

# CONCRETE INC.

-PRECISELY ENGINEERED HIGH STRENGTH CONCRETE-

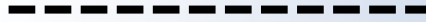


## *Fibercrete*®

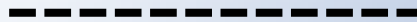
# TRENCH SYSTEM



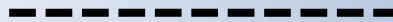
Fibercrete® trench is an ideal, accessible runway for power cables, control and communication wiring, and industrial piping.



Concast's standard cable trench system is 12" or 16" deep, and 10", 20", 24", 30", 40", and 50" wide. Standard trench lengths are 4' or 8'.



Fibercrete® is a Concast trademark. It stands for precisely engineered, high strength concrete. Fiber and steel reinforcement provide the trench units with the strength and durability of much heavier sections of ordinary concrete.



Concast, Inc. was founded in 1969 by Mr. Ben Tilsen, past owner and president. Ben is a concrete technologist known for his work in light weight aggregates and fiber reinforced concrete. He and Concast, Inc. hold patents on material and design in these fields. Concast is a member of the American Concrete Institute and the National Precast Concrete Association.

*Concast Inc. has specialized in concrete products for the electrical industry since 1969.*

*Overview* ..... 4

*Pedestrian Rated Trench*..... 6

*Heavy Traffic Trench* ..... 9

*Light Traffic Trench* ..... 11

*Accessories* ..... 12

*Typical Layouts* ..... 13

*Specifications* ..... 15



# TRENCH SYSTEM-OVERVIEW

## REDUCE INSTALLATION COST WITH CONCAST FIBERCRETE<sup>®</sup> TRENCH

IN-PLACE COST IS LESS than site cast concrete, conventional precast concrete, plastic mortars, or fiberglass plastics.



### BENEFITS:

- **HANDLING IS EASY.** One or two men can install without using hoisting equipment.
- **NON-SKID WALKWAY.** Fibercrete<sup>®</sup> covers provide for a skid-proof walkway.
- **INSTALLATION IS SIMPLE.** The Concast system has fewer parts to handle. No special brackets or lintels are required at corners or tees. One universal channel will form a tee, ell, or cross. Interlocking male-female ends eliminate the need for special tools, nuts, or bolts.
- **LESS ASSEMBLY PARTS.** Less time is spent searching the yard for “Specials.” No special lintels, sidewall lengths, or adaptor blocks at tees, crosses, ells, or reducers are required.
- **LESS EXCAVATION REQUIRED.** Fibercrete<sup>®</sup> trench is a compact system. Its outside dimensions are much less than that of other trench systems. As a result, less room is required around control houses, tower footings, and equipment foundations.
- **SUBSTATION EXPANSION.** Manual installation negates the use of cranes in stations where overhead towers and power lines exist. Fibercrete<sup>®</sup> trench is ideal for substation expansion since it can adapt to existing trench systems. A universal channel can be strategically placed in trench runs with two end plates for side wall closures, providing for future expansion. This results in significant labor savings when substation expansion requires additional trench.
- **IMMEDIATE USE.** Precast sections of road crossing allow for fast installation and traffic use immediately after installing.



### FEATURES:

- **OPEN BOTTOM DESIGN.** The Fibercrete<sup>®</sup> trench system is designed with an open bottom to allow for conduit exits, and drainage. A solid bottom is also available.
- **ABOVE OR BELOW GRADE.** Fibercrete<sup>®</sup> trench can be installed above ground. No special brackets or bolts are required.



### IDEAL USES:



SUBSTATIONS



INDUSTRIAL PIPING



TRANSPORTATION

### LAYOUT DRAWINGS PROVIDED.

Concast will provide large scale layout drawings for engineering approval, and to assist construction supervisor in trench installation. Drawings will show locations of all parts and give a complete bill of materials. Please refer to Concast Fibercrete® Trench Installation Guidelines No. 0347.45 for more information.

### FROM ADVANCED CONCRETE TECHNOLOGY.

Advanced technology makes possible light, thin shell, precast concrete products which can replace more massive units in ordinary steel reinforced concrete. Drawing from more than 30 years of research and experience, Concast Inc. developed Fibercrete®, a proprietary blend of high strength concrete reinforcing with special fibers, using steel reinforcing where required.

### QUALITY ASSURANCE AND RESEARCH.

Concast designs Fibercrete® products for specific applications, then tests them thoroughly for performance. The company molds and cures these products under precise controls at its Zumbrota, MN factory. Research continues at Concast to develop and test new and improved specialized products for the electrical distribution industry.

### GUIDE SPECIFICATIONS.

(Complete recommended specifications can be found at the end of the Trench System Catalog)

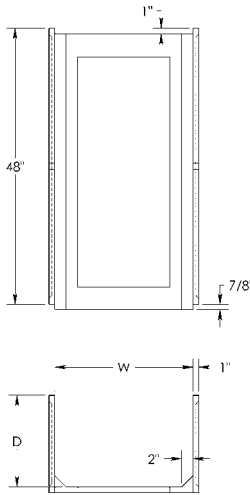
Trench shall be Concast Fibercrete® or approved equal. It shall be composed of cement mortar, reinforced by alkali resistant fiber, and deformed high tensile welding wire.

### **CONCAST'S ROLE: TO SERVE YOU.**

*For any special needs, contact your Concast Manufacturing representative, or call the factory direct.*

*Concast can make special sizes to meet your requirements.*

## STANDARD PEDESTRIAN CHANNELS



PART#	W	D	WEIGHT
8010	10"	12"	80 LBS.
8020	20"	12"	90 LBS.
8024	24"	12"	95 LBS.
8030	30"	12"	100 LBS.
8040	40"	12"	125 LBS.
8050	50"	12"	140 LBS.
801016	10"	16"	90 LBS.
802016	20"	16"	100 LBS.
802416	24"	16"	105 LBS.
803016	30"	16"	110 LBS.
804016	40"	16"	135 LBS.
805016	50"	16"	150 LBS.

Pedestrian channels are rated for 200 lbs./ft<sup>2</sup>

Our standard and flush channels can be customized per job specifications. Some common options include.

**Solid Bottom:** These channels are ideal for special applications. For part#, add a "SB". Ex: 8024SB.

**Unistrut:** Channels can have Unistrut imbedded into the side wall for attaching different hardware. For part#, add a "U". Ex: 8024U

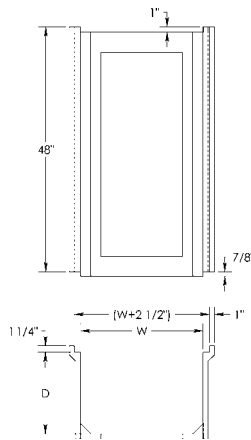
## 8 FOOT LENGTHS

Channels can be ordered in 4' or 8' lengths. 4' sections are shown, so to specify 8' pieces replace the prefix "80" in the Part# with an "88". Ex: 882416.

## SPECIAL LENGTHS

Any length between 6" and 96" can be made add the length in inches to the end of the part#. Ex: 802416 36". (Note: Covers made to fit)

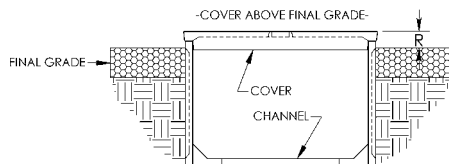
## FLUSH SERIES PEDESTRIAN CHANNELS



PART#	W	D	WEIGHT
8010F	10"	10.75"	87 LBS.
8020F	20"	10.75"	97 LBS.
8024F	24"	10.75"	102 LBS.
8030F	30"	10.75"	107 LBS.
8040F	40"	10.75"	132 LBS.
8050F	50"	10.75"	147 LBS.
801016F	10"	14.75"	97 LBS.
802016F	20"	14.75"	107 LBS.
802416F	24"	14.75"	112 LBS.
803016F	30"	14.75"	117 LBS.
804016F	40"	14.75"	142 LBS.
805016F	50"	14.75"	157 LBS.

Pedestrian channels are rated for 200 lbs./ft<sup>2</sup>

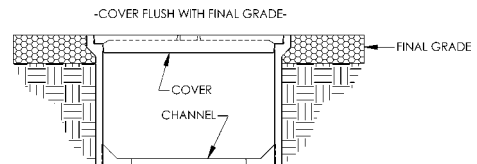
## SIDE BY SIDE COMPARISON



### STANDARD CHANNEL

THE STANDARD CHANNEL WILL WORK FOR APPLICATIONS NOT REQUIRING COVERS FLUSH WITH GRADE.

VS.



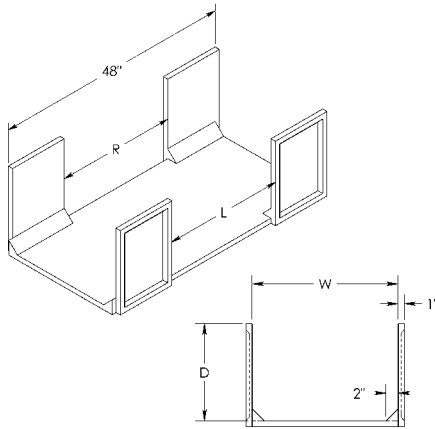
### FLUSH CHANNEL

FOR USE WHERE SURROUNDING ROCK, ASPHALT, OR CONCRETE NEED TO BE FLUSH WITH COVERS. CAN BE PURCHASED WITH SOLID BOTTOM AND GRATED COVERS FOR DRAINAGE TRENCH.

R=2 1/4" (CONCASTS MINIMUM RECOMMENDATION-WITH COVER)

CONCAST

## UNIVERSAL CHANNELS



{L}-Left  
{R}-Right

Note: Openings are centered on 48" sides, but they can be offset if needed for layout. Or upon request.

## STANDARD

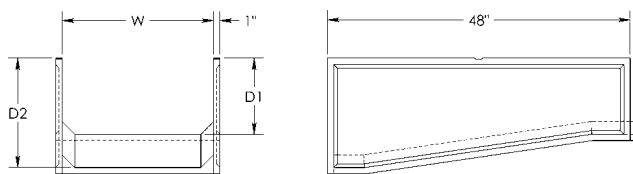
PART #	D	W	L	R
8012 (10X10)	12"	10"	10"	10"
8022 (20X20)	12"	20"	20"	20"
8026 (24X24)	12"	24"	24"	24"
8032 (30X30)	12"	30"	30"	30"
8042 (40X40)	12"	40"	40"	40"
801216 (10X10)	16"	10"	10"	10"
802216 (20X20)	16"	20"	20"	20"
802616 (24X24)	16"	24"	24"	24"
803216 (30X30)	16"	30"	30"	30"
804216 (40X40)	16"	40"	40"	40"

## EXAMPLES OF OTHER SIDE WALL OPTIONS

PART #	D	W	L	R
8022 (20X40)	12"	20"	20"	40"
803216 (0X40)	16"	30"	No Opening	40"
8042 (20X20)	12"	40"	20"	20"

Universal Channels can be used to make tees, ells, or crosses. They can be used to form a smooth step down from one width trench to another. The channel has a solid bottom for additional strength. For example the 8012 (10X10) is a ten-inch channel with a ten-inch opening on both sides. There are a number of universal possibilities so all the standards (Table 1) are shown and only a few others (Table 2) are shown. To obtain proper part number, visualize the channel sitting on its female end with the top facing towards you. (30X20) would be a 30" opening on the Left and a 20" opening on the right.

## TRANSITION CHANNELS



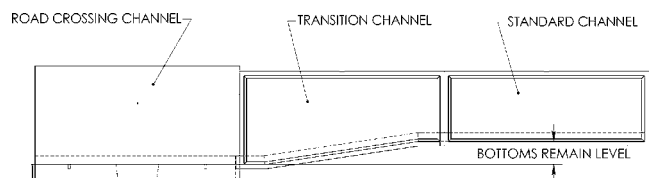
Note: RT's come with two female ends to interlock with the Heavy Traffic trench. Transition pieces are standard on all layouts containing both Pedestrian and Heavy Traffic Trench, for a smooth bottom transaction between the two. These channels can be used at the control house if a deeper inlet is needed. Transitions can only be made with a length of 36"- 48"; anything less then that will not allow for a smooth Transition. Channel is made with a Solid Bottom.

## EXAMPLES USING 20" WIDE CHANNELS

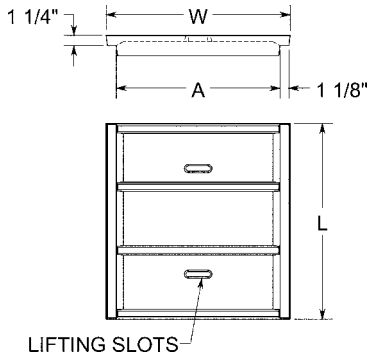
PART #	W	D1	D2	USED FOR
8020RT	20"	12"	17 1/4"	A
802016RT	20"	16"	17 1/4"	B
802016DRT	20"	16"	21 1/4"	C

A - For: 8020 to 8020R or 8020RSG  
 B - For: 802016 to 8020R or 8020RSG  
 C - For: 802016 to 802016R

## TYPICAL ELEVATION DETAIL

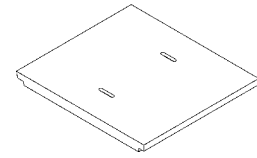


## FIBERCRETE COVERS



PART#	A	W	L	WEIGHT
8011	10"	12 1/2"	47 7/8"	56 LBS.
8021	20"	22 1/2"	23 7/8"	42 LBS.
8025	24"	26 1/2"	23 7/8"	60 LBS.
8031	30"	32 1/2"	23 7/8"	72 LBS.
8041	40"	42 1/2"	23 7/8"	89 LBS.
8051	50"	52 1/2"	16"	80 LBS.

Fibercrete Covers are fiber and wire reinforced with lifting slots cast in.



Polymer Covers are available upon request. Their part numbers have a letter "P" suffix.

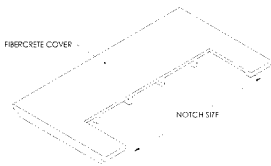
## EXAMPLES OF SPECIAL PIECES

PART#	A	W	L
8011 36"	10"	12 1/2"	35 7/8"
8021 24"	20"	22 1/2"	23 7/8"
8025 6"	24"	26 1/2"	5 7/8"
8031 18"	30"	32 1/2"	17 7/8"
8041 48"	40"	42 1/2"	47 7/8"

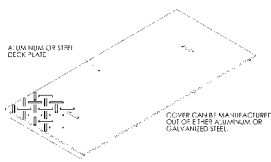
Notes:

- The covers are made 1/8" under channel size.
- Covers are rated at 200 lbs/ft<sup>2</sup>
- A 48" Fibercrete cover is supplied for all Universal Channels, and spans the openings in the sidewalls.

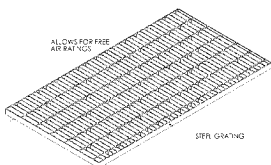
## OTHER TRENCH COVER OPTIONS



**Notched Covers:**  
Notches or holes can be cast into covers during manufacturing for a finished appearance. Notched covers typically are used next to control buildings for cable exits, but can be placed wherever needed. Covers are modified to your design specifications.

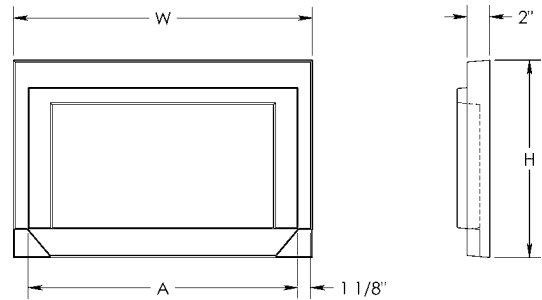


**Aluminum or Steel Covers:**  
In areas where Fibercrete covers are not desired. Concast can supply you with either light weight aluminum covers or galvanized steel covers. Part # example: 8021A or 8021SG .



**Ventilated Covers:**  
For some trench systems, ventilation is needed. Because of this, Concast offers Ventilated Steel Covers to fit all channel sections. Part # example: 8031V.

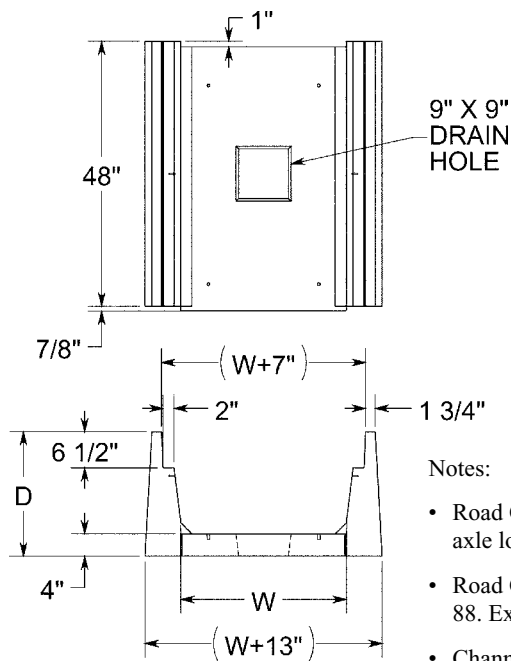
## END PLATES



PART#	A	W	H
8013	9 3/4"	12 3/8"	13 3/8"
8023	19 3/4"	22 3/8"	13 3/8"
8027	23 3/4"	26 3/8"	13 3/8"
8033	29 3/4"	32 3/8"	13 3/8"
8043	39 3/4"	42 3/8"	13 3/8"
8053	49 3/4"	52 3/8"	13 3/8"
801316	9 3/4"	12 3/8"	17 3/8"
802316	19 3/4"	22 3/8"	17 3/8"
802716	23 3/4"	26 3/8"	17 3/8"
803316	29 3/4"	32 3/8"	17 3/8"
804316	39 3/4"	42 3/8"	17 3/8"
805316	49 3/4"	52 3/8"	17 3/8"

Note: End plates are used to close up unused Universal openings and at termination of all trench runs.

## ROAD CROSSING CHANNELS (R)

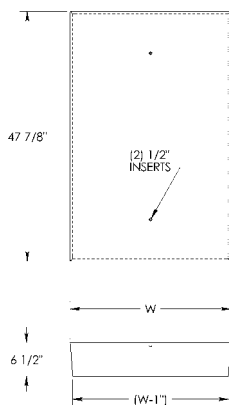


PART#	W	D	WEIGHT
8010R	10"	22 1/2"	1005 LBS.
8020R	20"	22 1/2"	1250 LBS.
8024R	24"	22 1/2"	1335 LBS.
8030R	30"	22 1/2"	1395 LBS.
8040R	40"	22 1/2"	1560 LBS.
8050R	50"	22 1/2"	1760 LBS.
801016R	10"	26 1/2"	1170 LBS.
802016R	20"	26 1/2"	1415 LBS.
802416R	24"	26 1/2"	1500 LBS.
803016R	30"	26 1/2"	1560 LBS.
804016R	40"	26 1/2"	1725 LBS.
805016R	50"	26 1/2"	1925 LBS.

### Notes:

- Road Crossing Channels meet AASHTO H-20 heavy equipment requirement 32,000 LB. axle load.
- Road Crossing also comes in 8' sections. The part # replaces the 80 in the original with an 88. Ex. 8810R or 8840R.
- Channels can be made in special lengths. The part number is then followed by the length. Ex. 8024R 24".
- (4) 1/2" Lead Threaded Inserts are cast into the part for lifting. It is recommended to use these with a Swivel type lifting eye and a 4-way chain.
- A 10x10 drain hole comes standard in all heavy traffic channels. Solid bottom is optional.
- For any 90° turns, two 45° special channels are used, where a "T" is required, a universal channel is used and called out the same as with the pedestrian universals.

## CONCRETE COVERS



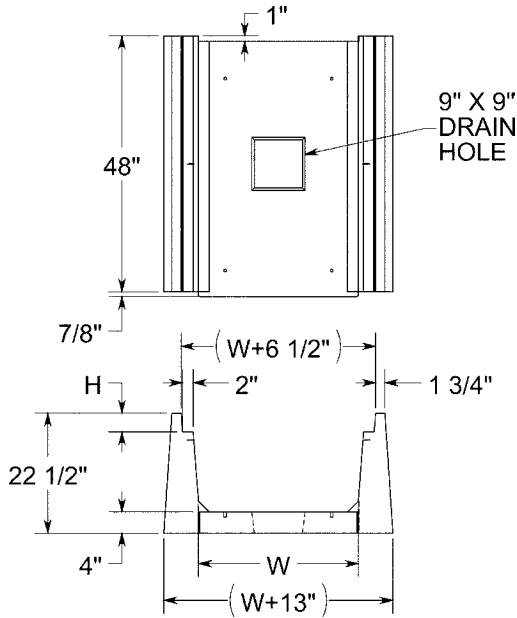
PART #	W	WEIGHT
8011R	16 5/8"	537 LBS.
8021R	26 5/8"	710 LBS.
8025R	30 5/8"	780 LBS.
8031R	36 5/8"	980 LBS.
8041R	46 5/8"	1240 LBS.
8051R	56 5/8"	1555 LBS.

Note: Road Crossing Covers meet AASHTO H-20 heavy equipment requirement 32,000 lb. axle load

## END PLATES

End Plates are supplied as needed per job. They are designed to fit the end profile of all Heavy Traffic & Light Traffic channels, and they are held in place with backfill.

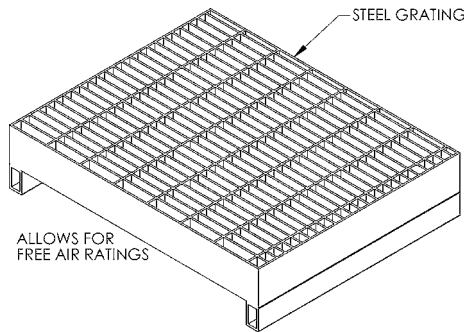
## ROAD CROSSING CHANNELS (RSG)



PART #	W	H	WEIGHT
8010RSG	10"	3 1/2"	1020 LBS.
8020RSG	20"	3 1/2"	1265 LBS.
8024RSG	24"	3 1/2"	1350 LBS.
8030RSG	30"	4"	1410 LBS.
8040RSG	40"	4"	1575 LBS.

**Notes:**

- Road Crossing Channels meet AASHTO H-20 heavy equipment requirement 32,000 LB. axle load.
- Road Crossing also comes in 8' sections. The part # replaces the 80 in the original with an 88. Ex. 8810RSG or 8840RSG.
- Channels can be made in special lengths. The part number is then followed by the length. Ex. 8024RSG 24".
- (4) 1/2" Lead Threaded Inserts are cast into the part for lifting. It is recommended to use these with a Swivel type lifting eye and a 4-way chain.
- A 10x10 drain hole comes standard in all heavy traffic channels. Solid bottom is optional.
- For any 90° turns, two 45° special channels are used, where a "T" is required, a universal channel is used and called out the same as with the pedestrian universals.
- RSG Style Road Crossing Channels are supplied when steel covers are requested.



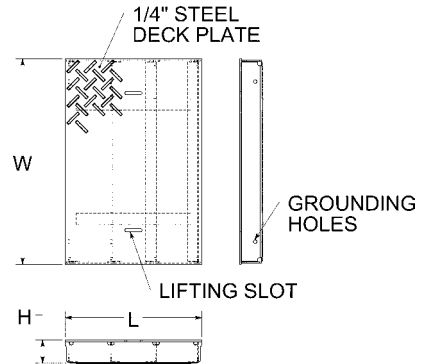
Along with concrete and steel galvanized covers, ventilated covers are available for all heavy and light traffic channels.

Note: Road Crossing Covers (RSG suffix) meet AASHTO H-20 heavy equipment requirement 32,000 lb. axle load.

Light Traffic Covers (LTSG suffix) meet AASHTO H-10 light equipment requirement 16,000 lb. axle load.

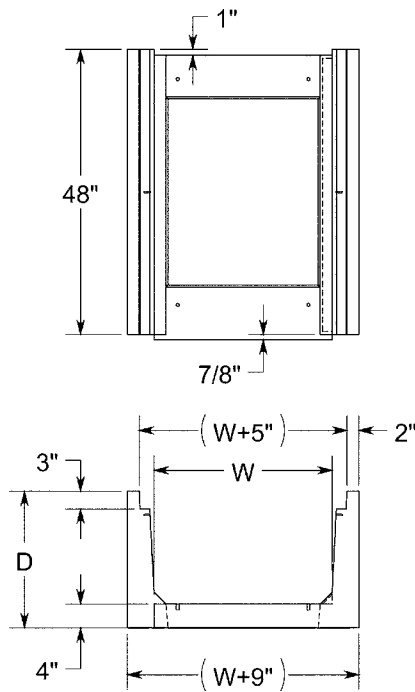
## STEEL COVERS

Cover is Hot-Dipped Galvanized Steel



PART#	W	L	H	WEIGHT
8011LTSG	14 3/4"	47 7/8"	3"	90 LBS.
8021LTSG	24 3/4"	23 7/8"	3"	73 LBS.
8025LTSG	28 3/4"	23 7/8"	3"	84 LBS.
8031LTSG	34 3/4"	23 7/8"	3"	107 LBS.
8041LTSG	44 3/4"	23 7/8"	3"	137 LBS.
8011RSG	16"	47 7/8"	3 1/2"	100 LBS.
8021RSG	26"	23 7/8"	3 1/2"	83 LBS.
8025RSG	30"	23 7/8"	3 1/2"	94 LBS.
8031RSG	36"	23 7/8"	4"	117 LBS.
8041RSG	46"	23 7/8"	4"	147 LBS.

## LIGHT TRAFFIC CHANNELS (LT)

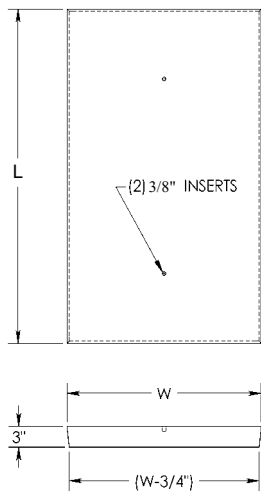


PART#	W	D	WEIGHT
8010LT	10"	19"	736 LBS.
8020LT	20"	19"	784 LBS.
8024LT	24"	19"	804 LBS.
8030LT	30"	19"	833 LBS.
8040LT	40"	19"	881 LBS.
801016LT	10"	23"	847 LBS.
802016LT	20"	23"	895 LBS.
802416LT	24"	23"	915 LBS.
803016LT	30"	23"	944 LBS.
804016LT	40"	23"	992 LBS.

**Note:**

- Light Traffic Channels meet AASHTO H-10 light equipment requirement 16,000 LB. axle load.
- Light Traffic also comes in 8' sections. The part # replaces the 80 in the original with an 88. Ex. 8810LT or 8840LT.
- Channels can be made in special lengths. The part number is then followed by the length. Ex. 8024LT 24".
- (4) 1/2" Lead Threaded Inserts are cast into the part for lifting. It is recommended to use these with a Swivel type lifting eye and a 4-way chain.
- Maximized open bottom trench design for cable entry. Solid bottom also available.
- For any 90° turns, two 45° special channels are used, where a "T" is required, a universal channel is used and called out the same as with the pedestrian universals.

## LIGHT TRAFFIC — CONCRETE COVERS



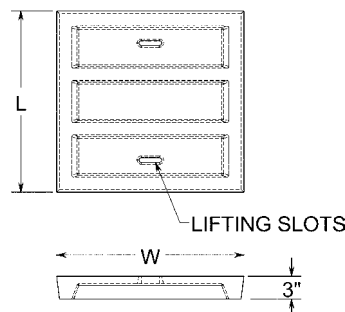
PART#	W	L	WEIGHT
8011LT	14 3/4"	47 7/8"	195 LBS.
8021LT	24 3/4"	47 7/8"	325 LBS.
8025LT	28 3/4"	47 7/8"	390 LBS.
8031LT	34 3/4"	47 7/8"	440 LBS.
8041LT	44 3/4"	23 7/8"	272 LBS.

Concrete covers come standard with Light Traffic trench.

## END PLATES

End Plates are supplied as needed per job. They are designed to fit end profile of channel and are held in place with backfill.

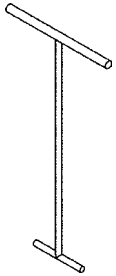
## LIGHT TRAFFIC — FIBERCRETE COVERS



- Lightweight H10 rated cover
- Fiber & steel reinforced concrete

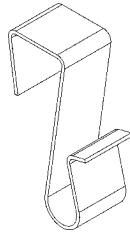
PART#	W	L	WEIGHT
8011LTF	14 3/4"	24"	60 LBS.
8021LTF	24 3/4"	24"	90 LBS.
8025LTF	28 3/4"	24"	100 LBS.
8031LTF	34 3/4"	16"	98 LBS.
8041LTF	Contact Concast for availability		

These covers do not come standard and must be specified.



## LIFTING DEVICE

*Part #8000* Lifting tools are provided with all orders for pedestrian type or steel galvanized covers. Lifting slots are cast into all covers to accommodate a lifting tool.



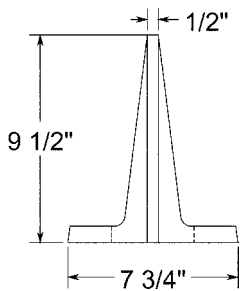
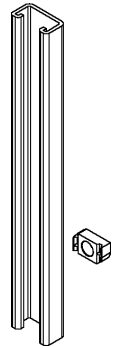
## CABLE CLIP

*Part #8002* All trench is designed ready for cable clips. Pedestrian channels are notched and Heavy Traffic channels have cast-in inserts. These clips are used to hold grounding wires on trench walls.



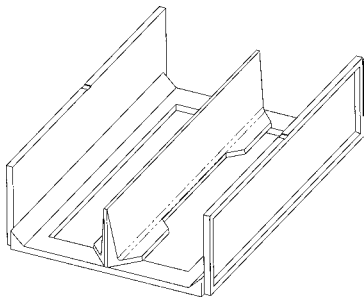
## UNISTRUT

Unistrut is an effective way for attaching supports to the trench walls. Unistrut can be cast into all trench on the side walls, bottom, or both. *Typical Part # would be 8040U. But Part #'s can vary.*



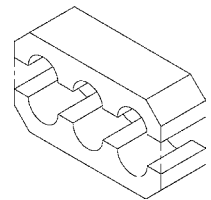
## PARTITION BOARDS

*Part #8001* We can supply partition boards which provide for physical separation of cables in all trench widths. With a wide base, these dividers will not tip over. Standard length is 47 7/8", but shorter lengths can be produced depending on job need.



## CABLE SUPPORT BLOCKS

*Part #'s vary.* Support blocks can be made to your special needs. We understand that every job possesses different challenges, and we will work with you to produce a support block to your specifications. Any number of sizes and hole locations can be done.



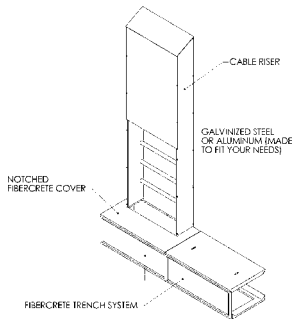
## HDPE PRODUCTS



Also shown:  
Part #8006 Corner Cable Protector

## CONCRETE PIPE SUPPORTS



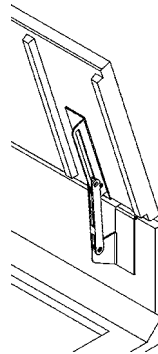


### CABLE RISERS

Aluminum or steel galvanized cable risers are available. We make cable risers per job specification. Typically used to get cables from Concast cable trench into a higher control building entrance.

### HINGED COVERS

Stainless Steel Hinges can be installed on our pedestrian channels and covers to make opening and closing easy. A hold-open arm will hold cover up at a 90° angle for easy cable maintenance. Keeps clear cross section for laying cable.

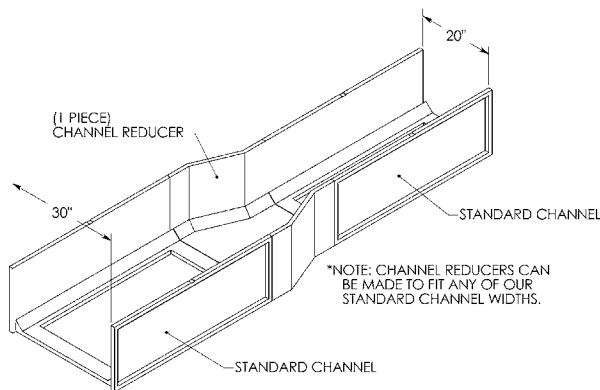


### WELD PLATES

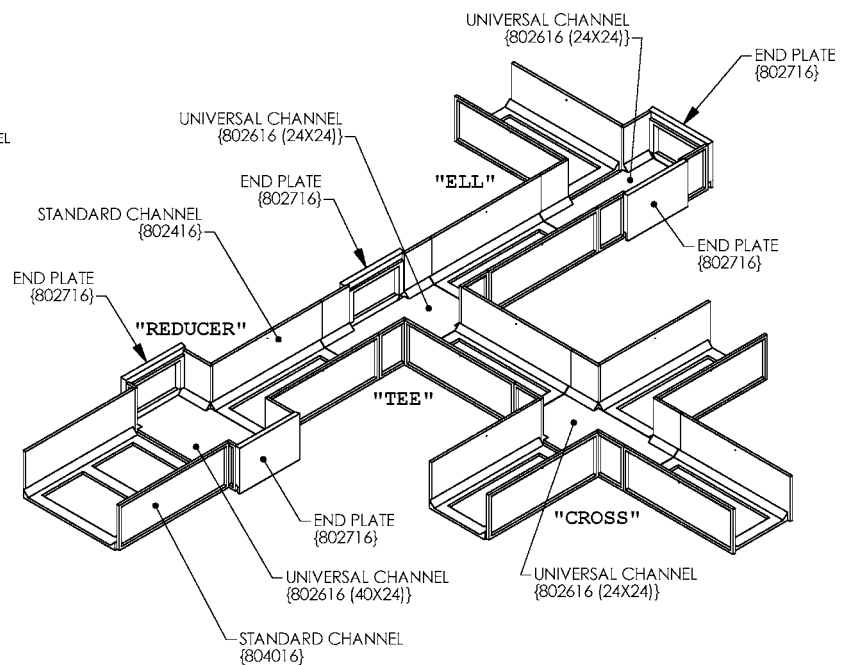
Weld plates can be cast into channels where needed for securing support members, trays, or piping.

## TYPICAL LAYOUTS

### TEES, ELLS, CROSS, REDUCER

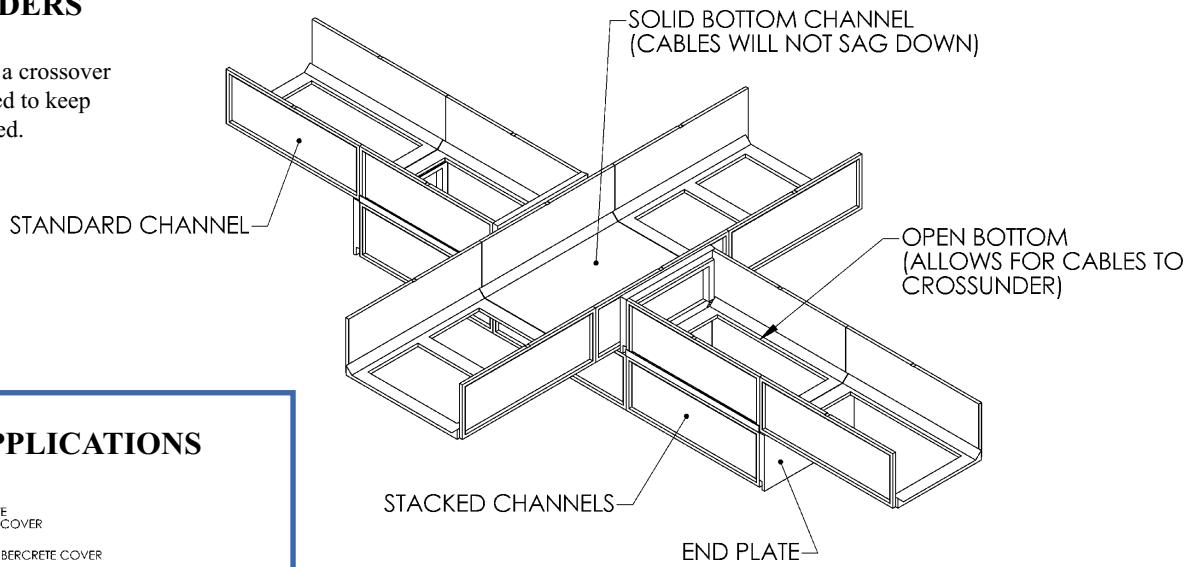


One-Piece Reducer



## CROSSOVERS AND CROSSUNDERS

When trench runs meet, a crossover or crossunder can be used to keep cables separated if needed.



### PULL BOX APPLICATIONS

\*NOTE: PULL BOXES CAN BE MODIFIED FOR MANY DIFFERENT APPLICATIONS.

Concast offers a pull box for use with our trench system. Pull boxes can be used for grade changes, crossovers, crossunders, and next to control buildings. Pull boxes can stand alone in other substation applications (see URD Vault / Utility Boxes Catalog).

### ELEVATION CHANGE

All horizontal angles are labeled numerically. Another method to accomplish this is by stacking trench. Elevation changes, crossovers or crossunders can be done this way.

**ANGLES AND ELEVATION CHANGES:** Concast trench can be cast to form any horizontal or vertical deviation. Shown are two generic examples. Each special piece is marked, and the layout drawings show you the exact location of each special (SP) section. Note that special covers are made to match each special channel.

### ANGLE CHANGE

All horizontal angles are labeled alphabetically. Covers are called out to match their channels; for example, the 802016 SP A in the drawing would get a 8021 SP A (cover).

**SPECIFICATION FOR CABLE TRENCH****1. GENERAL**

- 1-A.** Furnish a precast Fibercrete® (G.F.R.C.) cable trench system as manufactured by Concast Incorporated, Zumbrota, Minnesota. A trench system installed in the earth with covers extending above the surrounding crushed rock surface. Trenches with covers shall be constructed at the locations shown on the drawings. With all necessary fittings, offsets, and terminations.
- 1-B.** It shall be composed of cement mortar reinforced by alkali resistant glass fiber, and deformed high tensile welded wire, manufactured by means of the Concast spray lay up method incorporating a minimum of 4 percent volume A.R. glass fibers.
- 1-C.** The trench system should consist of precast glass fiber reinforced concrete (G.F.R.C.), one piece channel sections, and removable cover sections assembled to form a completely enclosed trench, with a 4" sand bedding on bottom.
- 1-E.** The trench should be 14 or 18" deep overall (including cover), with an interior clear cross sectional distance of 10, 20, 24, 30, 40, or 50" by 12 or 16" deep, depending on cable space required. Its design shall be such that the channel is self supporting and can be set above grade if required.
- 1-F.** The one-piece channel designed trench system shall be furnished in standard 4 or 8' lengths. Special lengths shall be furnished where required according to the layout design. Each channel section shall mate with an interlocking male-female joint.
- 1-G.** A universal channel shall be provided for ells, tees, crosses, and reducers.
- 1-H.** The precast trench covers shall be furnished in sections of lightweight construction, sized to permit removal by a single person, and each shall have slots for lifting tools. Covers shall be of Fibercrete®, an alkali resistant glass fiber and deformed prefabricated high tensile welded wire system, as specified in Concast Fibercrete trench system components. All covers and special length covers shall be packaged for easy field identification.
- 1-I.** The trench system shall be designed to support at least 200 psf live load. Except where vehicular or heavy traffic ratings are required.

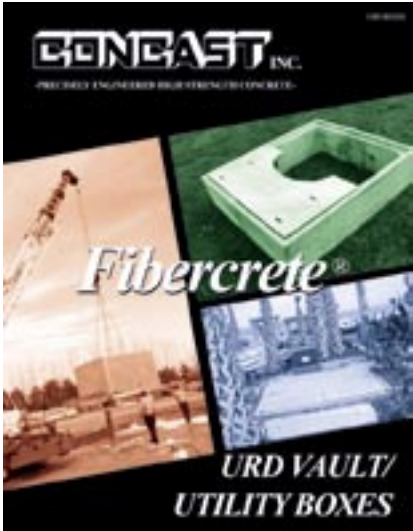
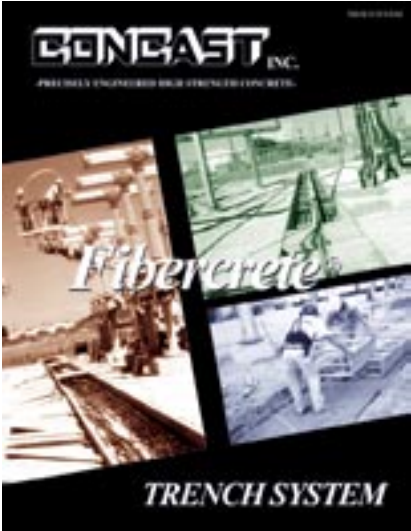
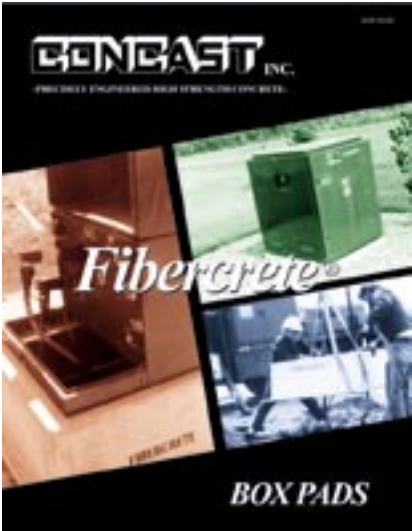
**2. ROAD CROSSING TRENCH**

- 2-A.** Heavy traffic rated trench shall meet the ASHTO H-20 heavy equipment requirements 32,000 lb. Axle load. Light traffic rated trench shall meet the ASHTO H-10 light equipment requirements 16,000 lb. Axle load.
- 2-B.** Precast trench members shall be cast in steel forms using 7000 PSI or greater, compressive strength concrete with Type One Portland Cement.
- 2-C.** Covers for road crossing trench shall be made of either precast steel reinforced concrete or fabricated hot-dipped galvanized steel. They too shall meet either ASHTO H-20 or ASHTO H-10 requirements.

**3. DRAWINGS**

- 3-A.** Drawings will be provided for engineering approval and field installation. Final drawings will include individual details, the layout, a complete B.O.M, and installation guidelines. Electronic drawings can be available upon request.

# OUR COMPLETE LINE OF CATALOGS



CONCAST, Inc.  
1010 North Star Drive  
P.O. Box 69 • Zumbrota, MN 55992-0069  
Phone: (507) 732-4095 • Fax: (507) 732-4094  
email: [info@concastinc.com](mailto:info@concastinc.com)

