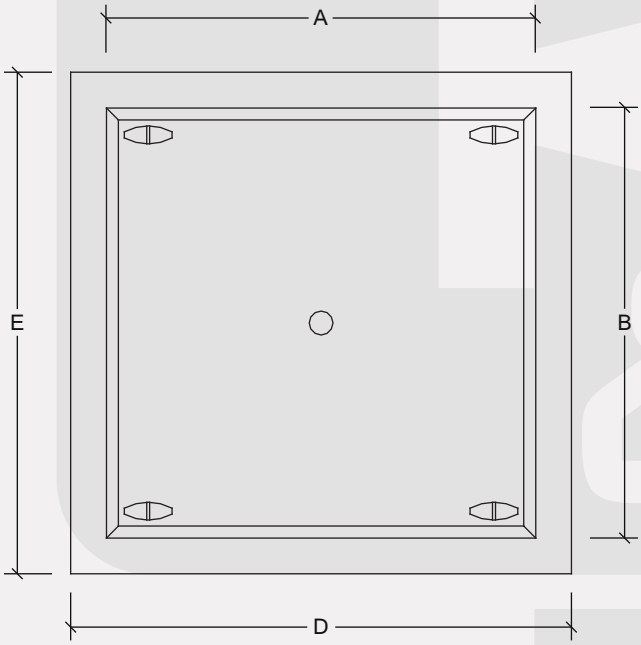
Pulling Vaults

Sizes and Specifications



Typical Pulling Vault
(Side View)





Typical Pulling Vault
(Plan View)

Specifications

* One-Piece Design available in square and rectangular sizes
* Four-point anchor cast inside box for ease of placement in tight areas and safe handling
* 4” drain pipe cast into bottom
* Available in Medium Duty or Heavy Duty to meet standards of AASHTO H-20 traffic ratings
* Window openings or terminators may be cast-in for design requirements
* Available with concrete and steel lid coverings

Description	Part Number	Weight	A	B	C	D	E	F	G
4 x 4 - Pulling Vault - MD	PV-4X4-MD-4	4532 lbs.	48"	48"	48"	54"	54"	53"	3"
4 x 4 - Pulling Vault Extension - MD	PV-4X4-MD-2EXT	1450 lbs.	48"	48"	24"	54"	54"	24"	3"
4 x 4 - Pulling Vault Extension - HD	PV-4X4-HD-4	6566 lbs.	48"	48"	48"	58"	58"	53"	6"
4 x 6 - Pulling Vault - MD	PV-4X6-MD-4	5721 lbs.	50"	72"	49"	56"	78"	53"	3"
4 x 6 - Pulling Vault Extension - MD	PV-4X6-MD-2EXT	1823 lbs.	50"	72"	24"	56"	78"	24"	3"
4 x 6 - Pulling Vault - HD	PV-4X6-HD-4	8228 lbs.	50"	72"	49"	60"	82"	53"	6"
6 x 6 - Pulling Vault - MD	PV-6X6-MD-4	7469 lbs.	72"	72"	48"	78"	78"	53"	3"
6 x 6 - Pulling Vault Extension- MD	PV-6X6-MD-2EXT	2141 lbs.	72"	72"	24"	78"	78"	24"	3"
6 x 6 - Pulling Vault - HD	PV-6X6-HD-4	10375 lbs.	72"	72"	48"	82"	82"	53"	6"
6 x 8 - Pulling Vault Bottom - MD	PV-6X8-MD-2	6136 lbs.	76"	100"	20"	84"	108"	24"	4"
6 x 8 - Pulling Vault Extension - MD	PV-6X8-MD-4EXT	7417 lbs.	76"	100"	48"	84"	108"	48"	4"
6 x 8 - Pulling Vault - MD	PV-6X8-MD-4	10591 lbs.	76"	100"	48"	84"	108"	52"	4"

Pulling Vaults - Building Ends

Placing a pulling vault beside a building to end a run of cable troughs is an easy way to route cables inside of a control house. In most scenarios where this occurs, an aluminum riser is used to get the wiring over head inside the control house. Pulling vaults like these will have a lid covering which can be easily accessed for maintenance and future expansion. Pulling vaults have window openings cast into any of the sides for cable trough connections. These pulling vaults are usually custom built according to specific orders which creates an opportunity to have all types of openings cast into the sides for most of the custom situations that may be accomplished.



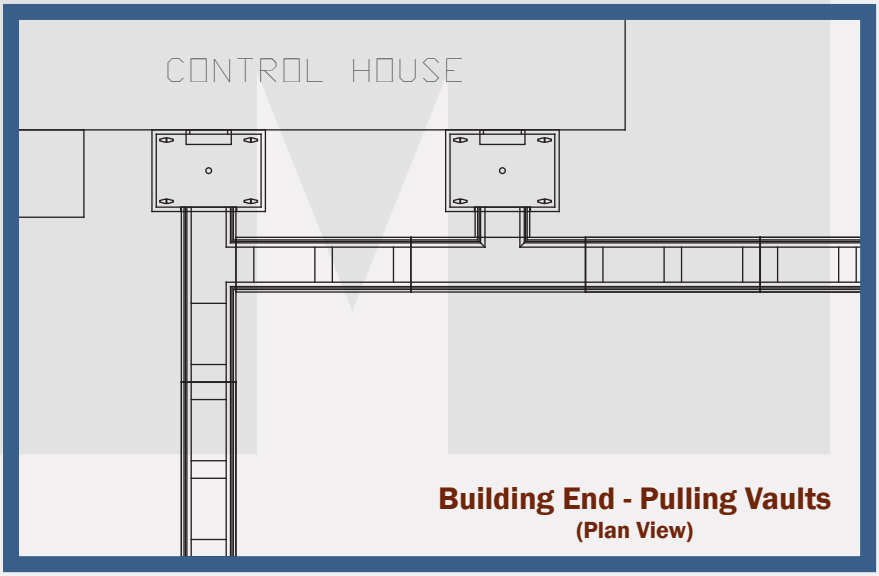
Pulling Vault
(Building End)

Above: A pulling vault sits beside a building. Notice the opening on the wall of the building to allow for an aluminum riser to be installed.



Pulling Vaults w/ Aluminum Risers
(Beside Control House)

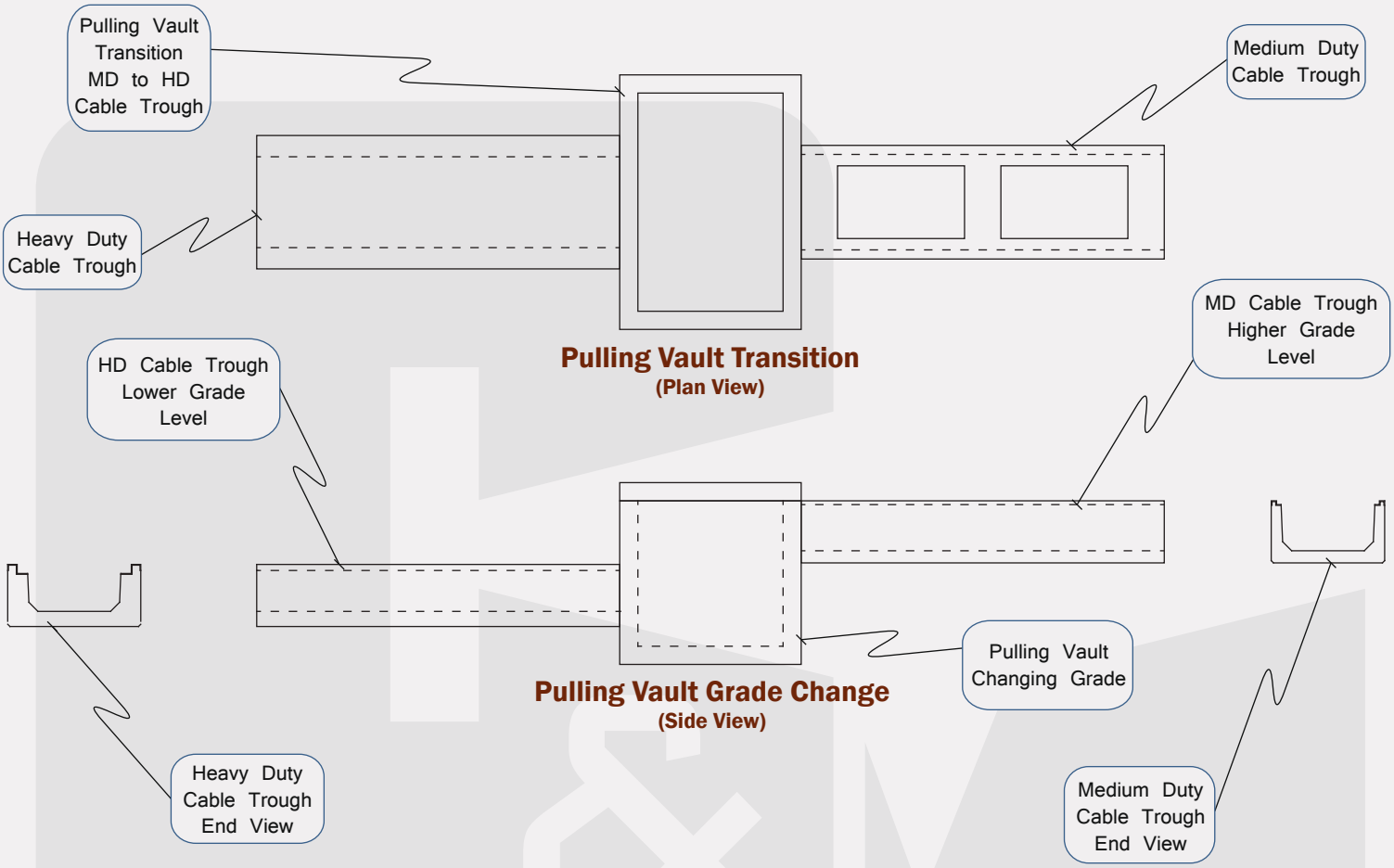
Above: Cable troughs will layout into pulling vaults next to a control house in an electrical substation. On top of each pulling vault is an aluminum riser which allows cables to be routed into the building.



Building End - Pulling Vaults
(Plan View)

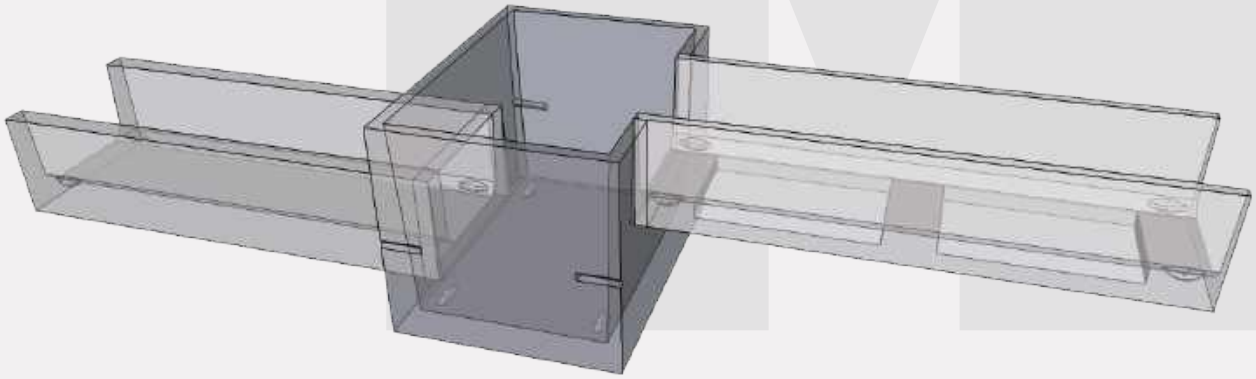
Right: Plan view of the photograph taken to the above-left

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Pulling Vaults with Grade Change/Transition

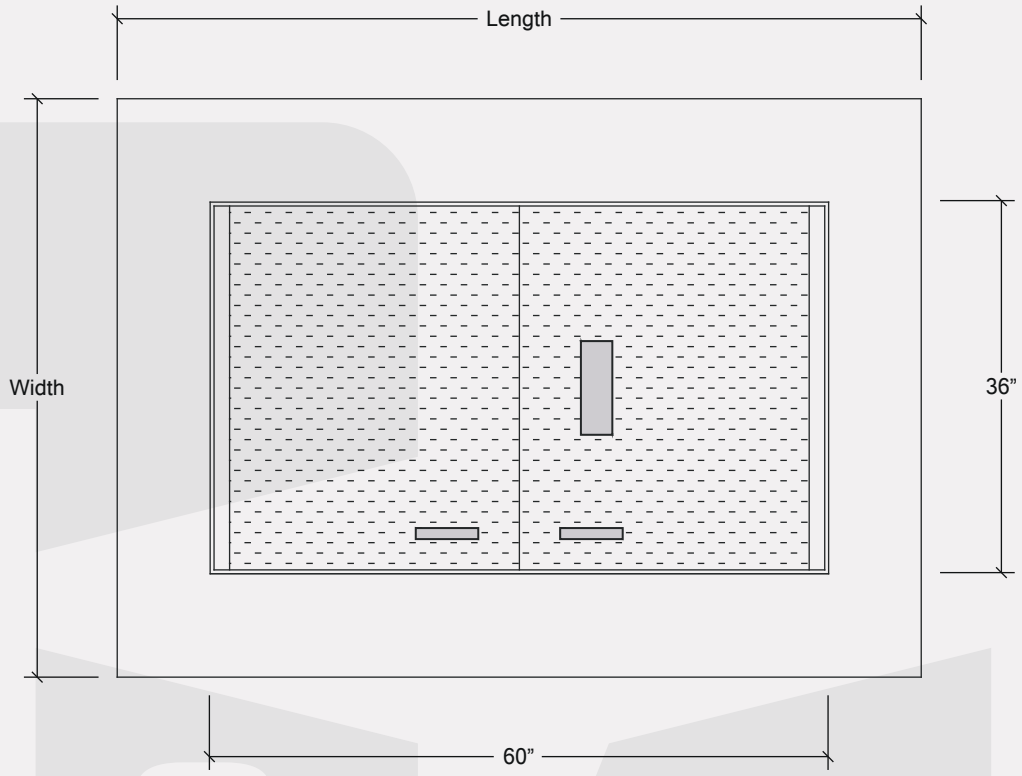
Most utility locations are level with slight changes in grade. In those situations the cable troughs will usually follow the level of the area. In other situations that have a step down or abrubt change in elevation, a pulling vault is usually the solution. Another use for a pulling vault would be to transition from an existing object such as a round pipe to a cable trough. Pulling vaults are usually the right solution for transitioning many of the custom situations. Notice the illustrations above and below for examples of how pulling vaults are used in transitions in grade.



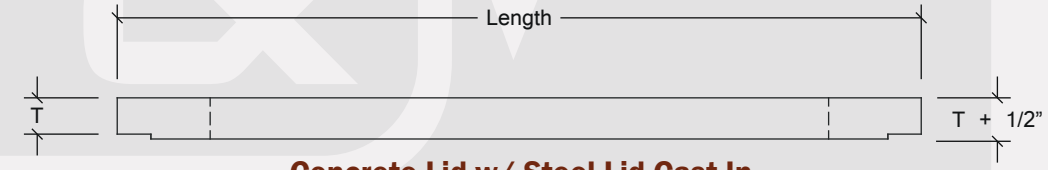
Pulling Vault Illustrating Grade Change/Transition

Pulling Vault Lids
C & M offers various types of lids for our pulling vaults. Determine what type of lid is required for the project when placing an order.

Torsion Assisted Lids
Pulling vault lids are designed to be easily accessed for maintenance. Torsion assisted lids are made to be locked by a hex-head bolt and have spring steel to make opening easier. Steel is diamond plated and has handles that are flush seated to prevent tripping hazards. Lids are manufactured as either medium duty pedestrian traffic or Heavy duty vehicular traffic ratings.



Galvanized Torsion Assisted Lid
Cast in Concrete
(Plan View)



Concrete Lid w/ Steel Lid Cast In
(Side View)



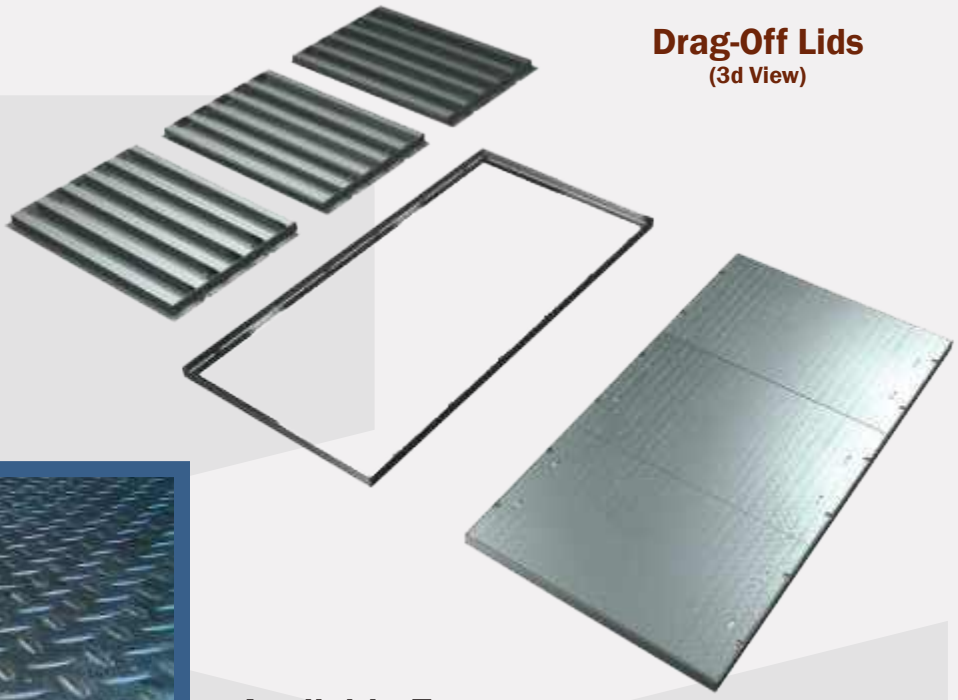
Torsion Assisted Lid
Cast-In Concrete
w/ Window Opening for Aluminum Riser

Part #	L	W	T	Weight
TA-LID-5454-MD	54"	54"	3.5"	798 lbs.
TA-LID-5858-HD	58"	58"	5.5"	1529 lbs.
TA-LID-7856-MD	78"	56"	3.5"	1297 lbs.
TA-LID-8260-HD	82"	60"	5.5"	2329 lbs.
TA-LID-7878-MD	78"	78"	3.5"	1885 lbs.
TA-LID-8282-HD	82"	82"	5.5"	3257 lbs
TA-LID-10884-MD	108"	84"	3.5"	3109 lbs.

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Drag-Off Lids

C & M offers two types of drag-off steel lids. Choosing the right lid depends on what kind of specifications are required for a particular project. Drag-off lids can be made to bolt down or can be free floating. These lids can be manufactured for medium duty or heavy duty traffic ratings.



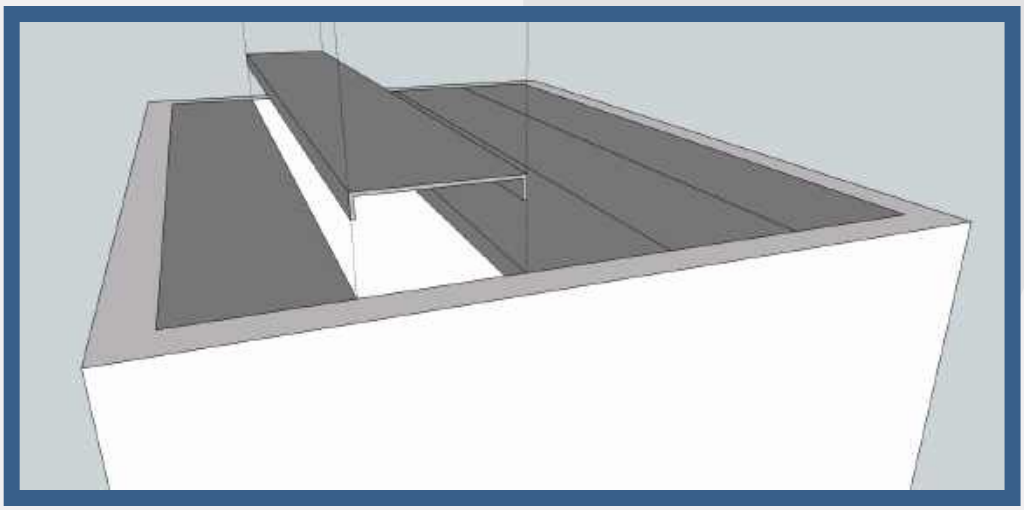
Drag-Off Lids
(3d View)



Diamond Style Top Plate
(Meets slip resistant codes in most cities)

Available Features

* Hardware cadmium plated to reduce corrosion
* Frame and covers available galvanized or painted
* Covers available with security bolts or locking mechanisms
* Covers available with either lifting handles or pick holes



Jr- Channel Steel Lids (Lock-down optional)
(3d View)

Available Specifications

* H-20 - "Full Vehicular Traffic"
* Steel, Hot Rolled To Mill Spec.
* Penta-head security bolts
* Hot dipped galvanized

Accessories Overview

There are many options available for the utility products C & M offers. Here are a some of the accessories that are offered in order to complete a special project.



Duct Terminators



Manhole Ladder Steps



Risers With Lid Coverings



Pipe Seal Openings



Drain Holes

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Aluminum Risers

C & M offers an Aluminum Riser which is used in most substation projects. Risers allow cables to be routed into a building structure vertically along the outside of the building from the cable trough/pulling vault below. Aluminum risers are easy to install and have horizontal bracing on the inside to which the cables will be attached. Made from aluminum which is durable and lightweight. All hardware used for installing and bolting is stainless steel.



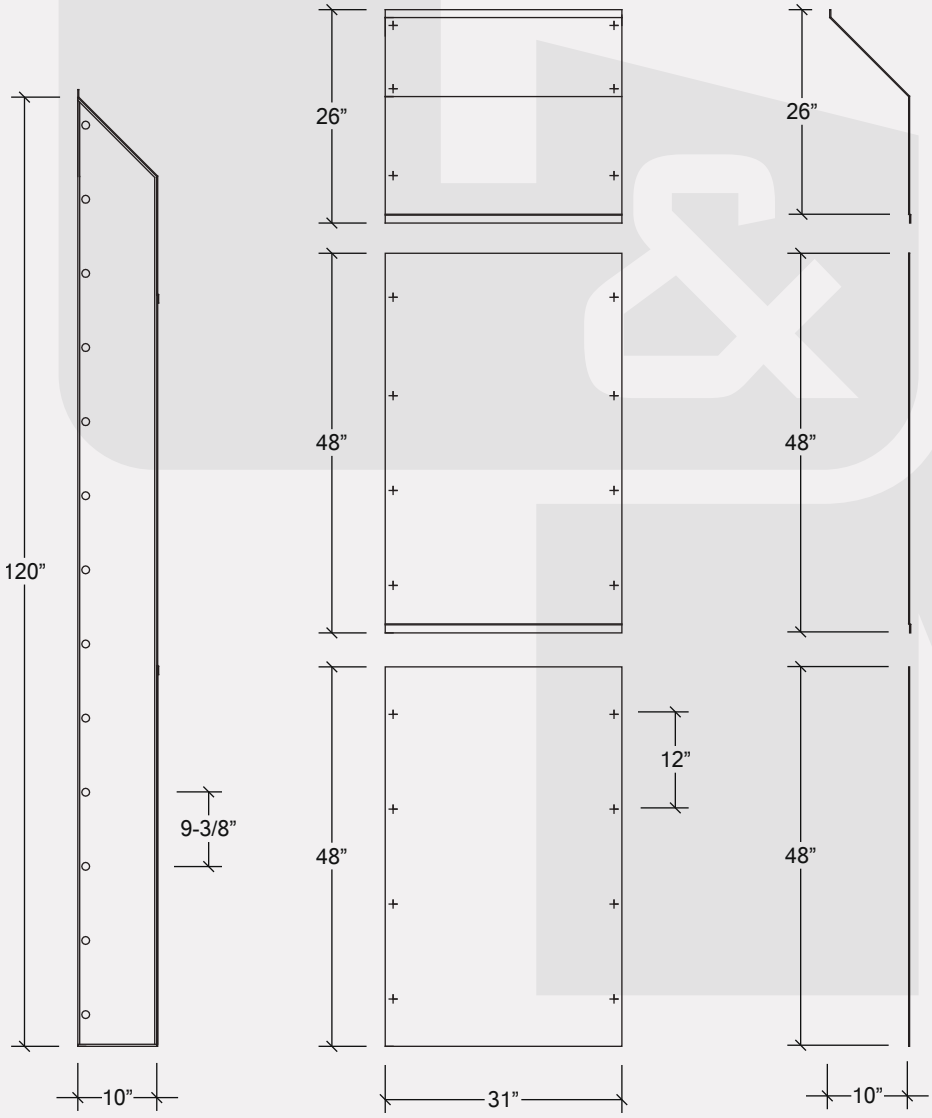


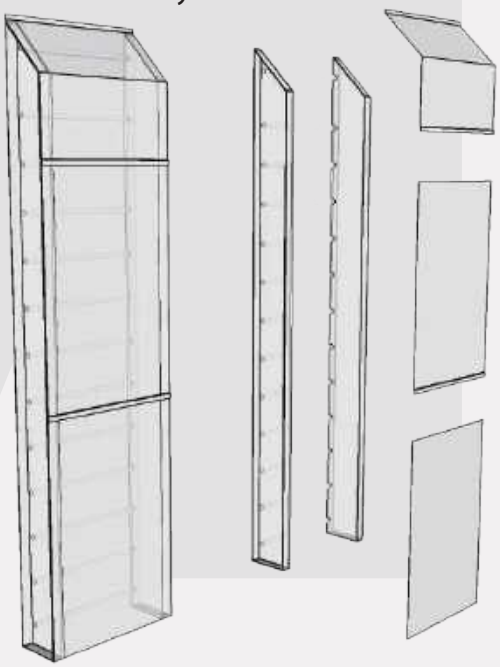
* Sheet material is Aluminum 5052 H32 .080"

* Side walls are made of Aluminum 6061-T6 Channel 10" x 2.60"-.240" thick.

* Pipes welded to channel are made of Aluminum 6061 S40 T6 .75"

* Riser is made to have a 10" x 26" opening inside for cable to run vertically.

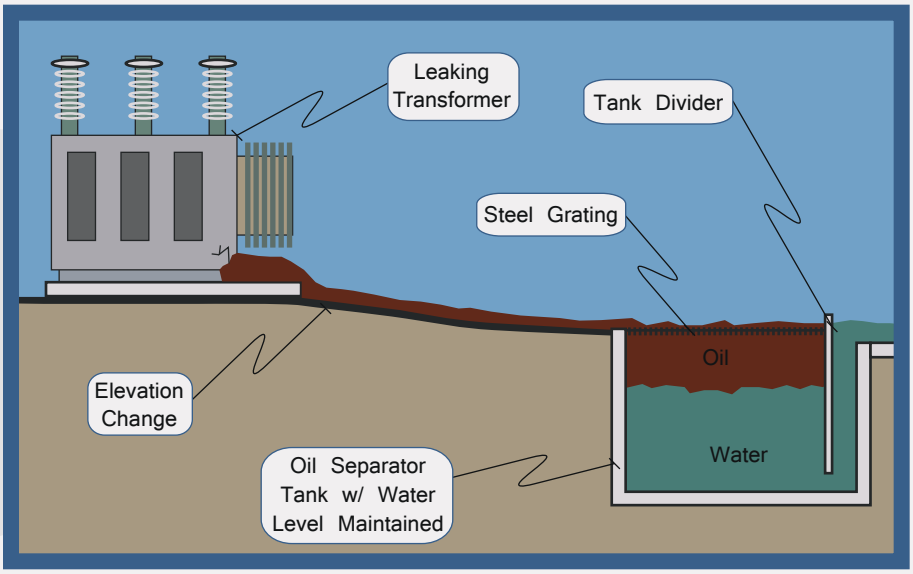




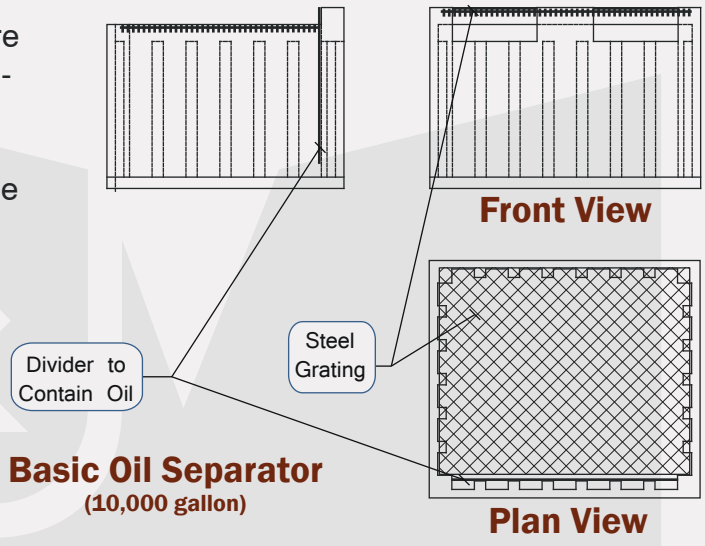
Oil Separator

Spill Prevention, Control and Countermeasure Plan (SPCC)

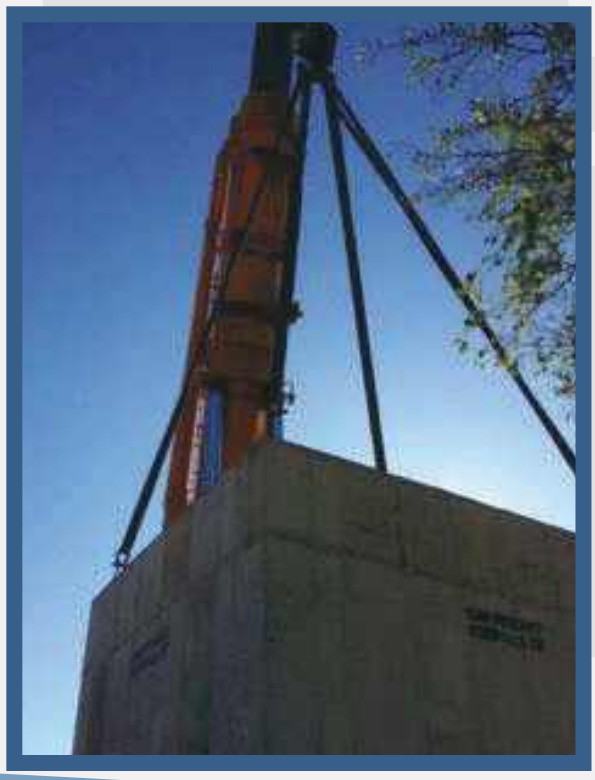
To help prevent oil spill from entering our environment's waters, the federal Environmental Protection Agency (EPA) has used the SPCC plan to help regulate this. Use a C & M Precast Oil Separator tank to help with this problem. These tanks will help contain the oil and help prevent contamination of the environment, particularly in substations where oil is used to help cool and lubricate electrical transformers. Oil separators can be an integral part of an SPCC plan.



Oil separators work by being part of the path of flow where the separator tank is lower in elevation than the transformers nearby. The tank must maintain a certain amount of water so that when oil enters the oil will stay afloat in one side and water will flow underneath the divider and exit the outflow. Notice the illustration (top right corner) to help understand the way the system operates.

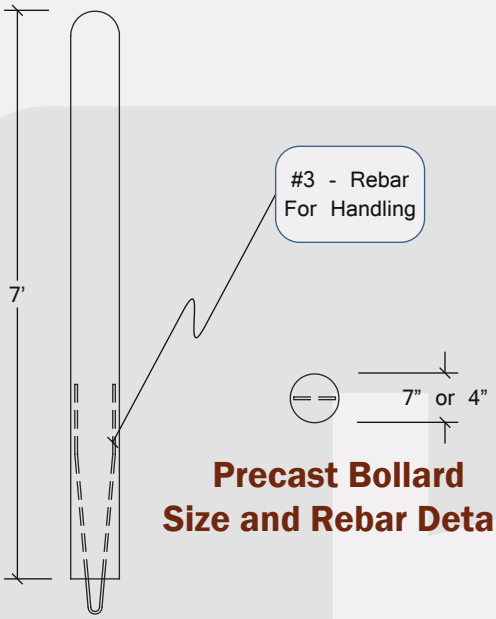


Below: a C & M Precast Oil Separator





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Precast Bollard
Size and Rebar Detail

Features

* 7' in length
* 4" and 7.5" Diameters
* Highly Visible and Bright Colors
* Molded Round Cap
* Impact Resistant
* UV Resistant

Benefits

* No yearly maintenance
* Contractor Friendly
* Less Overall Costs
* Easy Installation

Precast Bollards

Bollards are a contractor friendly product which allows for safety around work areas and warning of areas not to travel. C & M supplies bollards to customers for many different uses. Precast bollards are a roto molded polyethylene shell with concrete cast inside.





Standard Colors

* Brown Granite
* Construction Yellow
* Black
* Dark Granite Grey
* Bright Red
* Blue
* Light Granite Grey

Applications:

Electrical Substations - Garage Doors - Gates - Loading Docks - Traffic Control - Storage - Drive Thru
Road Crossings - Fencing - Parking Lots - Any Protected Area

Precast Concrete Fence

C & M Precast's concrete fence system is the perfect solution for security, with the added benefits of durability and beauty. This engineered wall system is built to last. C & M has standard patterns and finishes; custom designs and finishes are available upon request. Standard wall heights range from 4' - 12'.

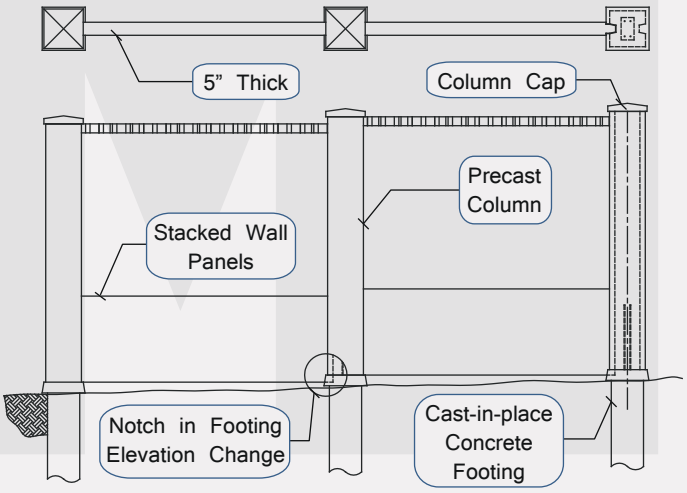






* **Privacy Fences**
* **Sound Walls**
* **Retaining Walls**
* **Pillars**
* **Dumpster Enclosures**





Typical Precast Concrete Fence Layout Detail
(4' & 8' Stacked Panels)

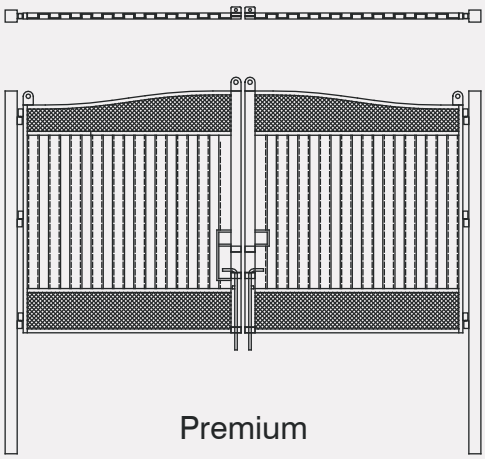
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Utility Gates

These gates are built for utility/industrial applications. Our gates are made of heavy duty steel and painted to match the concrete fence. Gates can also have ground straps installed for locations such as an electrical substation. The illustrations to the right are two of the common designs that have been provided.

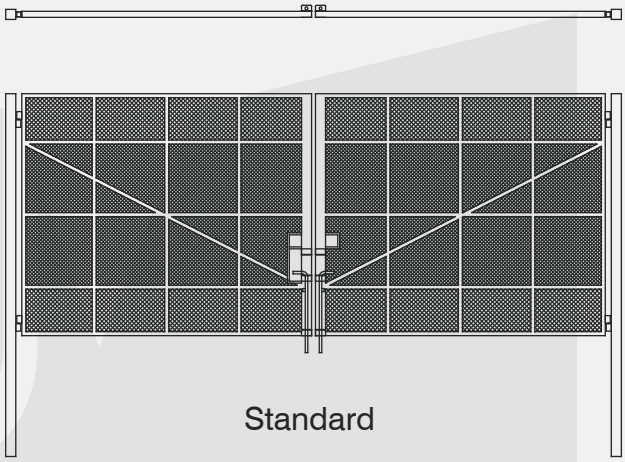
Below: Typical gate installed with precast concrete fence system.





Premium

Utility/Industrial Gates
(Front and Plan Views)



Standard

Personnel Gates

In some areas a smaller gate is required for personnel access. C & M produces a single walk-through gate which is made from the same heavy duty steel as the utility gates for vehicular traffic. Personnel gates may also have ground straps installed upon request.





Installation Process

Handling & Storage

Be sure to have the proper lifting equipment on site for unloading and handling of precast concrete products. Make sure to place on level ground with the proper dunnage. When stacking product, dunnage shall be vertically in-line with underlying dunnage to avoid dammage to product.





Site Preparation

1.) It is up to the contractor to review the drawings and installation guidelines before installing any product. It is a good idea to layout the site by establishing a good starting location. Most often buildings or fixed points are the best starting points.

2.) Once the job has been layed out, excavation should begin. Excavate trenches to a minimum width according to the actual size of cable troughs and pulling vaults. Depths of trenches will vary depending on what kind of backfill needs to be placed below troughs. Whatever the case may be, it is best for final elevation to be within 2” - 3” below bottom of cable trough.

3.) If using a drain tile, backfill with a crushed stone around the drain tile to within 3” of the cable trough bottom. A compactible material shall be placed, leveled, and compacted to the bottom of cable trough elevation. For H-20 loading, material should be compacted to 4,000 psf.





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Installing Cable Troughs

4.) All products should be properly lifted by the anchors that have been cast into them. Cable slings shall be sufficient length to maintain a 30 - 60 degree angle between the cables at the hook point.

5.) Maintain a staight line and minimal gaps between cable troughs to ensure layout is correct. Using a stringline or a transit will help alignment of cable troughs.





Setting Lids & Backfilling

6.) Set all lids by starting at a fixed point such as a building or a corner-end. Drawings should have a lid layout provided for location of each individual lid.

7.) If lockdown lids are being used, it is recommended lids be bolted once everything else has be completed. (Be sure to store locking hardware and tools in a safe location.)



8.) Sand or gravel should be used for backfilling and firmly compacted according to specifications required for loading. Be careful not to over-compact as this can damage the side-walls of the cable troughs. Backfilling can be topped off with excavated soils.



9.) Once everything has been backfilled and tamped, it is now time to level off with the final layer of gravel. It is recommended to stay just below the top edge of the trough for the elevation of gravel.

Cable Trough Specifications



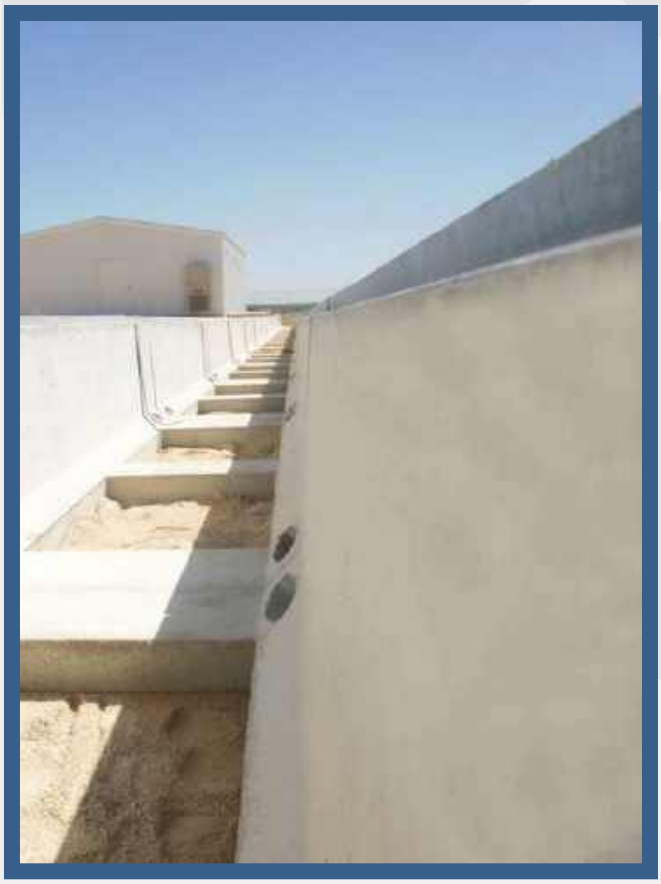
1. Cable troughs are a “one-piece” design.

2. Cable troughs consist of a u-shaped base and removable covers to be installed in earth trenches with covers extending above the surrounding surface.

3. The medium duty cable trough is designed to support at least 200 pounds per square foot live load for pedestrian traffic. Heavy duty cable troughs are designed to carry H-20 vehicular traffic (32,000 pound axle loading).

4. Cable troughs have standard openings in bottom to allow for drainage. Some cable troughs have special designs for custom projects with no openings in bottom. All heavy duty cable troughs have solid bottoms (optional drain holes).

5. It is recommended that the lid covers be installed before backfilling and tamping to help prevent damage to troughs and keep backfill material from getting inside.



6. Cable trough covers are to be furnished in ergonomically acceptable sections. Each cover section should weigh less than 50 pounds (unless otherwise noted). The covers shall be sized to permit removal by a single person.

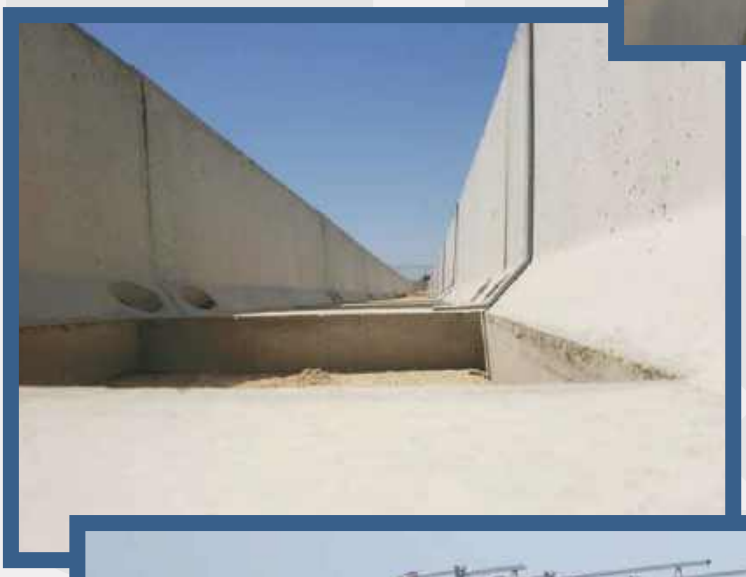
7. Cable troughs with steel cast in and exposed to outer surface shall be galvanized. Top steel edge of cable trough is permanantly attached and shall be used to ground individual lid section.

8. Four lifting anchors are installed in the cable trough. These anchors will be used to lift the cable trough during installation without damaging the unit.

9. Grounding straps will be installed and attached to the top steel edges.













C&M PRECAST
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2012

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Utility Catalogue

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