



# Composite Manhole Covers

## A Solution to Your Sanitary Sewer Overflow Problems



Submittal & Detail Sheet  
Revision: October, 2020

BlueGreen Municipal  
P.O. Box 8084  
Weslaco, Texas 78596  
(956) 277-0354

# WHAT IS SUPERCOVER?

- ✓ SuperCover is a non-metallic, fiber reinforced composite manhole cover capable of withstanding traffic loading requirements that meet or exceed H-25 rating at an economical value for all municipal budgets and projects.
- ✓ SuperCover is the solution to infiltration and inflow (I&I) of groundwater in wastewater pipes; designed by sanitary sewer overflow professionals to be the ultimate solution to I&I needs.
- ✓ SuperCover has been tried and tested through third party lab testing, university evaluation, and implemented in municipalities across Texas.
- ✓ Supercover has TXDoT approval for being placed outside the roadway/clear zone and within the roadway/clear zone on low speed ( $\leq 45$  mph) roadways.
- ✓ SuperCover is designed and distributed in Texas; and manufactured at a facility that is ISO certified by IQNet to conform to ISO 9000 and ISO 1400 standards.

## Want to know more about SuperCover?

Follow the detail sheet submittal on the next pages for all there is to uncover about SuperCover



Sanitary Sewer Overflow Series

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Purpose: To provide leading I&I prevention technology, in a manhole ring & cover with the capability to solve most municipal sanitary sewer overflow problems.

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## Description:

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SuperCover is a polymer matrix, non-metallic, fiber reinforced, composite, manhole cover; capable of withstanding traffic loading requirements that meet or exceed **H-20 & H-25** rating. SuperCover offers features such as: self-aligning design, antirotating construction, secure bolting into manhole, and compatibility with inflow dish for maximum I&I prevention. SuperCover also comes compatible with the 3M locator dish for manhole identification and location. **SuperCover has been approved by Texas Department of Transportation (TXDOT).**

## Specification:

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SuperCover is offered in two sizes that are most common in municipal manholes; 24" and 30" clear opening. These two openings accommodate for 95% of requirements for new and/or existing construction today. OSHA has adopted 30" clear opening for human entry confined spaces. SuperCover fully meets and complies with the requirements for OSHA for entry confined spaces. SuperCover is offered in two styles; Sanitary Sewer Overflow (SSO) non-hinged and hinged series. Non-hinged SSO series covers bolted down into place with double gaskets for maximum locking and I&I protection. Hinged covers are affixed to ring using a double hinge capable of 189 degree opening. **All SuperCover's are compatible with our fully composite SureSeal inner dish and double gasketed for complete I&I prevention.**

## Strength & Durability:

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SuperCover has been tested by Trenchless Technology Center at Louisiana Tech University and signed off by a US registered licensed professional engineer. The US Department of Transportation requires manhole ring and covers to be tested for load ratings under AASHTO M-306-10. In order to be classified H-20 Heavy Duty Product must withstand 16,000 lbs. for 60 seconds without cracking or breaking. A 2.5 times safety factor is required which brings the total proof load to 40,000 lbs. SuperCover was able to average 76,000lbs total force weight before initial signs of cracking or destruction. **SuperCover is able to perform 60,000lbs over the requirement for H-20 & H-25 rating; and 0.0 gallons per hour in I&I testing.**

## Installation:

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SuperCover is installed using conventional methods as classic manhole covers. Only SuperCover approved tooling should be used when assembling and disassembling the ring and cover.

The bottom of the composite manhole cover shall sit flush with the top of the manhole cone or the adjustment riser ring. Since the composite manhole cover is water tight the top of the cover should be flush and level with the ground, street, sidewalk, or paved area. A concrete pad is recommended to secure and anchor the composite manhole cover in place. A detail sheet shall be furnished as part of construction drawings (see detail sheet portion of submittal).

**In the event that the composite manhole cover is being installed on an elevated raised manhole, concrete anchor bolts, J-hooks, and grout/concrete may be used to secure the composite cover to the manhole opening.**

## Submittal:

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1. Fiber Reinforced Ring & Cover:
  - ✓ Ring & Cover polymer matrix shall be comprised of non-metallic materials. There should be no inner structural materials made of metal inside the body of the frame or the cover. Materials used to produce a composite manhole frame and cover are thermosetting resins, fibers, plastics, recycled plastics, and/or additives that enhance physical properties such as UV, strength, impact resistance, and durability. The final product should be a solid uniformed structure (non-porous) capable of withstanding the conditions and corrosive environment found in the sewer system.
2. Gasket & Seal:
  - ✓ Ring & cover must have two gaskets, one gasket sealing the cover to the manhole, and one gasket that seals the insert dish to the frame to prevent water from leaking through the ring and cover. Water leak testing of the units must yield a leak rate no more than 1 gallon in a 24-hour period. Leak testing shall be conducted by a qualified 3rd party testing lab or by project owner.
3. Anti-Rotation alignment tabs:
  - ✓ Ring & covers are required to have anti-rotation alignment tabs. Anti-Rotation alignment tabs provide quick and safe bolt alignment.
4. SureSeal Inner Dish:
  - ✓ Ring & cover must be compatible with an insert dish with the following features; gasket, 316 SS 1/2" bolts, Stainless steel handle for easy removal, Self-Aligning Guides and a non-corrosive connection chain. Must be rated for 0.0 gallons per hour in I&I testing. SureSeal inner dish meets all required specifications.
5. Locating Disk:
  - ✓ Ring & Cover must have a designated area for an optional 3M iD Disk Marker 1414-XR/iD, for protection of the disk and easy installation
6. Certifications & Approval:
  - ✓ Manhole ring and cover must be TXDoT approved and tested by a third-party testing facility with a signed professional engineer signed seal.

**SuperCover not only meets the required submittal specifications in most municipalities, but exceeds specification requirements in composition and performance.**

**Testing Reports Available on Request**

Approval & 3<sup>rd</sup> Party Testing:

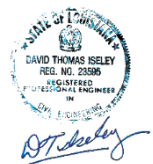
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**SuperCover has been approved for use in Texas by**



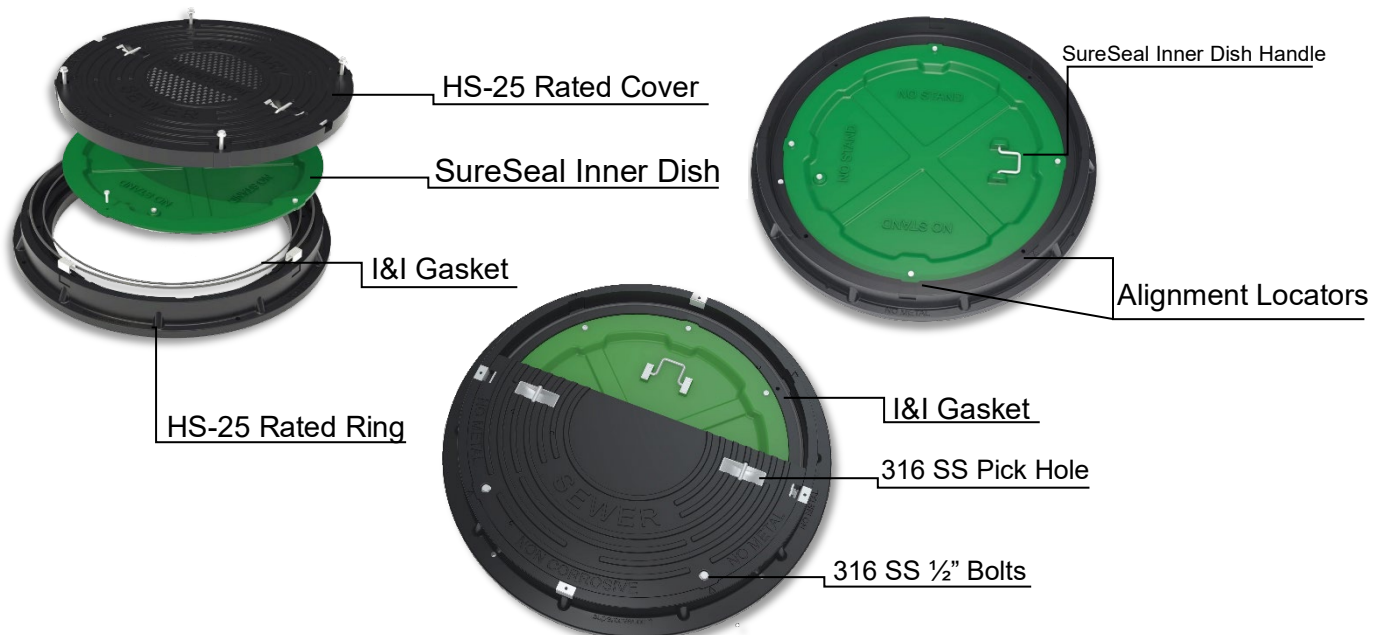
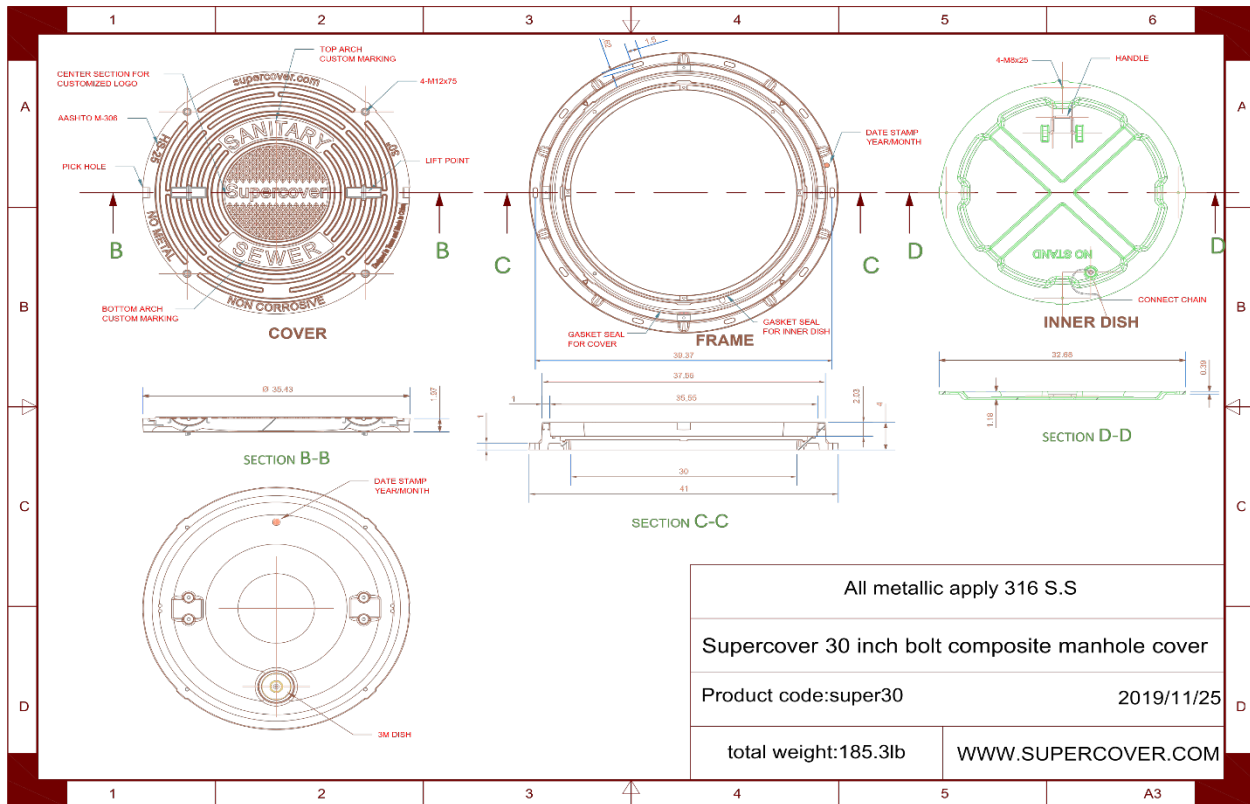
\*NOT AN ENDORSEMENT

**SuperCover has been 3<sup>rd</sup> party tested & Certified by**



Detail Sheet:

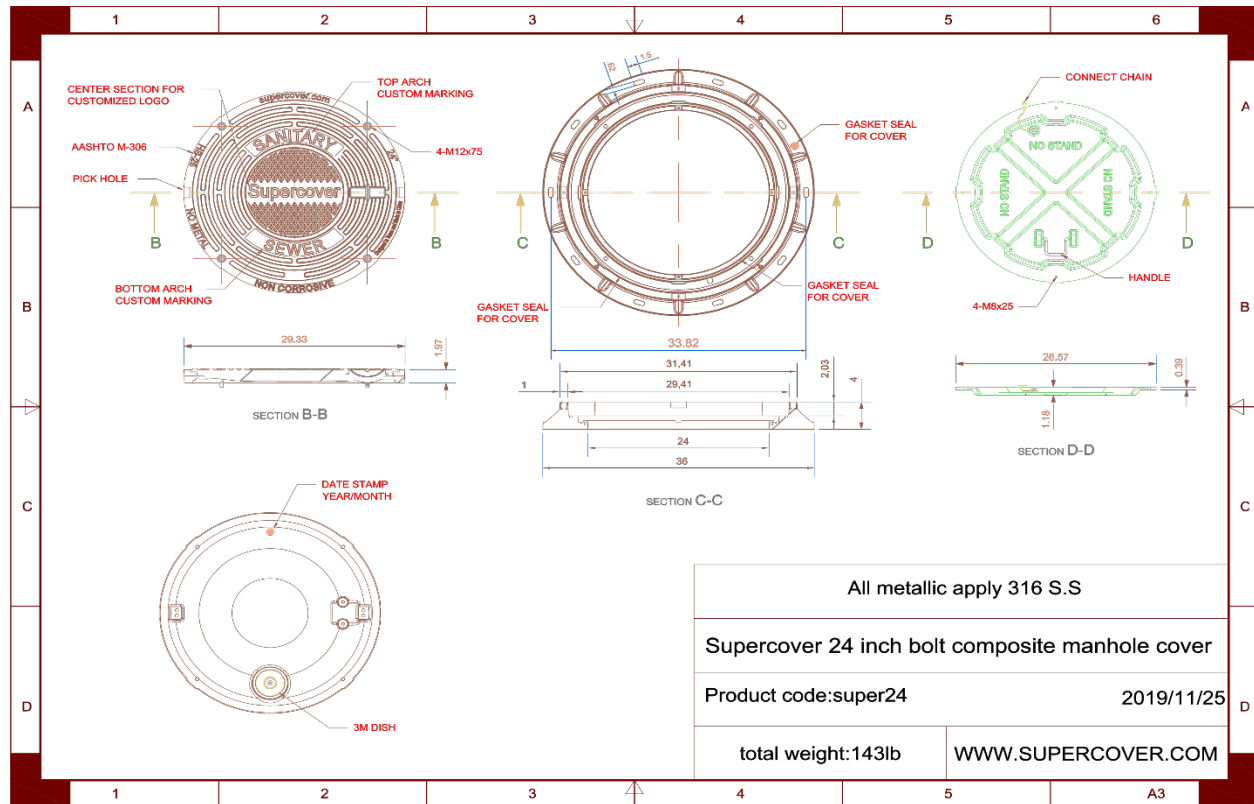
## SuperCover Non-Hinged SSO 30"



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# SuperCover Non-Hinged SSO 24"



	ID	OD	Rim Thickness	Inner Dish	Ring	Cover	Ring & Cover
NH SSO 24"	24"	36"	4.0"	8.6 lb.	61.8 lb.	72.6 lb.	143 lb.
NH SSO 30"	30"	41"	4.0"	13.2 lb.	66.4 lb.	72.6 lb.	185 lb.
DH 30"	30"	41"	4.0"	13.2 lb.	66.4 lb.	72.6 lb.	185 lb.

NH SSO: Non-Hinged Sanitary Sewer Overflow

ID: Inner Diameter (Opening)

OD: Outer Diameter Ring & Cover

I&I: Infiltration & Inflow



Sanitary Sewer Overflow Series

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## Features:



Exceeds 50,000lb Proof  
Load Test AASHTO



Water Tight



Anti-Corrosive Inert  
Composite Materials



No Scrap  
Metal Value



Locate with: 3M™ iD  
Disk Marker 1414-XR/iD



Self-Extinguishing



Odor-Eliminating



Bolted Down to Frame,  
Cover & Inner Dish



Manufactured at an  
ISO 9000 Certified Plant



NO Unlawful Entry:  
Bolt & Locking System



Anti-Theft



5 Year Warranty

FEATURE	SUPERCOVER	LEADING COMPETITOR
ANTI-ROTATING	✓	
INFLOW DISH-CAPABLE	✓	
BOLTED DOWN INFLOW DISH	✓	
DOUBLE GASKET	✓	
ODOR PREVENTION	✓	✓
FALL PROTECTION INNER DISH	✓	
SELF ALIGNING	✓	
H-25 LOAD RATED	✓	✓



## Reference Standards:

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**Product submittal must list these testing procedures at minimum to be in compliance with submittal standard:**

- |                      |                                   |
|----------------------|-----------------------------------|
| A. AASHTO M306-10    | Proof Load Testing H-25           |
| B. ASTM C 1028-07 e1 | Static Coefficient of Friction    |
| C. ASTM D 790-17     | Flexure Testing                   |
| D. ASTM D 790-17     | Flexure Testing After UV Exposure |
| E. ASTM D 256-10     | Izod Pendulum Impact              |
| F. ASTM D 635-18     | Burning Rate                      |
| G. ASTM D 4060-14    | Taber Abrasion (10,000 Cycles)    |
| H. ASTM D 570-98     | Water Absorption                  |
| I. ASTM G 154-16     | UV (1,000 Hours)                  |

## Performance Data:

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ASTM D790-17 Flexure Strength Cover	20,393 psi
ASTM D790-17 Flexure Strength Retention After UV Exposure Cover	Pass, >85% Retention
ASTM D790-17 Flexure Strength Frame	19,728 psi
ASTM D790-17 Flexure Strength Retention After UV Exposure Frame	Pass, >85% Retention
ASTM C1028-07e1 Static Coefficient of friction	0.674
ASTM D256-10 Izod Impact Testing	1,473 J/m
ASTM D635-18 Rate of Burning in Horizontal	Samples Self-Extinguish
ASTM D4060-14 Taber Abrasion Testing 10,000 cycles Cover	60.2 milligrams
ASTM D4060-14 Taber Abrasion Testing 10,000 Cycles Frame	72.3 milligrams
ASTM C501-84 Wear & Abrasion Testing 1,000 cycles Cover	Pass, <300
ASTM C501-84 Wear & Abrasion Testing 1,000 cycles Frame	Pass, <300
ASTM D570-98 Water Absorption	0.37%
ASTM G154-16 UV Testing Cover & Frame 1,000 Hours	No deformation
AASHTO Proof Load Testing 40,000 lbs. H-25	Pass, no cracking or deformation
AASHTO Proof Load Testing 70,000 lbs. H-25	Pass, no cracking or deformation
Infiltration & Inflow 24-Hrs	0.0

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\*SuperCover sets the standard in performance, durability, and I&I in the composite manhole industry. Testing results were conducted with SureSeal inner dish in unit.

**3<sup>rd</sup> party testing provided by Trenchless Technology Center at Louisiana Tech University  
& Metallurgical engineering Services, INC.**

**Testing Reports Available on Request**

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### Manufacturing Process:

SuperCover is designed and distributed by Wastewater Rehabilitation Professionals. Supercovers are produced using Sheet Molding Compounding (SMC) in order to meet the stringent manufacturing standards that municipalities demand. SuperCover is molded using state of the art machine and tool technology in a manufacturing facility that is **ISO certified by IQNet to conform to ISO 9000 and ISO 1400 standards**. SuperCover's non-metallic unique composition is fiber reinforced to ensure maximum strength and durability. SuperCover is also enhanced by the compatibility with Sureseal inner dish for maximum I&I protection. Before the finished product is promoted to the quality assurance phase it is meticulously analyzed for imperfections.

### Quality Assurance Process:

Each SuperCover is examined for defects or inconsistencies prior to being distributed.

### Packaging:

SuperCover comes stacked with five covers to a pallet, shrink-wrapped and banded for extra protection.

### Warranty:



SuperCover comes with a 5 year, no hassle warranty. If SuperCover is delivered with defects contact BlueGreen Municipal for warranty information.

### Precautions:

SuperCover weights range from 117 to 185 lbs. always proceed with caution when lifting or moving supercovers. Do not attempt to lift a supercover without assistance; or improper handling of weight distribution. BlueGreen Municipal is not responsible for injuries when installing or transporting SuperCover.

In accordance with C.F.R 1910.1200, this product is an "article" and therefore not subject to the HCS 2012 SDS labeling and Requirements.

### TXDOT Approval & Third-Party Certification:

**Testing reports and client testimonials available upon request. All client testimonials and endorsements have been authorized by the client for publication and reference.**



**Texas Department of Transportation**

125 EAST 11<sup>TH</sup> STREET | AUSTIN, TEXAS 78701-2483 | (512) 463-8700 | WWW.TXDOT.GOV

12/30/2019

SuperCover  
1200 W. Expressway 83  
LaFeria, Texas 78559

Re: RTI New Product Evaluation Tracking #20-3140  
“SuperCover Non Corrosive manhole frame and cover”

Dear SuperCover:

Thank you for submitting the SuperCover Non Corrosive manhole frame and cover for evaluation.

The Texas Department of Transportation's (TxDOT) Bridge (BRG) Division has reviewed your request and approves the use of the SuperCover Non Corrosive manhole frame and cover when being placed outside the roadway/clear zone and within the roadway/clear zone on low speed ( $\leq 45$  mph) roadways.

A Special Specification will be required for the TxDOT District's use, to include, at a minimum, addressing measurement and payment, materials, loading, wear and abrasion, UV exposure, friction, and bolting/locking mechanisms.

This product shall be added to the Approved Product List under the TxDOT Product Evaluation page and expires three years from the date of this letter, and shall need to be recertified at that time.

This letter shall not be considered a product endorsement, nor shall it be used for promotional purposes.

Thank you for contacting the Texas Department of Transportation. If you have further questions, please contact me at 512-416-4730.

Sincerely,

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(956) 277-0354



Chris Glancy  
Research Project Manager  
Research and Technology Implementation Division

cc Taya  
Retterer  
cc Joanne  
Steele

OUR GOALS  
MAINTAIN A SAFE SYSTEM ▪ ADDRESS CONGESTION ▪ CONNECT TEXAS COMMUNITIES ▪ BEST IN  
CLASS STATE AGENCY  
*An Equal Opportunity Employer*

# Tested & Certified

## Third Party Tested & Certified

by

The Trenchless Technology Center (TTC) at Louisiana Tech University

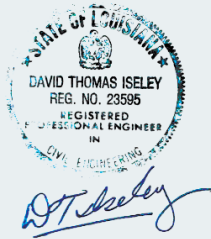
# SuperCover™

Name

Complies with the requirements of section 6.1

Proof-Load Test H-25 as specified in AASHTO Standard M

306-2, CERTIFIED TO M-306 H-20 & H-25



# AASHTO



**The Trenchless Technology Center (TTC) at Louisiana Tech University**

is an independent source of knowledge, research and education for both government entities and the private sector in the field of Trenchless Technology.

[www.supercover.com](http://www.supercover.com)

# **CARRASQUILLO ASSOCIATES, LTD.**

**MATERIALS, CONSTRUCTION, AND  
STRUCTURAL CONSULTANTS**

TBPE Reg. F-3467

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5113 SOUTHWEST PARKWAY, STE. 250  
AUSTIN, TX 78735

November 18, 2010

Mr. Ramon Closner  
Southern Trenchless Solutions  
26971 Rabb Road  
La Feria, Texas 78559

## **RE: Super Cover – Composite Manhole Covers**

Dear Mr. Closner:

Carrasquillo Associates has reviewed product information regarding the Super Cover Composite Manhole, including but not limited to, testing reports from an accredited university, product specifications, and an acceptance letter from the Texas Department of Transportation. In addition, CA has performed an extensive review of composite manhole covers, related data, industry standards, and has been involved in numerous communications with representatives of Southern Trenchless Solutions.

Based on the information received to date, it is CA's opinion that the Super Cover is a superior alternative to traditional systems by providing a much more durable and cost effective product for municipalities and/or state agencies.

Please do not hesitate to contact us at 512-358-7020 if we can be of any further assistance in this matter.

Regards,

A handwritten signature in black ink, appearing to read 'Carlos Garza', written over a horizontal line.

Carlos Garza, M.S., P.E.  
Project Manager