# Condition Assessment, Repairs, and Rehabilitation on PVSC's Aging [110(+) Year Old] Infrastructure and Assets

## Miscellaneous Repairs CSO Regulator Chambers (B301)

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Passaic Valley Sewerage Commission

*"Protecting Public Health and the Environment"*

*October 22, 2025*

# Contract No. B301

# Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark Project

BRENDAN MURPHY
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Passaic Valley Sewerage Commission

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*October 22, 2025*

# Contract No. B301
# Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark Project

* **Twenty-Four (24) CSO Regulator Chamber Locations**
* CSO No. 001 – Curtis Place Regulator Chamber, Paterson, NJ
* CSO No. 003 – West Broadway Regulator Chamber, Paterson, NJ
* CSO No. 005 – Bridge Street Regulator Chamber, Paterson, NJ
* CSO No. 006 – Montgomery Street Regulator Chamber, Paterson, NJ
* CSO No. 007 – Straight Street Regulator Chamber, Paterson, NJ
* CSO No. 010 – Warren Street Regulator Chamber, Paterson, NJ
* CSO No. 013 – East 11th Street Regulator Chamber, Paterson, NJ
* CSO No. 016 – Northwest Street Regulator Chamber, Paterson, NJ
* CSO No. 021 – Bergen Street Regulator Chamber, Paterson, NJ
* CSO No. 023 – Second Avenue Regulator Chamber, Paterson, NJ
* CSO No. 028 – Stewart Avenue Regulator Chamber, Kearny, NJ
* CSO No. 031 – Nairn Avenue Regulator Chamber, Kearny, NJ

# Contract No. B301
# Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark Project

* CSO No. 033 – Johnston Avenue Regulator Chamber, Kearny, NJ
* CSO No. 037 – Dukes Street Regulator Chamber, Kearny, NJ
* CSO No. 038 – Central Avenue Regulator Chamber, East Newark, NJ
* CSO No. 041 – Harrison Avenue Regulator Chamber, Harrison, NJ
* CSO No. 043 – Middlesex Street Regulator Chamber, Harrison, NJ
* CSO No. 044 – Bergen Street Regulator Chamber, Harrison, NJ
* CSO No. 046 – Verona Avenue Regulator Chamber, Newark, NJ
* CSO No. 050 – Fourth Avenue Regulator Chamber, Newark, NJ
* CSO No. 058 – Polk Street Regulator Chamber, Newark, NJ
* CSO No. 059 – Freeman Street Regulator Chamber, Newark, NJ
* CSO No. 076 – Passaic Street Regulator Chamber, Newark, NJ
* CSO No. 067 – Hudson Street Regulator Chamber, Paterson, NJ

*October 22, 2025*

# Contract No. B301
# Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark Project

* Engineer: PVSC Engineering Department
  * Assets installed between late 1910s and early 1920s
* Contractor: National Water Main Cleaning Company
  * Construction Cost: $1,989,779.75

* Protective Coating Materials:
  * Raven Lining Systems, Inc., Tulsa Oklahoma
    * Raven 755 – ReSurfacer
    * Raven 175 – Epoxy Primer
    * Raven 405 – Epoxy Coating (125-mils)

# Contract No. B010
# Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark Project [2016 - 2017]

* **Twelve (12) CSO Regulator Chamber Locations were completed.**
  * Assets installed between late 1910s and early 1920s
* Engineer: PVSC Engineering Department

* Contractor: National Water Main Cleaning Company
  * Construction Cost: $1,077,943.75

* Protective Coating Materials:
  * Raven Lining Systems, Inc., Tulsa Oklahoma
    * Raven 755 – ReSurfacer
    * Raven 175 – Epoxy Primer
    * Raven 405 – Epoxy Coating (125-mils)

**THOMAS TUCCI, JR.**
***Chairman***

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**GREGORY A. TRAMONTOZZI**
***Executive Director***

**JOSEPH F. KELLY**
***Acting Clerk***

***"PROTECTING PUBLIC HEALTH AND THE ENVIRONMENT"***

**600 WILSON AVENUE, NEWARK, NEW JERSEY 07105**

# PASSAIC VALLEY SEWERAGE COMMISSION
# CONTRACT NO. B301

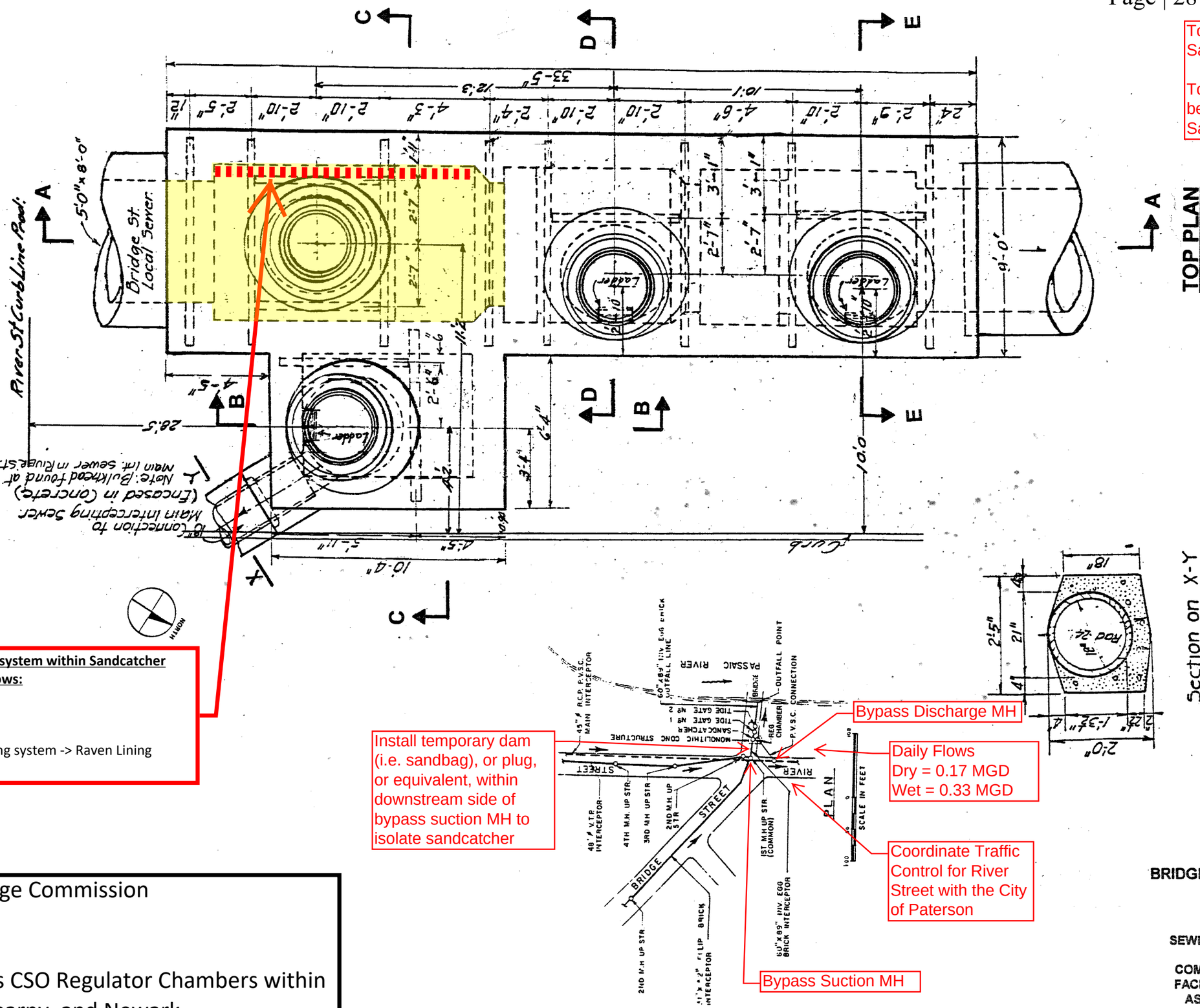
# MISCELLANEOUS REPAIRS CSO REGULATOR CHAMBERS WITHIN PATERSON, HARRISON, KEARNY, AND NEWARK

# AUGUST 2022

 **FIGURE 005-1**

Total area of SandCatcher = 520 s.f.

Total area of coating to be repaired = 80 s.f. SandCatcher




**1. Area of damaged coating system within Sandcatcher should be addressed as follows:**

a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

Passaic Valley Sewerage Commission
Contract No. B301

.

Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

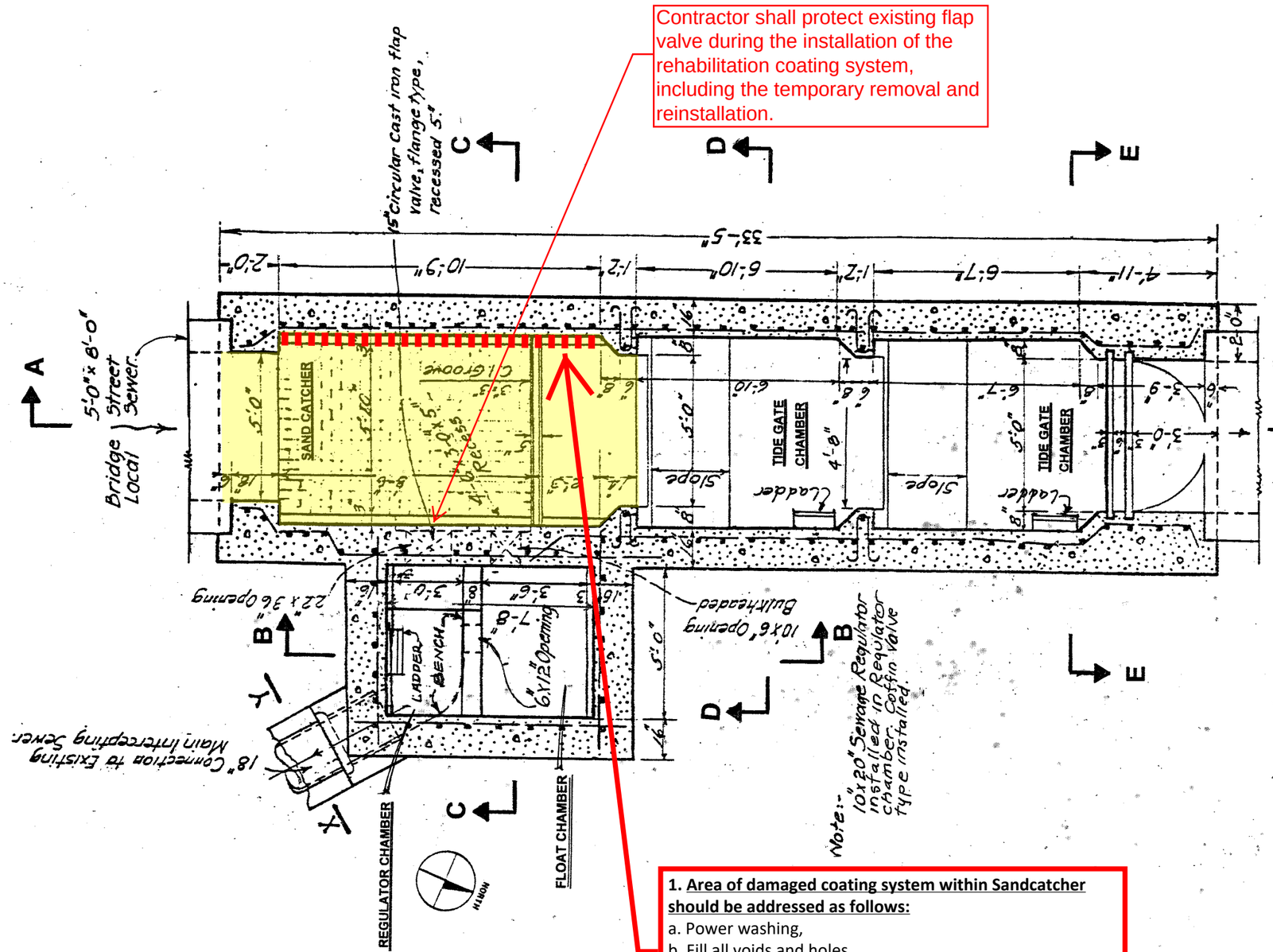
**NUMBER 005**
**BRIDGE STREET REGULATOR**
**PATERSON**

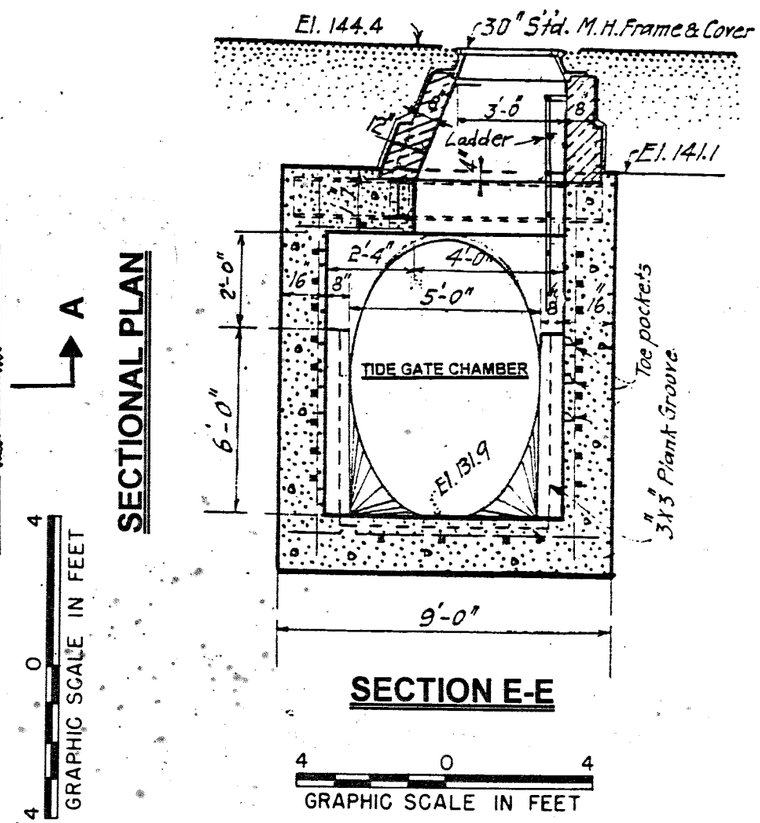
**PASSAIC VALLEY SEWERAGE COMMISSIONERS**

**COMBINED SEWER SYSTEM FACILITIES INVENTORY AND ASSESSMENT ANALYSIS**

FIGURE 005-2

Contractor shall protect existing flap valve during the installation of the rehabilitation coating system, including the temporary removal and reinstallation.




**1. Area of damaged coating system within Sandcatcher should be addressed as follows:**

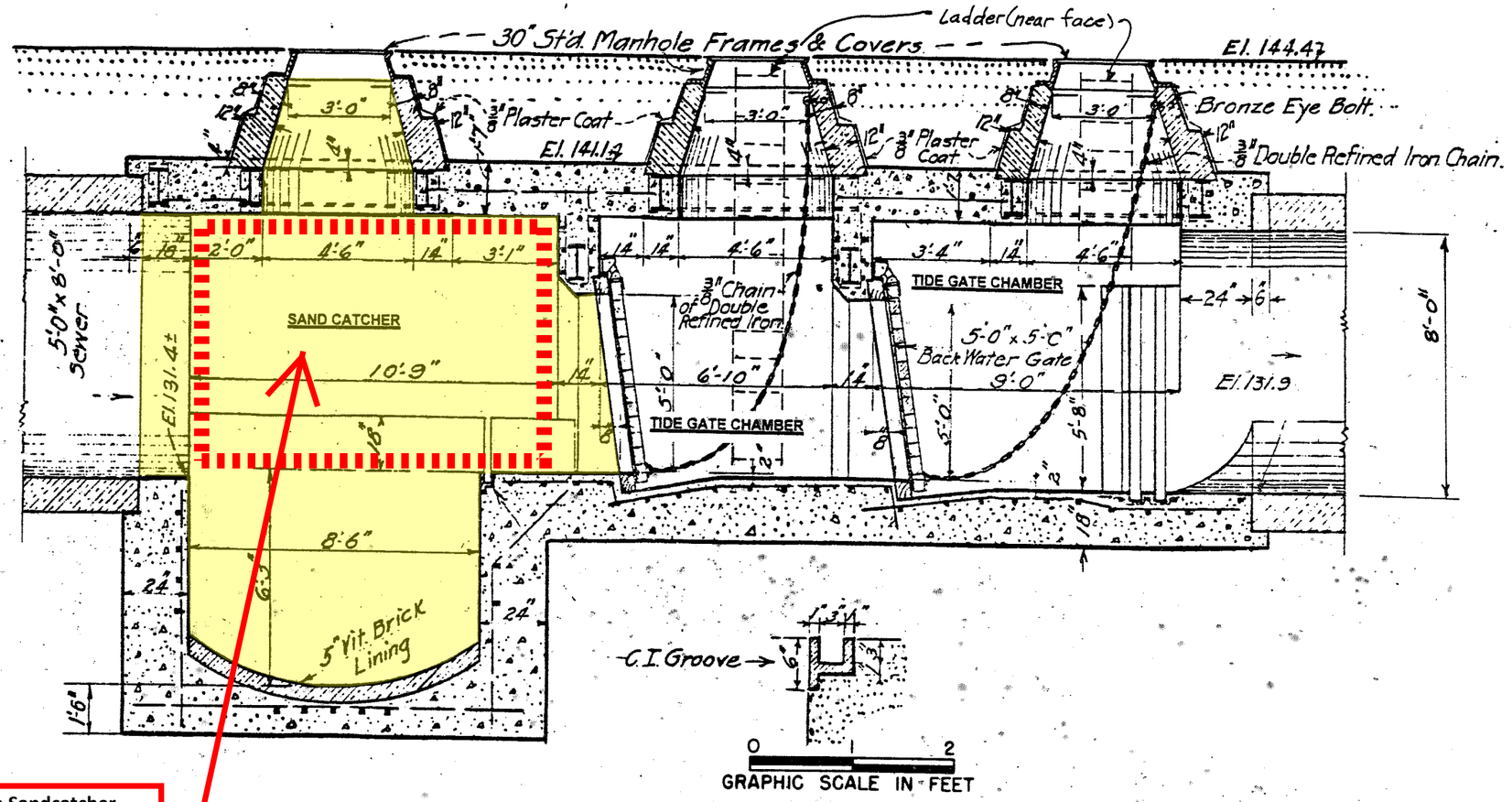
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

Passaic Valley Sewerage Commission
Contract No. B301
.
Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

NUMBER 005
BRIDGE STREET REGULATOR
PATERSON

PASSAIC VALLEY
SEWERAGE COMMISSIONERS

COMBINED SEWER SYSTEM
FACILITIES INVENTORY AND
ASSESSMENT ANALYSIS




**1. <u>Area of damaged coating system within Sandcatcher should be addressed as follows:</u>**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

## SECTION A-A

4 0 4
GRAPHIC SCALE IN FEET

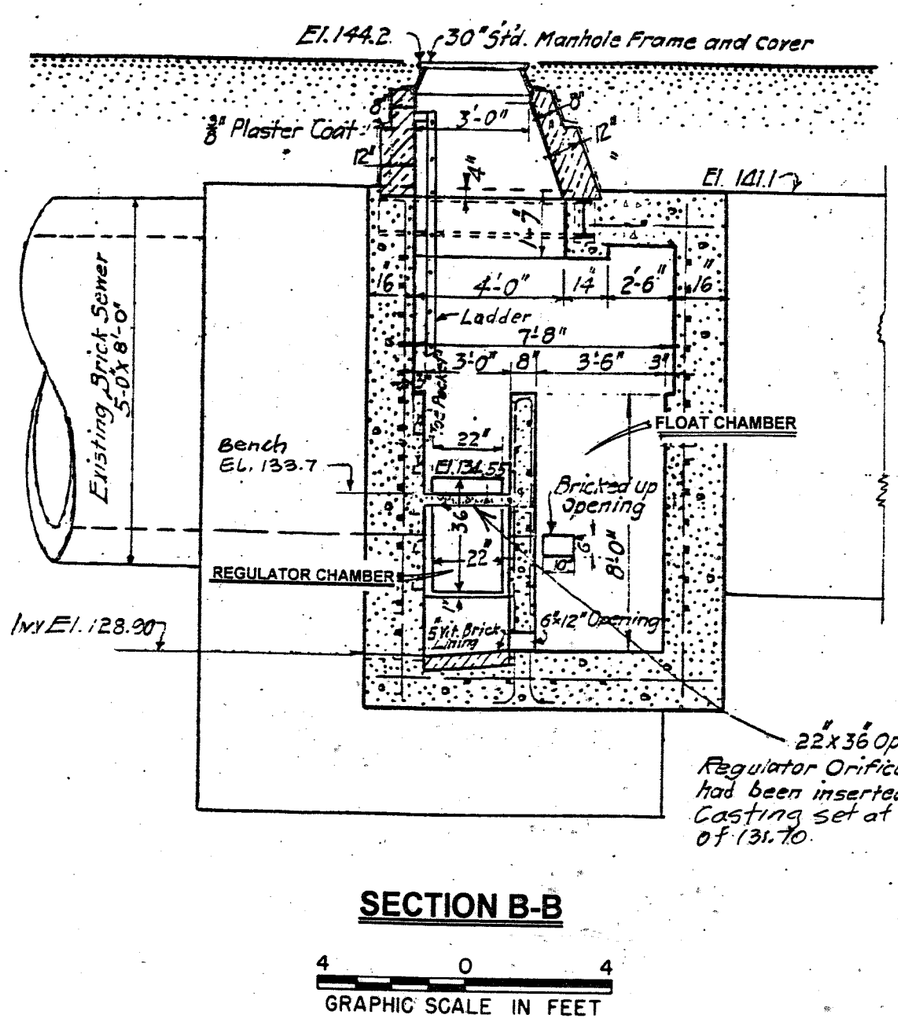
Passaic Valley Sewerage Commission
Contract No. B301
.
Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

NUMBER 005
BRIDGE STREET REGULATOR
PATERSON

PASSAIC VALLEY
SEWERAGE COMMISSIONERS

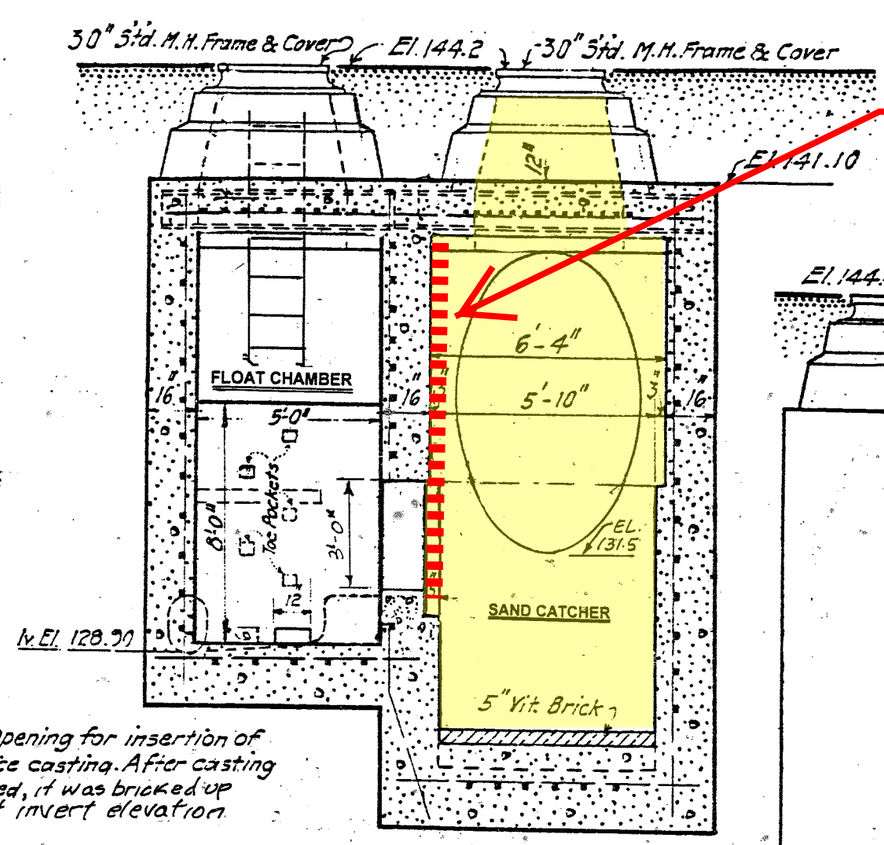
COMBINED SEWER SYSTEM
FACILITIES INVENTORY AND
ASSESSMENT ANALYSIS

 **FIGURE 005-4**



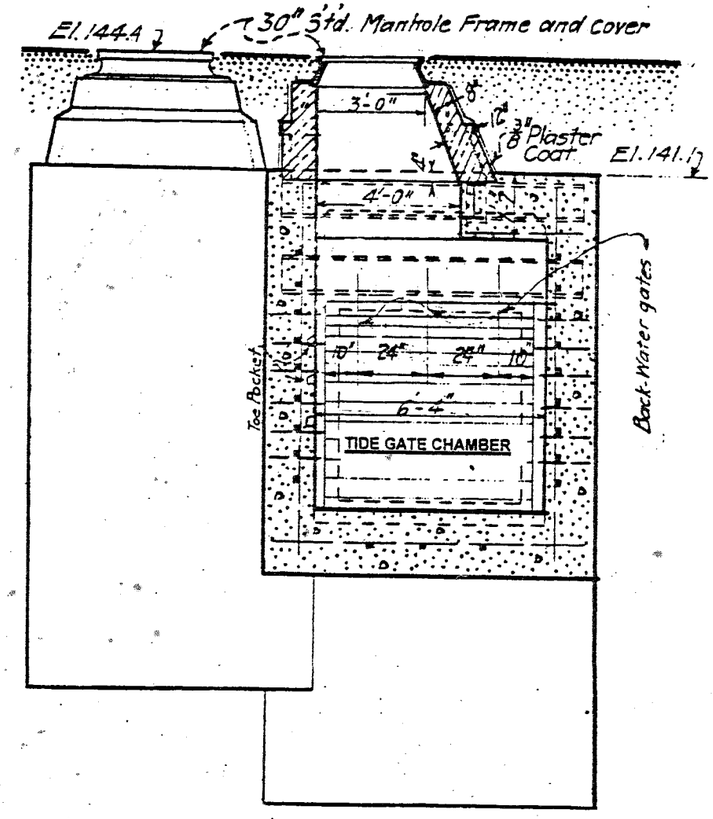

**SECTION B-B**

4 0 4
GRAPHIC SCALE IN FEET




**SECTION C-C**

4 0 4
GRAPHIC SCALE IN FEET




**SECTION D-D**

4 0 4
GRAPHIC SCALE IN FEET

**1. Area of damaged coating system within Sandcatcher should be addressed as follows:**

a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

Passaic Valley Sewerage Commission
Contract No. B301

.

Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

**NUMBER 005**
**BRIDGE STREET REGULATOR**
**PATERSON**

**PASSAIC VALLEY SEWERAGE COMMISSIONERS**

**COMBINED SEWER SYSTEM FACILITIES INVENTORY AND ASSESSMENT ANALYSIS**

# CSO 005 Bridge Street Regulator

Sandcatcher Chamber – Previous Coating Failure




Sandcatcher Chamber – Previous Coating Failure




*February 8, 2024*

# CSO 005 Bridge Street Regulator

Sandcatcher Chamber – Previous Coating Failure




Sandcatcher Chamber – Previous Coating Failure



*February 8, 2024*

# CSO 005 Bridge Street Regulator

Sandcatcher Chamber - During Repairs




Apply Raven 755 – ReSurfacer.

Sandcatcher Chamber - During Repairs




Apply Raven 755 – ReSurfacer.

# CSO 005 Bridge Street Regulator

Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

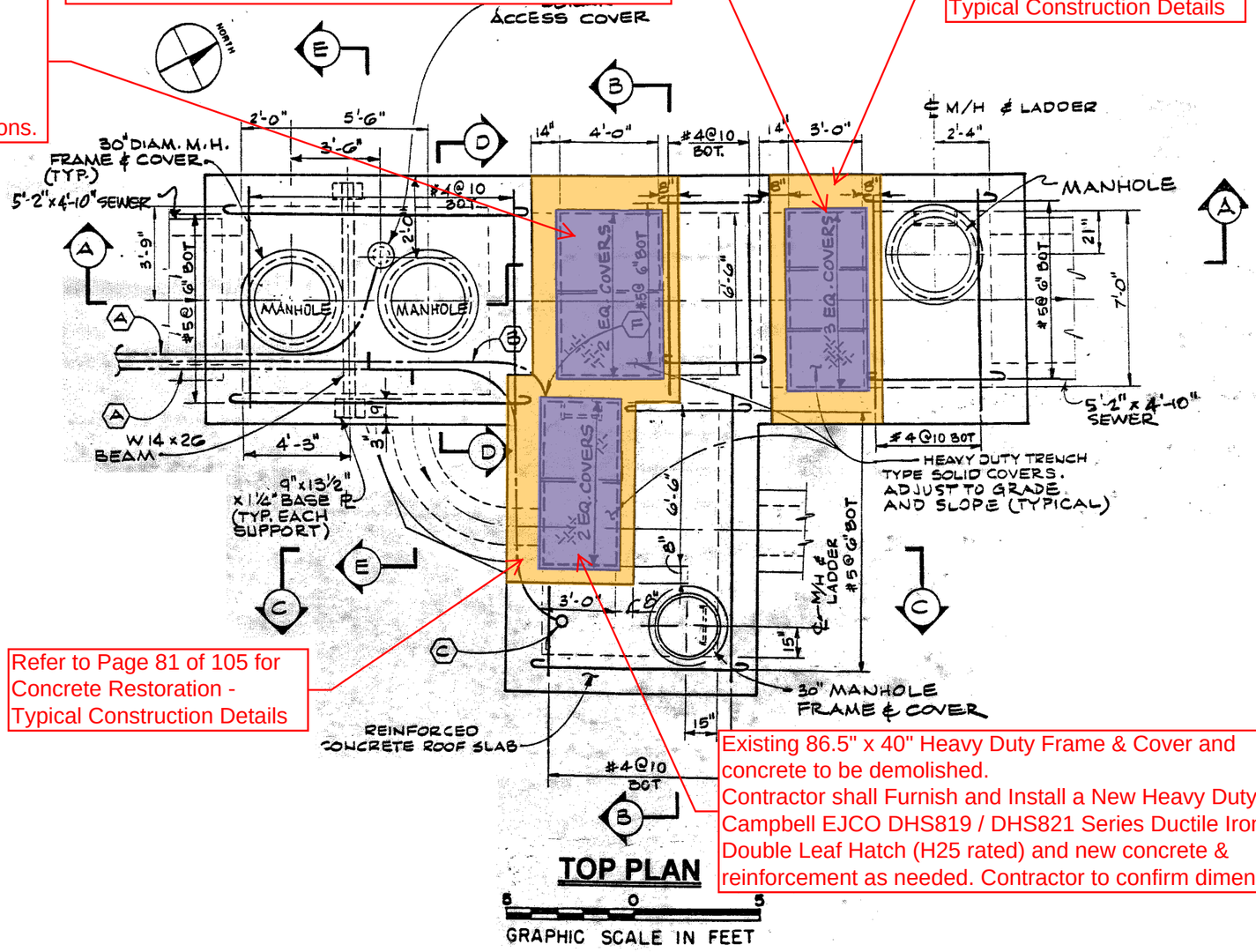
*February 8, 2024*

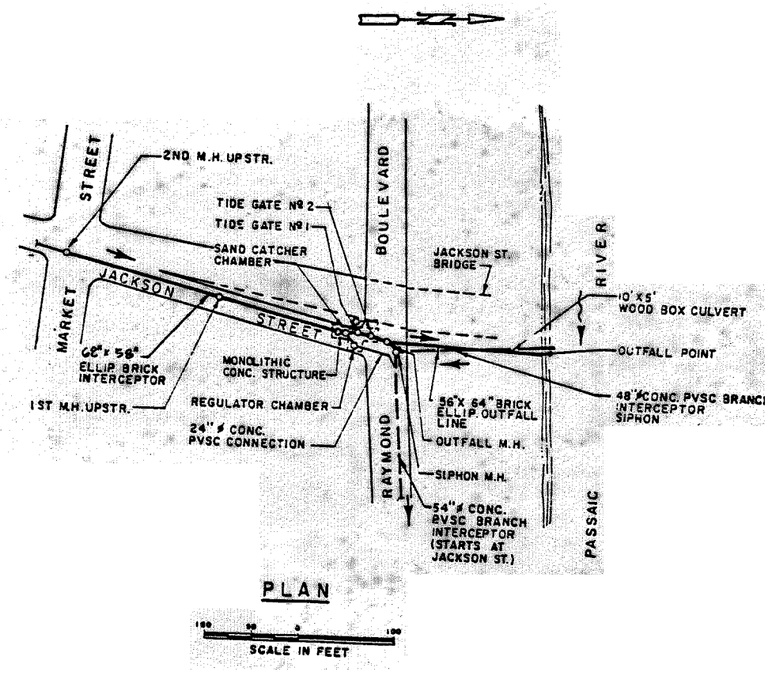
 FIGURE 057-1

Existing 80.5" x 52" Heavy Duty Frame & Cover and concrete to be demolished.
Contractor shall Furnish and Install a New Heavy Duty Campbell EJCO DHS819 / DHS821 Series Ductile Iron Double Leaf Hatch (H25 rated) and new concrete & reinforcement as needed. Contractor to confirm dimensions.

Existing 86.5" x 40" Heavy Duty Frame & Cover and concrete to be demolished.
Contractor shall Furnish and Install a New Heavy Duty Campbell EJCO DHS819 / DHS821 Series Ductile Iron Double Leaf Hatch (H25 rated) and new concrete & reinforcement as needed. Contractor to confirm dimensions.

Refer to Page 81 of 105 for Concrete Restoration - Typical Construction Details




Passaic Valley Sewerage Commission
Contract No. B301
.
Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

ALL STEEL REINFORCING SHALL BE GALVANIZED.

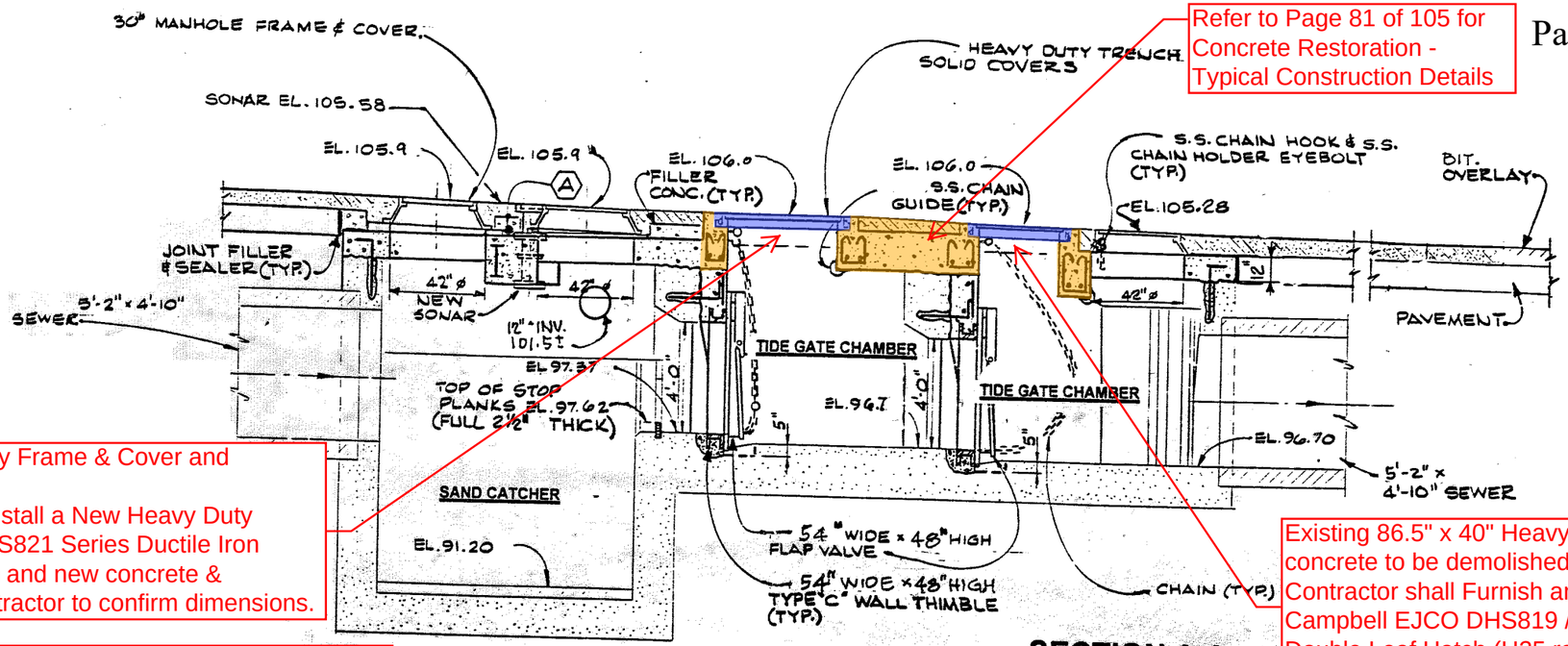
NUMBER 057
JACKSON STREET REGULATOR
NEWARK

PASSAIC VALLEY
SEWERAGE COMMISSIONERS

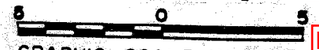
COMBINED SEWER SYSTEM
FACILITIES INVENTORY AND
ASSESSMENT ANALYSIS

FIGURE 057-3

Refer to Page 81 of 105 for Concrete Restoration - Typical Construction Details




## SECTION A-A

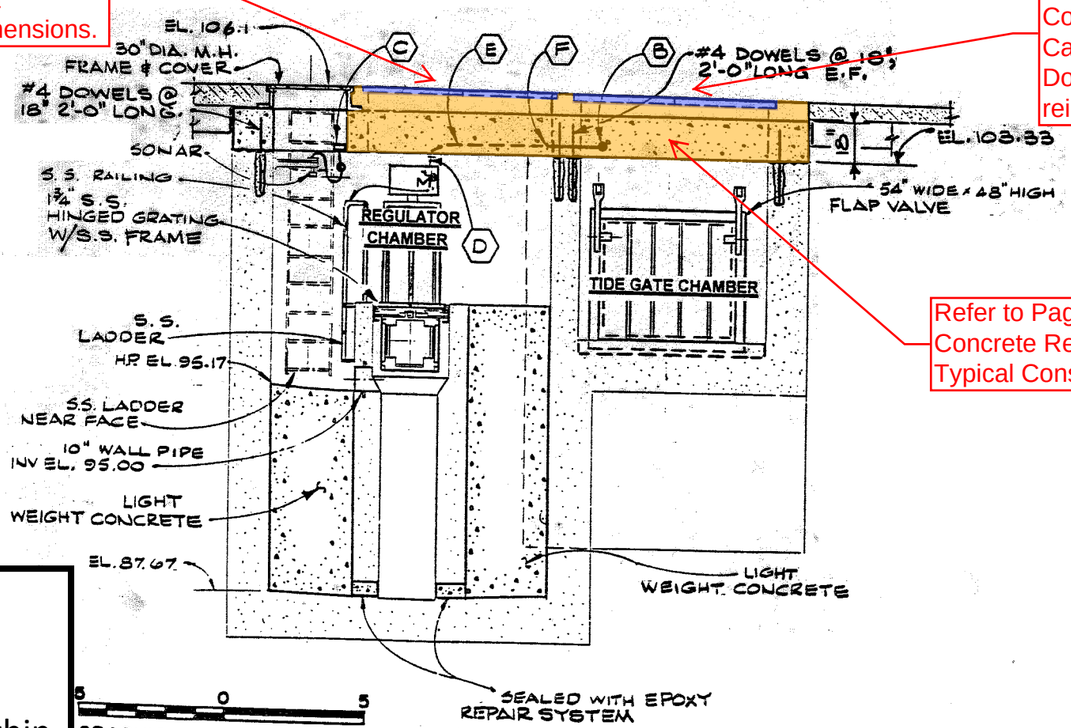



Existing 80.5" x 52" Heavy Duty Frame & Cover and concrete to be demolished.
Contractor shall Furnish and Install a New Heavy Duty Campbell EJCO DHS819 / DHS821 Series Ductile Iron Double Leaf Hatch (H25 rated) and new concrete & reinforcement as needed. Contractor to confirm dimensions.

Existing 86.5" x 40" Heavy Duty Frame & Cover and concrete to be demolished.
Contractor shall Furnish and Install a New Heavy Duty Campbell EJCO DHS819 / DHS821 Series Ductile Iron Double Leaf Hatch (H25 rated) and new concrete & reinforcement as needed. Contractor to confirm dimensions.

Existing 86.5" x 40" Heavy Duty Frame & Cover and concrete to be demolished.
Contractor shall Furnish and Install a New Heavy Duty Campbell EJCO DHS819 / DHS821 Series Ductile Iron Double Leaf Hatch (H25 rated) and new concrete & reinforcement as needed. Contractor to confirm dimensions.

Existing 80.5" x 52" Heavy Duty Frame & Cover and concrete to be demolished.
Contractor shall Furnish and Install a New Heavy Duty Campbell EJCO DHS819 / DHS821 Series Ductile Iron Double Leaf Hatch (H25 rated) and new concrete & reinforcement as needed. Contractor to confirm dimensions.




## SECTION B-B




Refer to Page 81 of 105 for Concrete Restoration - Typical Construction Details

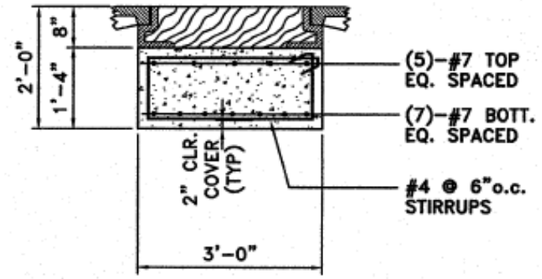
ALL STEEL REINFORCING SHALL BE GALVANIZED.

Passaic Valley Sewerage Commission
Contract No. B301
.
Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

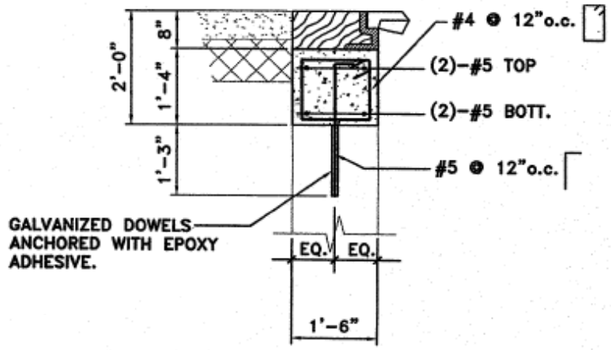
**NUMBER 057**
**JACKSON STREET REGULATOR**
**NEWARK**

**PASSAIC VALLEY SEWERAGE COMMISSIONERS**

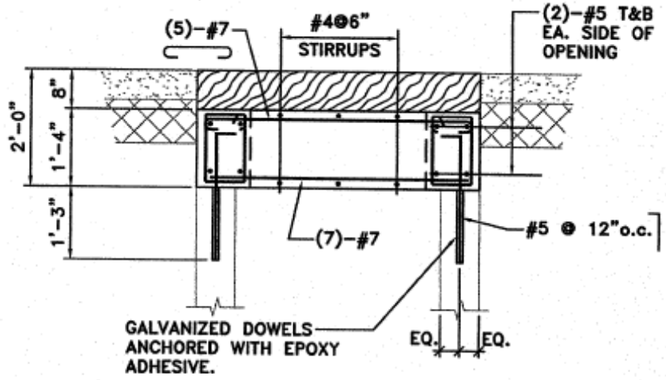
**COMBINED SEWER SYSTEM FACILITIES INVENTORY AND ASSESSMENT ANALYSIS**



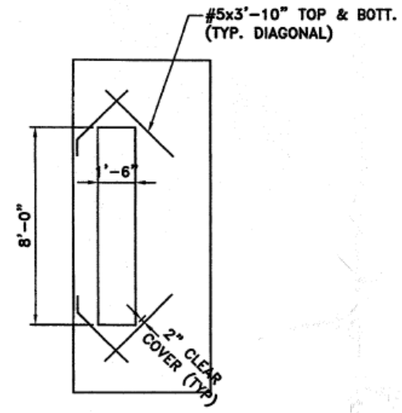

**DETAIL 1**
SCALE: 1/2" = 1'-0"



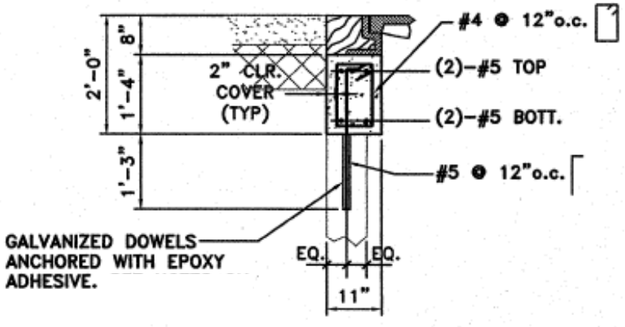

**DETAIL 3**
SCALE: 1/2" = 1'-0"



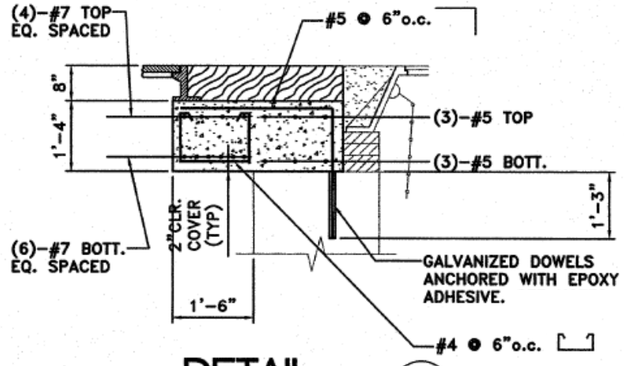

**SECTION J**
SCALE: 1/2" = 1'-0"



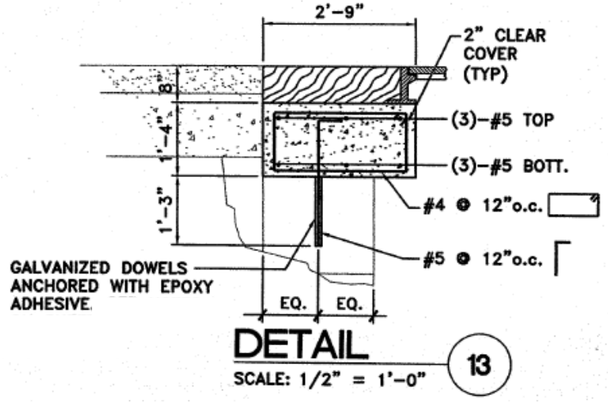

**ADDITIONAL REINFORCING AT OPENINGS**
SCALE: 1/4" = 1'-0"



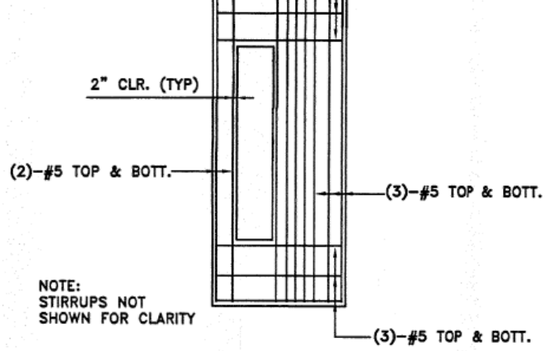

**DETAIL 2**
SCALE: 1/2" = 1'-0"



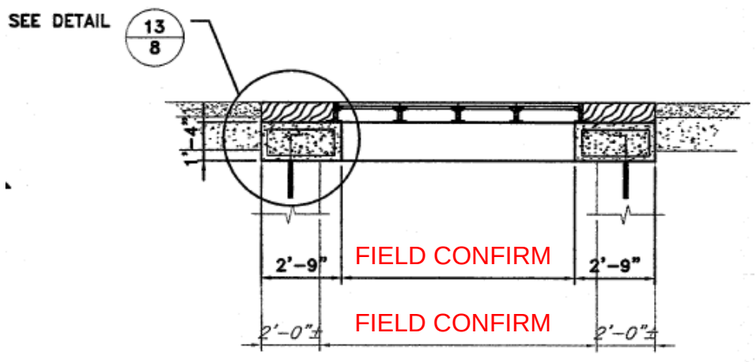

**DETAIL 4**
SCALE: 1/2" = 1'-0"



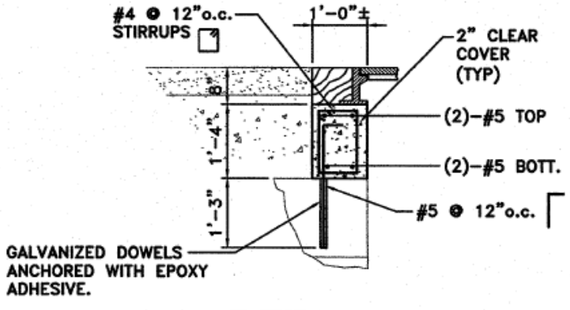

**DETAIL 13**
SCALE: 1/2" = 1'-0"




**SLAB MAIN REINFORCING PLAN**
SCALE: 1/4" = 1'-0"




**SECTION H**
SCALE: 1/4" = 1'-0"




**DETAIL 5**
SCALE: 1/2" = 1'-0"

Passaic Valley Sewerage Commission
Contract No. B301
.
Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

NOTES:
1. ALL STEEL REINFORCING SHALL BE GALVANIZED.
2. CONTRACTOR SHALL CONFIRM ALL DIMENSIONS

FOURTH (4TH) AVENUE AND JACKSON STREET REGULATORS – CONCRETE RESTORATION – TYPICAL CONSTRUCTION DETAILS

# CSO 057 Jackson Street Regulator

Heavy Duty Access Frame & Covers




Heavy Duty Access Frame & Covers




August 6, 2024

# CSO 057 Jackson Street Regulator

Heavy Duty Access Frame & Covers




Heavy Duty Access Frame & Covers




August 6, 2024

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Heavy Duty Access Frame & Covers




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# CSO 057 Jackson Street Regulator

Heavy Duty Access Frame & Covers




Heavy Duty Access Frame & Covers




*August 6, 2024*

# CSO 057 Jackson Street Regulator

## Heavy Duty Access Frame & Covers




*August 6, 2024*

# CSO 057 Jackson Street Regulator

Heavy Duty Access Frame & Covers




Heavy Duty Access Frame & Covers




August 6, 2024

# CSO 057 Jackson Street Regulator

Heavy Duty Access Frame & Covers

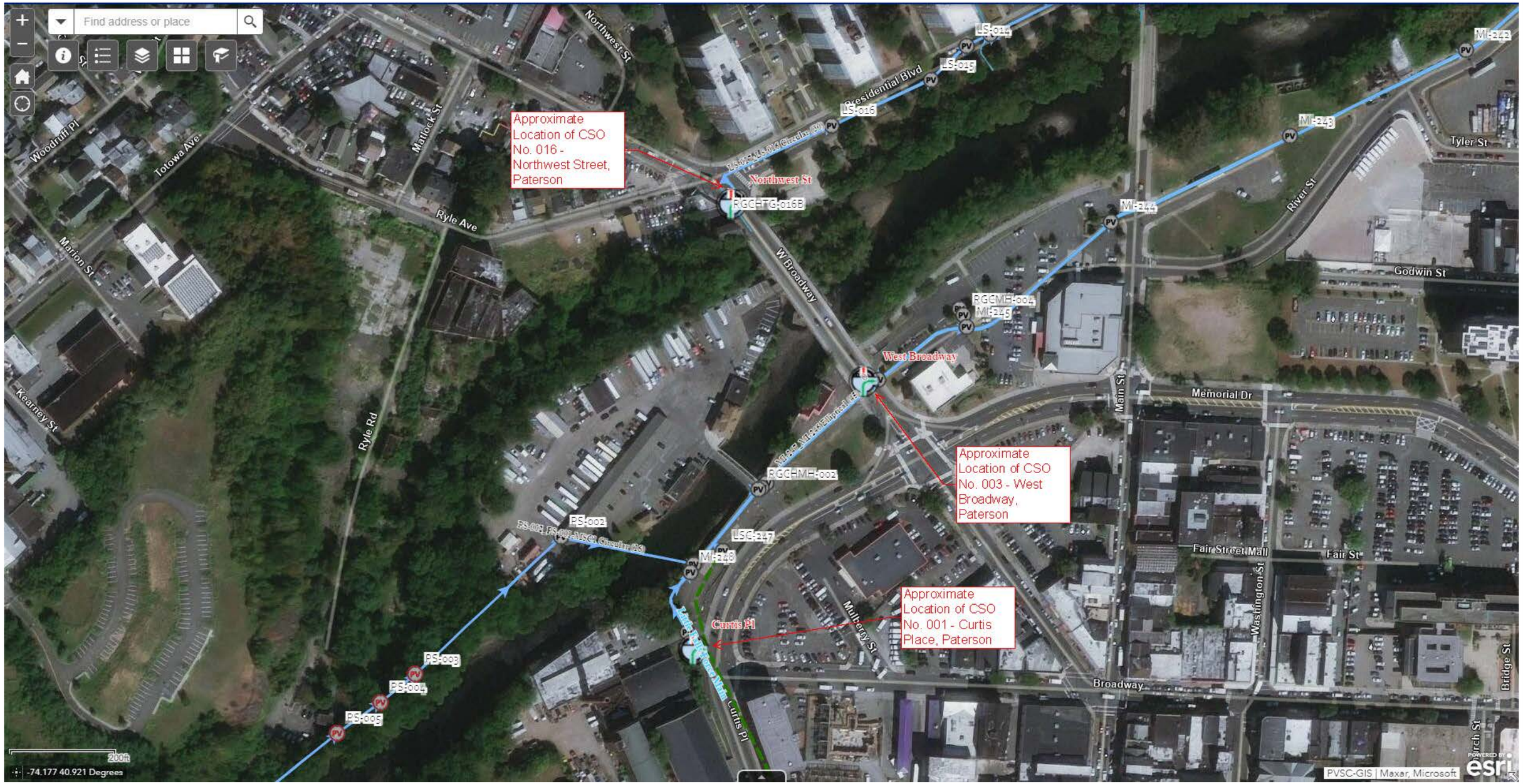



Heavy Duty Access Frame & Covers




August 6, 2024

## LOCATION PLAN

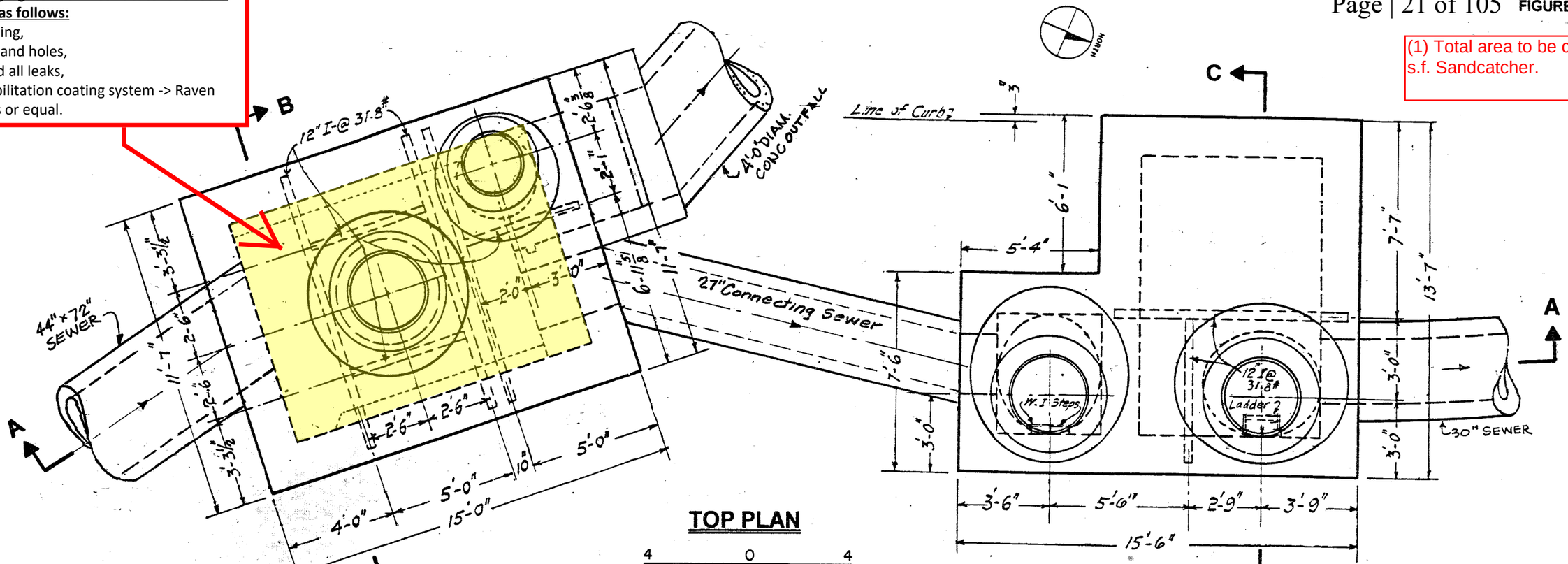



**CSO No. 001 (Curtis Place), CSO No. 003 (West Broadway) & CSO No. 016 (Northwest Street) within City of Paterson**

 **FIGURE 001-1**

**1. <u>Exposed aggregate within Sandcatcher should be addressed as follows:</u>**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems or equal.

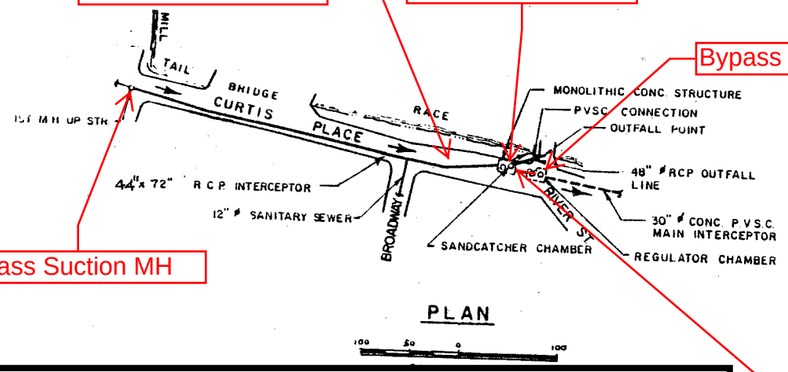
(1) Total area to be coated = 777 s.f. Sandcatcher.



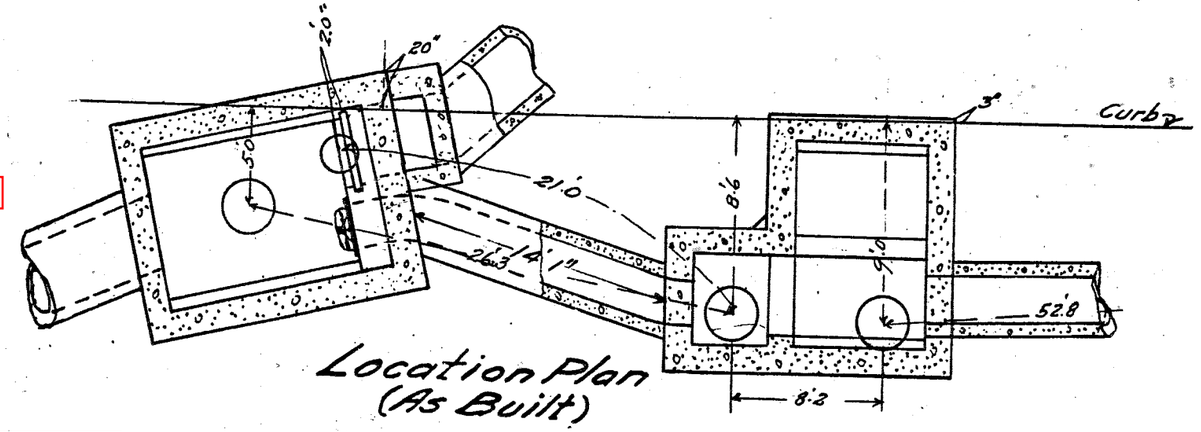

Coordinate Traffic Control for Curtis Place with the City of Paterson = NOT APPLICABLE

Daily Flows
Dry = 7.85 MGD
Wet = 9.35 MGD

Bypass Discharge MH




Bypass Suction MH




Install temporary dam (i.e. sandbag), or plug, or equivalent, within upstream side of bypass suction MH to isolate sandcatcher

Passaic Valley Sewerage Commission
Contract No. B301
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Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

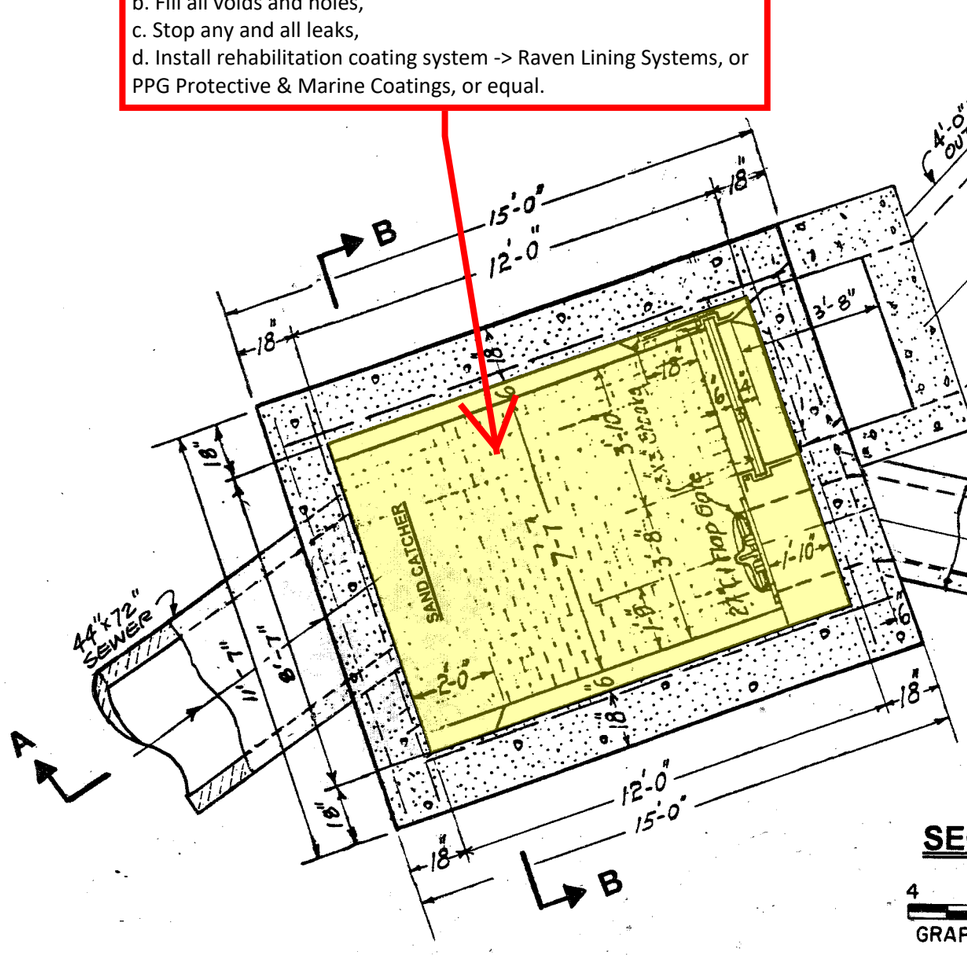
**NUMBER 001**
**CURTIS PLACE REGULATOR**
**PATERSON**

**PASSAIC VALLEY SEWERAGE COMMISSIONERS**

**COMBINED SEWER SYSTEM FACILITIES INVENTORY AND ASSESSMENT ANALYSIS**

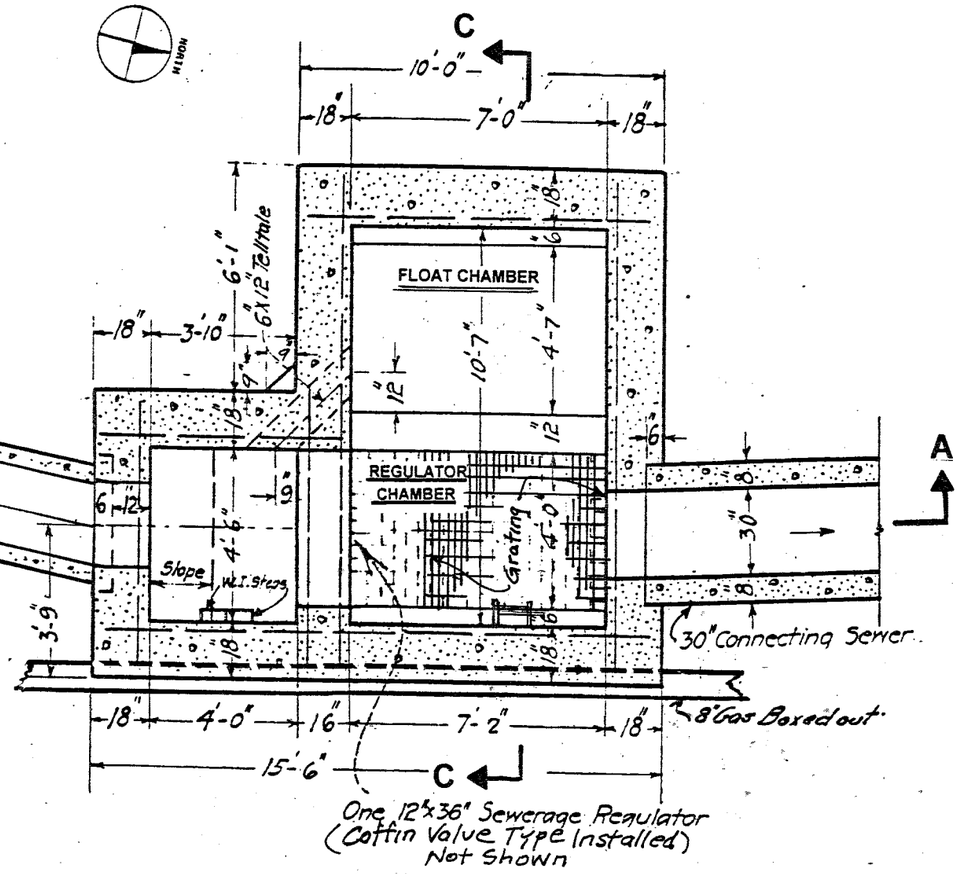
 FIGURE 001-2

**1. <u>Exposed aggregate within Sandcatcher should be addressed as follows:</u>**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or PPG Protective & Marine Coatings, or equal.




**SECTIONAL PLAN**

4 0 4
GRAPHIC SCALE IN FEET



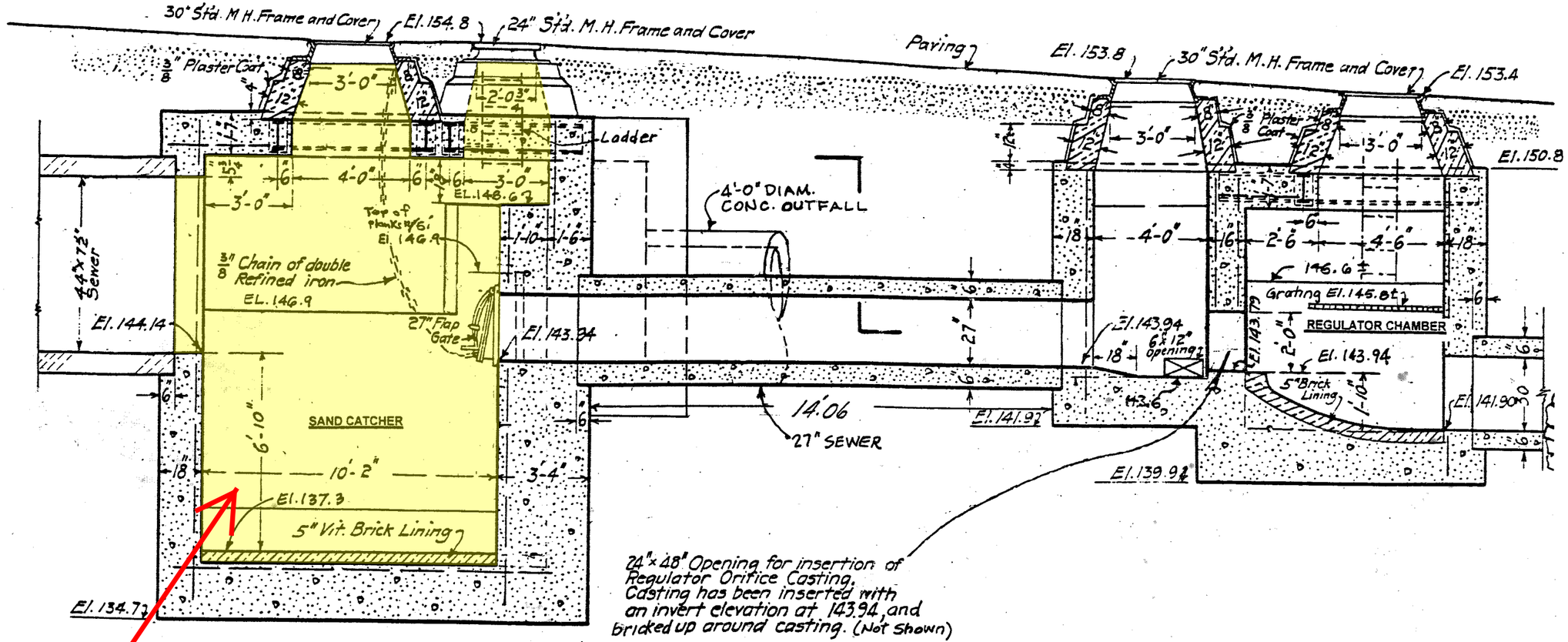

Passaic Valley Sewerage Commission
Contract No. B301
.
Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

**NUMBER 001**
**CURTIS PLACE REGULATOR**
**PATERSON**

**PASSAIC VALLEY SEWERAGE COMMISSIONERS**

**COMBINED SEWER SYSTEM FACILITIES INVENTORY AND ASSESSMENT ANALYSIS**

 **FIGURE 001-3**




**1. Exposed aggregate within Sandcatcher should be addressed as follows:**

a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or PPG Protective & Marine Coatings, or equal.

## SECTION A-A

4 0 4
GRAPHIC SCALE IN FEET

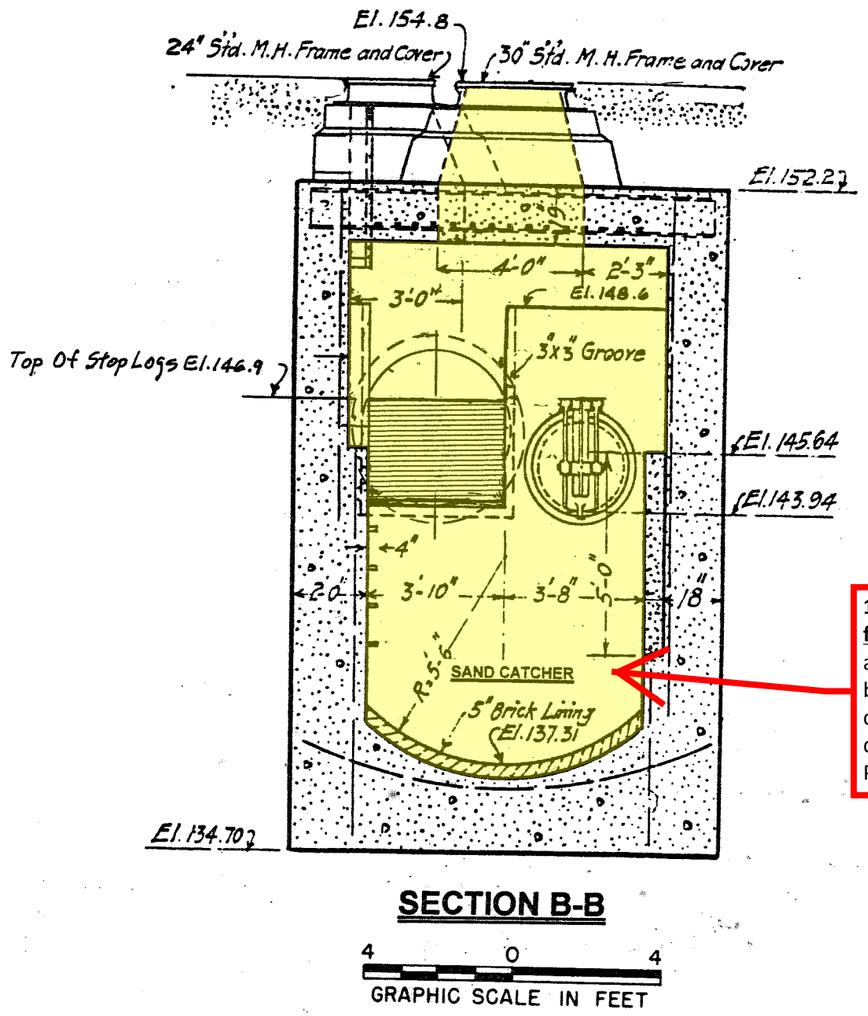
Passaic Valley Sewerage Commission
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.
Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

**NUMBER 001**
**CURTIS PLACE REGULATOR**
**PATERSON**

**PASSAIC VALLEY SEWERAGE COMMISSIONERS**

**COMBINED SEWER SYSTEM FACILITIES INVENTORY AND ASSESSMENT ANALYSIS**

 FIGURE 001-4




**SECTION B-B**

4 0 4

GRAPHIC SCALE IN FEET

**1. Exposed aggregate within Sandcatcher should be addressed as follows:**

a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or PPG Protective & Marine Coatings, or equal.

Passaic Valley Sewerage Commission
Contract No. B301
.
Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

NUMBER 001
CURTIS PLACE REGULATOR
PATERSON

PASSAIC VALLEY
SEWERAGE COMMISSIONERS

COMBINED SEWER SYSTEM
FACILITIES INVENTORY AND
ASSESSMENT ANALYSIS

# CSO 001 Curtis Place Regulator

Sandcatcher Chamber Manhole - Before Repairs




Mortar Loss and Concrete Corrosion.

Sandcatcher Chamber Manhole - After Repairs




Apply Raven 405 Epoxy (125 mils).

*September 16, 2024*

# CSO 001 Curtis Place Regulator

Sandcatcher Chamber - Before Repairs




Concrete Corrosion.

Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

*September 16, 2024*

Install temporary dam (i.e. sandbag), or plug, or equivalent, within upstream side of bypass suction MH to isolate sandcatcher

Daily Flows
Dry = 0.07 MGD
Wet = 0.11 MGD

Bypass Suction MH

Bypass Discharge MH

Coordinate Traffic Control for West Broadway [Route 509] with Passaic County and the City of Paterson

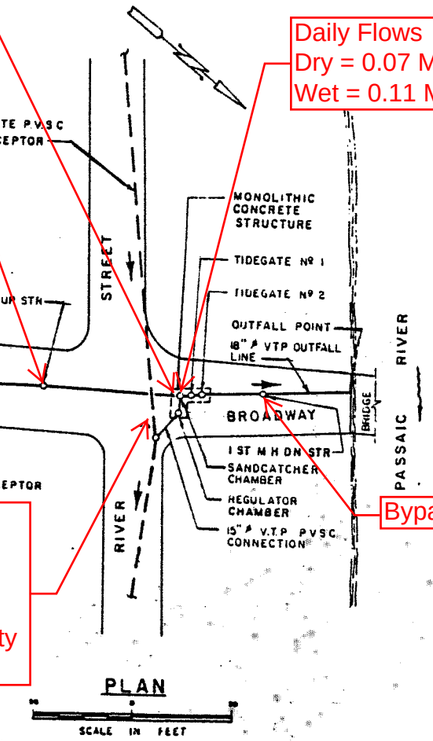






FIGURE 003-1

(1) Total area to be coated = 389 s.f. Sandcatcher

.

(2) Total area to be coated = 26 s.f Regulator Manhole

**1. Exposed aggregate within Sandcatcher should be addressed as follows:**

a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

Passaic Valley Sewerage Commission
Contract No. B301

.

Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

NUMBER 003
WEST BROADWAY REGULATOR
PATERSON

PASSAIC VALLEY
SEWERAGE COMMISSIONERS

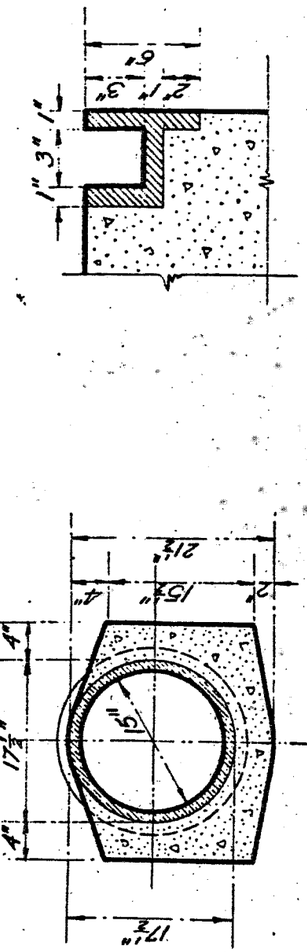
COMBINED SEWER SYSTEM
FACILITIES INVENTORY AND
ASSESSMENT ANALYSIS

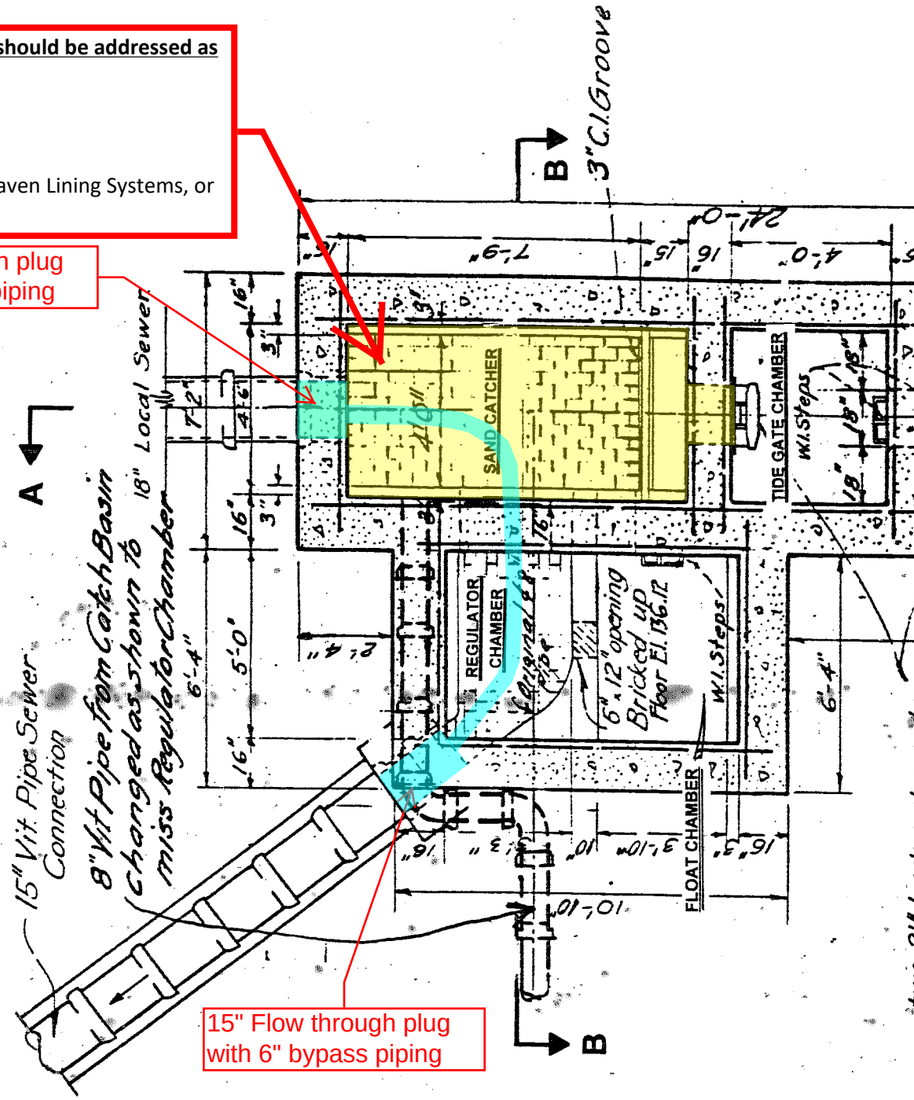
**FIGURE 003-2**

**1. Exposed aggregate within Sandcatcher should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

18" Flow through plug with 6" bypass piping

15" Flow through plug with 6" bypass piping




Passaic Valley Sewerage Commission
Contract No. B301

.

Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

**NUMBER 003**
**WEST BROADWAY REGULATOR**
**PATERSON**

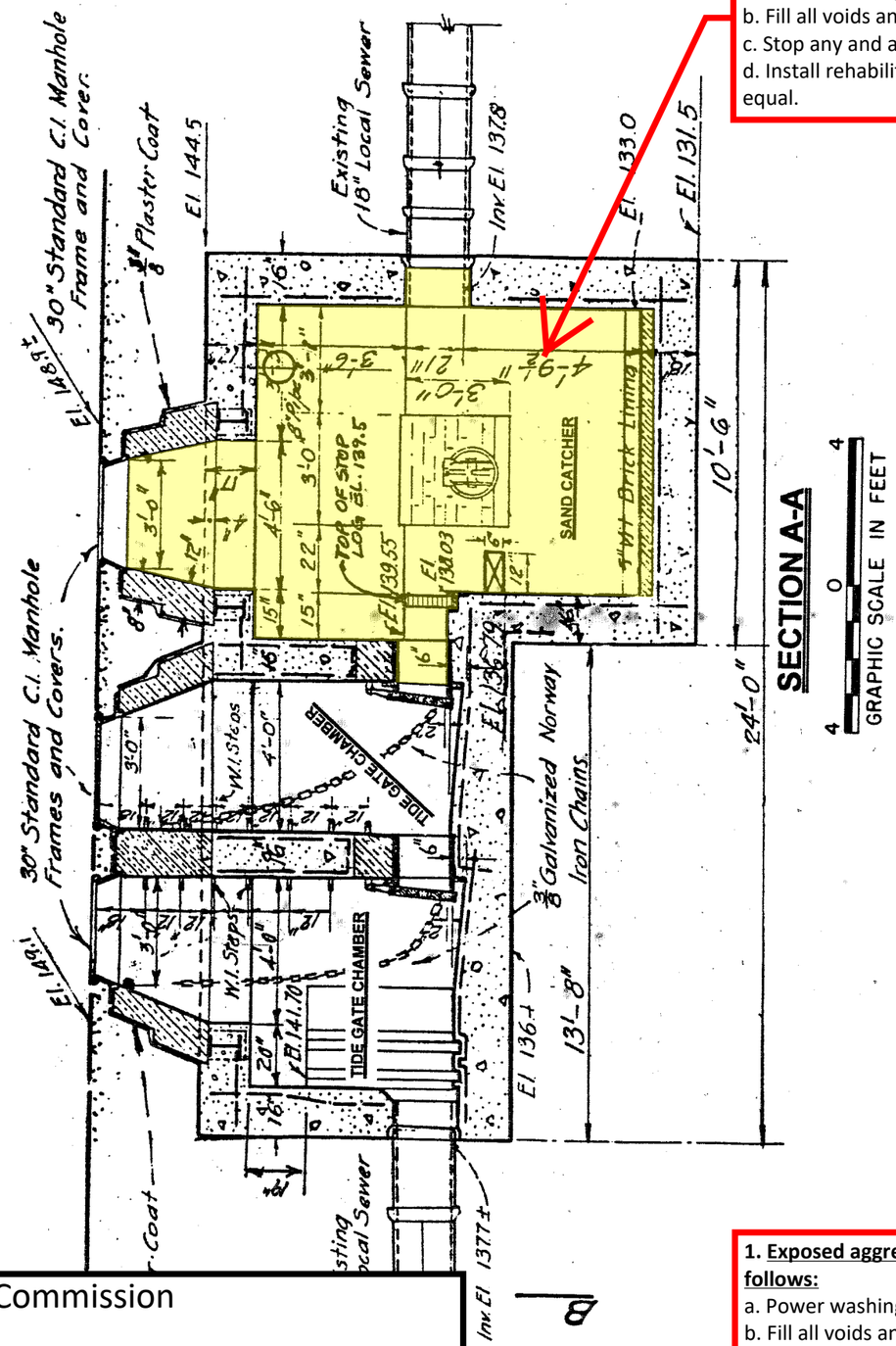
**PASSAIC VALLEY SEWERAGE COMMISSIONERS**

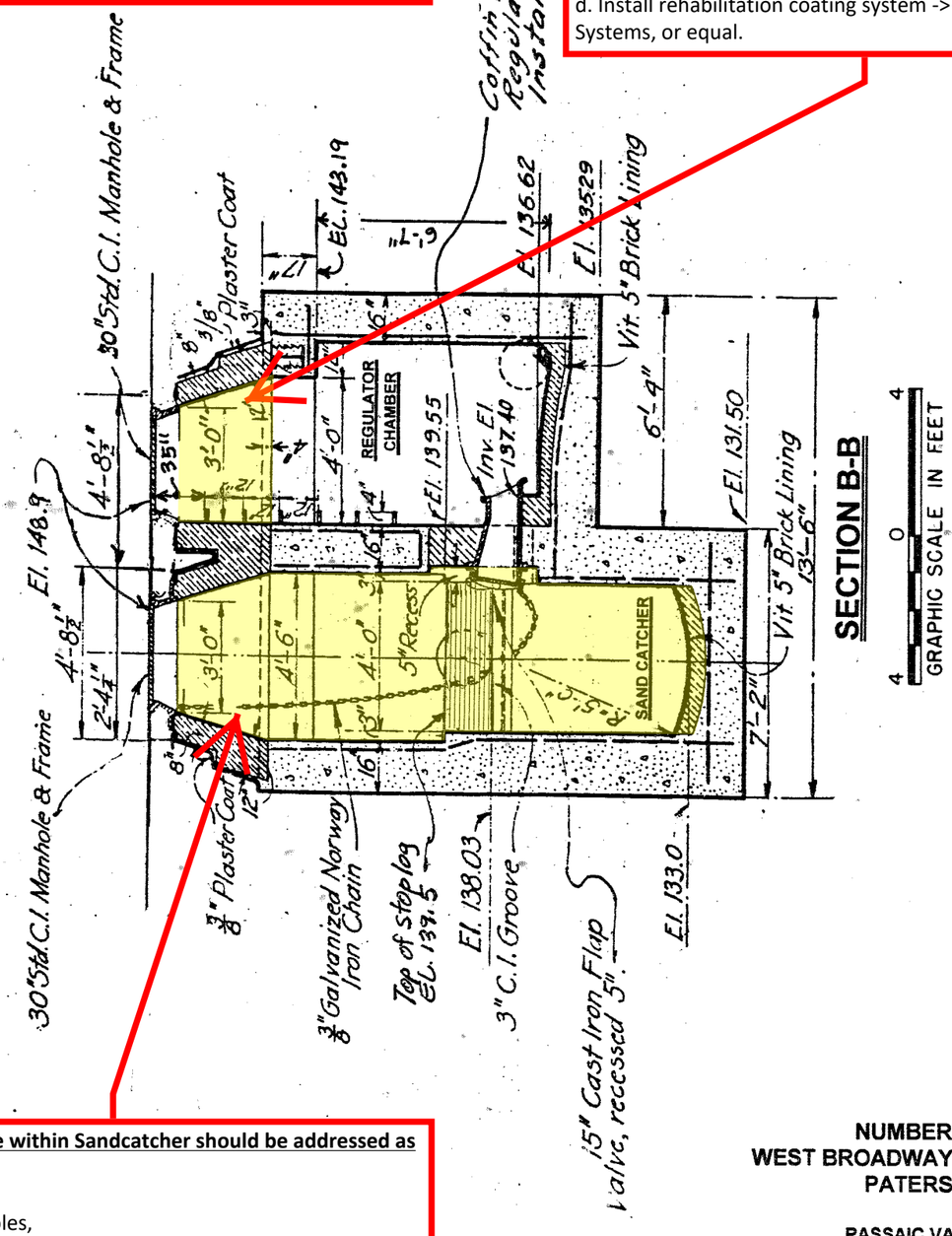
**COMBINED SEWER SYSTEM FACILITIES INVENTORY AND ASSESSMENT ANALYSIS**

**FIGURE 003-3**

**1. Exposed aggregate within Sandcatcher should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

**1. Exposed aggregate within Regulator should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.




Passaic Valley Sewerage Commission
Contract No. B301

.

Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

**1. Exposed aggregate within Sandcatcher should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

**NUMBER 003**
**WEST BROADWAY REGULATOR**
**PATERSON**

**PASSAIC VALLEY SEWERAGE COMMISSIONERS**

**COMBINED SEWER SYSTEM FACILITIES INVENTORY AND ASSESSMENT ANALYSIS**

# CSO 003 West Broadway Regulator

Sandcatcher Chamber Manhole - Before Repairs




Mortar Loss and Concrete Corrosion.

Sandcatcher Chamber Manhole - Before Repairs




Mortar Loss and Concrete Corrosion.

*February 8, 2024*

# CSO 003 West Broadway Regulator

## Sandcatcher Chamber Manhole – During Repairs




Apply Raven 755 – ReSurfacer.

## Sandcatcher Chamber Manhole - After Repairs




Apply Raven 405 Epoxy (125 mils).

*February 8, 2024*

# CSO 003 West Broadway Regulator

## Sandcatcher Chamber - Before Repairs



Concrete Corrosion.

## Sandcatcher Chamber - Before Repairs



Concrete Corrosion.

*February 8, 2024*

# CSO 003 West Broadway Regulator

Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

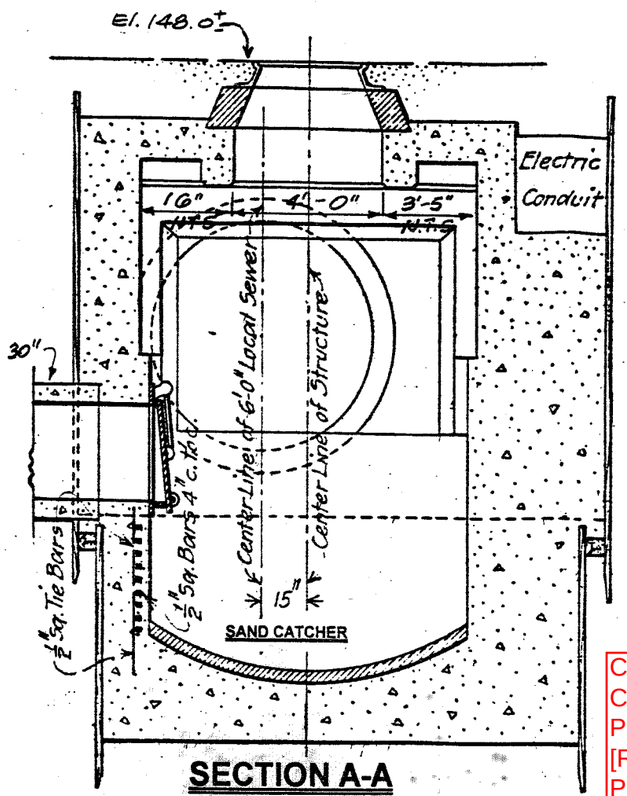
Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

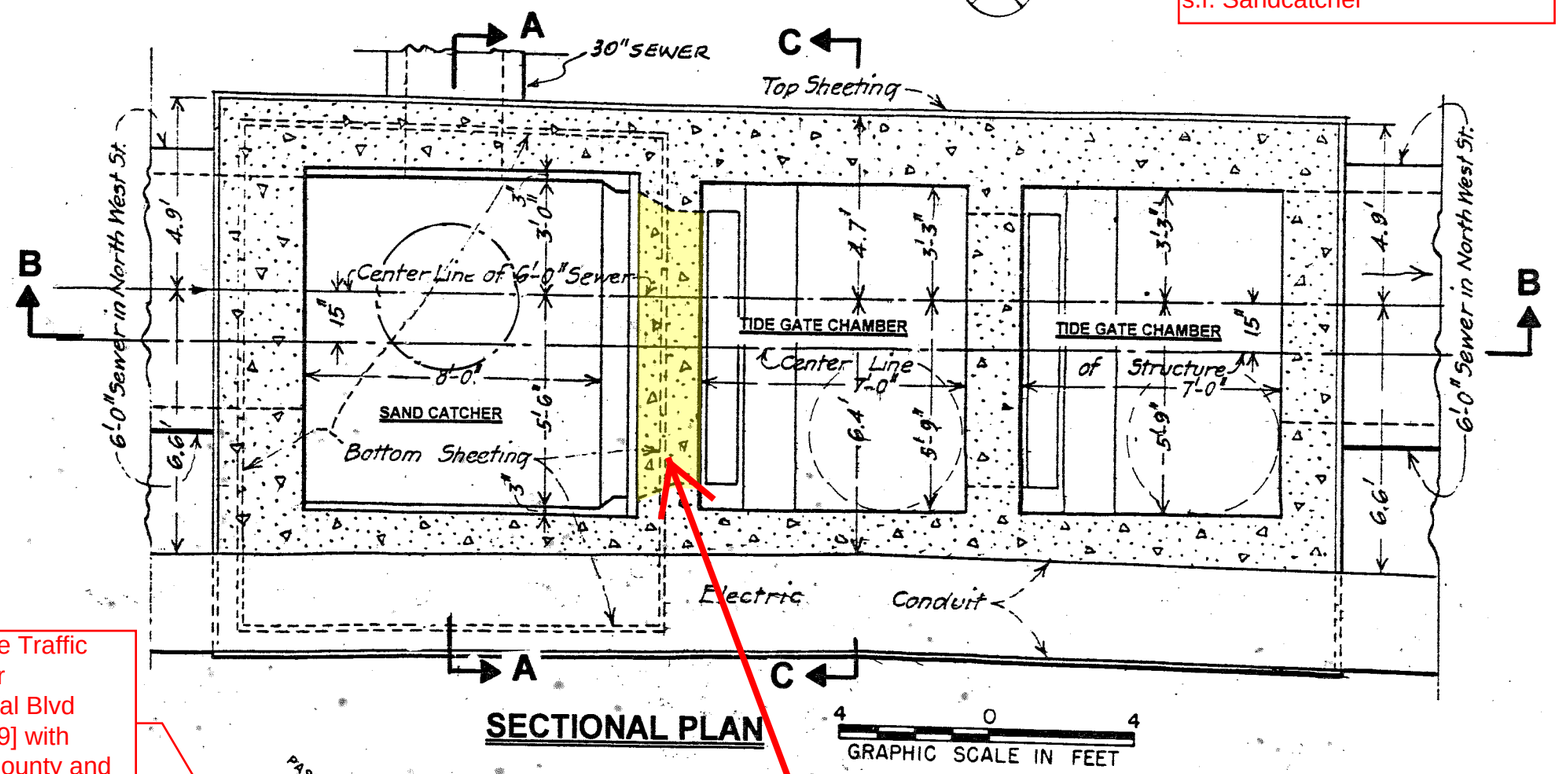
*February 8, 2024*

(1) Total area to be coated = 48 s.f. Sandcatcher




SECTION A-A

GRAPHIC SCALE IN FEET 4 0 4

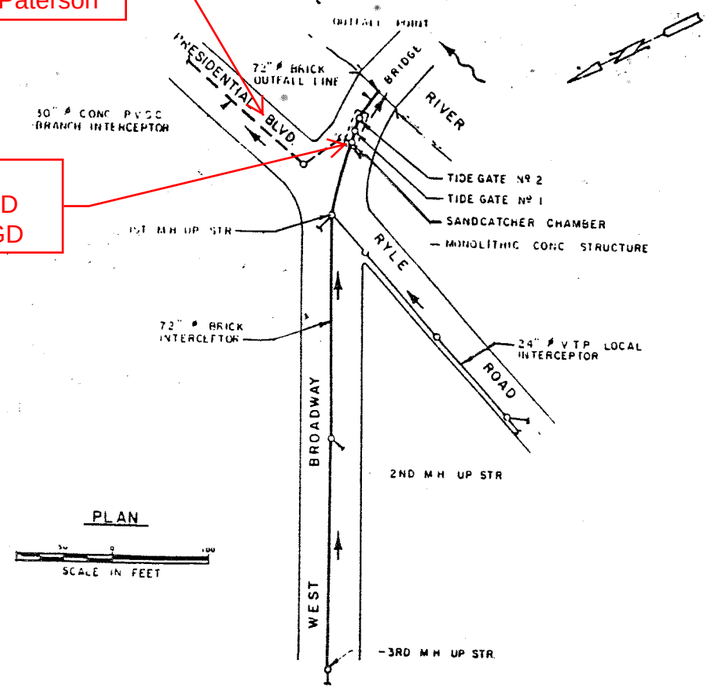



SECTIONAL PLAN

GRAPHIC SCALE IN FEET 4 0 4

Coordinate Traffic Control for Presidential Blvd [Route 509] with Passaic County and the City of Paterson

Daily Flows
Dry = 2.00 MGD
Wet = 3.00 MGD




PLAN

SCALE IN FEET 30 0 100

1. **Exposed aggregate within Sandcatcher should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

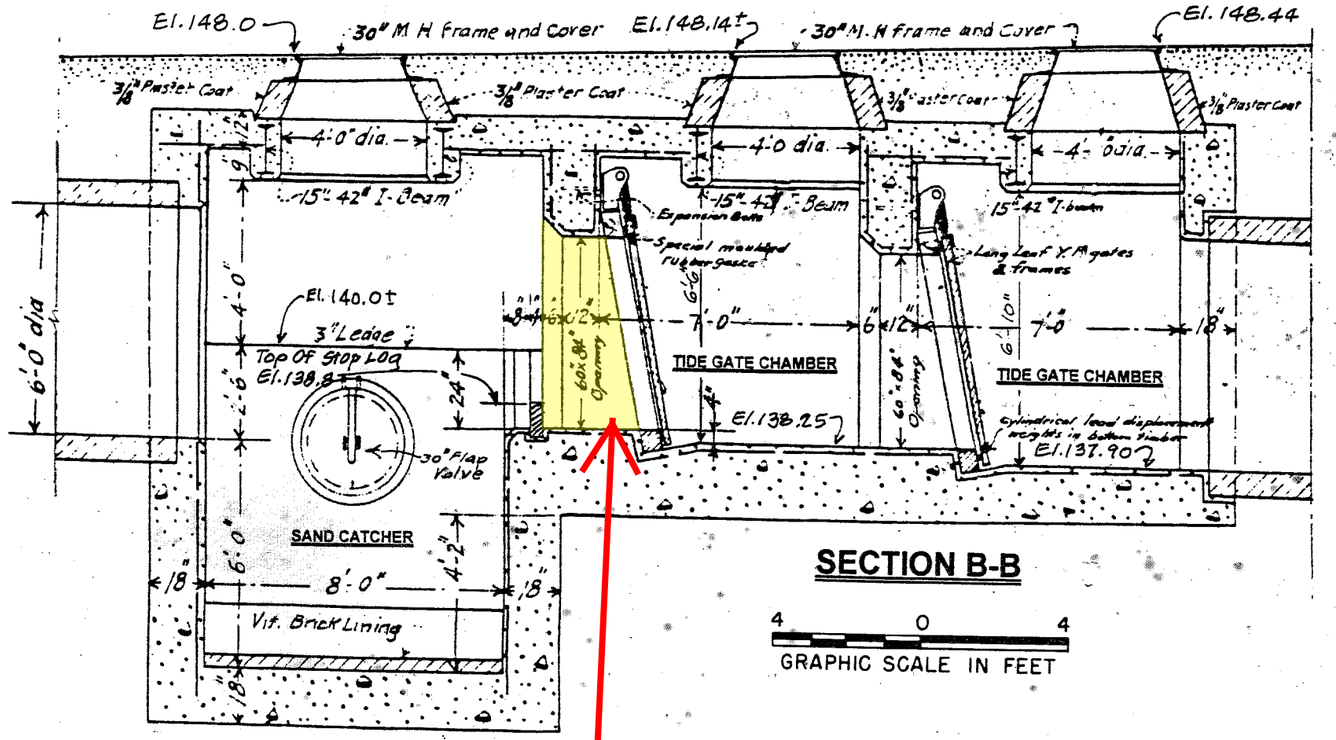
Passaic Valley Sewerage Commission
Contract No. B301
.
Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

**NUMBER 016**
**NORTHWEST STREET REGULATOR**
**PATERSON**

**PASSAIC VALLEY SEWERAGE COMMISSIONERS**

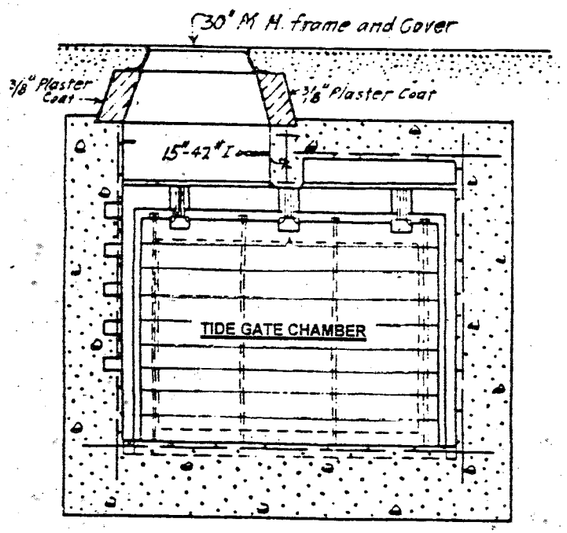
**COMBINED SEWER SYSTEM FACILITIES INVENTORY AND ASSESSMENT ANALYSIS**

 **FIGURE 016-2**




## SECTION B-B

4 0 4
GRAPHIC SCALE IN FEET




## SECTION C-C

4 0 4
GRAPHIC SCALE IN FEET

**1. Exposed aggregate within Sandcatcher should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

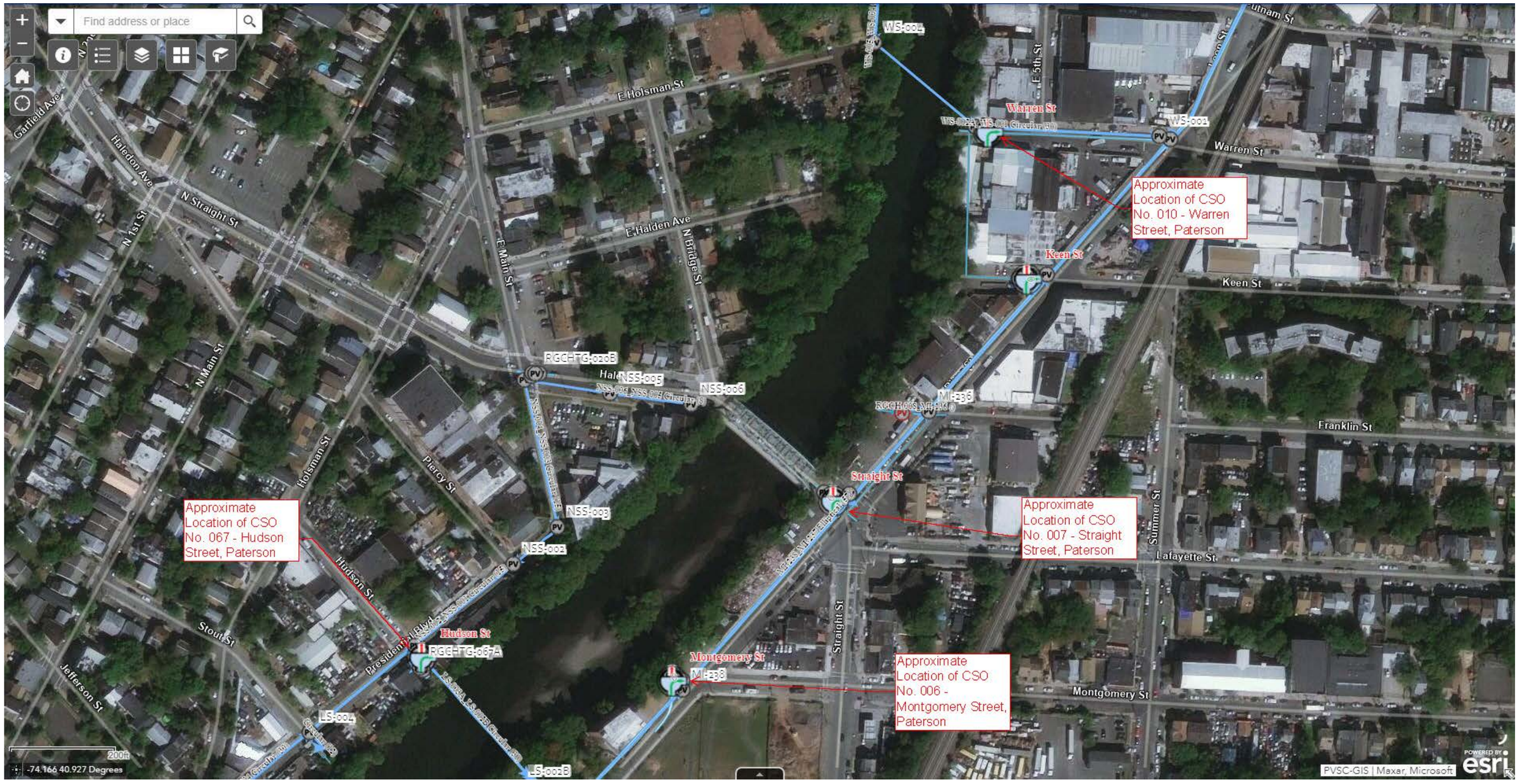
Passaic Valley Sewerage Commission
Contract No. B301
.
Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

**NUMBER 016**
**NORTHWEST STREET REGULATOR**
**PATERSON**

**PASSAIC VALLEY SEWERAGE COMMISSIONERS**

**COMBINED SEWER SYSTEM FACILITIES INVENTORY AND ASSESSMENT ANALYSIS**

## LOCATION PLAN



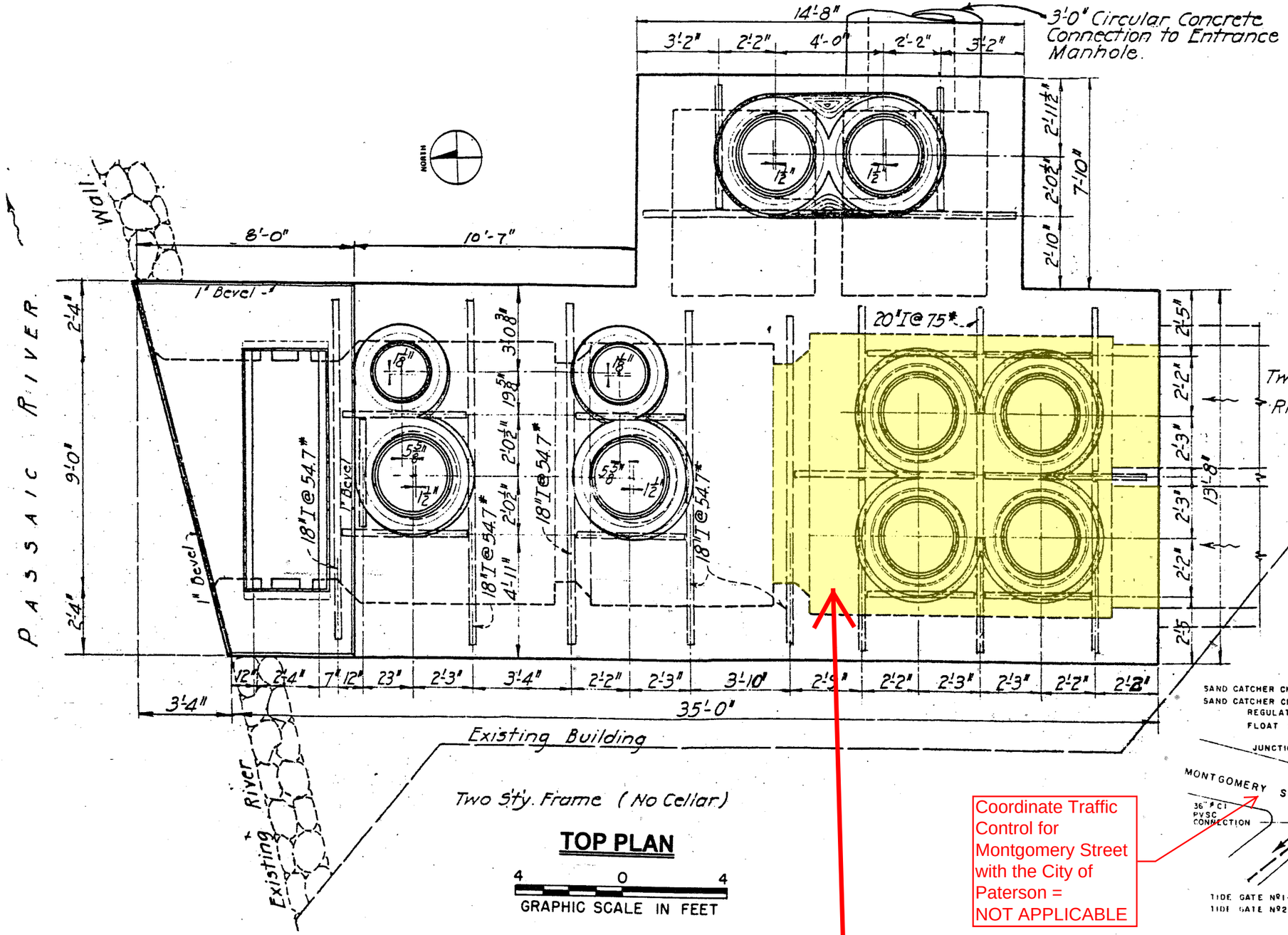

**CSO No. 006 (Montgomery Street), CSO No. 007 (Straight Street), CSO No. 010 (Warren Street) & CSO No. 067 (Hudson Street) within City of Paterson**

 **FIGURE 006-1**

(1) Total area to be coated = 720 s.f. Sandcatcher

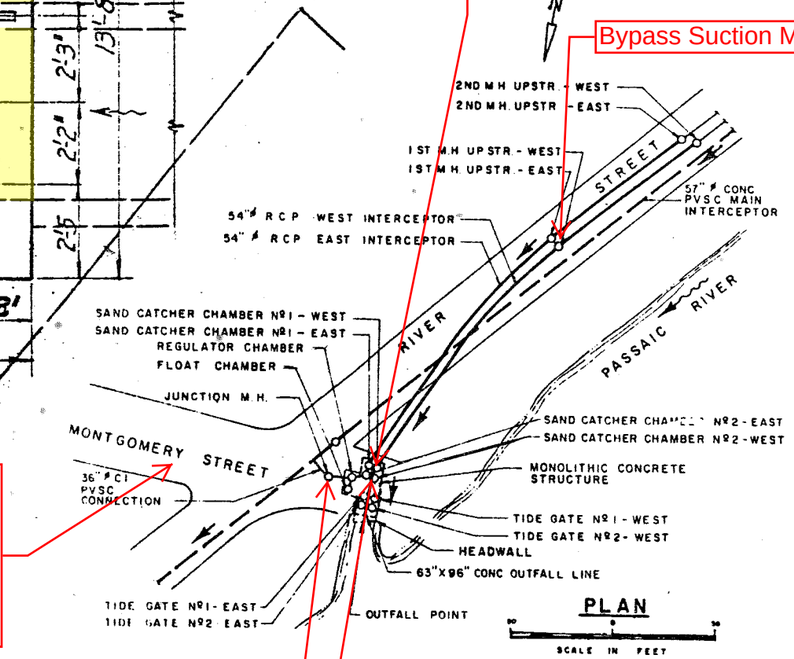
.

(2) Total area to be coated = 14 s.f Regulator Manhole




Install temporary dam (i.e. sandbag), or plug, or equivalent, within downstream side of bypass suction MH to isolate sandcatcher

Bypass Suction MH




Coordinate Traffic Control for Montgomery Street with the City of Paterson = NOT APPLICABLE

Bypass Discharge MH

Daily Flows
Dry = 2.83 MGD
Wet = 3.84 MGD

**1. Exposed aggregate within Sandcatcher should be addressed as follows:**

a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

Passaic Valley Sewerage Commission
Contract No. B301

.

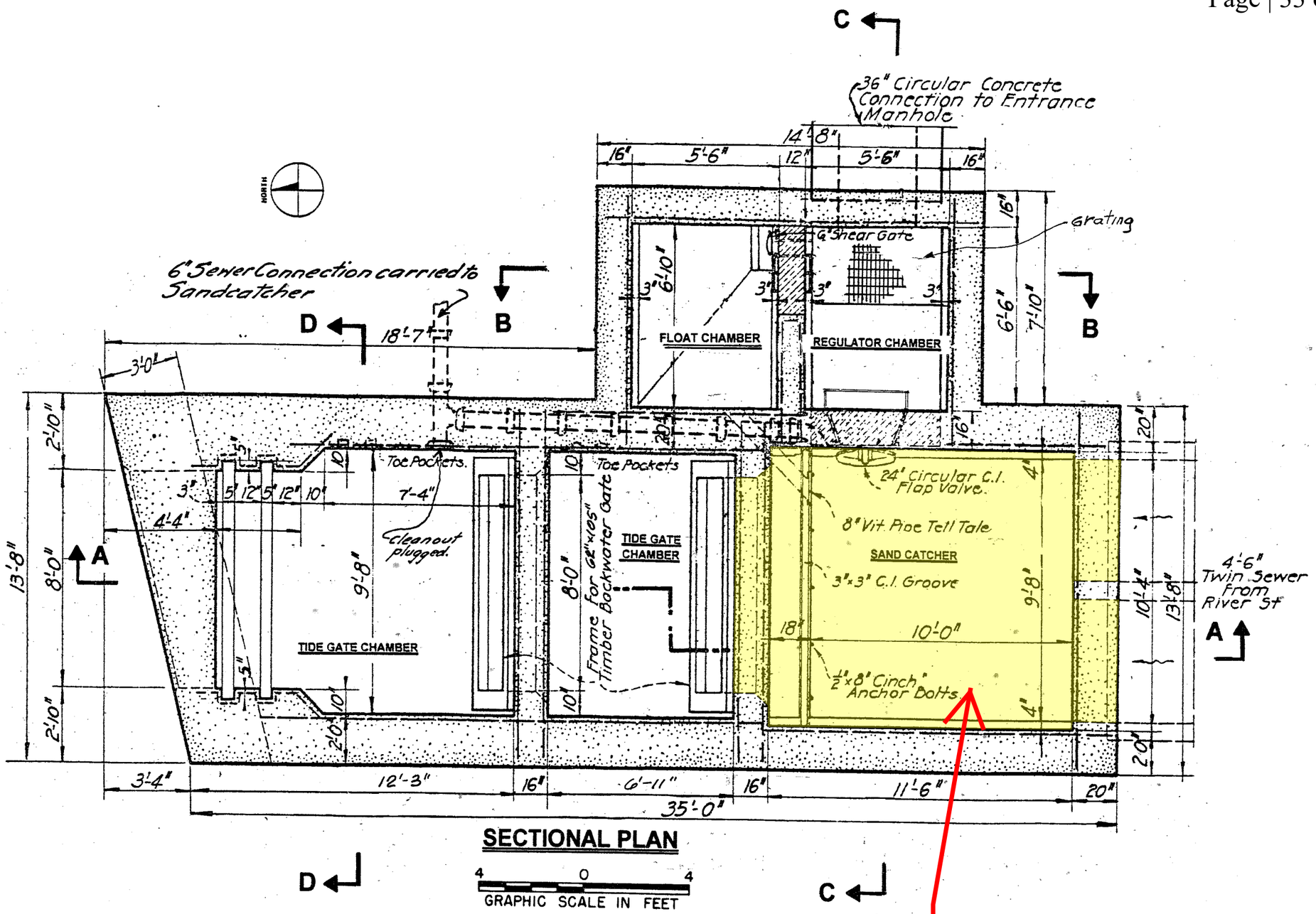
Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

**NUMBER 006**
**MONTGOMERY STREET REGULATOR**
**PATERSON**

**PASSAIC VALLEY SEWERAGE COMMISSIONERS**

**COMBINED SEWER SYSTEM FACILITIES INVENTORY AND ASSESSMENT ANALYSIS**

 **FIGURE 006-2**




Passaic Valley Sewerage Commission
Contract No. B301
.
Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

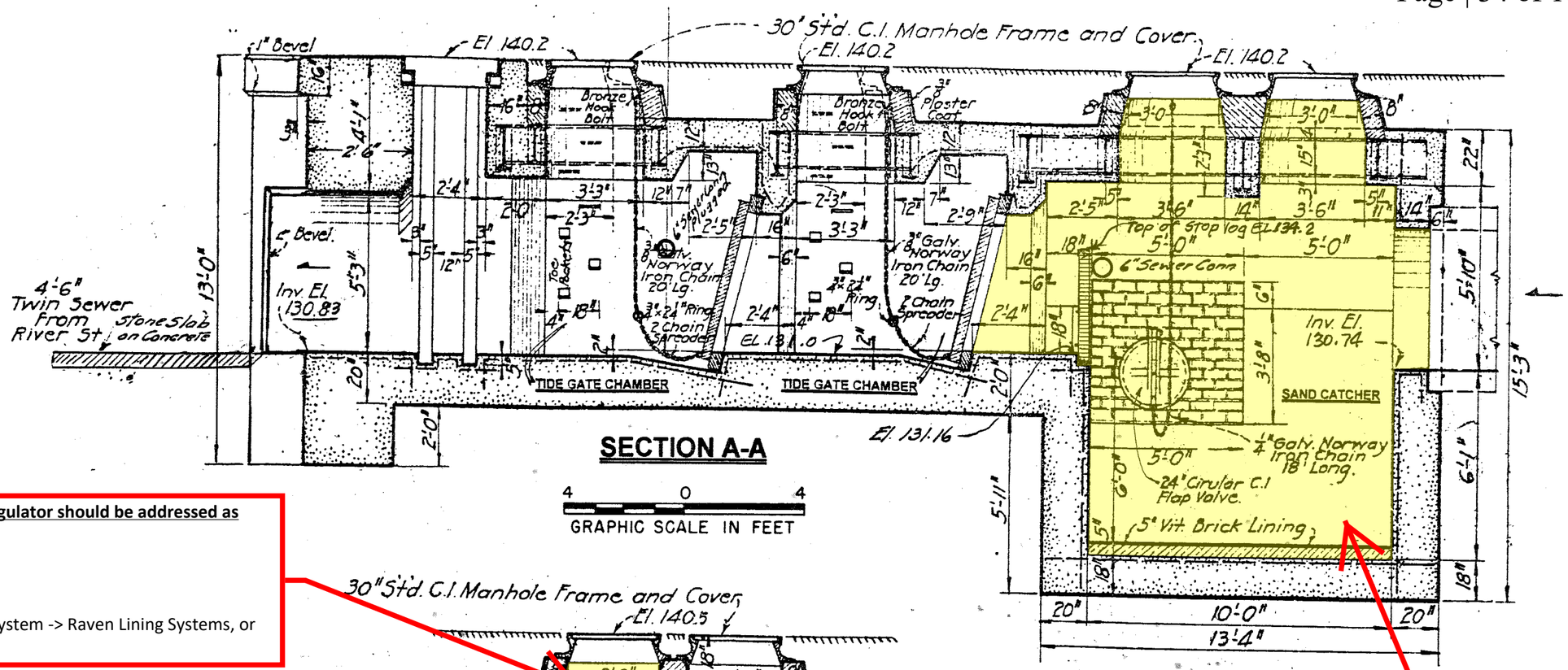
**1. Exposed aggregate within Sandcatcher should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

**NUMBER 006**
**MONTGOMERY STREET REGULATOR**
**PATERSON**

**PASSAIC VALLEY SEWERAGE COMMISSIONERS**

**COMBINED SEWER SYSTEM FACILITIES INVENTORY AND ASSESSMENT ANALYSIS**

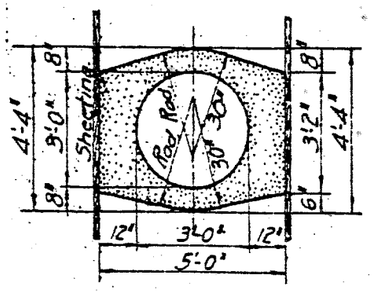
 **FIGURE 006-3**




## SECTION A-A

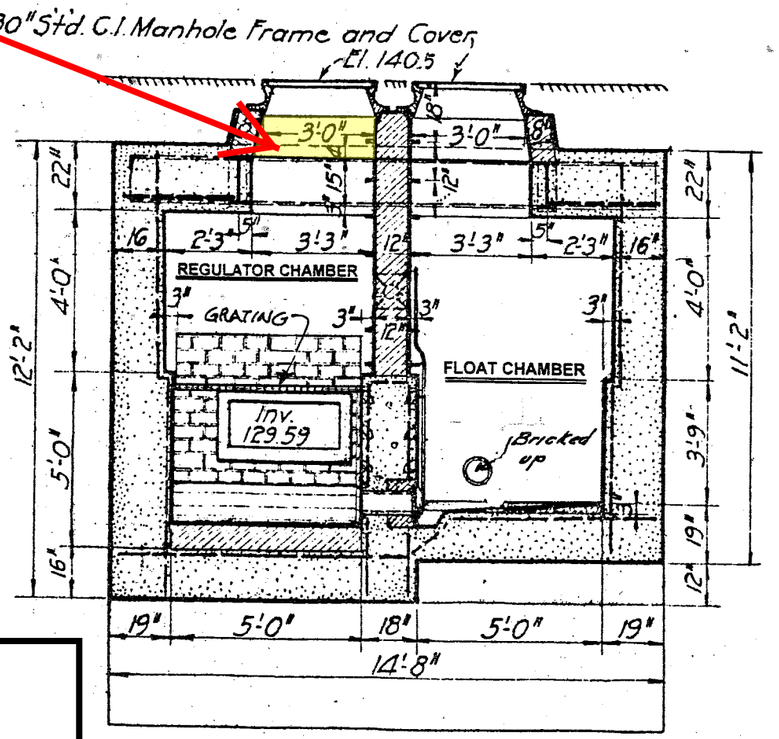
4 0 4
GRAPHIC SCALE IN FEET

**1. <u>Exposed aggregate within Regulator should be addressed as follows:</u>**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.




## 36" SEWER

4 0 4
GRAPHIC SCALE IN FEET




## SECTION B-B

4 0 4
GRAPHIC SCALE IN FEET

**1. <u>Exposed aggregate within Sandcatcher should be addressed as follows:</u>**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

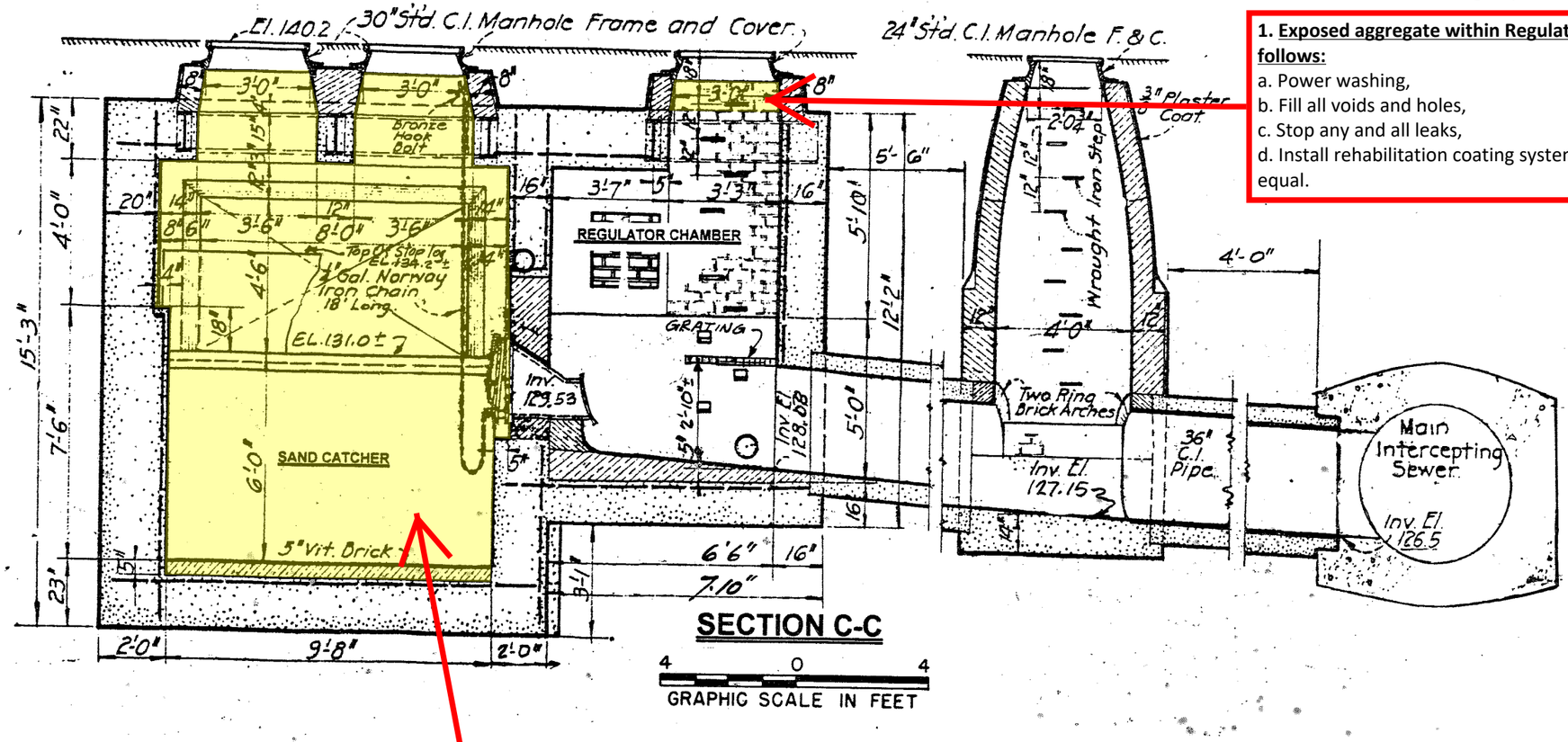
Passaic Valley Sewerage Commission
Contract No. B301
.
Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

**NUMBER 006**
**MONTGOMERY STREET REGULATOR**
**PATERSON**

**PASSAIC VALLEY SEWERAGE COMMISSIONERS**

**COMBINED SEWER SYSTEM FACILITIES INVENTORY AND ASSESSMENT ANALYSIS**

 FIGURE 006-4




**1. Exposed aggregate within Regulator should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

**1. Exposed aggregate within Sandcatcher should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

Passaic Valley Sewerage Commission
Contract No. B301

.

Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

NUMBER 006
MONTGOMERY STREET REGULATOR
PATERSON

PASSAIC VALLEY
SEWERAGE COMMISSIONERS

COMBINED SEWER SYSTEM
FACILITIES INVENTORY AND
ASSESSMENT ANALYSIS

# CSO 006 Montgomery Street Regulator

Sandcatcher Chamber Manhole - Before Repairs




Mortar Loss and Concrete Corrosion.

Sandcatcher Chamber Manhole - Before Repairs



Mortar Loss and Concrete Corrosion.

*August 2, 2023*

# CSO 006 Montgomery Street Regulator

Sandcatcher Chamber Manhole – During Repairs




Apply Raven 755 ReSurfacer Cement.

Sandcatcher Chamber Manhole – During Repairs



Apply Raven 755 ReSurfacer Cement.

*August 2, 2023*

# CSO 006 Montgomery Street Regulator

## Sandcatcher Chamber - Before Repairs




Concrete Corrosion.

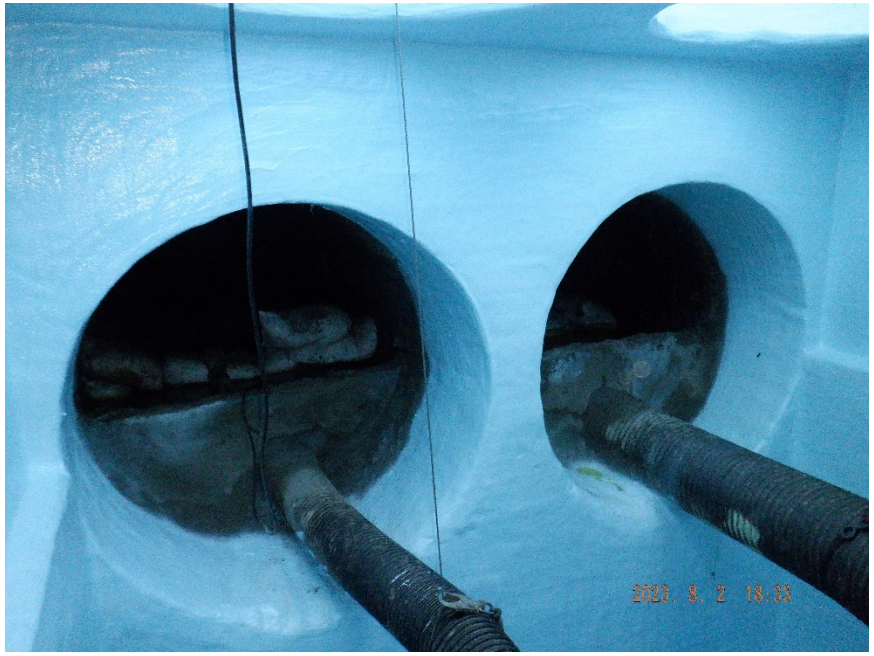
## Sandcatcher Chamber - During Repairs



Apply Raven 755 – ReSurfacer.

# CSO 006 Montgomery Street Regulator

## Sandcatcher Chamber - After Repairs




Apply Raven 175 Epoxy Primer.

## Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

*August 2, 2023*

 **FIGURE 007-1**

Coordinate Traffic Control for Straight Street [Route 650] with Passaic County and the City of Paterson

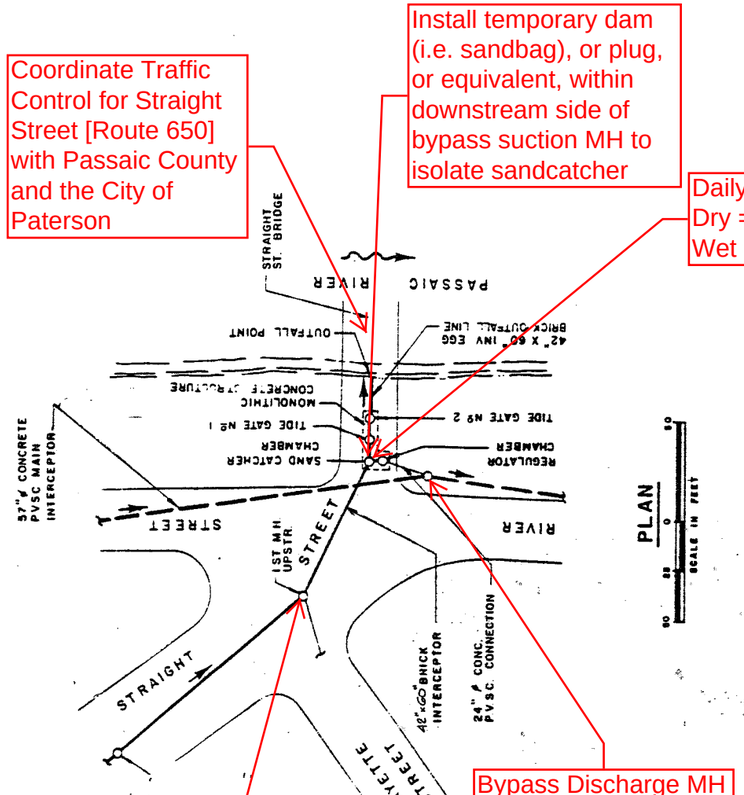
Install temporary dam (i.e. sandbag), or plug, or equivalent, within downstream side of bypass suction MH to isolate sandcatcher

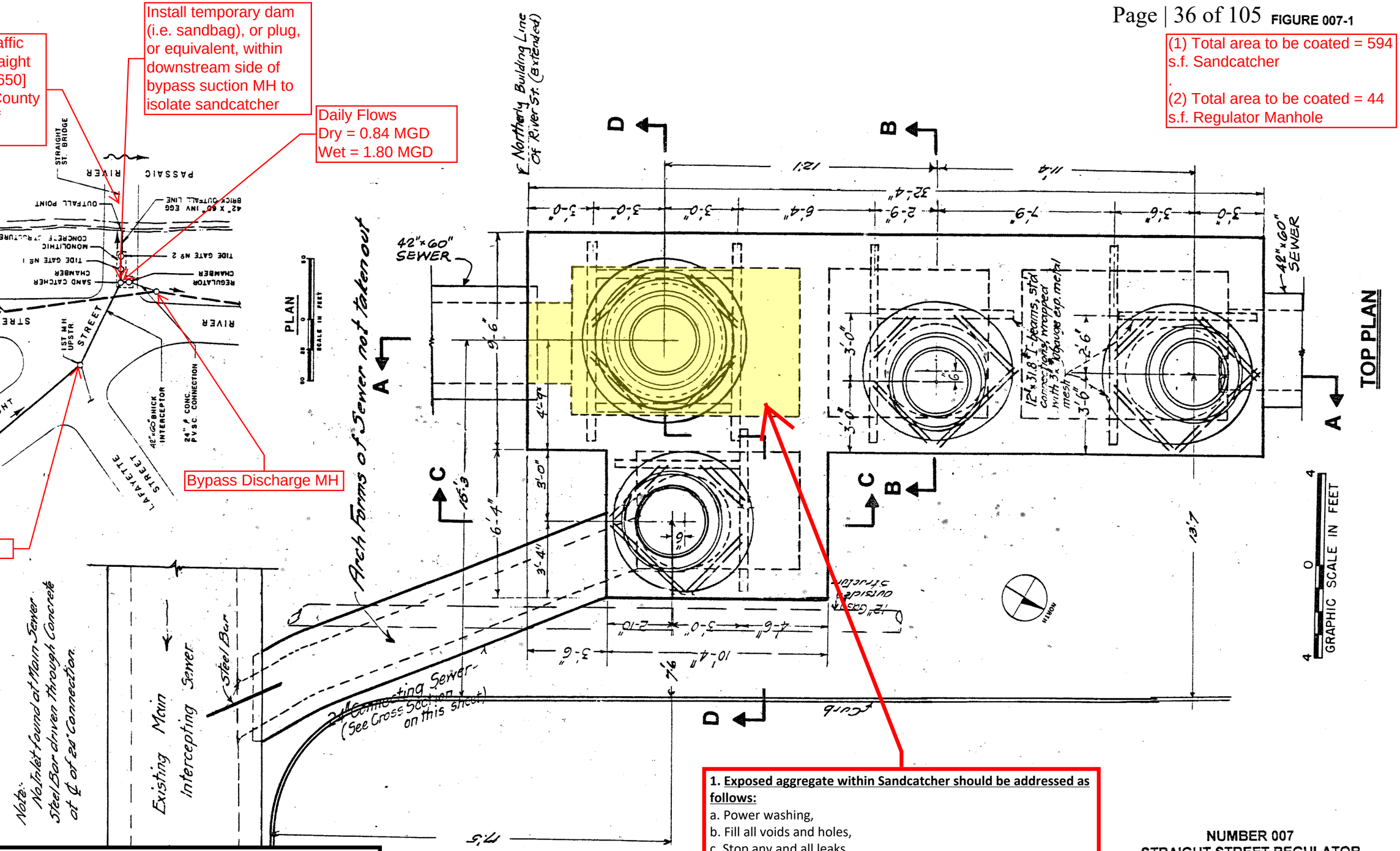
Daily Flows
Dry = 0.84 MGD
Wet = 1.80 MGD

(1) Total area to be coated = 594 s.f. Sandcatcher

.

(2) Total area to be coated = 44 s.f. Regulator Manhole




**1. Exposed aggregate within Sandcatcher should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

Passaic Valley Sewerage Commission
Contract No. B301

.

Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

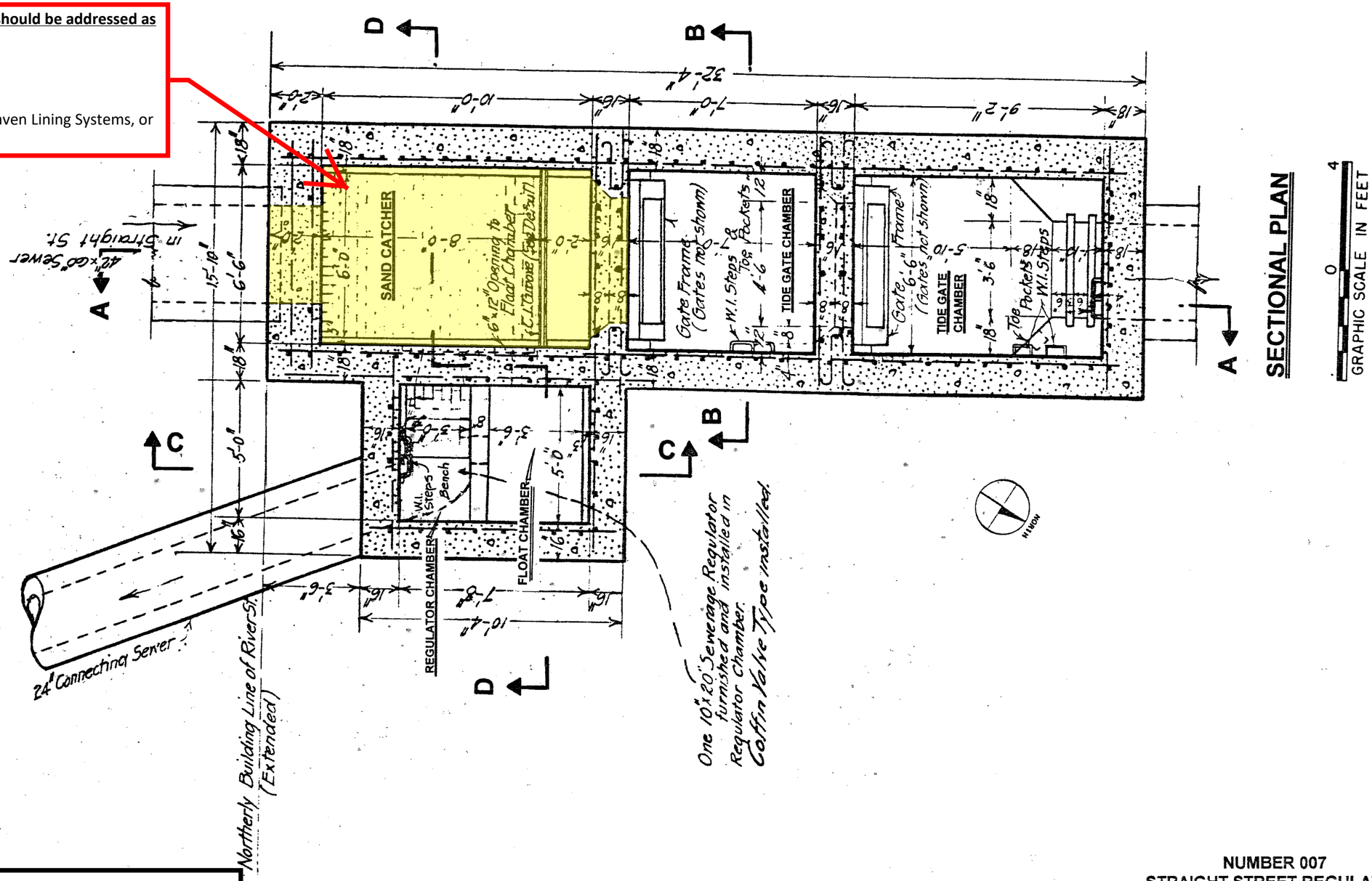
**NUMBER 007**
**STRAIGHT STREET REGULATOR**
**PATERSON**

**PASSAIC VALLEY SEWERAGE COMMISSIONERS**

**COMBINED SEWER SYSTEM FACILITIES INVENTORY AND ASSESSMENT ANALYSIS**

 FIGURE 007-2

**1. <u>Exposed aggregate within Sandcatcher should be addressed as follows:</u>**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

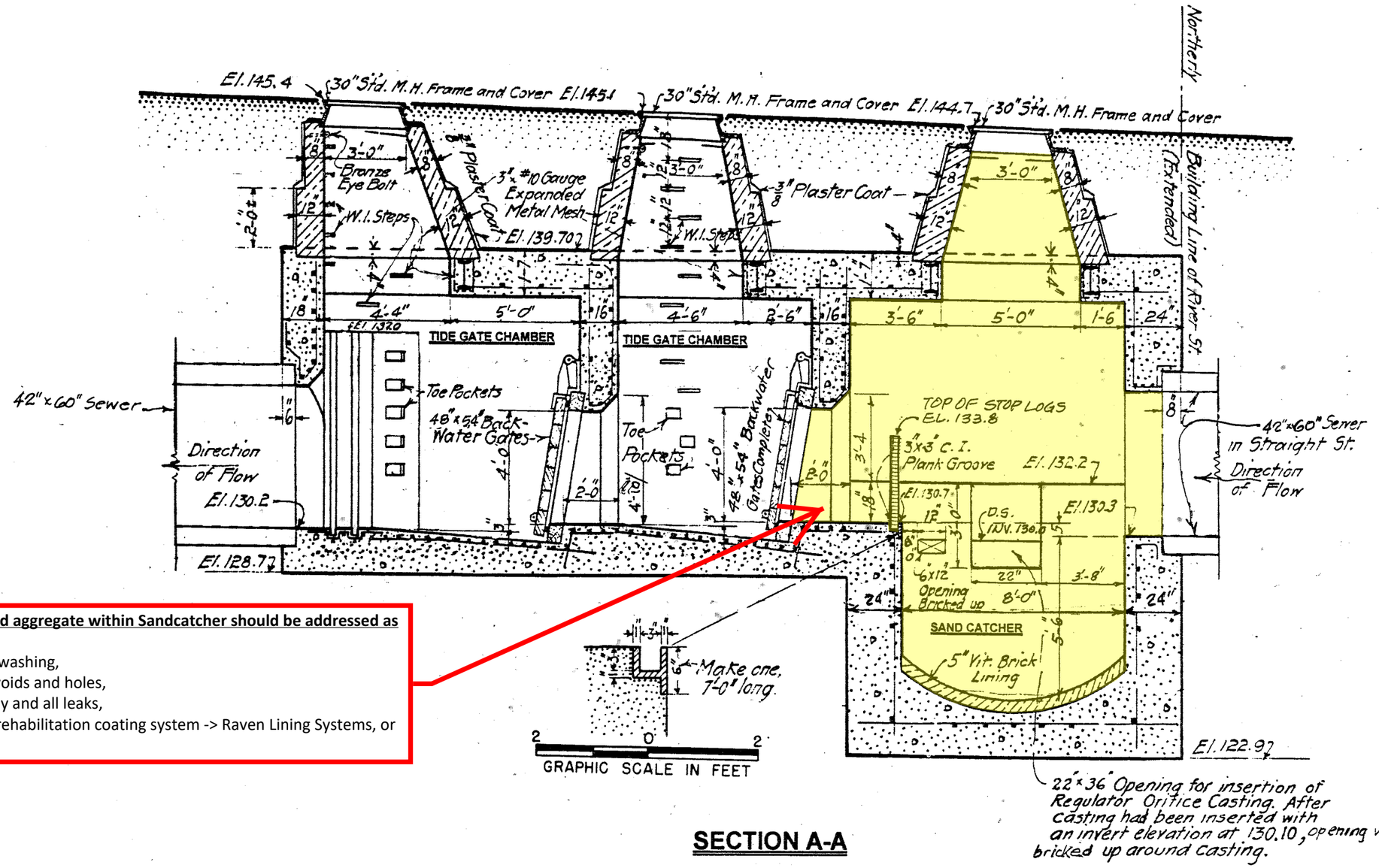



Passaic Valley Sewerage Commission
Contract No. B301
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Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

**NUMBER 007**
**STRAIGHT STREET REGULATOR**
**PATERSON**

**PASSAIC VALLEY SEWERAGE COMMISSIONERS**

**COMBINED SEWER SYSTEM FACILITIES INVENTORY AND ASSESSMENT ANALYSIS**




**1. Exposed aggregate within Sandcatcher should be addressed as follows:**

a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

## SECTION A-A

4 0 4
GRAPHIC SCALE IN FEET

Passaic Valley Sewerage Commission
Contract No. B301

.

Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

**NUMBER 007**
**STRAIGHT STREET REGULATOR**
**PATERSON**

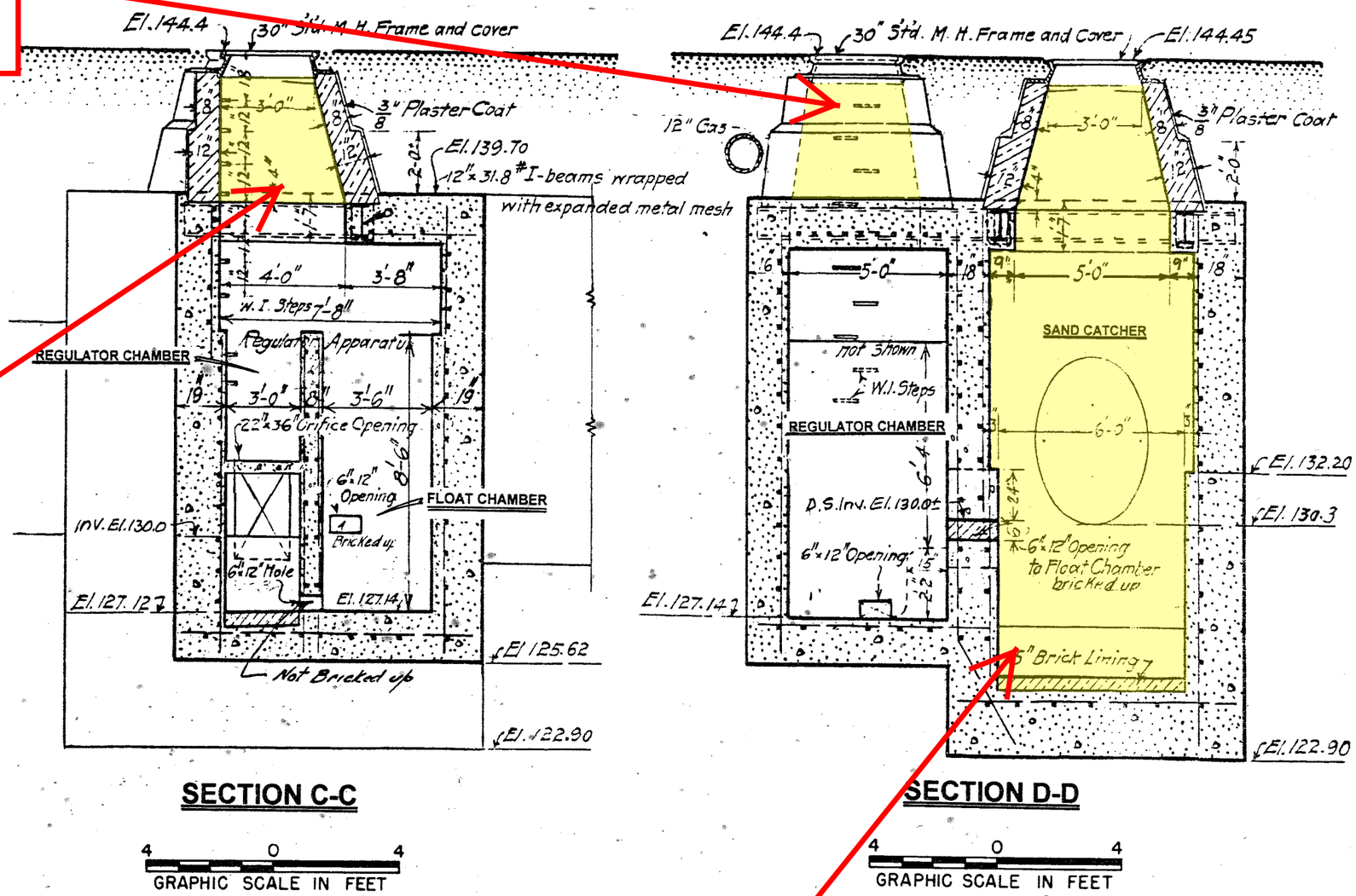
**PASSAIC VALLEY SEWERAGE COMMISSIONERS**

**COMBINED SEWER SYSTEM FACILITIES INVENTORY AND ASSESSMENT ANALYSIS**

**FIGURE 007-4**

**1. Exposed aggregate within Regulator should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

**1. Exposed aggregate within Regulator should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.




**1. Exposed aggregate within Sandcatcher should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

Passaic Valley Sewerage Commission
Contract No. B301

.

Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

**NUMBER 007**
**STRAIGHT STREET REGULATOR**
**PATERSON**

**PASSAIC VALLEY SEWERAGE COMMISSIONERS**

**COMBINED SEWER SYSTEM FACILITIES INVENTORY AND ASSESSMENT ANALYSIS**

# CSO 007 Straight Street Regulator

Sandcatcher Chamber - During Repairs




Apply Raven 755 – ReSurfacer.

Sandcatcher Chamber - During Repairs




Apply Raven 755 – ReSurfacer.

# CSO 007 Straight Street Regulator

Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

Sandcatcher Chamber - After Repairs



Apply Raven 405 Epoxy (125 mils).

*November 21, 2023*

# CSO 007 Straight Street Regulator

Sandcatcher Chamber - After Repairs



Apply Raven 405 Epoxy (125 mils).

Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

*November 21, 2023*

FIGURE 010-1

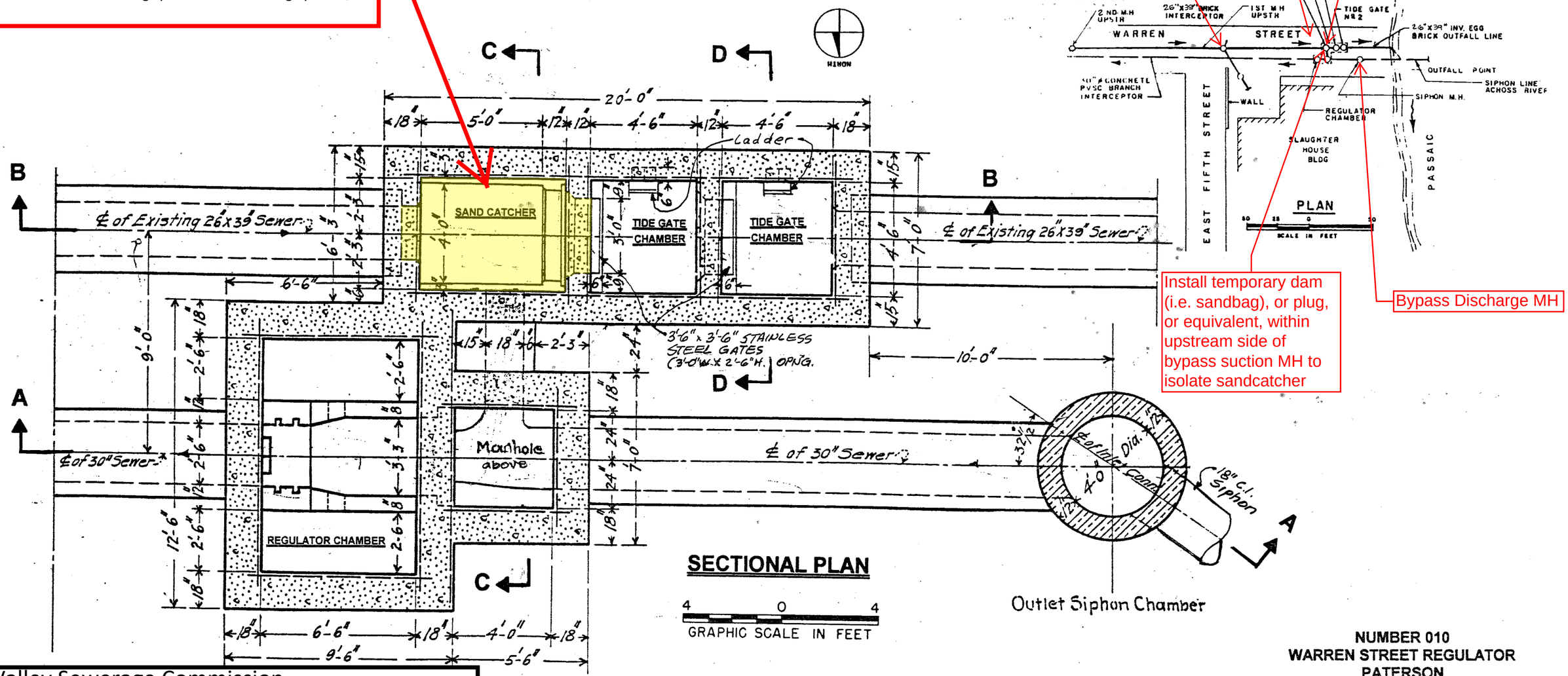
**1. <u>Exposed aggregate within Sandcatcher should be addressed as follows:</u>**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

Coordinate Traffic Control for Warren Street with the City of Paterson = NOT APPLICABLE

(1) Total area to be coated = 338 s.f. Sandcatcher

Daily Flows
Dry = 1.40 MGD
Wet = 1..88 MGD

Bypass Suction MH




Install temporary dam (i.e. sandbag), or plug, or equivalent, within upstream side of bypass suction MH to isolate sandcatcher

Bypass Discharge MH

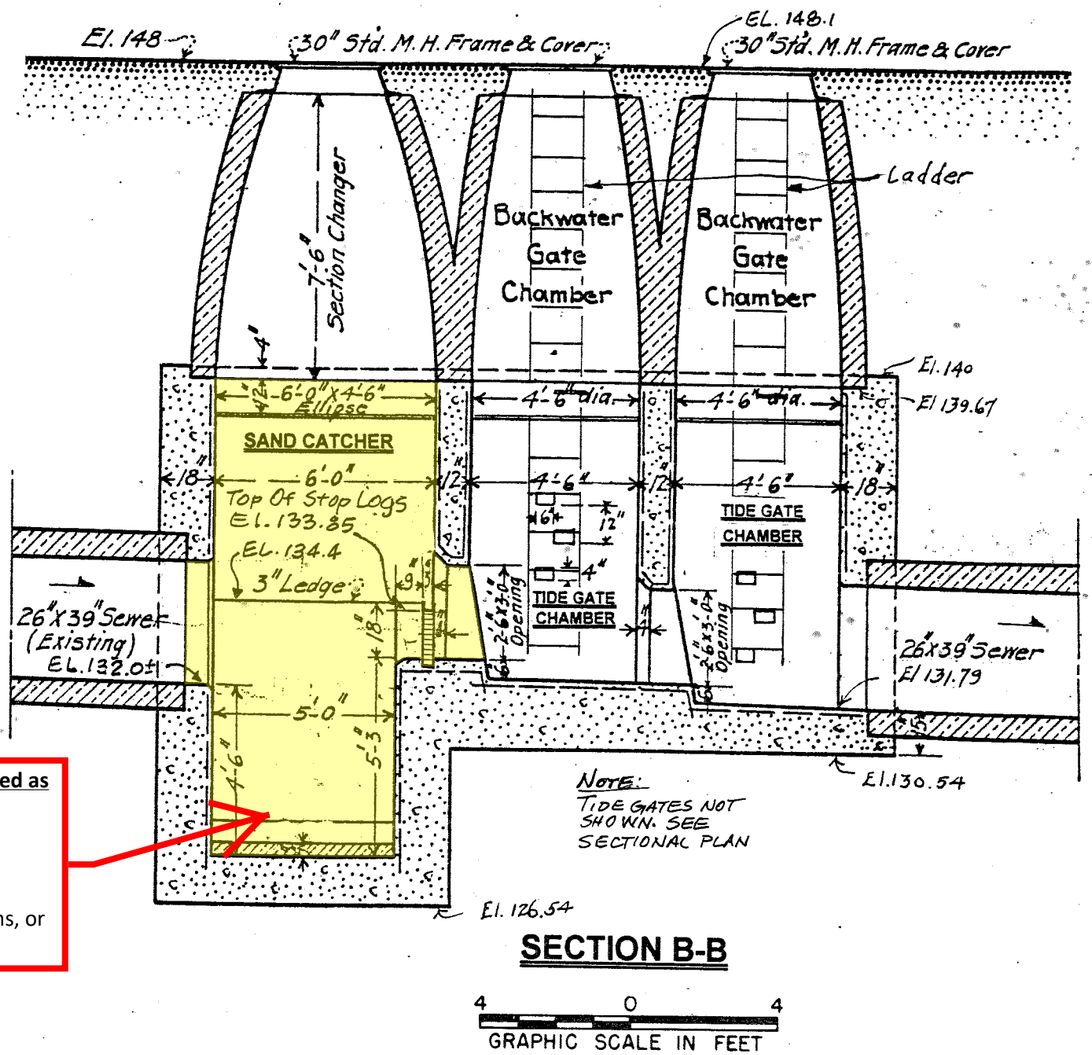
Passaic Valley Sewerage Commission
Contract No. B301
.
Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

**NUMBER 010**
**WARREN STREET REGULATOR**
**PATERSON**

**PASSAIC VALLEY SEWERAGE COMMISSIONERS**

**COMBINED SEWER SYSTEM FACILITIES INVENTORY AND ASSESSMENT ANALYSIS**

 FIGURE 010-3




**1. Exposed aggregate within Sandcatcher should be addressed as follows:**

a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

Passaic Valley Sewerage Commission
Contract No. B301

.

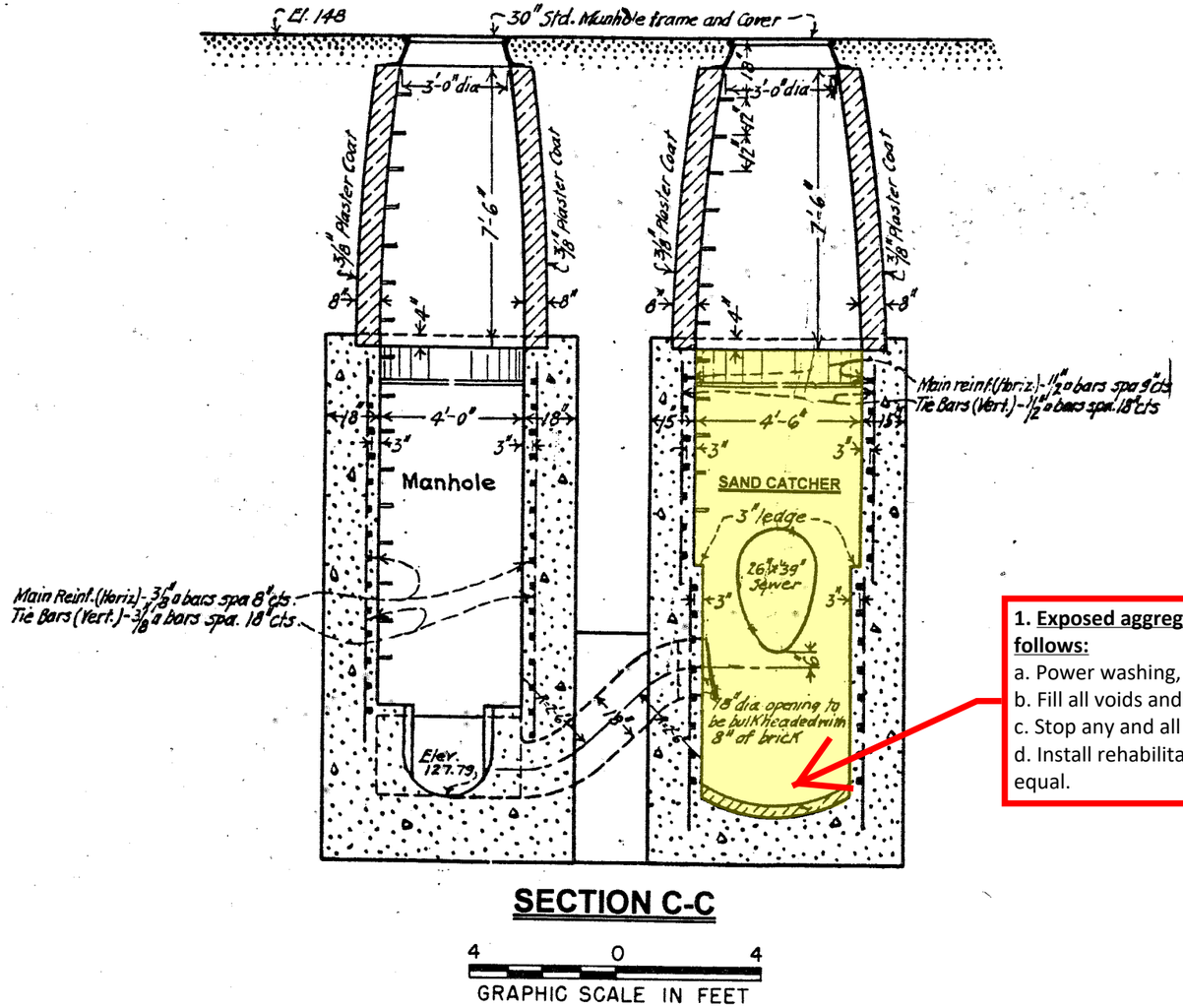
Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

**NUMBER 010**
**WARREN STREET REGULATOR**
**PATERSON**

**PASSAIC VALLEY SEWERAGE COMMISSIONERS**

**COMBINED SEWER SYSTEM FACILITIES INVENTORY AND ASSESSMENT ANALYSIS**

FIGURE 010-4




**SECTION C-C**

4 0 4

GRAPHIC SCALE IN FEET

**1. Exposed aggregate within Sandcatcher should be addressed as follows:**

a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

Passaic Valley Sewerage Commission
Contract No. B301

.

Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

**NUMBER 010**
**WARREN STREET REGULATOR**
**PATERSON**

**PASSAIC VALLEY SEWERAGE COMMISSIONERS**

**COMBINED SEWER SYSTEM FACILITIES INVENTORY AND ASSESSMENT ANALYSIS**

# CSO 010 Warren Street Regulator

Sandcatcher Chamber - Before Repairs




Concrete Corrosion.

Sandcatcher Chamber - Before Repairs




Concrete Corrosion.

# CSO 010 Warren Street Regulator

Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

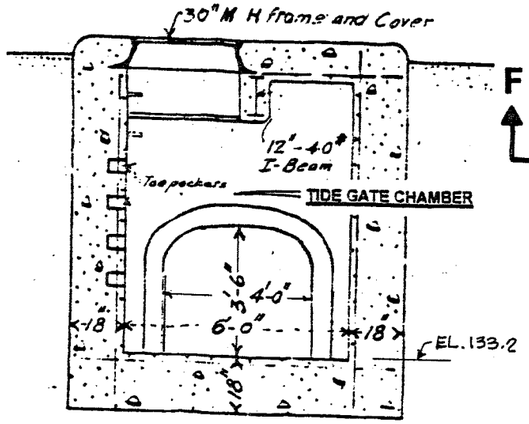
*October 19, 2023*

FIGURE 067-1

(1) Total area to be coated = 15 s.f. Riverside Grout Floor

.

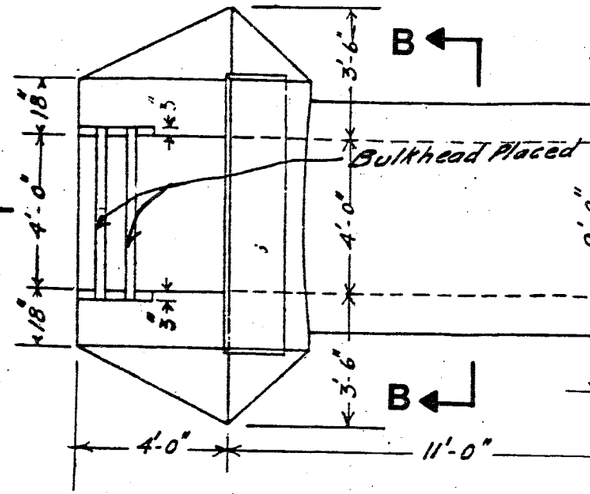
(2) Total area to be coated = 15 s.f. Sewerside Grout Floor

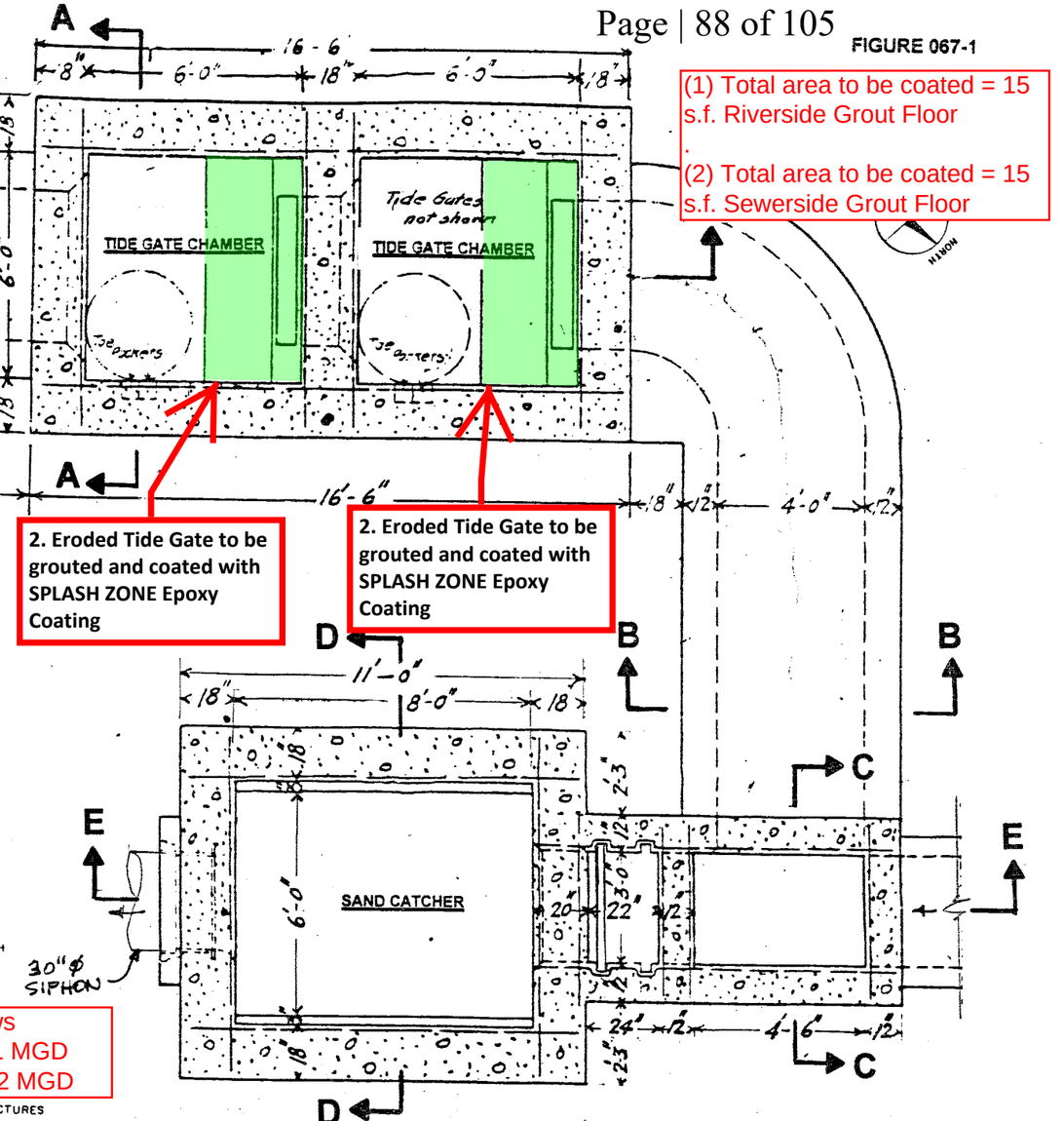



SECTION A-A

4 0 4

GRAPHIC SCALE IN FEET

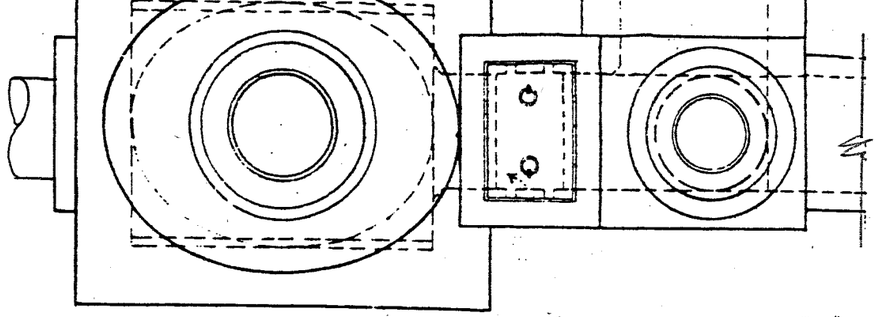



SECTIONAL PLAN

4 0 4

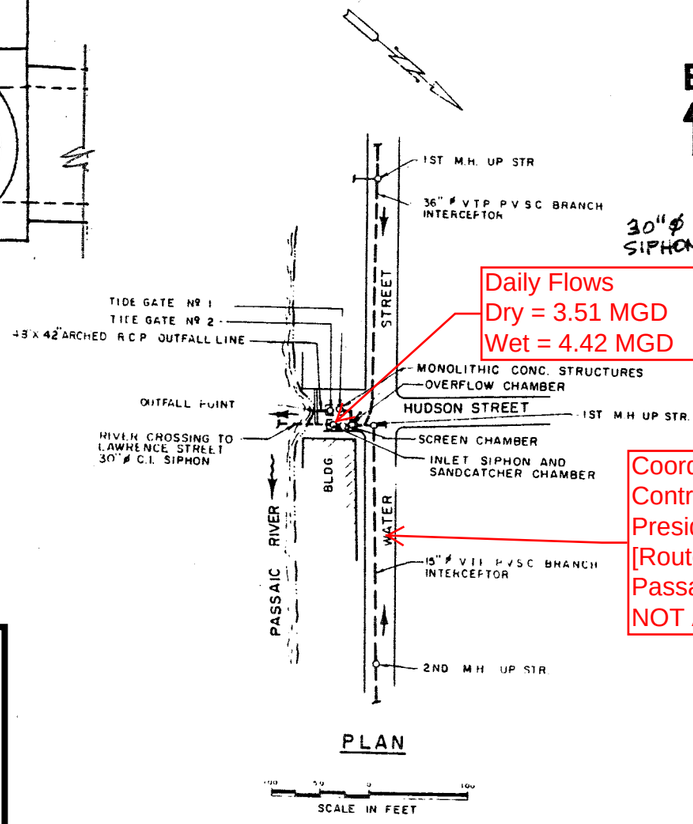
GRAPHIC SCALE IN FEET



TOP PLAN

4 0 4

GRAPHIC SCALE IN FEET




PLAN

SCALE IN FEET

Passaic Valley Sewerage Commission
Contract No. B301

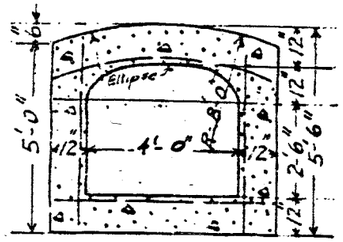
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Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

NUMBER 067
HUDSON STREET REGULATOR
PATERSON

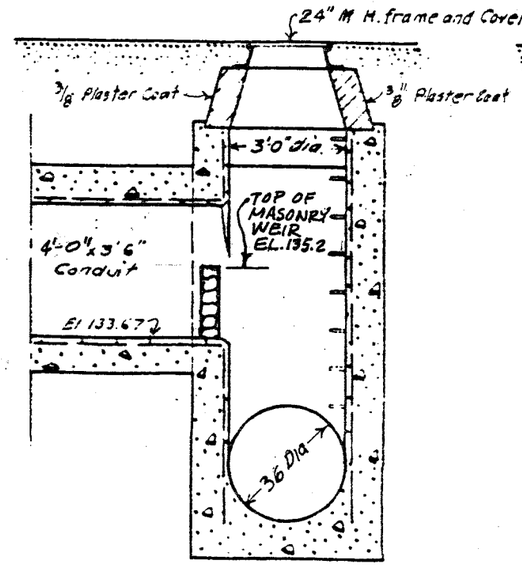
PASSAIC VALLEY
SEWERAGE COMMISSIONERS

COMBINED SEWER SYSTEM
FACILITIES INVENTORY AND
ASSESSMENT ANALYSIS



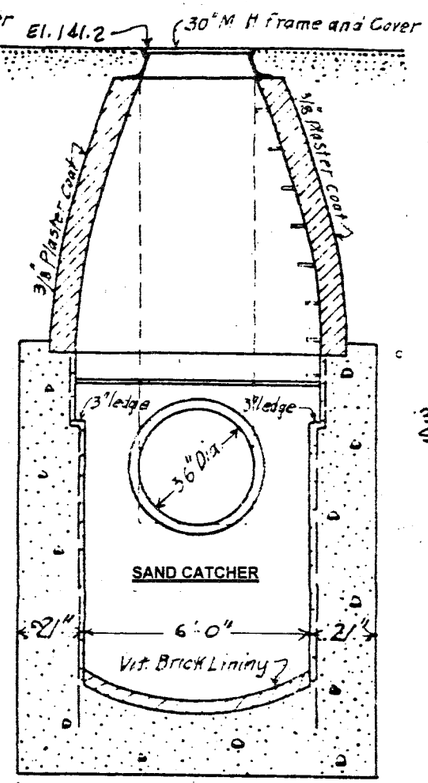

**SECTION B-B**

4 0 4
GRAPHIC SCALE IN FEET



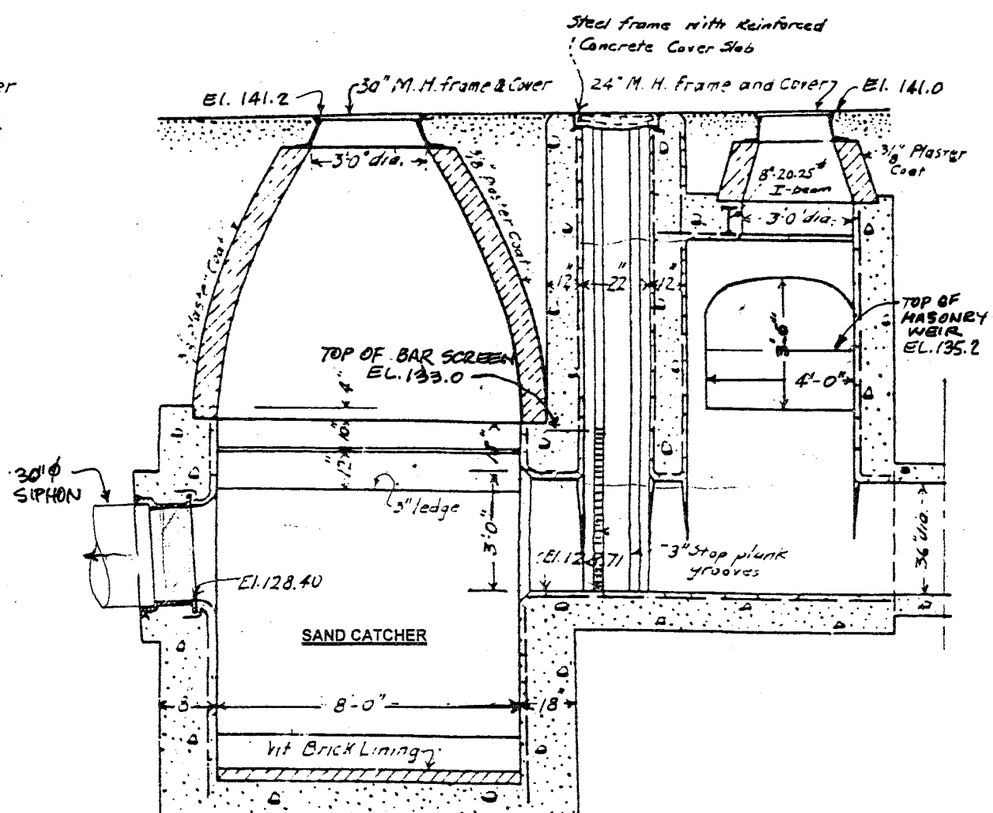

**SECTION C-C**

4 0 4
GRAPHIC SCALE IN FEET




**SECTION D-D**

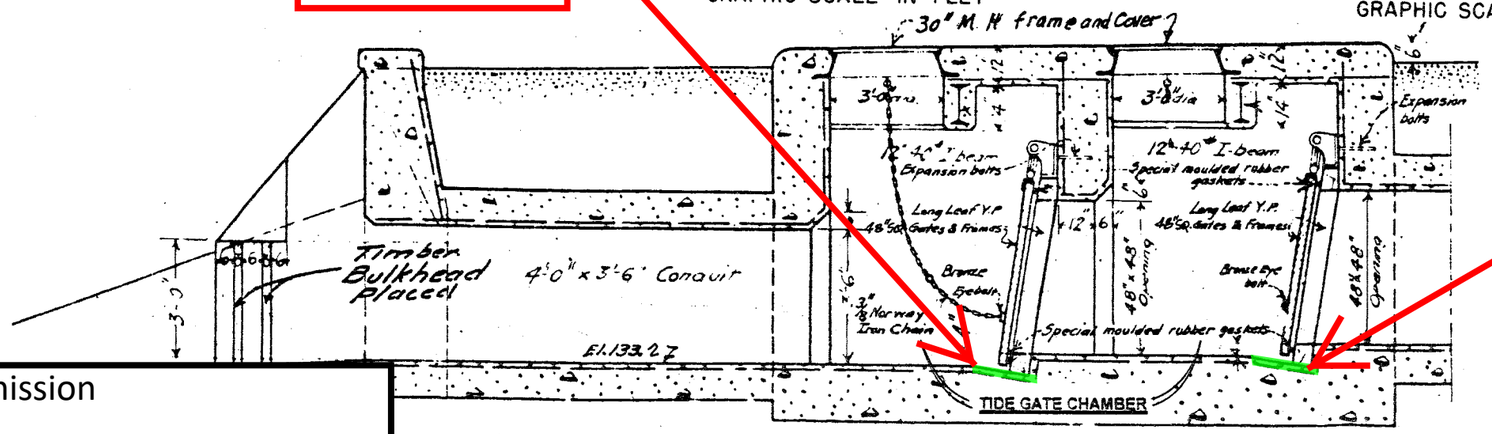
4 0 4
GRAPHIC SCALE IN FEET




**SECTION E-E**

4 0 4
GRAPHIC SCALE IN FEET

2. Eroded Tide Gate to be grouted and coated with SPLASH ZONE Epoxy Coating




**SECTION F-F**

4 0 4
GRAPHIC SCALE IN FEET

2. Eroded Tide Gate to be grouted and coated with SPLASH ZONE Epoxy Coating

Passaic Valley Sewerage Commission
Contract No. B301
.
Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

NUMBER 067
HUDSON STREET REGULATOR
PATERSON

PASSAIC VALLEY
SEWERAGE COMMISSIONERS

COMBINED SEWER SYSTEM
FACILITIES INVENTORY AND
ASSESSMENT ANALYSIS

# CSO 067 Hudson Street Regulator

Tidegate Chambers - Before Repairs



Concrete Corrosion.

Tidegate Chambers - Before Repairs



Concrete Corrosion.

*June 13, 2023*

# CSO 067 Hudson Street Regulator

Sewerside Tidegate Chamber - After Repairs




Apply Splash Zone Epoxy Coating.

Sewerside Tidegate Chamber - After Repairs




Apply Splash Zone Epoxy Coating.

*June 13, 2023*

# CSO 067 Hudson Street Regulator

Riverside Tidegate Chamber - After Repairs




Apply Splash Zone Epoxy Coating.

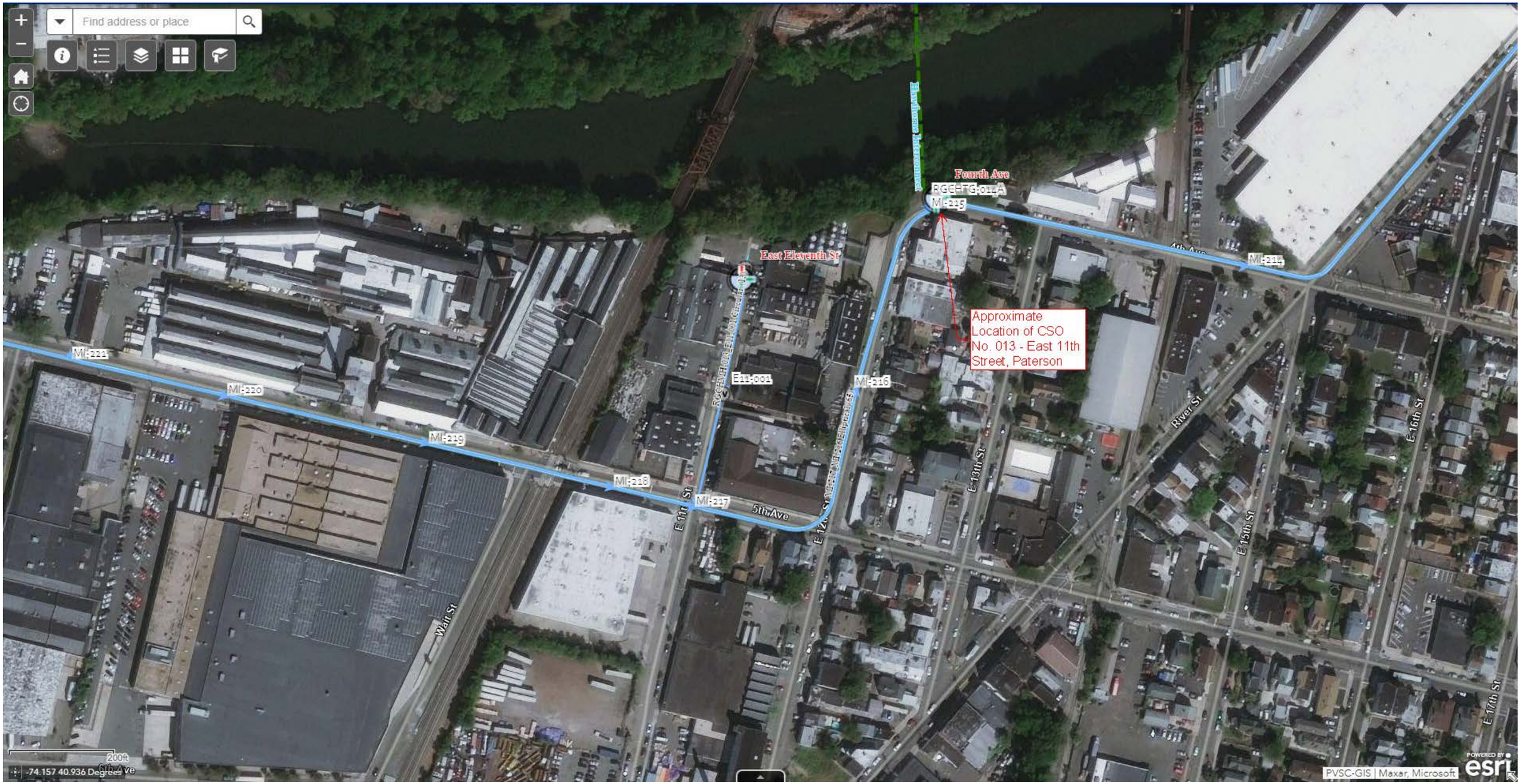
Riverside Tidegate Chamber - After Repairs




Apply Splash Zone Epoxy Coating.

*June 13, 2023*

**LOCATION PLAN**




**CSO No. 013 (East 11th Street) within City of Paterson**

FIGURE 013-1

(1) Total area to be coated = 596 s.f. Sandcatcher

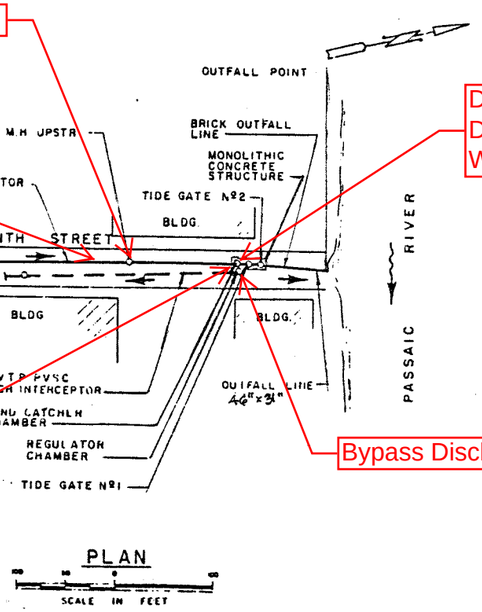
Bypass Suction MH

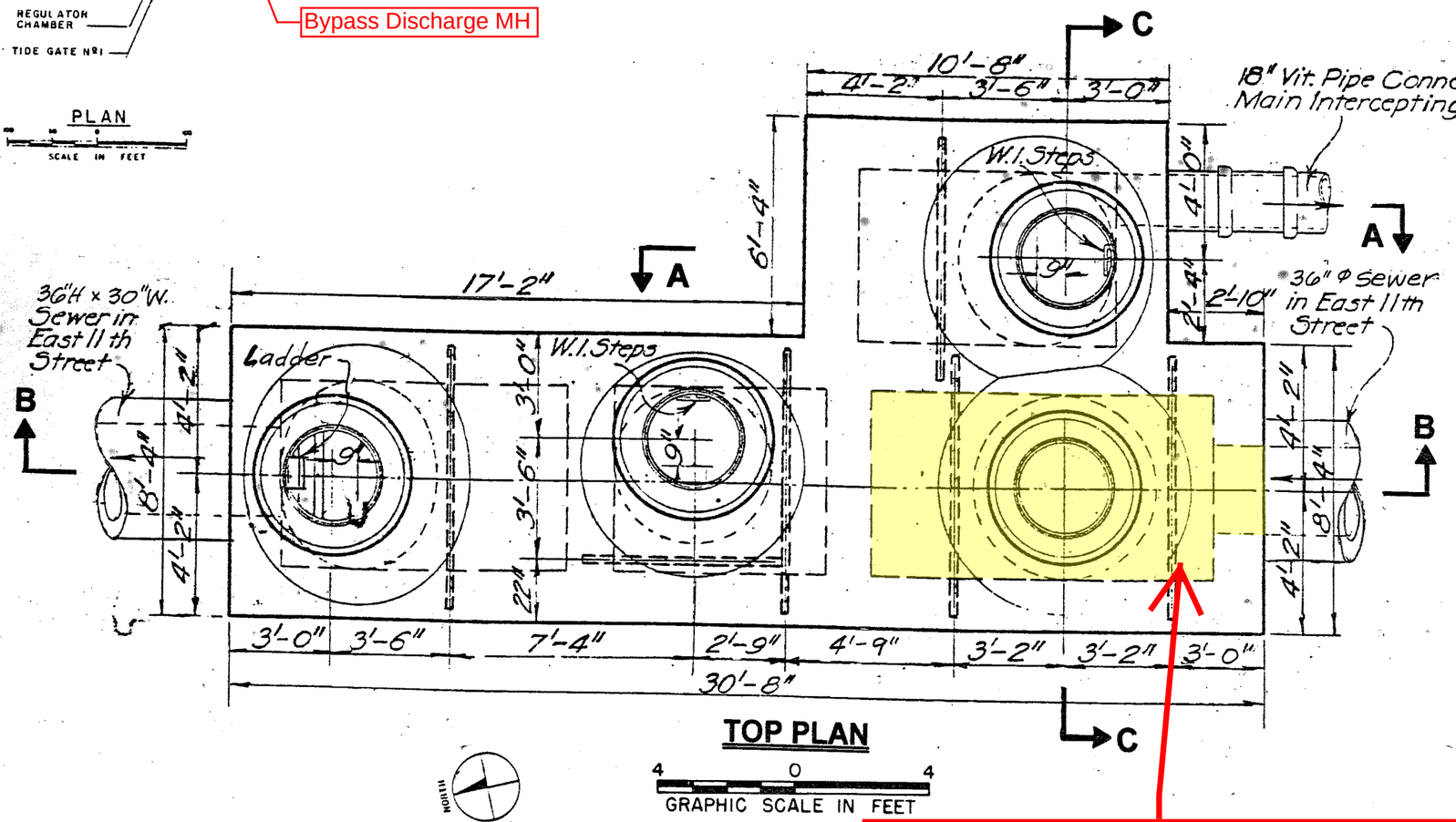
Coordinate Traffic Control for East 11th Street with the City of Paterson = NOT APPLICABLE

Daily Flows
Dry = 0.89 MGD
Wet = 0.89 MGD

Install temporary dam (i.e. sandbag), or plug, or equivalent, within downstream side of bypass suction MH to isolate sandcatcher

Bypass Discharge MH




**1. Exposed aggregate within Sandcatcher should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

Passaic Valley Sewerage Commission
Contract No. B301
.
Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

**NUMBER 013**
**E. 11TH STREET**
**PATERSON**

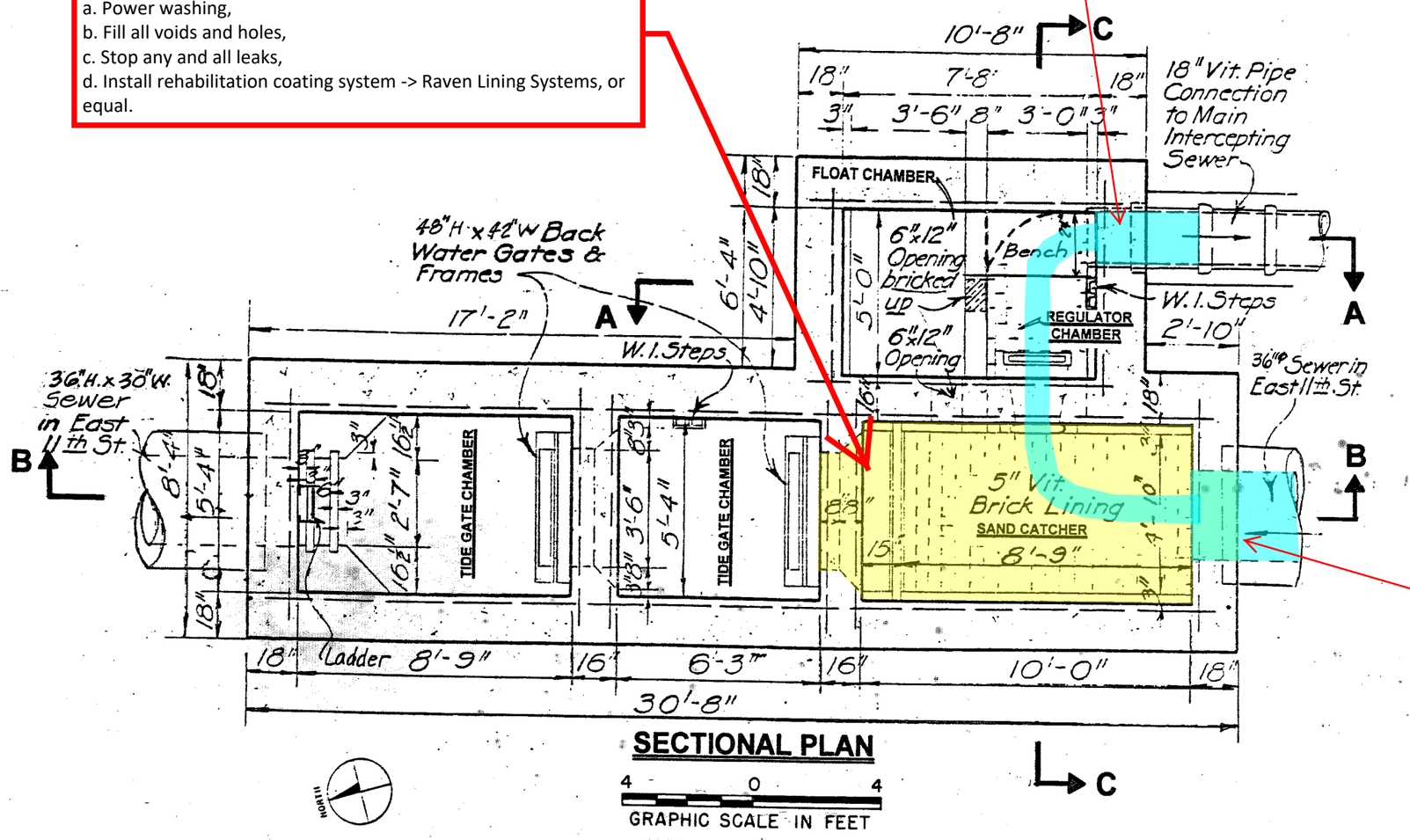
**PASSAIC VALLEY SEWERAGE COMMISSIONERS**

**COMBINED SEWER SYSTEM FACILITIES INVENTORY AND ASSESSMENT ANALYSIS**

FIGURE 013-2

**1. Exposed aggregate within Sandcatcher should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

18" Flow through plug with 12" bypass piping




36" Flow through plug with 12" bypass piping

Passaic Valley Sewerage Commission
Contract No. B301

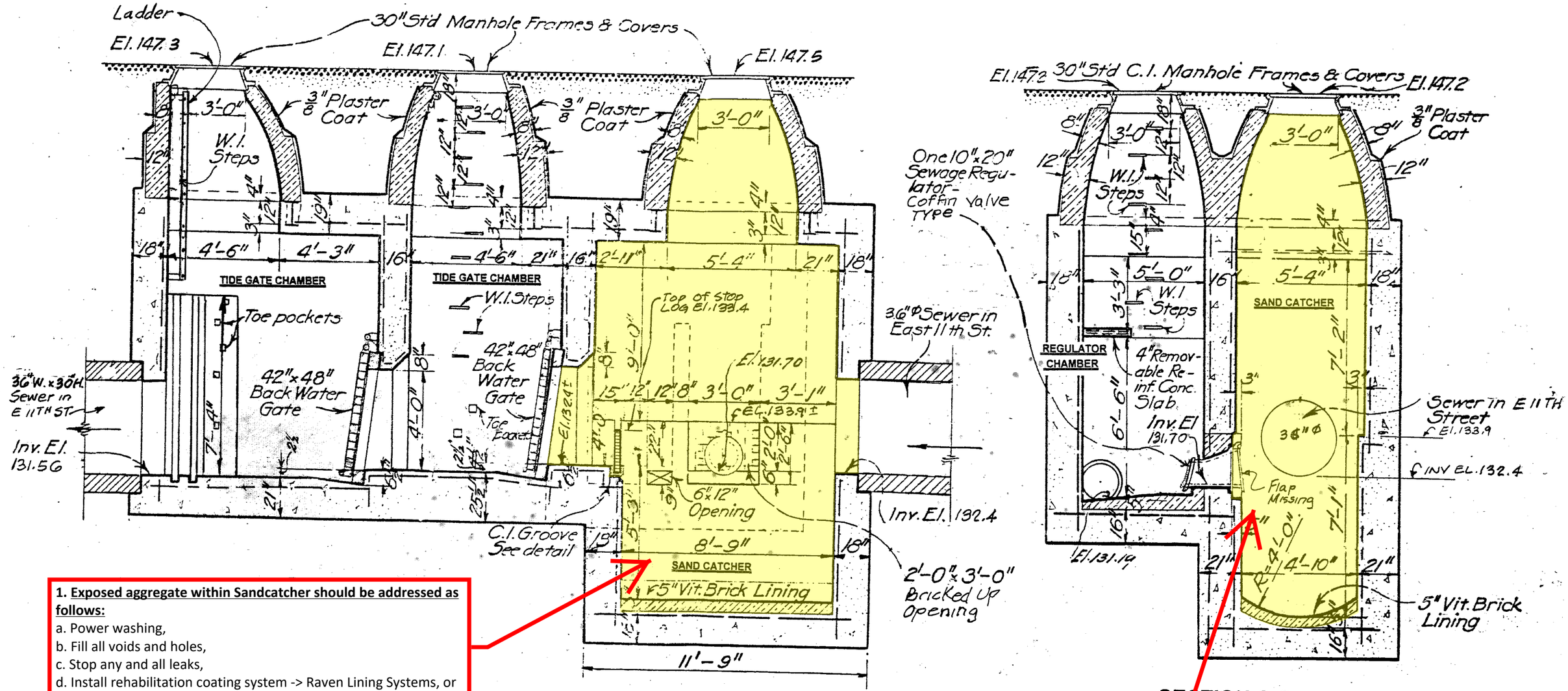
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Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

NUMBER 013
E. 11TH STREET
PATERSON

PASSAIC VALLEY
SEWERAGE COMMISSIONERS

COMBINED SEWER SYSTEM
FACILITIES INVENTORY AND
ASSESSMENT ANALYSIS




**1. Exposed aggregate within Sandcatcher should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

**1. Exposed aggregate within Sandcatcher should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

Passaic Valley Sewerage Commission
Contract No. B301
.
Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

**NUMBER 013**
**E. 11TH STREET**
**PATERSON**

**PASSAIC VALLEY SEWERAGE COMMISSIONERS**

**COMBINED SEWER SYSTEM FACILITIES INVENTORY AND ASSESSMENT ANALYSIS**

# CSO 013 East 11th Street Regulator

Sandcatcher Chamber - Before Repairs



Mortar Loss and Concrete Corrosion.

Sandcatcher Chamber - Before Repairs



Mortar Loss and Concrete Corrosion.

# CSO 013 East 11th Street Regulator

Sandcatcher Chamber - Before Repairs



Mortar Loss and Concrete Corrosion.

Sandcatcher Chamber - Before Repairs



Mortar Loss and Concrete Corrosion.

# CSO 013 East 11th Street Regulator

Sandcatcher Chamber - During Repairs



Apply Raven 755 ReSurfacer Cement.

Sandcatcher Chamber - During Repairs



Apply Raven 755 ReSurfacer Cement.

*October 4, 2023*

# CSO 013 East 11th Street Regulator

Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

Sandcatcher Chamber - After Repairs

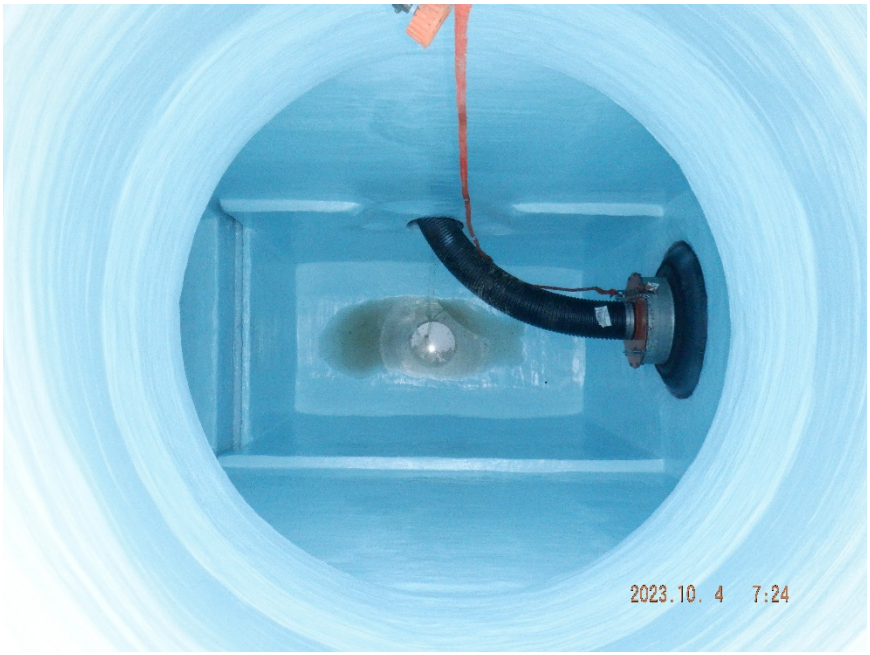



Apply Raven 405 Epoxy (125 mils).

*October 4, 2023*

# CSO 013 East 11th Street Regulator

Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

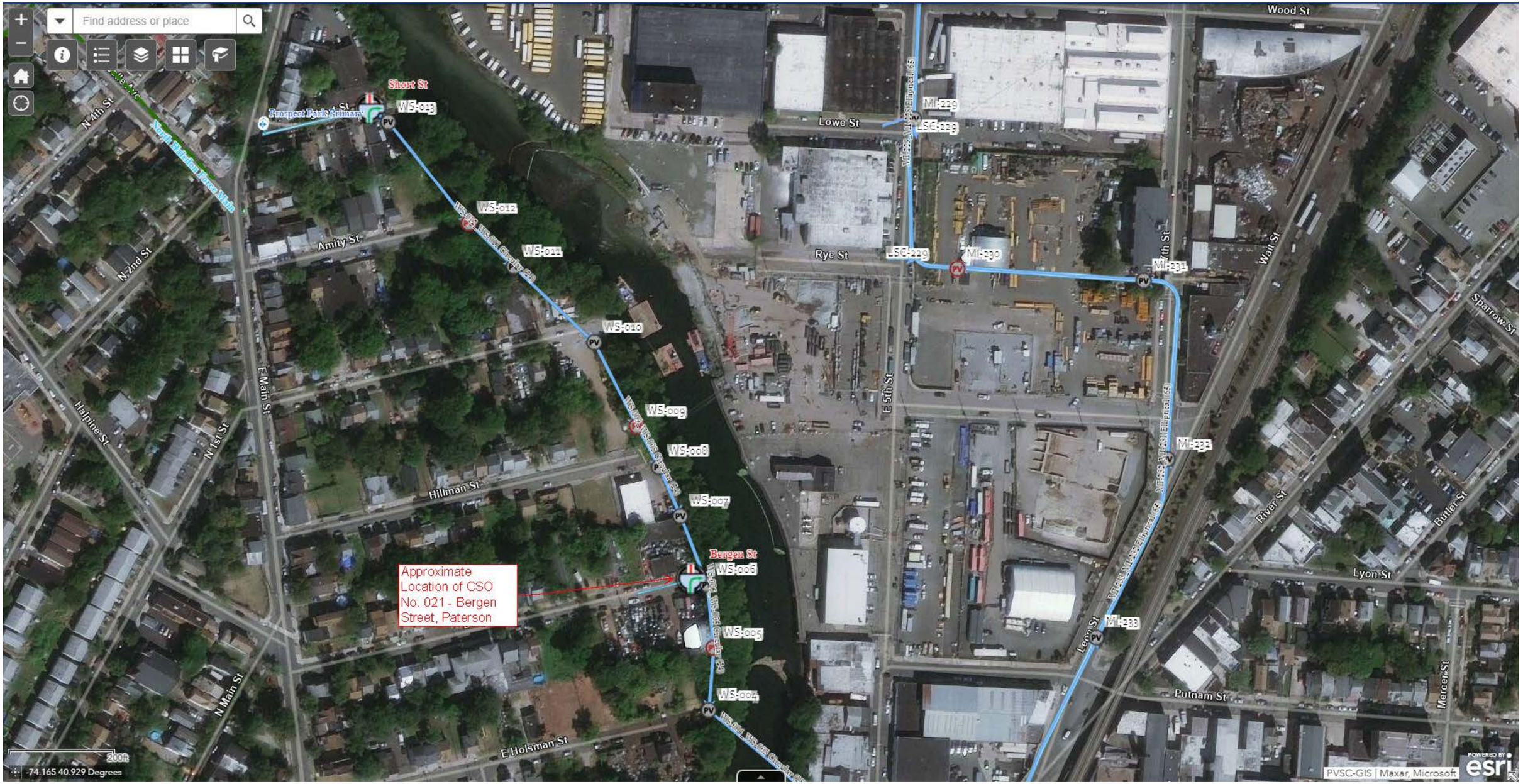
Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

*October 4, 2023*

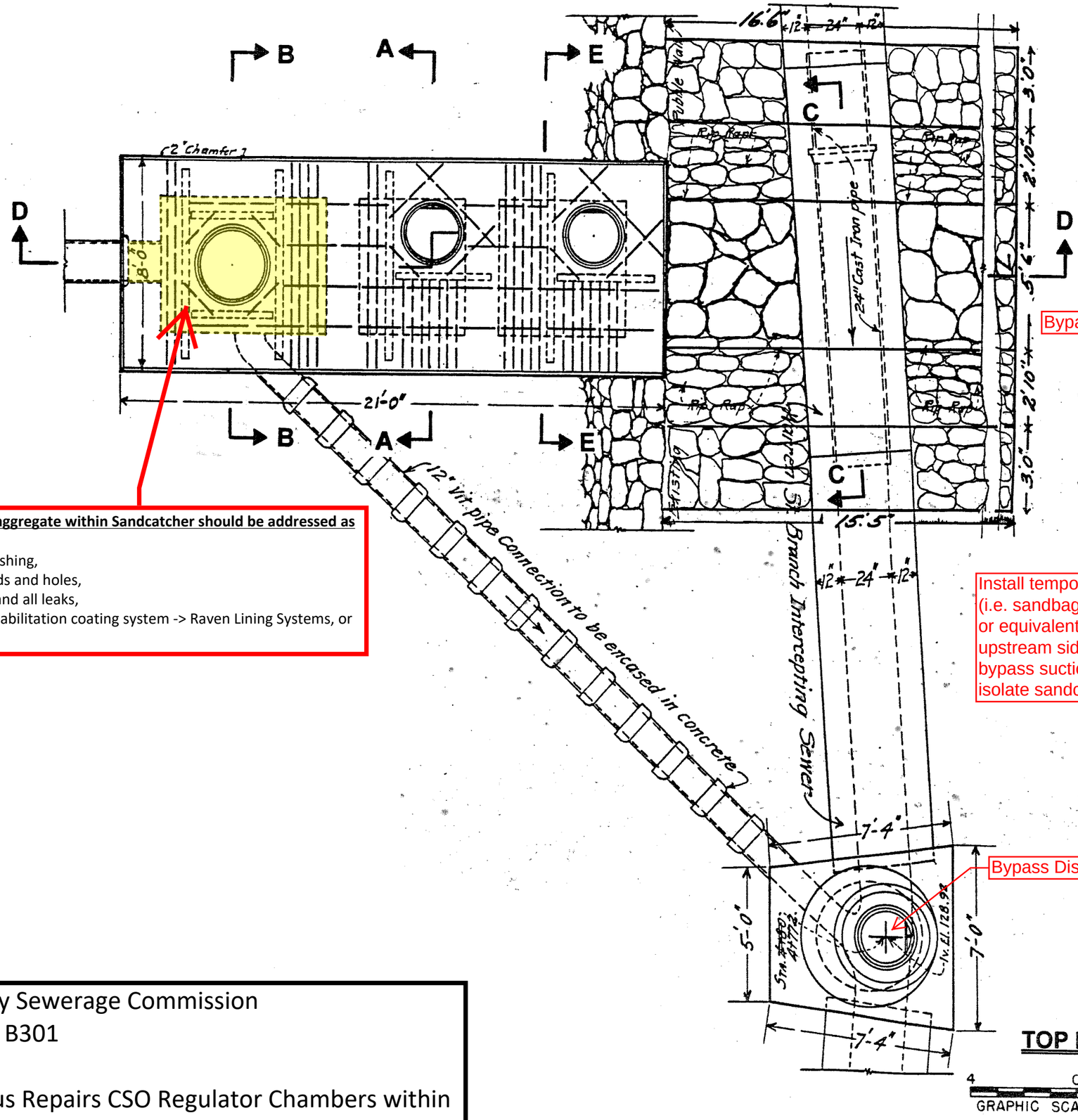
## LOCATION PLAN




**CSO No. 021 (Bergen Street) within City of Paterson**

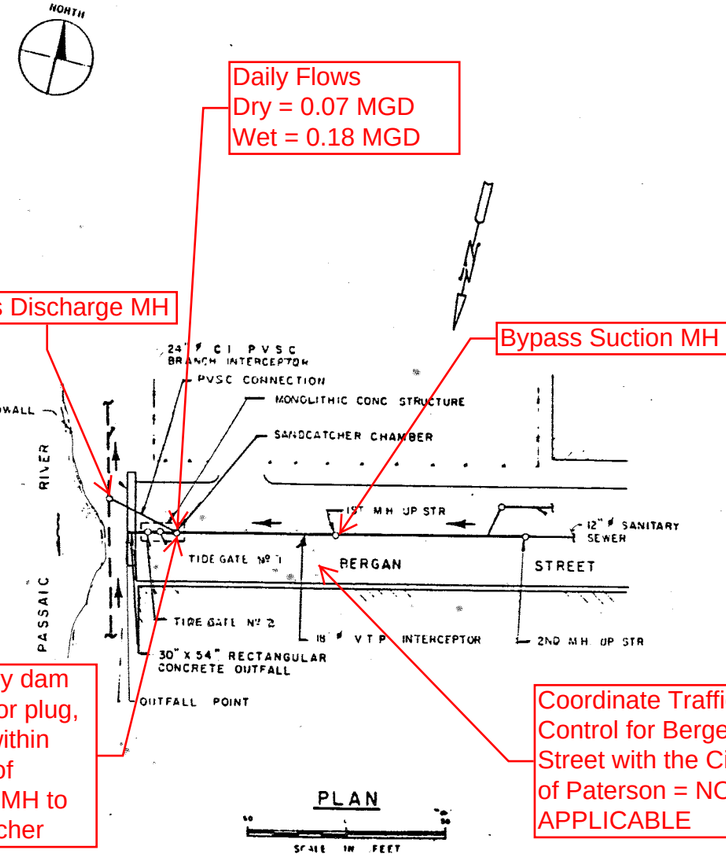
 FIGURE 021-1

(1) Total area to be coated = 276 s.f. Sandcatcher




**1. <u>Exposed aggregate within Sandcatcher should be addressed as follows:</u>**

a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.




Daily Flows
Dry = 0.07 MGD
Wet = 0.18 MGD

Bypass Discharge MH

Bypass Suction MH

Install temporary dam (i.e. sandbag), or plug, or equivalent, within upstream side of bypass suction MH to isolate sandcatcher

Coordinate Traffic Control for Bergen Street with the City of Paterson = NOT APPLICABLE

Passaic Valley Sewerage Commission
Contract No. B301

.

Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

**NUMBER 021**
**BERGEN STREET REGULATOR**
**PATERSON**

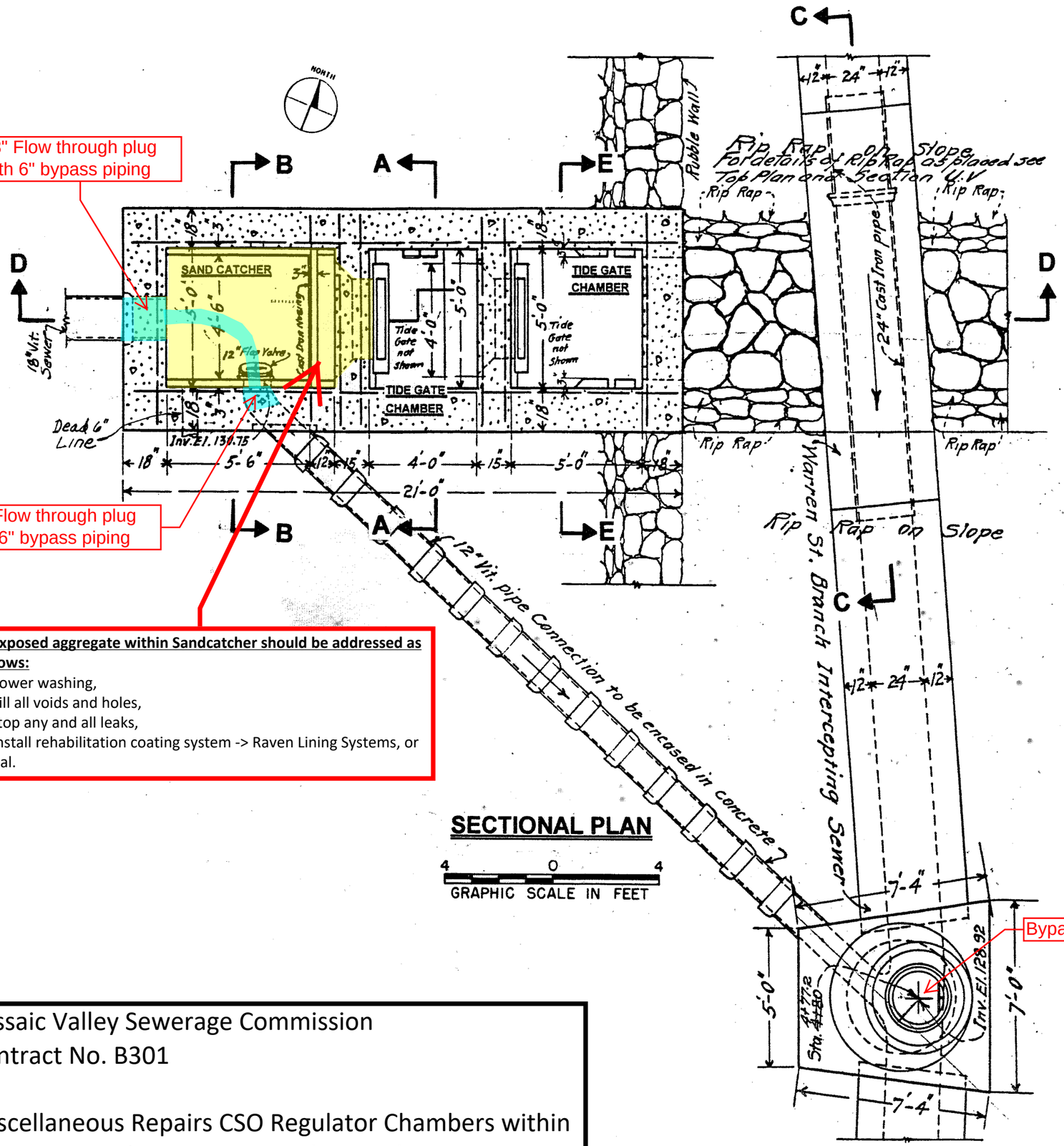
**PASSAIC VALLEY SEWERAGE COMMISSIONERS**

**COMBINED SEWER SYSTEM FACILITIES INVENTORY AND ASSESSMENT ANALYSIS**

FIGURE 021-2

18" Flow through plug with 6" bypass piping

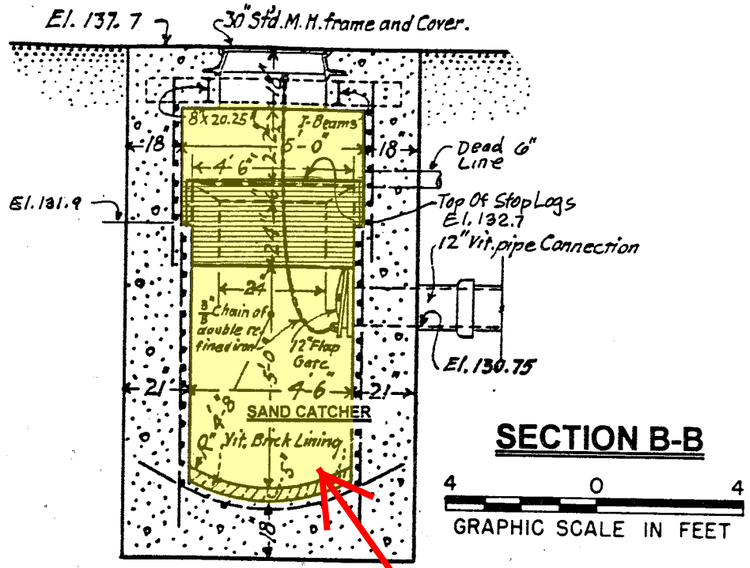
12" Flow through plug with 6" bypass piping




1. **Exposed aggregate within Sandcatcher should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

## SECTIONAL PLAN

4 0 4
GRAPHIC SCALE IN FEET




## SECTION B-B

4 0 4
GRAPHIC SCALE IN FEET

1. **Exposed aggregate within Sandcatcher should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

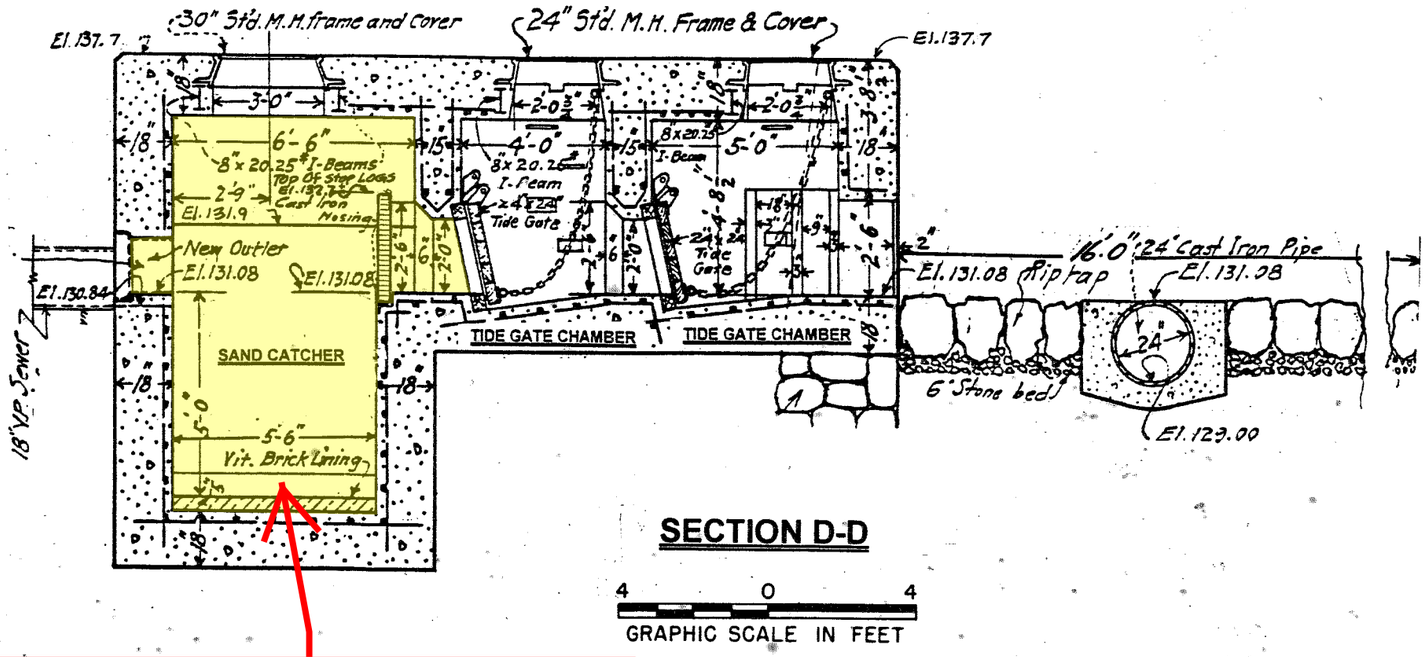
Bypass Discharge MH

Passaic Valley Sewerage Commission
Contract No. B301
.
Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

**NUMBER 021**
**BERGEN STREET REGULATOR**
**PATERSON**

**PASSAIC VALLEY SEWERAGE COMMISSIONERS**

**COMBINED SEWER SYSTEM FACILITIES INVENTORY AND ASSESSMENT ANALYSIS**




## SECTION D-D

4 0 4
GRAPHIC SCALE IN FEET

**1. <u>Exposed aggregate within Sandcatcher should be addressed as follows:</u>**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

Passaic Valley Sewerage Commission
Contract No. B301
.
Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

**NUMBER 021**
**BERGEN STREET REGULATOR**
**PATERSON**

**PASSAIC VALLEY SEWERAGE COMMISSIONERS**

**COMBINED SEWER SYSTEM FACILITIES INVENTORY AND ASSESSMENT ANALYSIS**

# CSO 021 Begen Street Regulator

Sandcatcher Chamber - Before Repairs



Mortar Loss and Concrete Corrosion.

Sandcatcher Chamber - Before Repairs



Mortar Loss and Concrete Corrosion.

# CSO 021 Begen Street Regulator

Sandcatcher Chamber - During Repairs




Apply Raven 755 ReSurfacer Cement.

Sandcatcher Chamber - During Repairs




Apply Raven 755 ReSurfacer Cement.

*October 12, 2023*

# CSO 021 Begen Street Regulator

Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

*October 12, 2023*

# CSO 021 Begen Street Regulator

Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

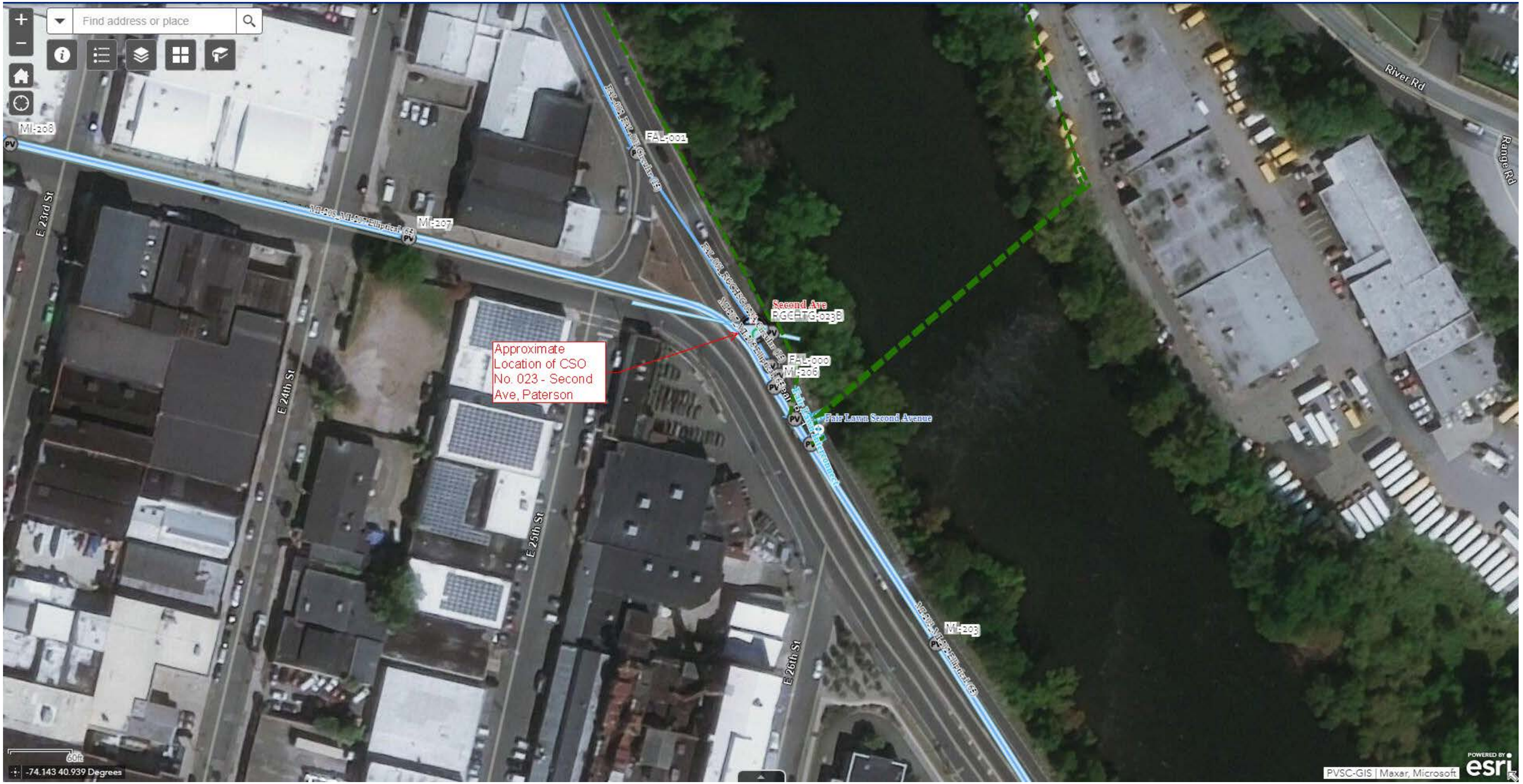
Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

*October 12, 2023*

**LOCATION PLAN**



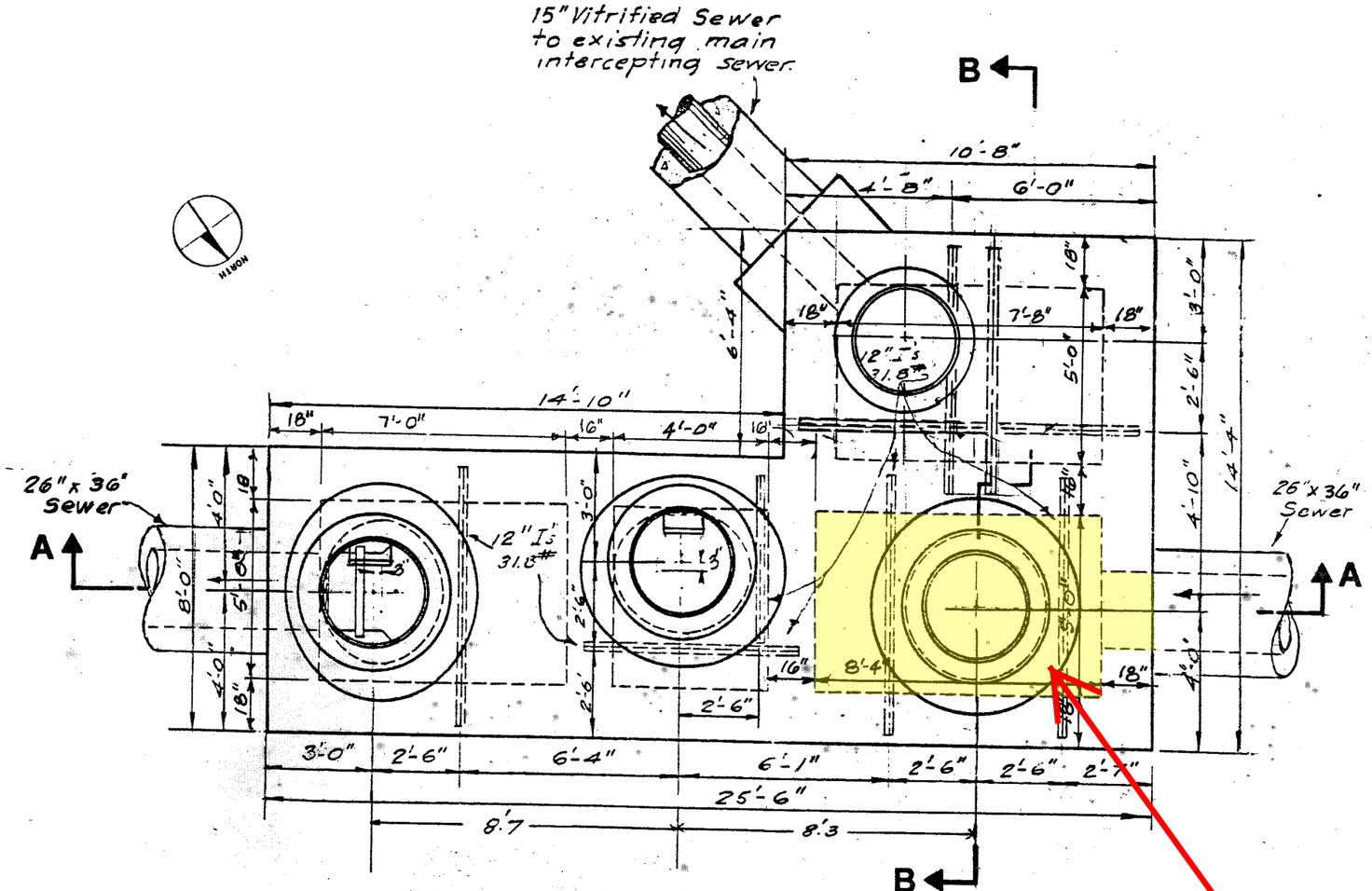

**CSO No. 023 (Second Avenue) within City of Paterson**

FIGURE 023-1

(1) Total area to be coated = 412 s.f. Sandcatcher

.

(2) Total area to be coated = 21 s.f. Regulator Manhole



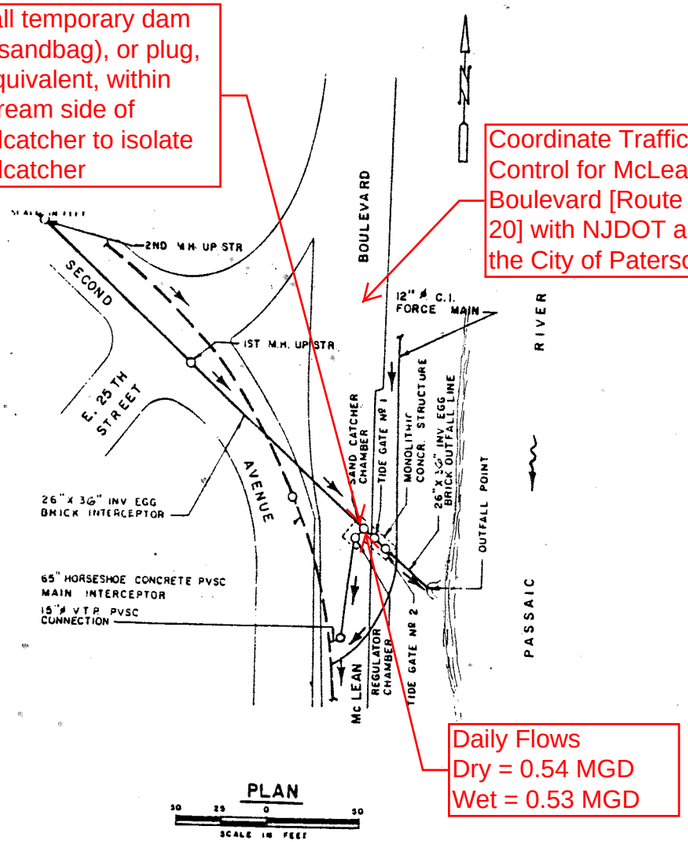

**TOP PLAN**

4 0 4

GRAPHIC SCALE IN FEET

Install temporary dam (i.e. sandbag), or plug, or equivalent, within upstream side of sandcatcher to isolate sandcatcher

Coordinate Traffic Control for McLean Boulevard [Route 20] with NJDOT and the City of Paterson




**PLAN**

50 25 0 50

SCALE IN FEET

Daily Flows
Dry = 0.54 MGD
Wet = 0.53 MGD

**1. Exposed aggregate within Sandcatcher should be addressed as follows:**

a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

Passaic Valley Sewerage Commission
Contract No. B301

.

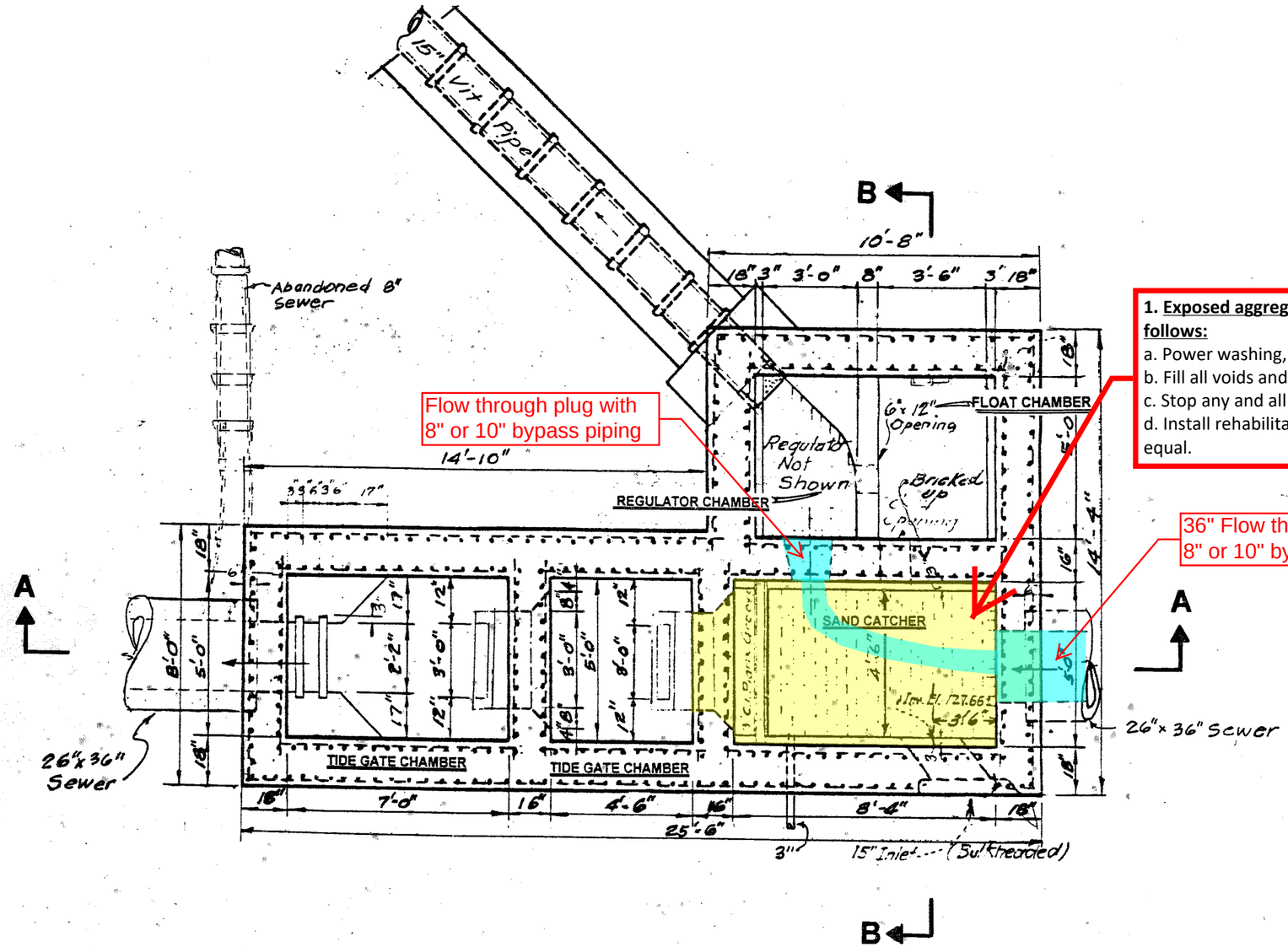
Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

**NUMBER 023**
**SECOND AVENUE REGULATOR**
**PATERSON**

**PASSAIC VALLEY SEWERAGE COMMISSIONERS**

**COMBINED SEWER SYSTEM FACILITIES INVENTORY AND ASSESSMENT ANALYSIS**

 **FIGURE 023-2**




**1. Exposed aggregate within Sandcatcher should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

## SECTIONAL PLAN

4 0 4
GRAPHIC SCALE IN FEET

Passaic Valley Sewerage Commission
Contract No. B301
.
Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

**NUMBER 023**
**SECOND AVENUE REGULATOR**
**PATERSON**

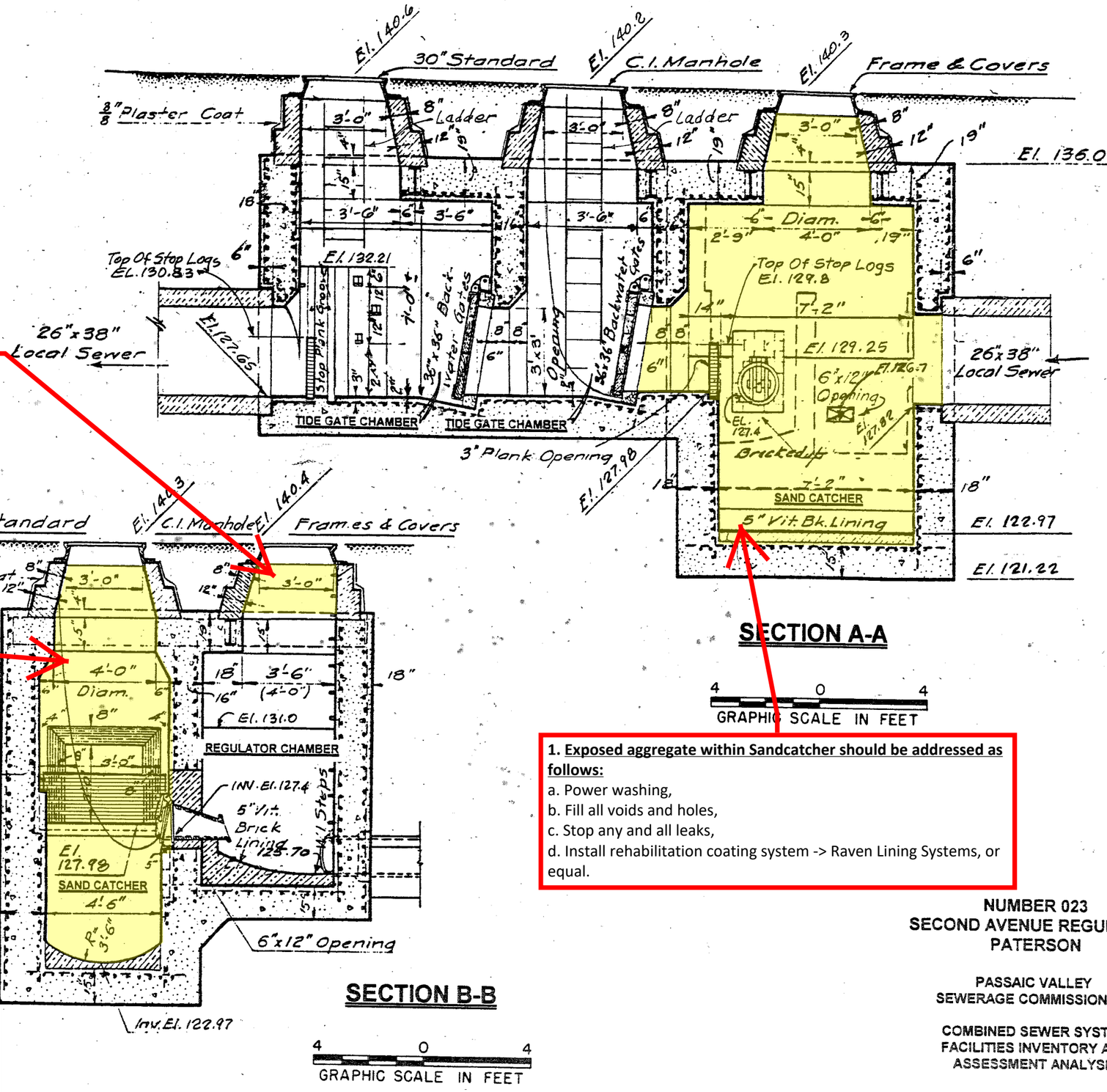
**PASSAIC VALLEY SEWERAGE COMMISSIONERS**

**COMBINED SEWER SYSTEM FACILITIES INVENTORY AND ASSESSMENT ANALYSIS**

FIGURE 023-3

**1. Exposed aggregate within Regulator should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

**1. Exposed aggregate within Sandcatcher should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.




Passaic Valley Sewerage Commission
Contract No. B301

.

Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

NUMBER 023
SECOND AVENUE REGULATOR
PATERSON

PASSAIC VALLEY
SEWERAGE COMMISSIONERS

COMBINED SEWER SYSTEM
FACILITIES INVENTORY AND
ASSESSMENT ANALYSIS

# CSO 023 2nd Avenue Regulator

Sandcatcher Chamber - Before Repairs



Mortar Loss and Concrete Corrosion.

Sandcatcher Chamber - During Repairs

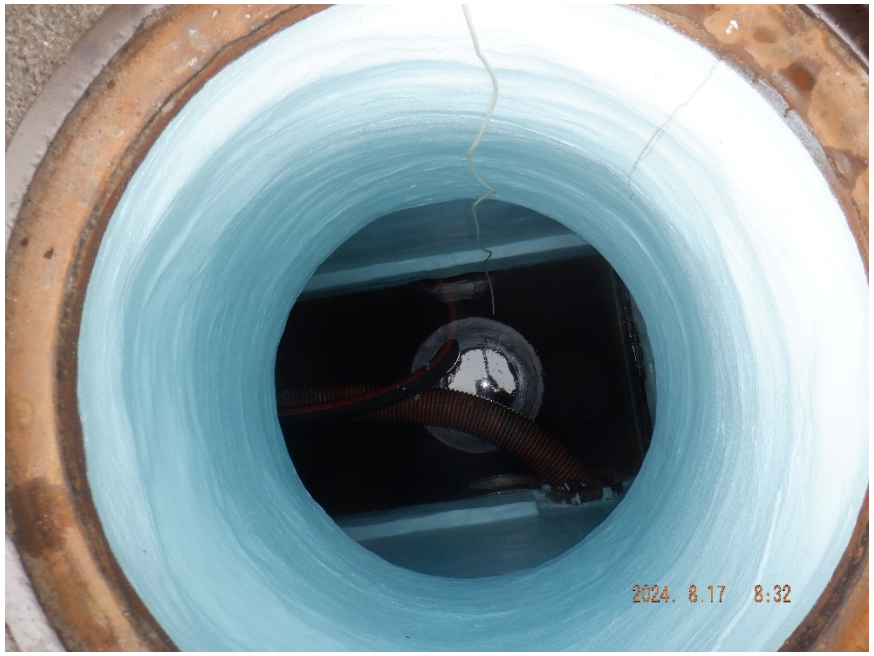


Apply Raven 755 ReSurfacer Cement.

*August 17, 2024*

# CSO 023 2nd Avenue Regulator

Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

*August 17, 2024*

# CSO 023 2nd Avenue Regulator

Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

*August 17, 2024*

# CSO 023 2nd Avenue Regulator

Sandcatcher Chamber - After Repairs



Apply Raven 405 Epoxy (125 mils).

Sandcatcher Chamber - After Repairs



Apply Raven 405 Epoxy (125 mils).

*August 17, 2024*

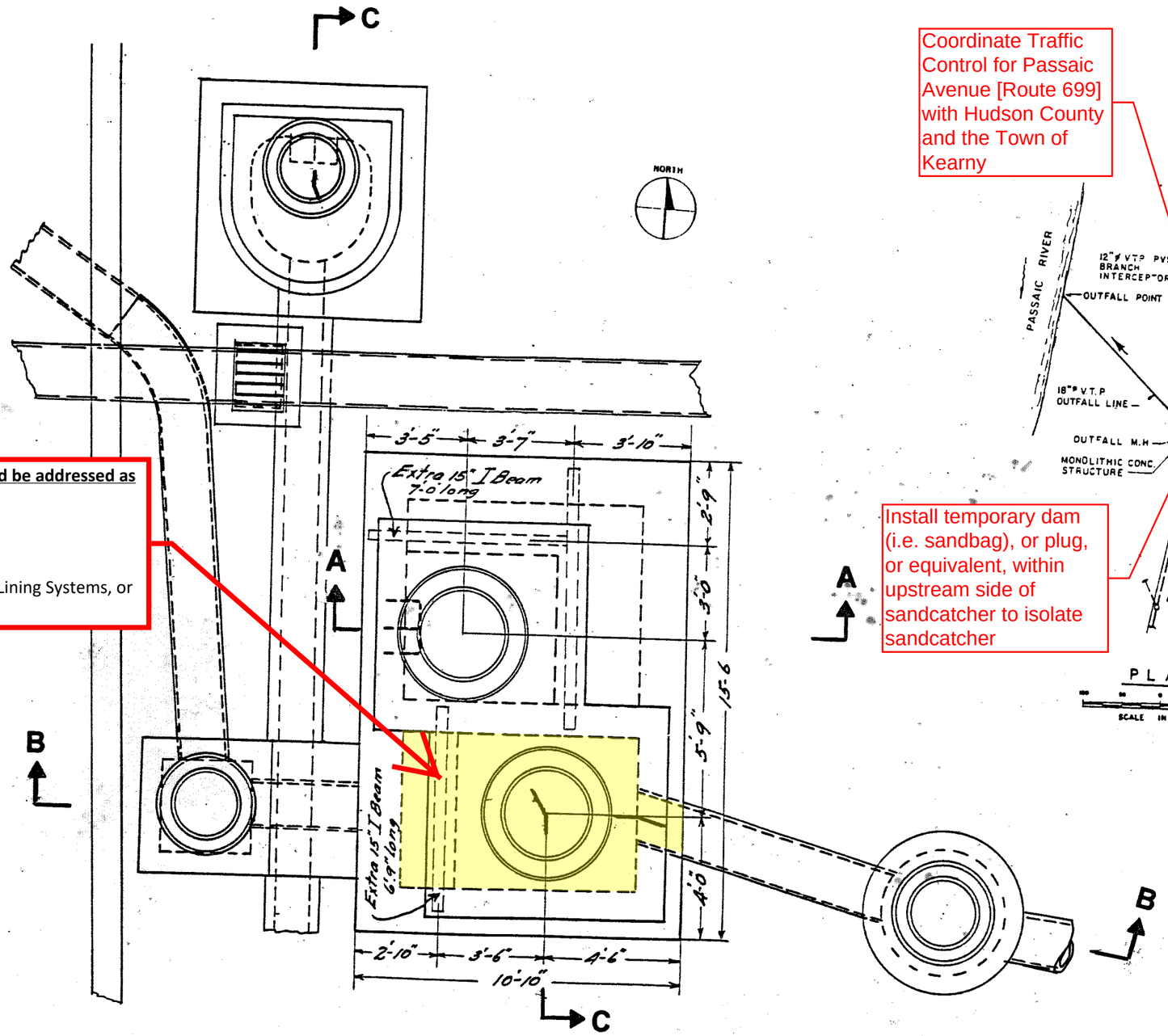
**LOCATION PLAN**




**CSO No. 028 (Stewart Avenue) within Town of Kearny**

 **FIGURE 028-1**

**1. <u>Exposed aggregate within Sandcatcher should be addressed as follows:</u>**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.



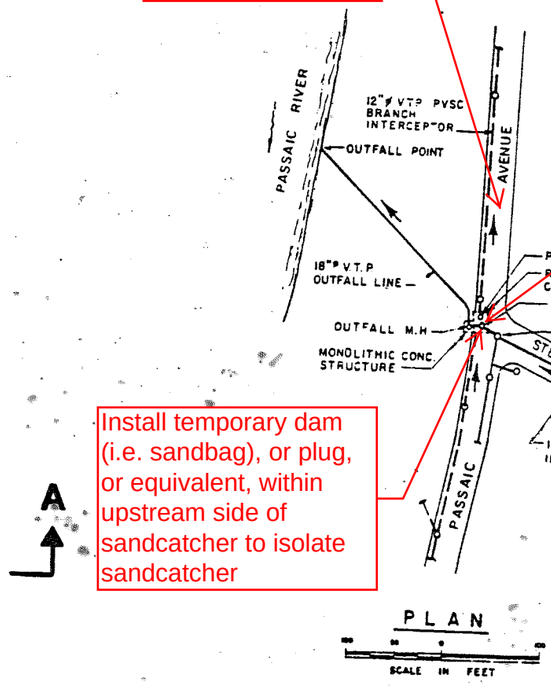

**TOP PLAN**

Coordinate Traffic Control for Passaic Avenue [Route 699] with Hudson County and the Town of Kearny

(1) Total area to be coated = 345 s.f. Sandcatcher
.
(2) Total area to be coated = 26 s.f Outlet Sewer Invert

Daily Flows
Dry = 0.06 MGD
Wet = 0.06 MGD

Install temporary dam (i.e. sandbag), or plug, or equivalent, within upstream side of sandcatcher to isolate sandcatcher



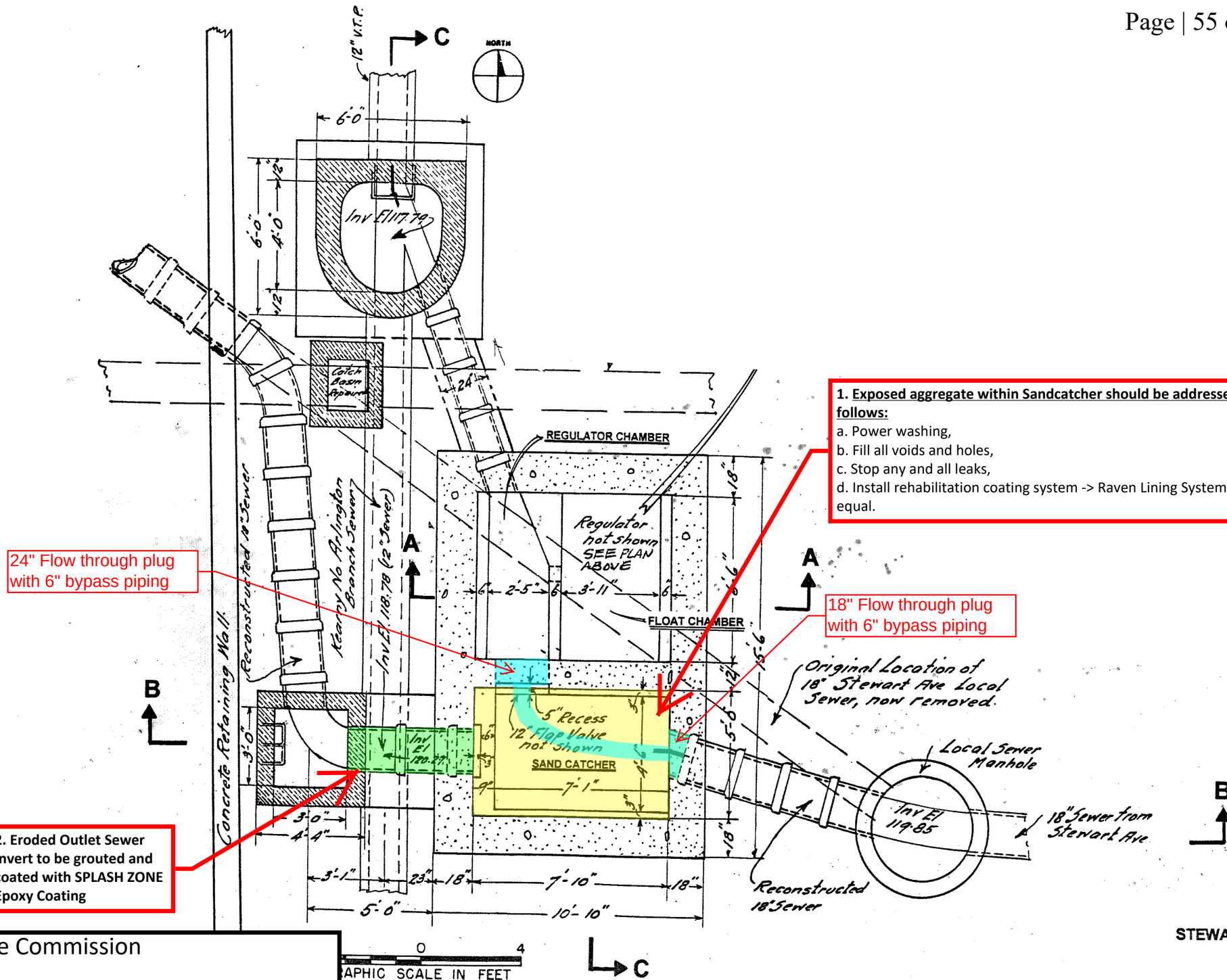

Passaic Valley Sewerage Commission
Contract No. B301
.
Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

**NUMBER 028**
**STEWART AVENUE REGULATOR**
**KEARNY**

**PASSAIC VALLEY SEWERAGE COMMISSIONERS**

**COMBINED SEWER SYSTEM FACILITIES INVENTORY AND ASSESSMENT ANALYSIS**

 FIGURE 028-2




24" Flow through plug with 6" bypass piping

18" Flow through plug with 6" bypass piping

**1. <u>Exposed aggregate within Sandcatcher should be addressed as follows:</u>**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

**2. Eroded Outlet Sewer Invert to be grouted and coated with SPLASH ZONE Epoxy Coating**

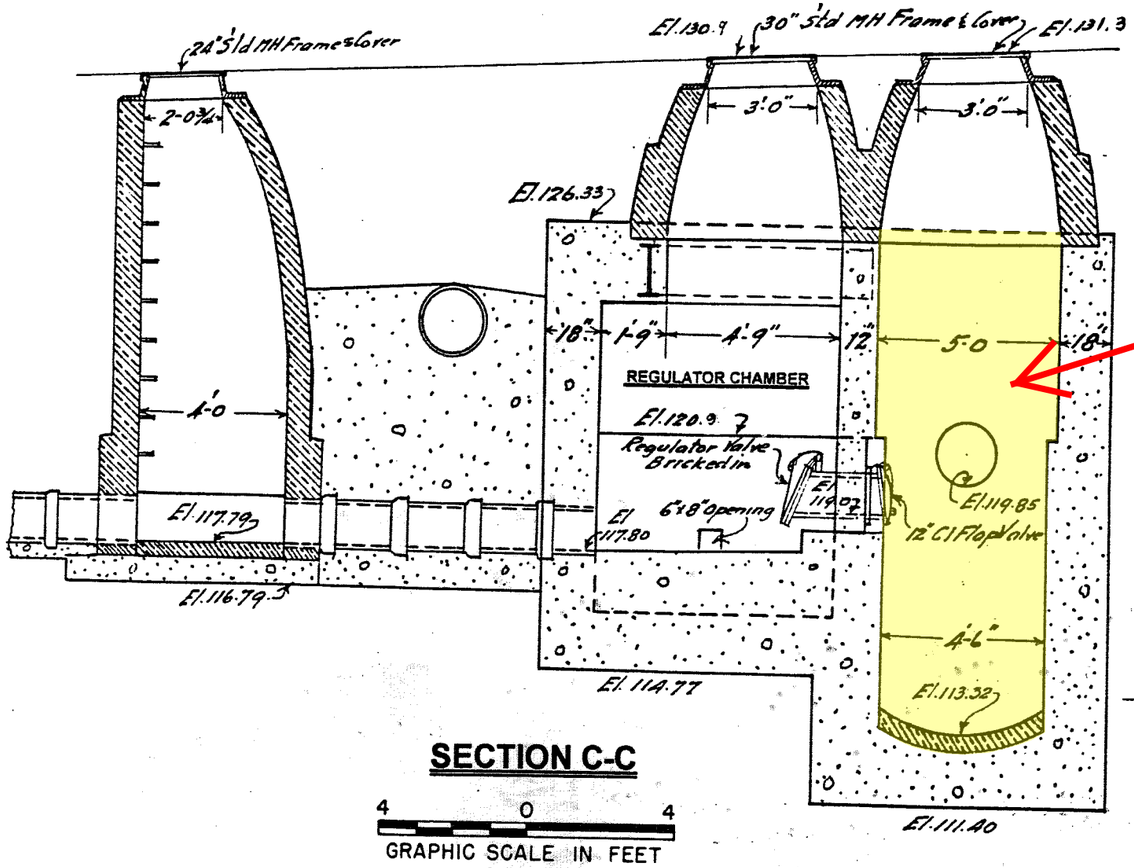
Passaic Valley Sewerage Commission
Contract No. B301
.
Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

**NUMBER 028**
**STEWART AVENUE REGULATOR**
**KEARNY**

**PASSAIC VALLEY SEWERAGE COMMISSIONERS**

**COMBINED SEWER SYSTEM FACILITIES INVENTORY AND ASSESSMENT ANALYSIS**

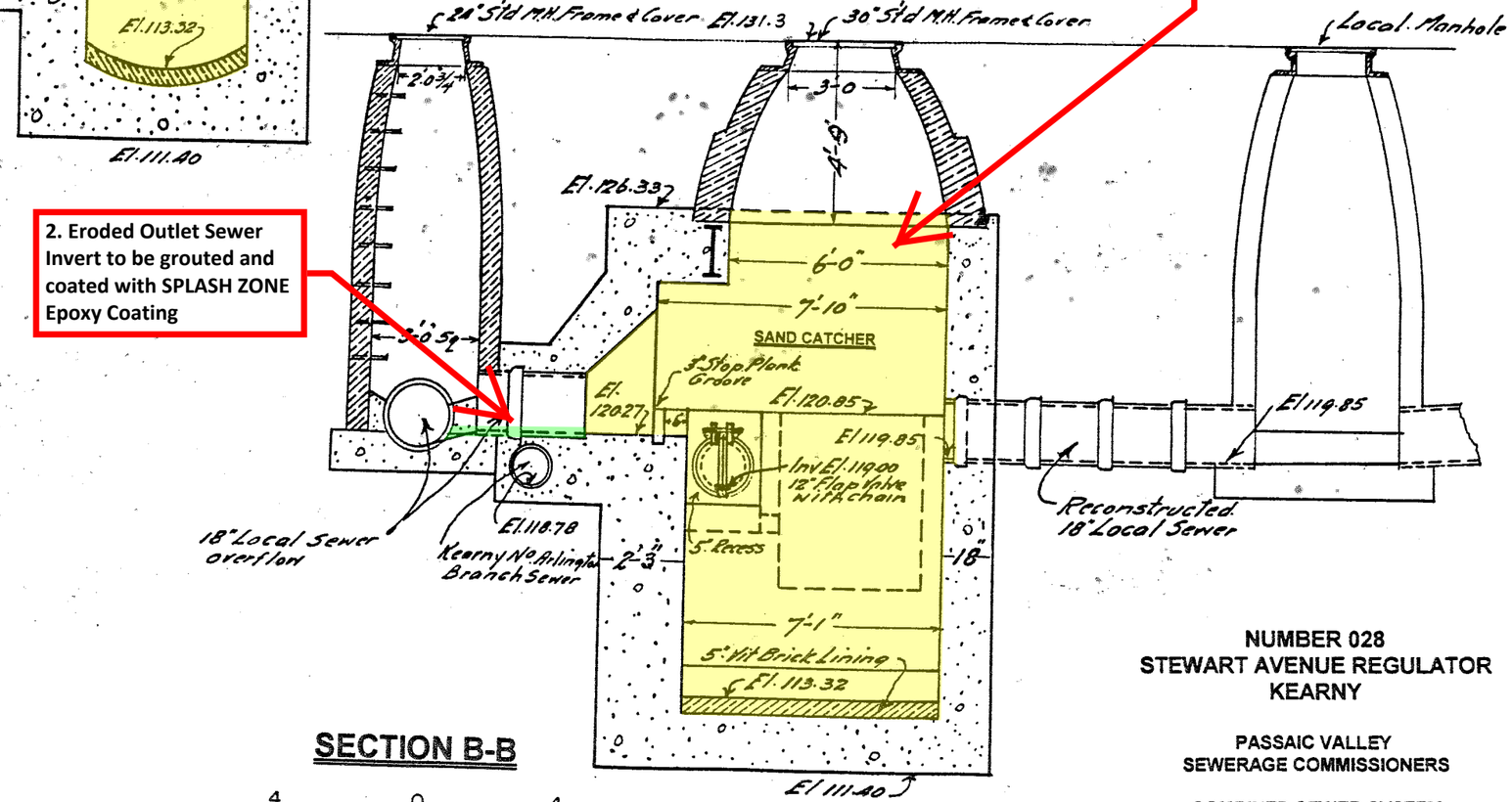
 **FIGURE 028-3**




## SECTION C-C

4 0 4
GRAPHIC SCALE IN FEET

**1. Exposed aggregate within Sandcatcher should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.




**2. Eroded Outlet Sewer Invert to be grouted and coated with SPLASH ZONE Epoxy Coating**

## SECTION B-B

4 0 4
GRAPHIC SCALE IN FEET

Passaic Valley Sewerage Commission
Contract No. B301

.

Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

**NUMBER 028**
**STEWART AVENUE REGULATOR**
**KEARNY**

**PASSAIC VALLEY SEWERAGE COMMISSIONERS**

**COMBINED SEWER SYSTEM FACILITIES INVENTORY AND ASSESSMENT ANALYSIS**

# CSO 028 Stewart Avenue Regulator

Sandcatcher Chamber - Before Repairs




Concrete Corrosion.

Sandcatcher Chamber - Before Repairs



Concrete Corrosion.

*May 25, 2023*

# CSO 028 Stewart Avenue Regulator

Sandcatcher Chamber - Before Repairs




Mortar Loss and Concrete Corrosion.

Sandcatcher Chamber - Before Repairs




Concrete Corrosion.

*May 25, 2023*

# CSO 028 Stewart Avenue Regulator

Sandcatcher Chamber - During Repairs




Apply Raven 755 – ReSurfacer.

Sandcatcher Chamber - During Repairs




Apply Raven 755 – ReSurfacer.

*May 25, 2023*

# CSO 028 Stewart Avenue Regulator

Sandcatcher Chamber - During Repairs




Apply Raven 755 – ReSurfacer.

Sandcatcher Chamber - During Repairs




Apply Raven 755 – ReSurfacer.

*May 25, 2023*

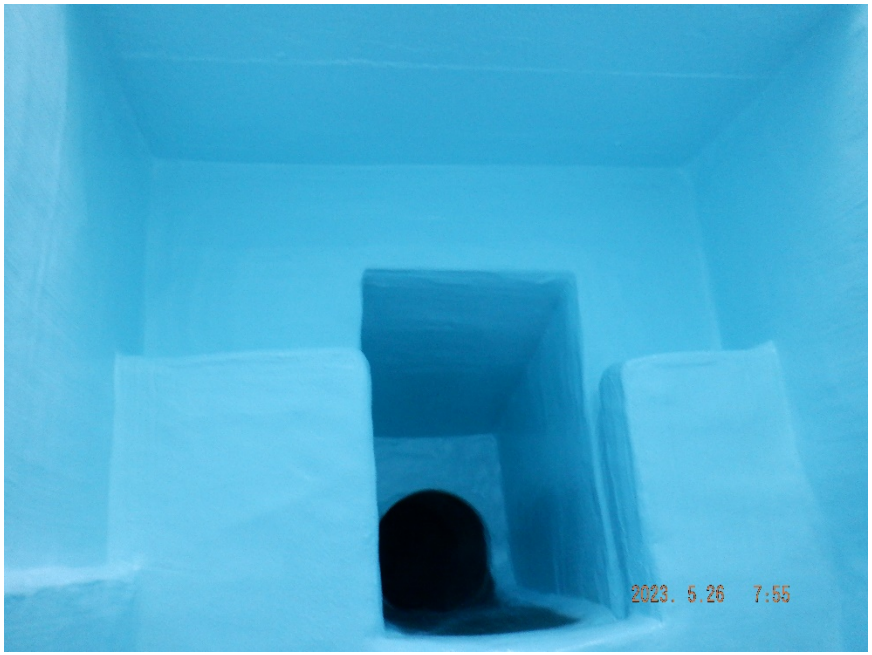
# CSO 028 Stewart Avenue Regulator

Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

Sandcatcher Chamber - After Repairs

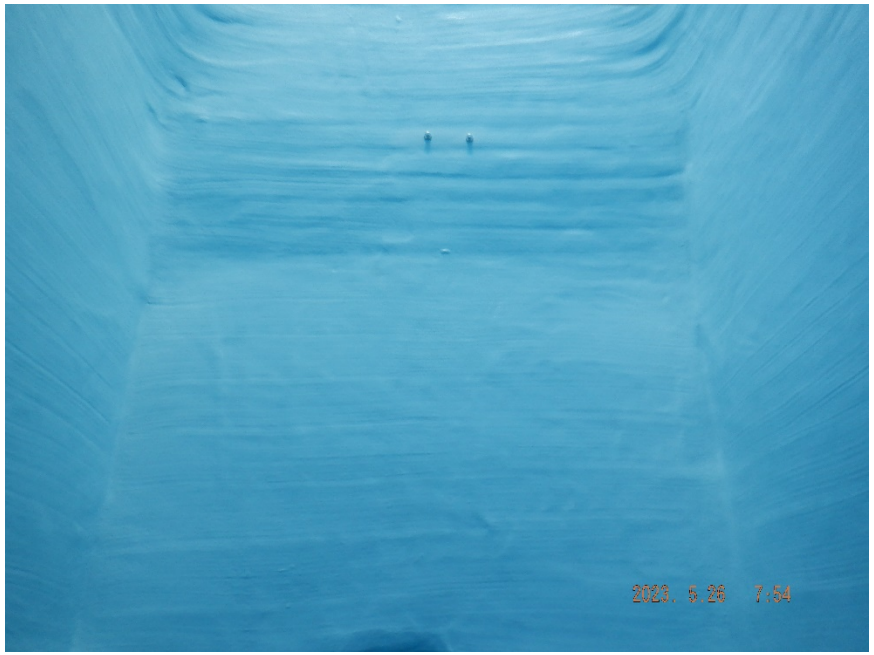



Apply Raven 405 Epoxy (125 mils).

*May 25, 2023*

# CSO 028 Stewart Avenue Regulator

Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

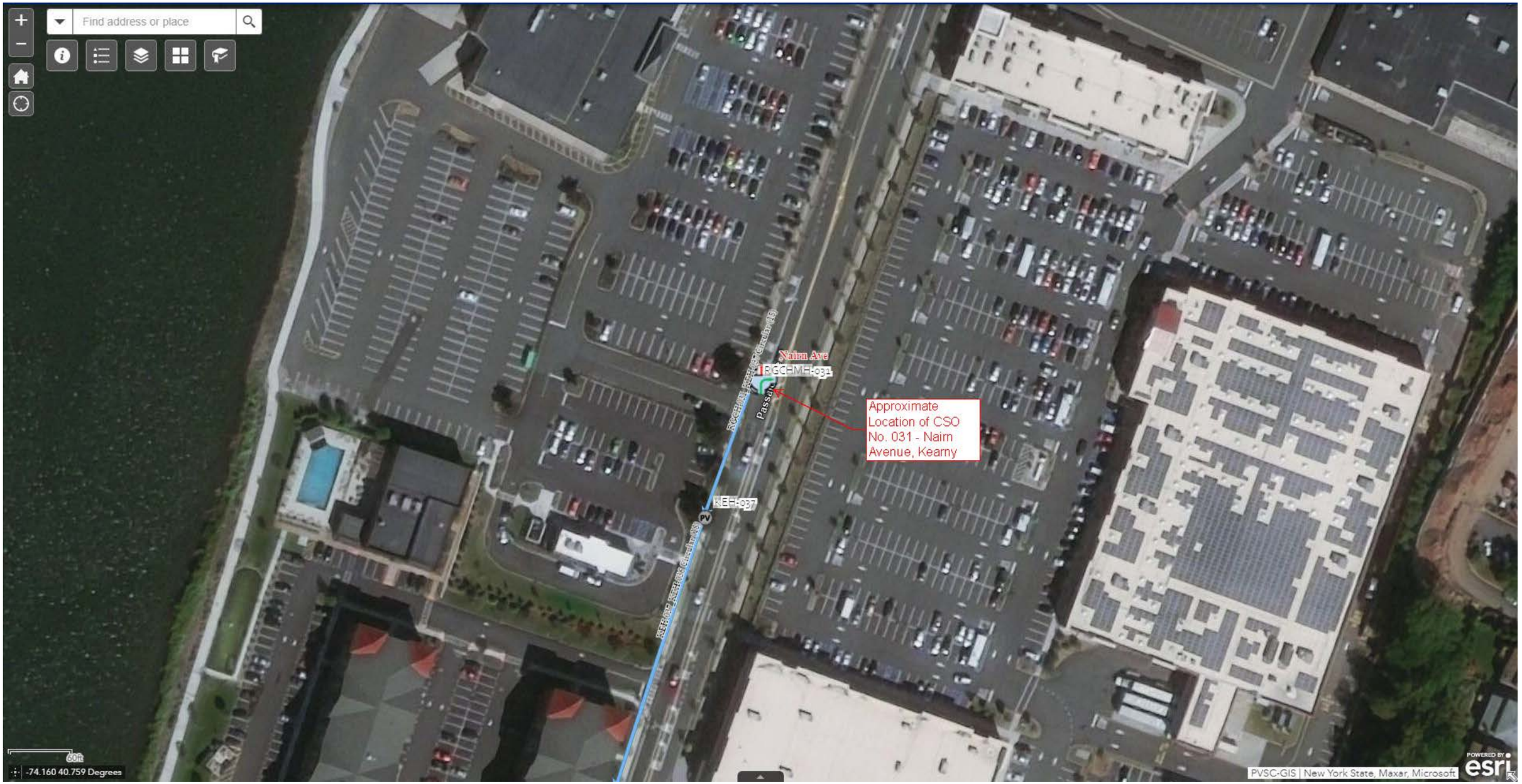
Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

*May 25, 2023*

**LOCATION PLAN**



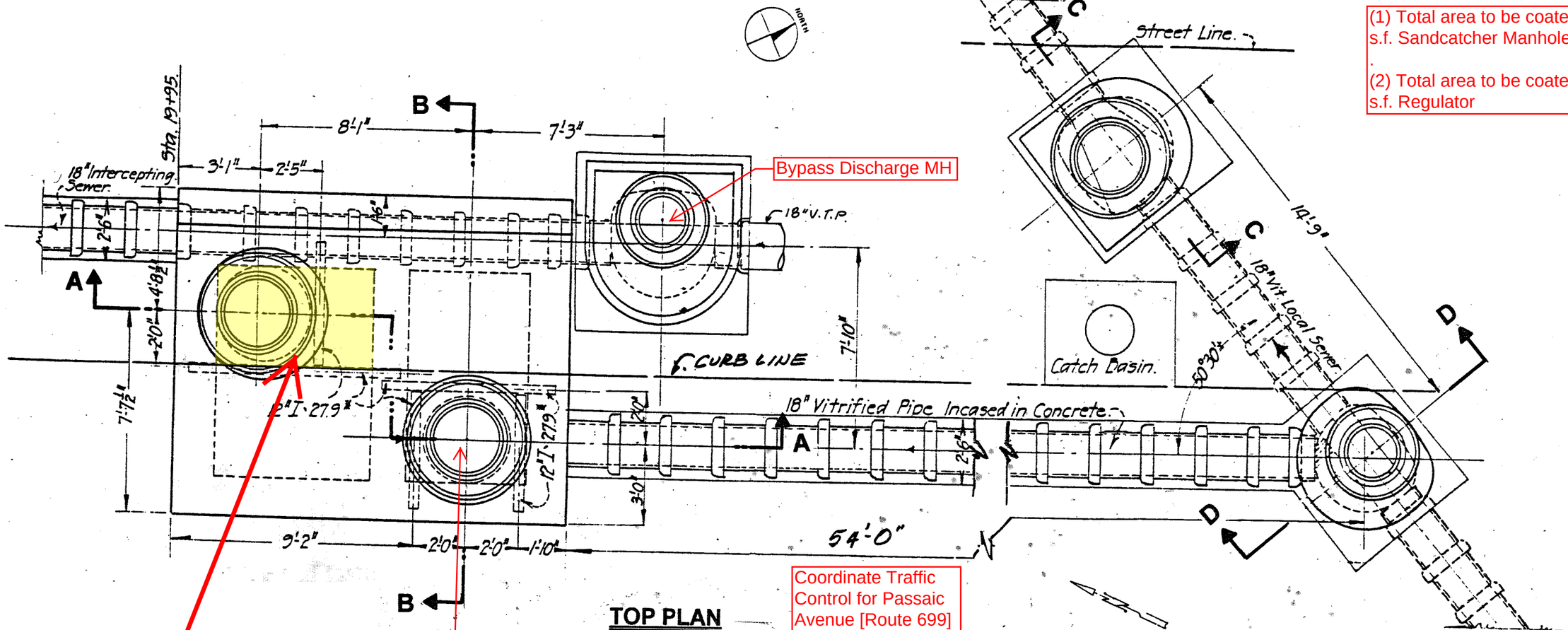

**CSO No. 031 (Nairn Avenue) within Town of Kearny**

 **FIGURE 031-1**

(1) Total area to be coated = 17 s.f. Sandcatcher Manhole

.

(2) Total area to be coated = 231 s.f. Regulator




**1. Exposed aggregate within Regulator should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

Install temporary dam (i.e. sandbag), or plug, or equivalent, within downstream side of bypass suction MH to isolate regulator

Daily Flows
Dry = 0.54 MGD
Wet = 0.69 MGD

Passaic Valley Sewerage Commission
Contract No. B301

.

Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

**NUMBER 031**
**NAIRN AVENUE REGULATOR**
**KEARNY**

**PASSAIC VALLEY SEWERAGE COMMISSIONERS**

**COMBINED SEWER SYSTEM FACILITIES INVENTORY AND ASSESSMENT ANALYSIS**

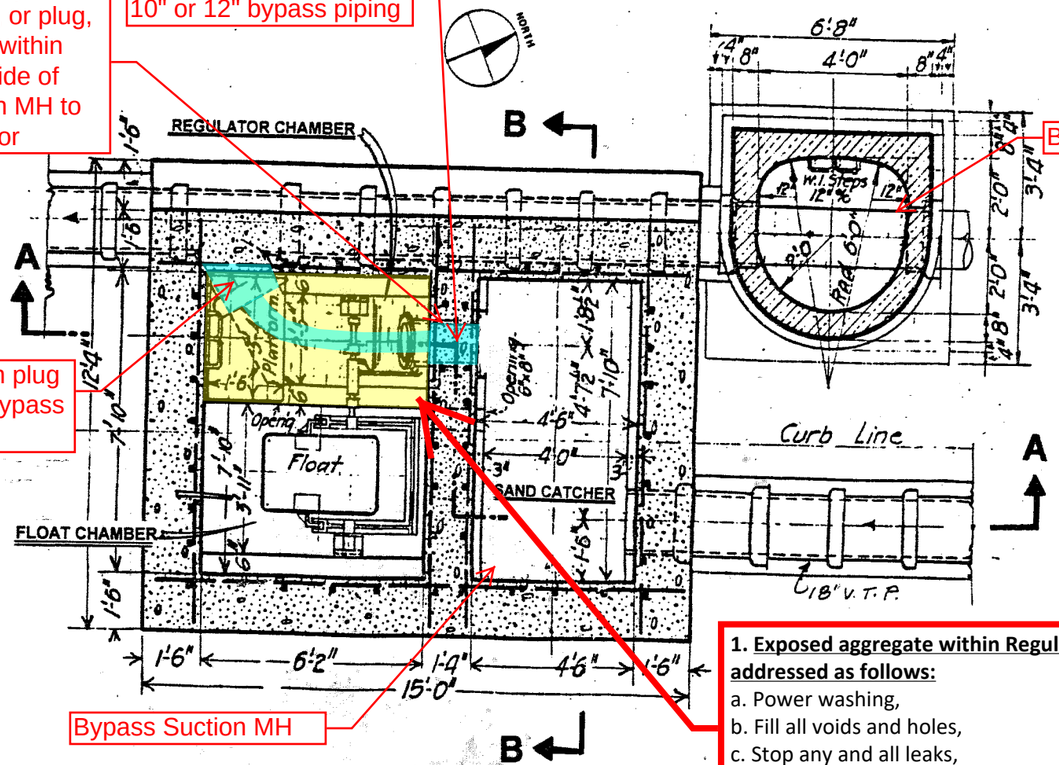
Install temporary dam (i.e. sandbag), or plug, or equivalent, within downstream side of bypass suction MH to isolate regulator

Flow through plug with 10" or 12" bypass piping

18" Flow through plug with 10" or 12" bypass piping

Bypass Suction MH

Bypass Discharge MH

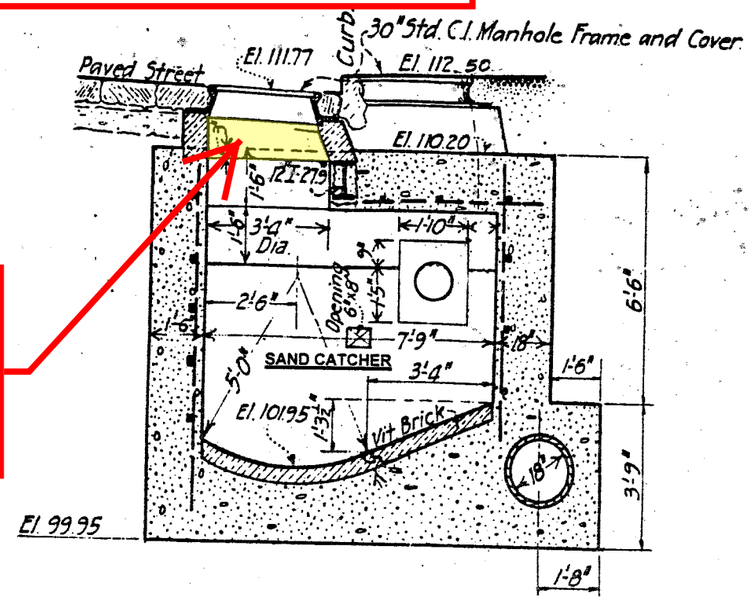



## SECTIONAL PLAN

4 0 4
GRAPHIC SCALE IN FEET

**1. Exposed aggregate within Regulator should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

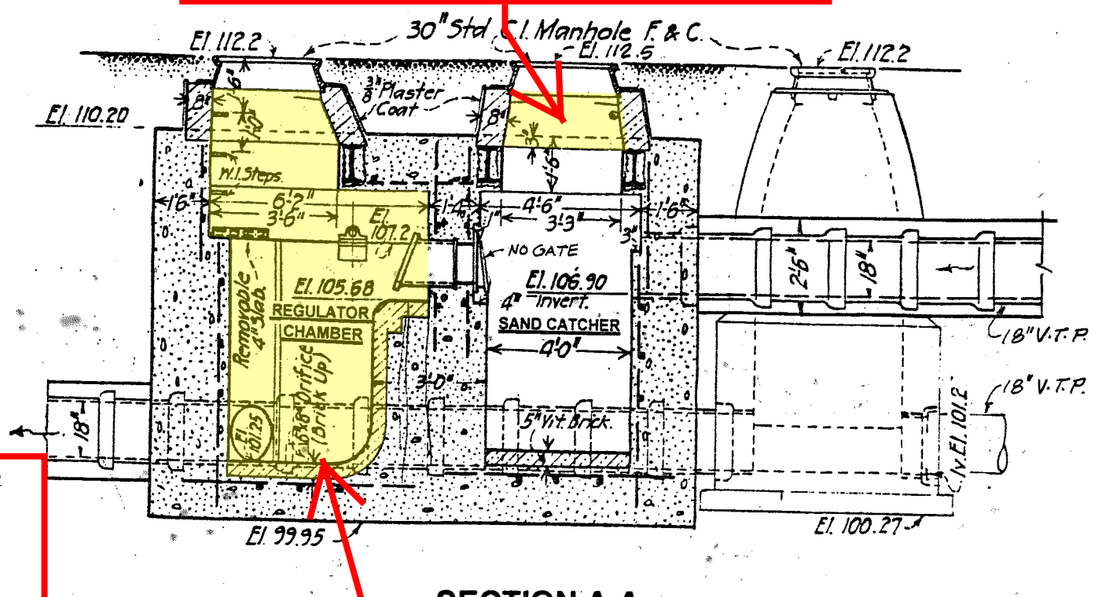
**1. Exposed aggregate within Sandcatcher should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.




## SECTION B-B

4 0 4
GRAPHIC SCALE IN FEET

**1. Exposed aggregate within Sandcatcher should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.




## SECTION A-A

4 0 4
GRAPHIC SCALE IN FEET

**1. Exposed aggregate within Regulator should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

Passaic Valley Sewerage Commission
Contract No. B301
.
Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

**NUMBER 031**
**NAIRN AVENUE REGULATOR**
**KEARNY**

PASSAIC VALLEY
SEWERAGE COMMISSIONERS

COMBINED SEWER SYSTEM
FACILITIES INVENTORY AND
ASSESSMENT ANALYSIS

# CSO 031 Nairn Avenue Regulator

Sandcatcher Chamber - Before Repairs




Mortar Loss and Concrete Corrosion.

Sandcatcher Chamber - Before Repairs




Mortar Loss and Concrete Corrosion.

# CSO 031 Nairn Avenue Regulator

Sandcatcher Chamber - During Repairs




Apply Raven 755 – ReSurfacer.

Sandcatcher Chamber - During Repairs




Apply Raven 755 – ReSurfacer.

# CSO 031 Nairn Avenue Regulator

Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

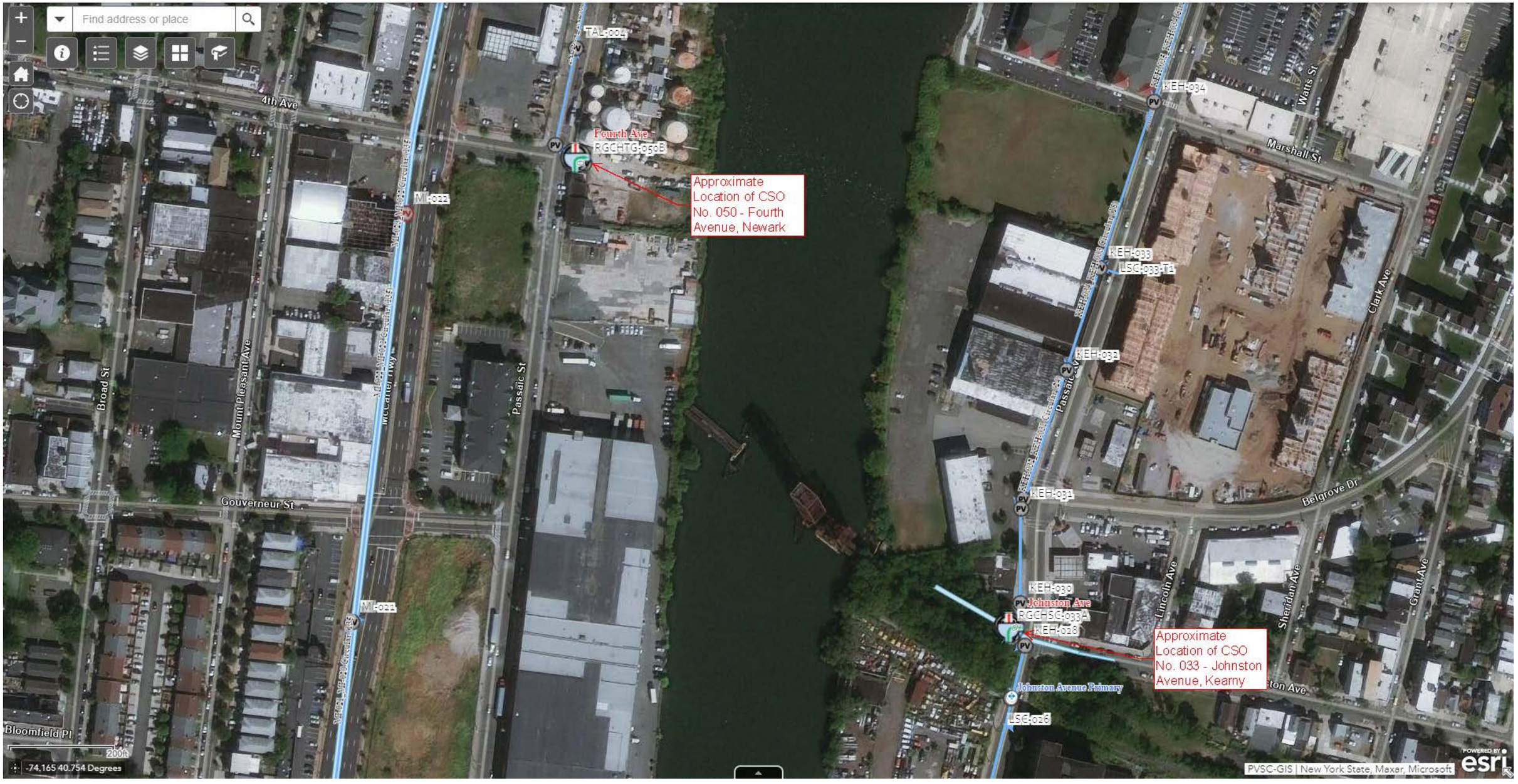
Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

*June 7, 2023*

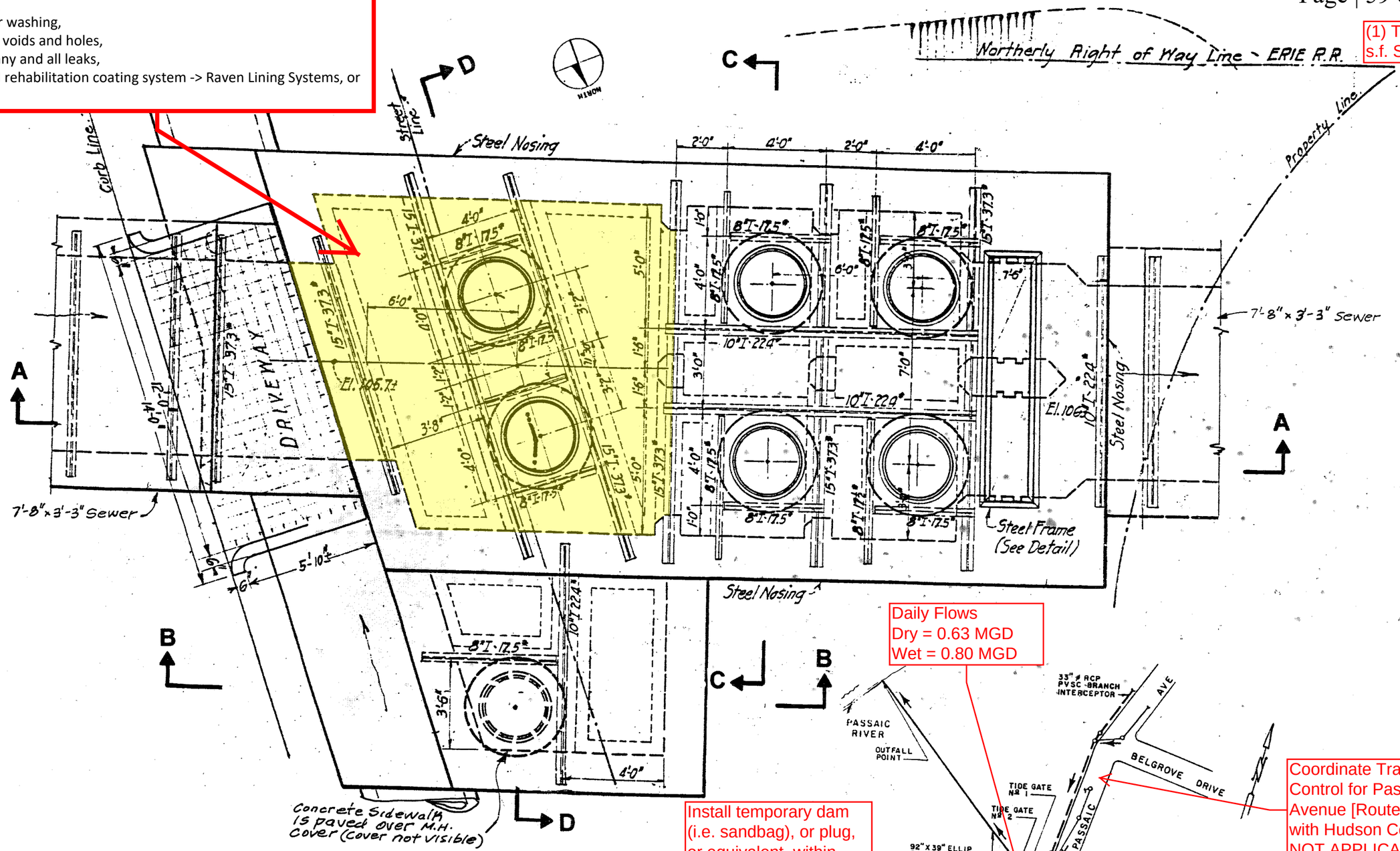
## LOCATION PLAN




**CSO No. 033 (Johnston Avenue) within Town of Kearny & CSO No. 050 (Fourth Avenue) within City of Newark**

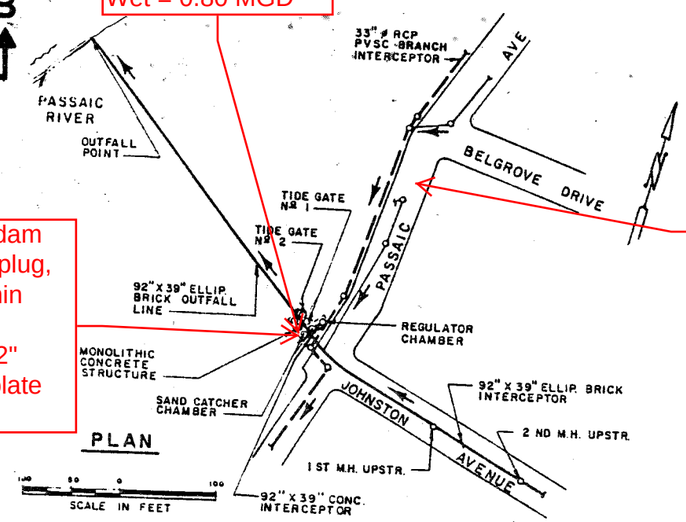
**1. Exposed aggregate within Sandcatcher should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

(1) Total area to be coated = 668 s.f. Sandcatcher




Daily Flows
Dry = 0.63 MGD
Wet = 0.80 MGD

Install temporary dam (i.e. sandbag), or plug, or equivalent, within upstream side of sandcatcher for 12" bypass pipe to isolate sandcatcher




Coordinate Traffic Control for Passaic Avenue [Route 699] with Hudson County = NOT APPLICABLE

Passaic Valley Sewerage Commission
Contract No. B301

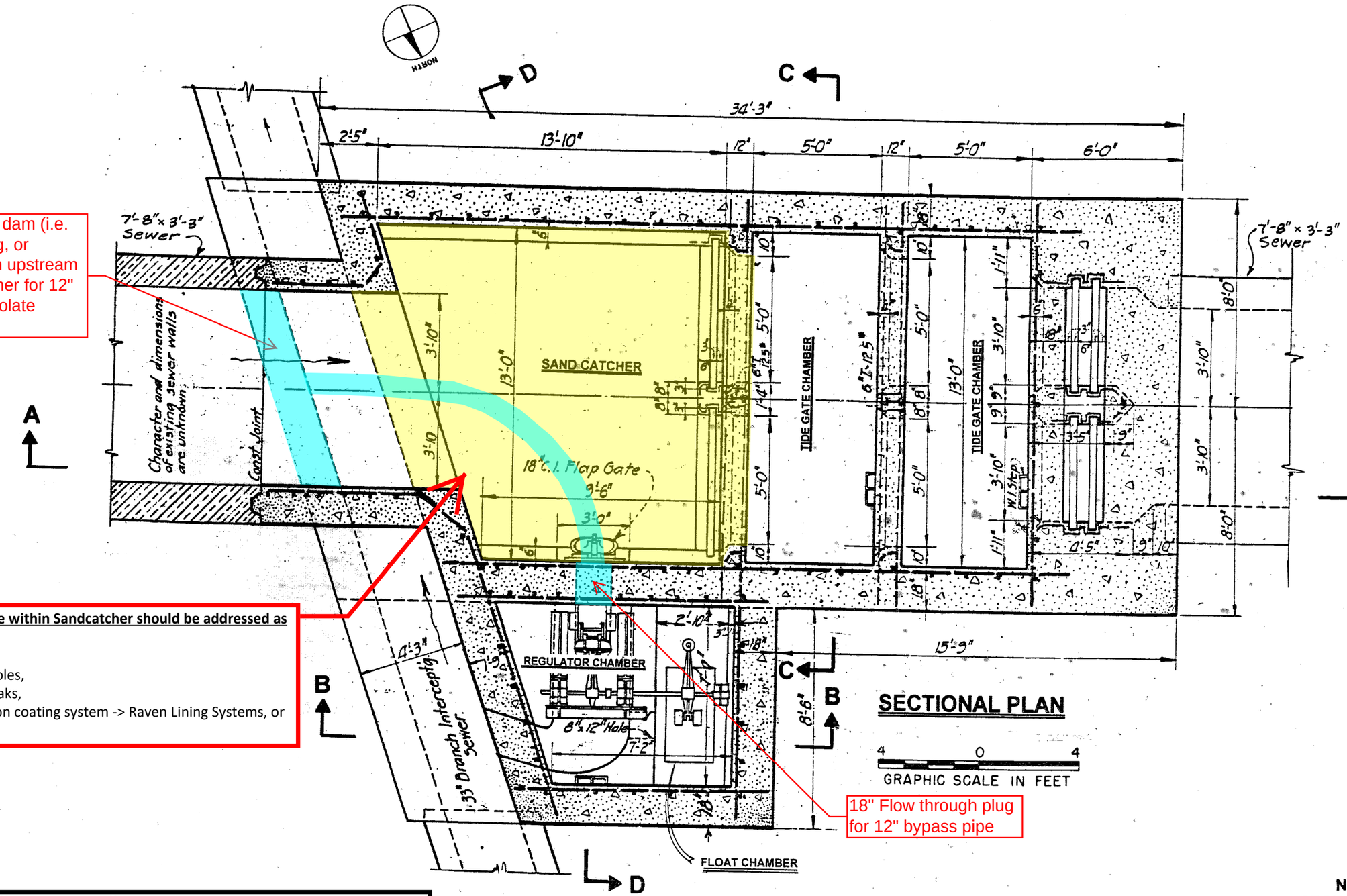
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Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

**NUMBER 033**
**JOHNSTON AVENUE REGULATOR**
**KEARNY**

**PASSAIC VALLEY SEWERAGE COMMISSIONERS**

**COMBINED SEWER SYSTEM FACILITIES INVENTORY AND ASSESSMENT ANALYSIS**




Install temporary dam (i.e. sandbag), or plug, or equivalent, within upstream side of sandcatcher for 12" bypass pipe to isolate sandcatcher

**1. Exposed aggregate within Sandcatcher should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

18" Flow through plug for 12" bypass pipe

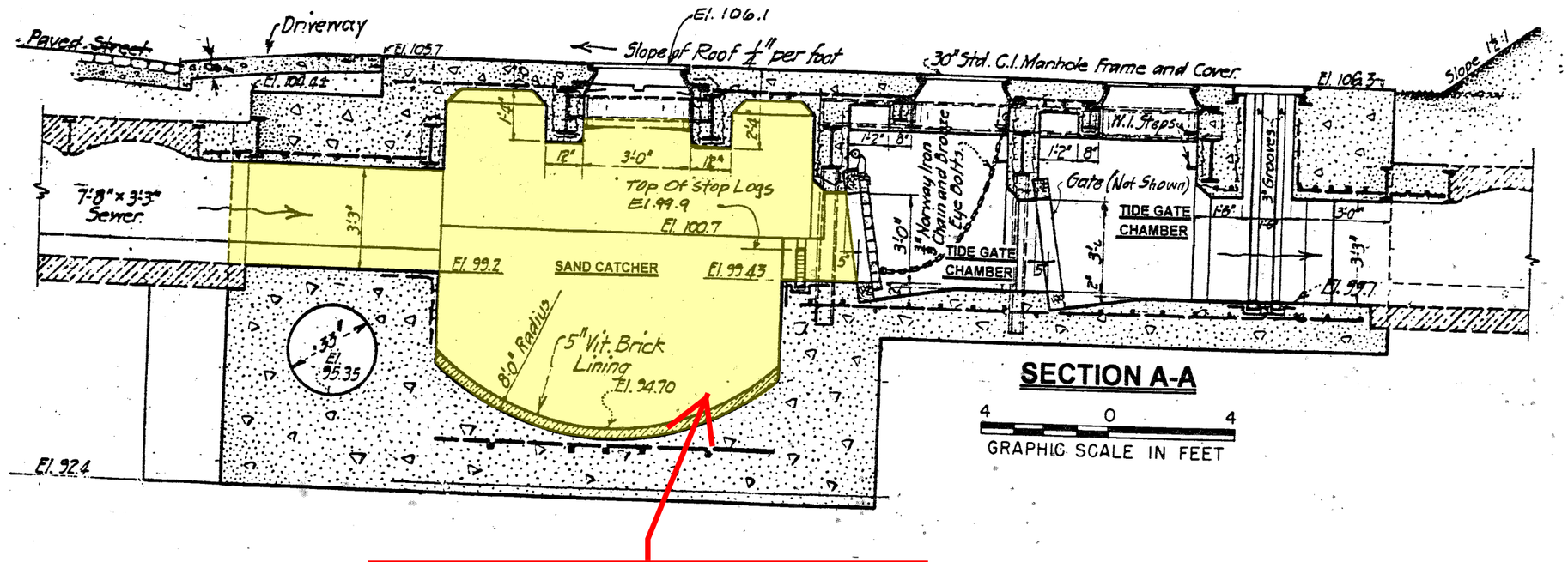
Passaic Valley Sewerage Commission
Contract No. B301
.
Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

NUMBER 033
JOHNSTON AVENUE REGULATOR
KEARNY

PASSAIC VALLEY
SEWERAGE COMMISSIONERS

COMBINED SEWER SYSTEM
FACILITIES INVENTORY AND
ASSESSMENT ANALYSIS

 **FIGURE 033-3**




**1. <u>Exposed aggregate within Sandcatcher should be addressed as follows:</u>**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

Passaic Valley Sewerage Commission
Contract No. B301
.
Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

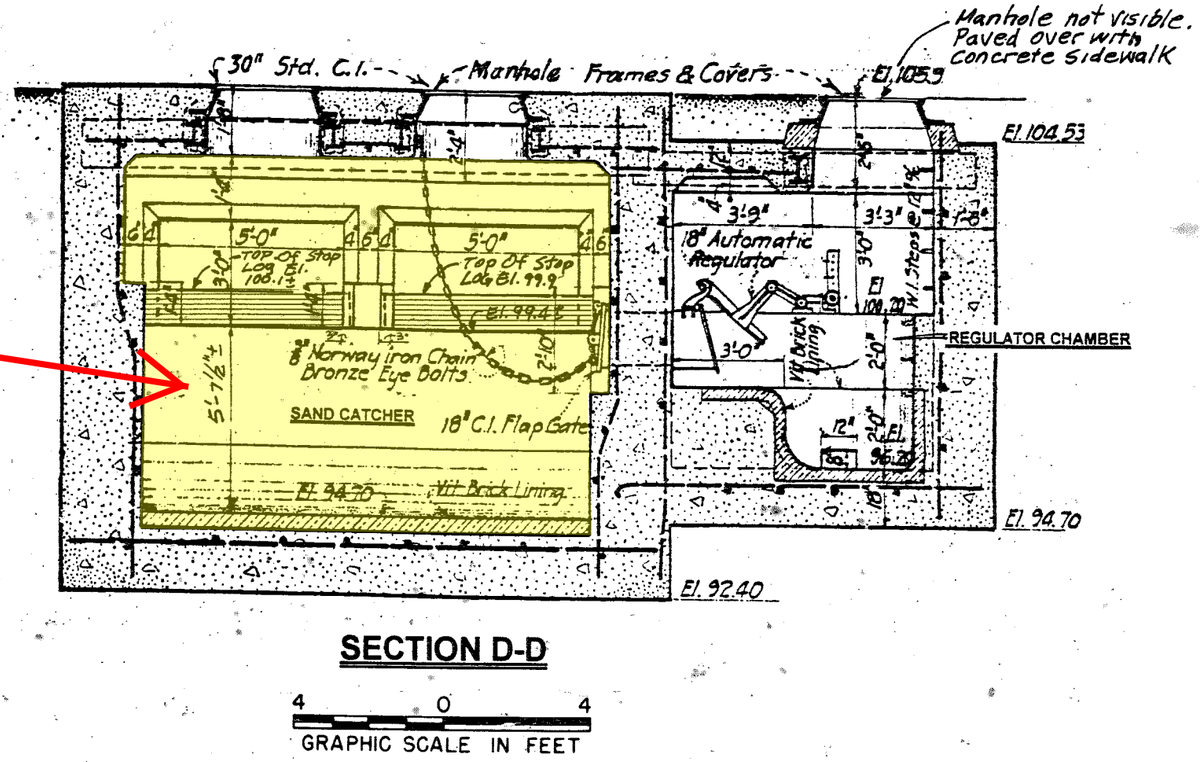
**NUMBER 033**
**JOHNSTON AVENUE REGULATOR**
**KEARNY**

**PASSAIC VALLEY SEWERAGE COMMISSIONERS**

**COMBINED SEWER SYSTEM FACILITIES INVENTORY AND ASSESSMENT ANALYSIS**

 **FIGURE 033-4**

**1. Exposed aggregate within Sandcatcher should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.




**SECTION D-D**

Passaic Valley Sewerage Commission
Contract No. B301

.

Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

**NUMBER 033**
**JOHNSTON AVENUE REGULATOR**
**KEARNY**

**PASSAIC VALLEY SEWERAGE COMMISSIONERS**

**COMBINED SEWER SYSTEM FACILITIES INVENTORY AND ASSESSMENT ANALYSIS**

# CSO 033 Johnston Avenue Regulator

Sandcatcher Chamber - Before Repairs



Mortar Loss and Concrete Corrosion.

Sandcatcher Chamber - Before Repairs



Mortar Loss and Concrete Corrosion.

# CSO 033 Johnston Avenue Regulator

Sandcatcher Chamber - Before Repairs




Mortar Loss and Concrete Corrosion.

Sandcatcher Chamber - Before Repairs



Mortar Loss and Concrete Corrosion.

# CSO 033 Johnston Avenue Regulator

Sandcatcher Chamber - Before Repairs




Mortar Loss and Concrete Corrosion.

Sandcatcher Chamber - Before Repairs




Mortar Loss and Concrete Corrosion.

# CSO 033 Johnston Avenue Regulator

Sandcatcher Chamber - During Repairs



Apply Raven 755 ReSurfacer Cement.

Sandcatcher Chamber - During Repairs



Apply Raven 755 ReSurfacer Cement.

*July 12, 2023*

# CSO 033 Johnston Avenue Regulator

Sandcatcher Chamber - During Repairs




Apply Raven 755 ReSurfacer Cement.

Sandcatcher Chamber - During Repairs




Apply Raven 755 ReSurfacer Cement.

*July 12, 2023*

# CSO 033 Johnston Avenue Regulator

Sandcatcher Chamber - During Repairs




Apply Raven 755 ReSurfacer Cement.

Sandcatcher Chamber - During Repairs




Apply Raven 755 ReSurfacer Cement.

# CSO 033 Johnston Avenue Regulator

Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

Sandcatcher Chamber - After Repairs

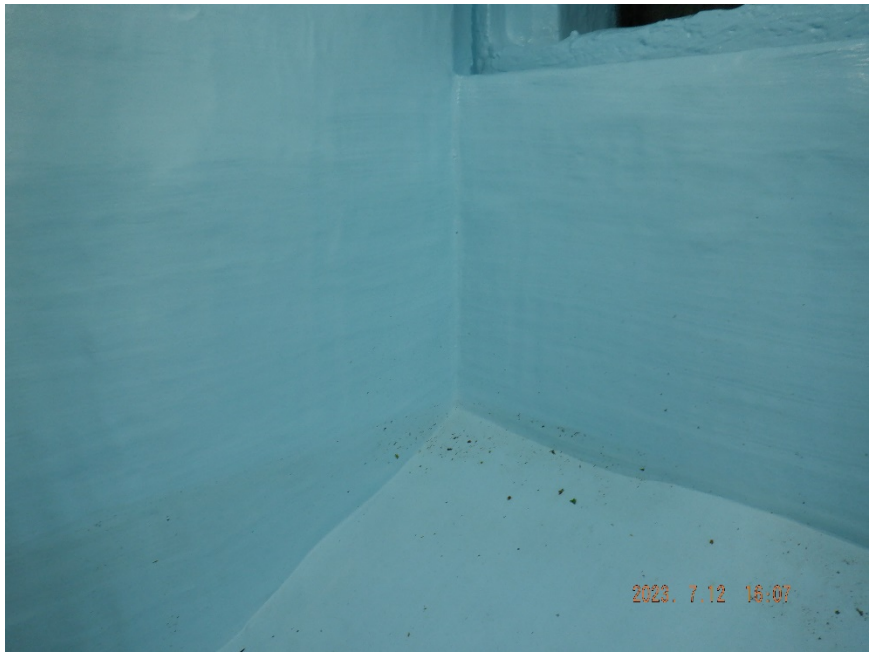



Apply Raven 405 Epoxy (125 mils).

*July 12, 2023*

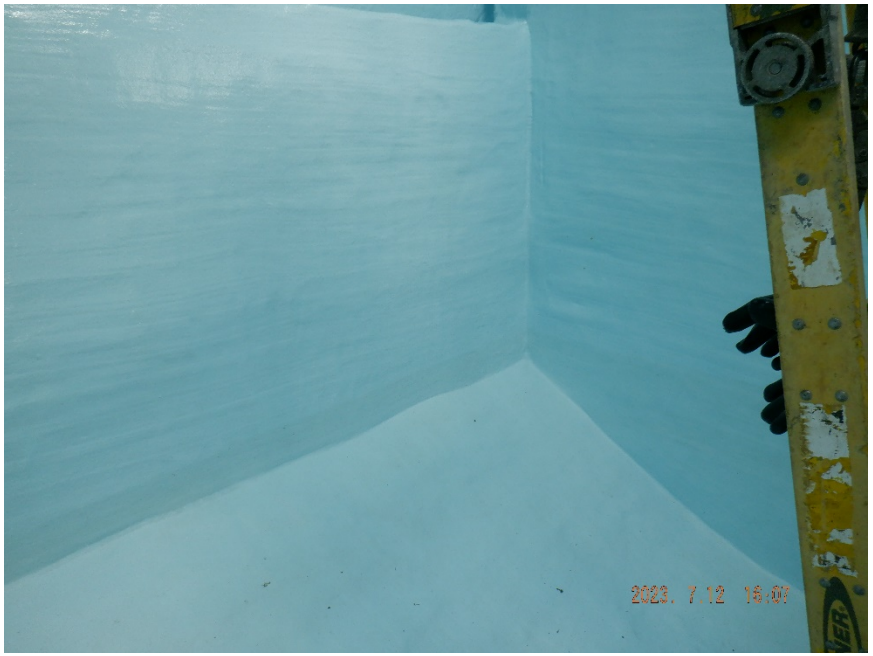
# CSO 033 Johnston Avenue Regulator

Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

*July 12, 2023*

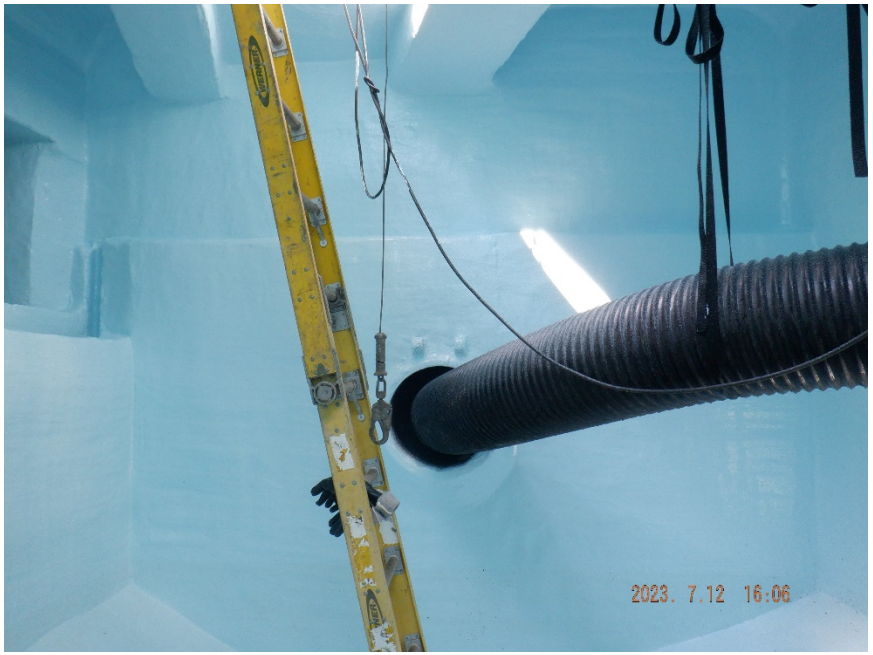
# CSO 033 Johnston Avenue Regulator

Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

*July 12, 2023*

# CSO 033 Johnston Avenue Regulator

Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

*July 12, 2023*

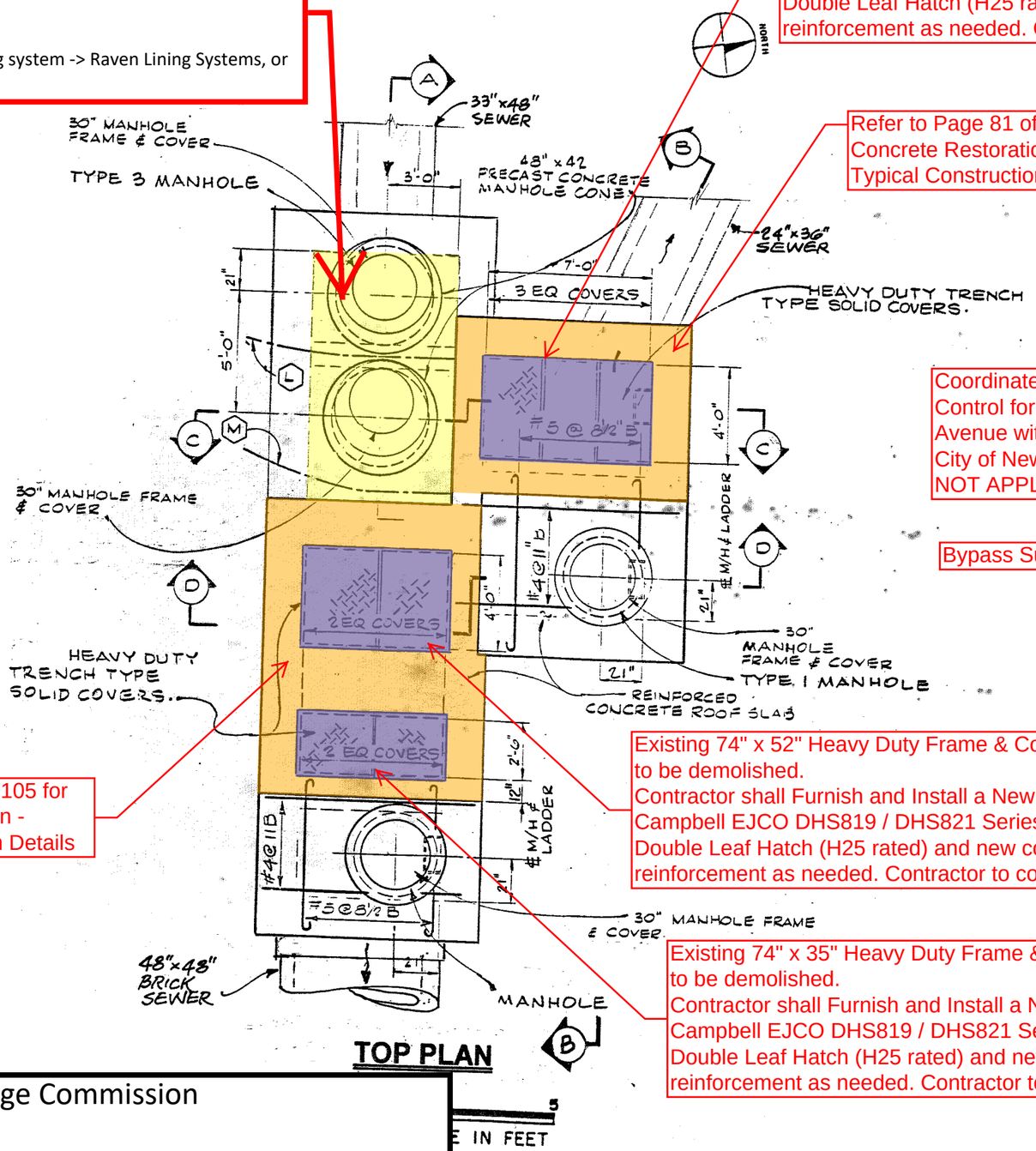
**FIGURE 050-1**

(1) Total area to be coated = 440 s.f. Sandcatcher

**1. Exposed aggregate within Sandcatcher should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

Existing 87" x 52" Heavy Duty Frame & Cover and concrete to be demolished.
Contractor shall Furnish and Install a New Heavy Duty Campbell EJCO DHS819 / DHS821 Series Ductile Iron Double Leaf Hatch (H25 rated) and new concrete & reinforcement as needed. Contractor to confirm dimensions.

Refer to Page 81 of 105 for Concrete Restoration - Typical Construction Details




Refer to Page 81 of 105 for Concrete Restoration - Typical Construction Details

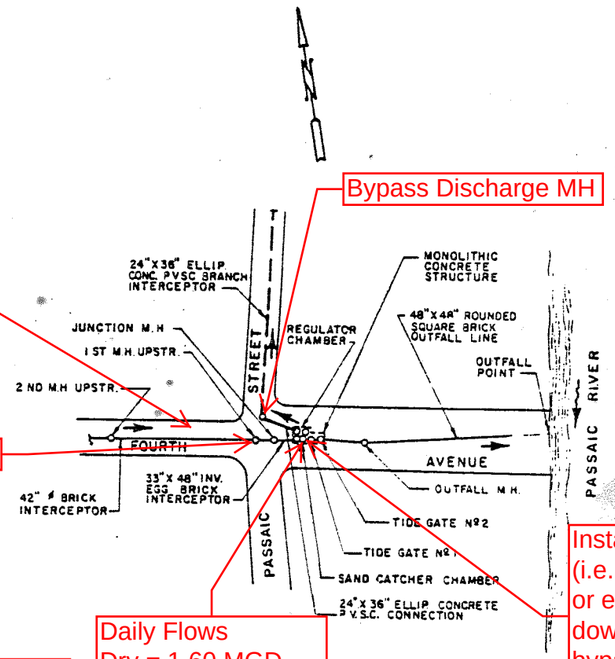
Existing 74" x 52" Heavy Duty Frame & Cover and concrete to be demolished.
Contractor shall Furnish and Install a New Heavy Duty Campbell EJCO DHS819 / DHS821 Series Ductile Iron Double Leaf Hatch (H25 rated) and new concrete & reinforcement as needed. Contractor to confirm dimensions.

Existing 74" x 35" Heavy Duty Frame & Cover and concrete to be demolished.
Contractor shall Furnish and Install a New Heavy Duty Campbell EJCO DHS819 / DHS821 Series Ductile Iron Double Leaf Hatch (H25 rated) and new concrete & reinforcement as needed. Contractor to confirm dimensions.

Coordinate Traffic Control for Fourth Avenue with the City of Newark = NOT APPLICABLE

Bypass Suction MH

Bypass Discharge MH




Daily Flows
Dry = 1.60 MGD
Wet = 1.95 MGD

Install temporary dam (i.e. sandbag), or plug, or equivalent, within downstream side of bypass suction MH to isolate sandcatcher

PLAN
SCALE IN FEET

Passaic Valley Sewerage Commission
Contract No. B301
.
Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

ALL STEEL REINFORCING SHALL BE GALVANIZED.

**NUMBER 050**
**FOURTH AVENUE REGULATOR**
**NEWARK**

**PASSAIC VALLEY SEWERAGE COMMISSIONERS**

**COMBINED SEWER SYSTEM FACILITIES INVENTORY AND ASSESSMENT ANALYSIS**

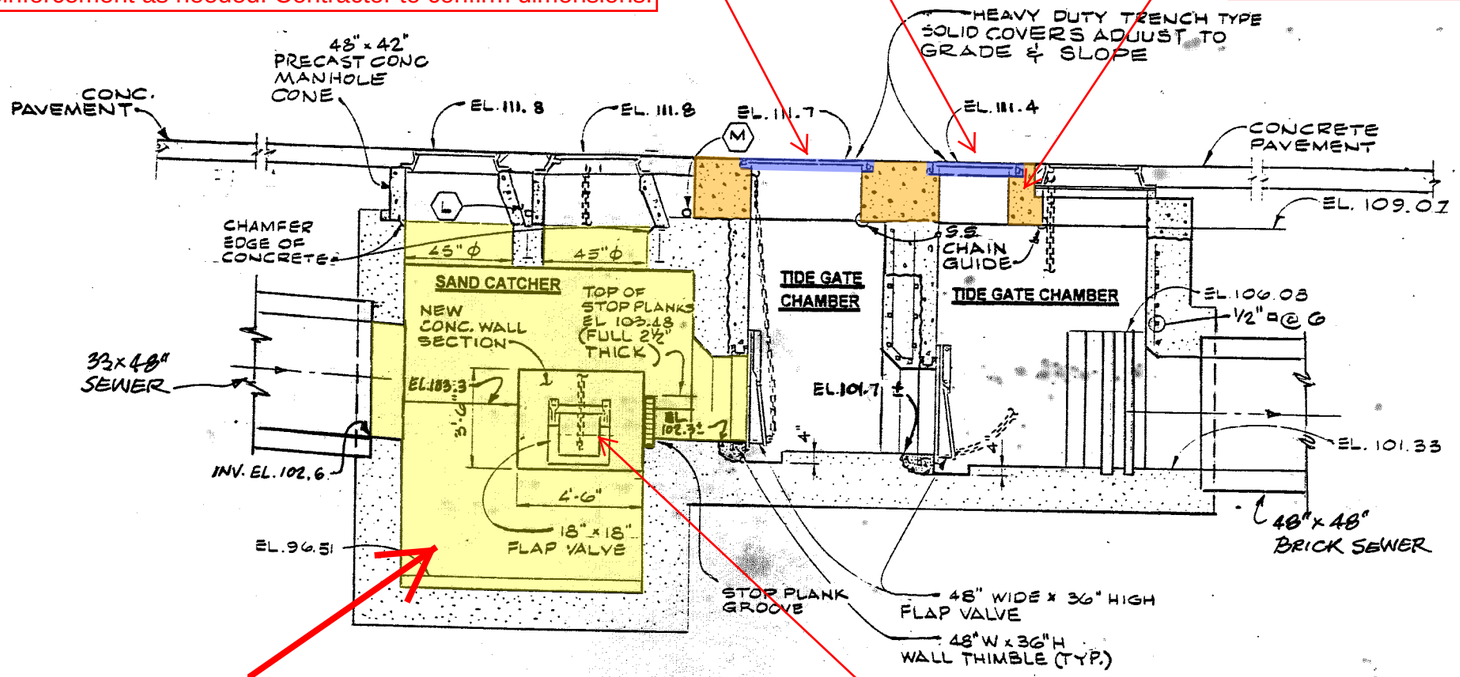
FIGURE 050-2

Existing 74" x 35" Heavy Duty Frame & Cover and concrete to be demolished.
Contractor shall Furnish and Install a New Heavy Duty Campbell EJCO DHS819 / DHS821 Series Ductile Iron Double Leaf Hatch (H25 rated) and new concrete & reinforcement as needed. Contractor to confirm dimensions.

Existing 74" x 52" Heavy Duty Frame & Cover and concrete to be demolished.
Contractor shall Furnish and Install a New Heavy Duty Campbell EJCO DHS819 / DHS821 Series Ductile Iron Double Leaf Hatch (H25 rated) and new concrete & reinforcement as needed. Contractor to confirm dimensions.

**1. Exposed aggregate within Sandcatcher should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

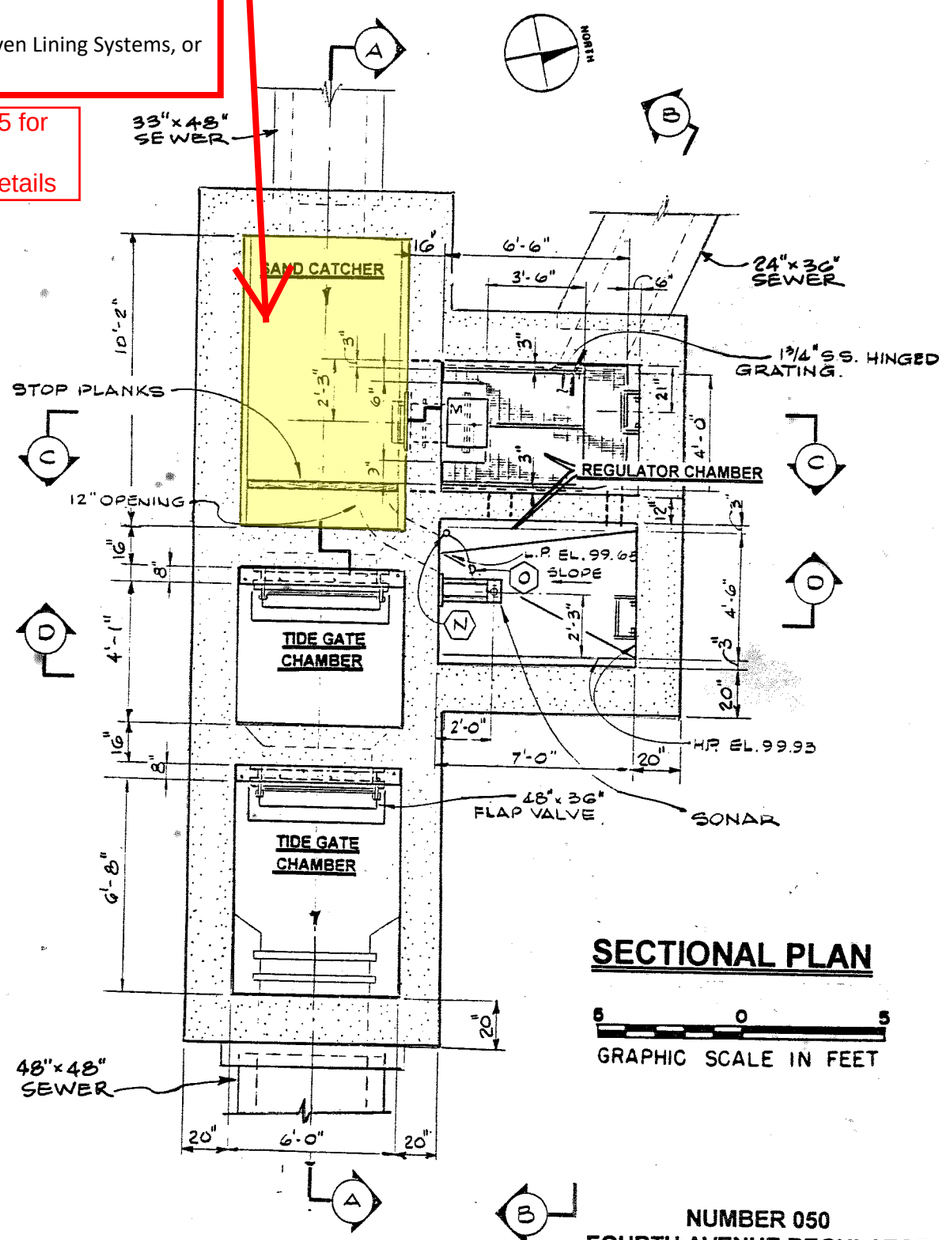
Refer to Page 81 of 105 for Concrete Restoration - Typical Construction Details




## SECTION A-A

5 0 5
GRAPHIC SCALE IN FEET

Contractor shall protect existing flap valve during the installation of the rehabilitation coating system, including the temporary removal and reinstallation.




## SECTIONAL PLAN

5 0 5
GRAPHIC SCALE IN FEET

**1. Exposed aggregate within Sandcatcher should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

Passaic Valley Sewerage Commission
Contract No. B301
.
Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

ALL STEEL REINFORCING SHALL BE GALVANIZED.

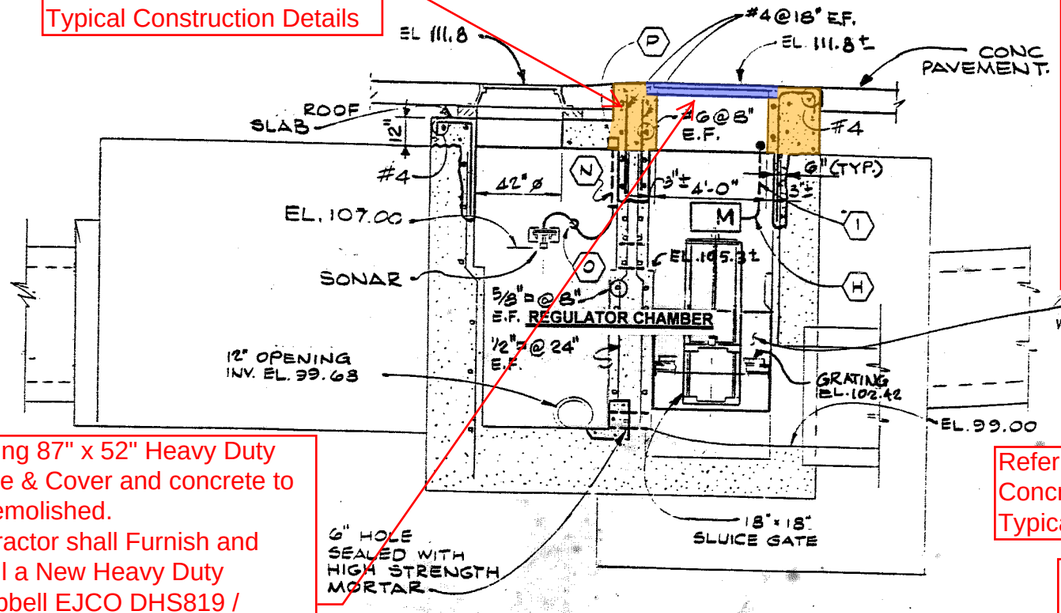
NUMBER 050
FOURTH AVENUE REGULATOR
NEWARK

PASSAIC VALLEY
SEWERAGE COMMISSIONERS

COMBINED SEWER SYSTEM
FACILITIES INVENTORY AND
ASSESSMENT ANALYSIS

Refer to Page 81 of 105 for Concrete Restoration - Typical Construction Details

Existing 87" x 52" Heavy Duty Frame & Cover and concrete to be demolished.
Contractor shall Furnish and Install a New Heavy Duty Campbell EJCO DHS819 / DHS821 Series Ductile Iron Double Leaf Hatch (H25 rated) and new concrete & reinforcement as needed.
Contractor to confirm dimensions.



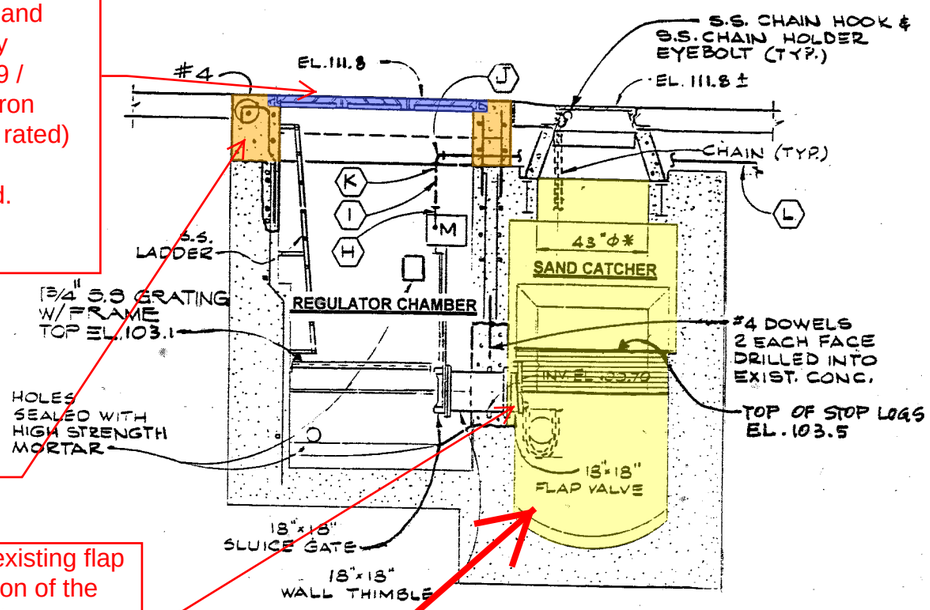

## SECTION B-B



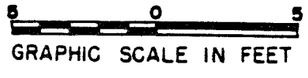

Existing 87" x 52" Heavy Duty Frame & Cover and concrete to be demolished.
Contractor shall Furnish and Install a New Heavy Duty Campbell EJCO DHS819 / DHS821 Series Ductile Iron Double Leaf Hatch (H25 rated) and new concrete & reinforcement as needed.
Contractor to confirm dimensions.

Refer to Page 81 of 105 for Concrete Restoration - Typical Construction Details

Contractor shall protect existing flap valve during the installation of the rehabilitation coating system, including the temporary removal and reinstallation.




## SECTION C-C




**1. Exposed aggregate within Sandcatcher should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

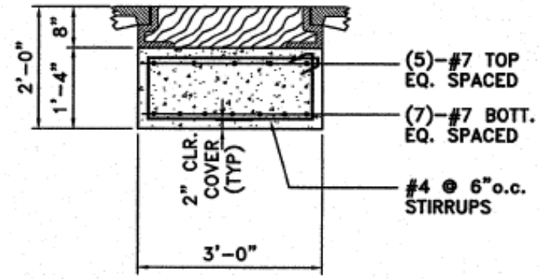
Passaic Valley Sewerage Commission
Contract No. B301
.
Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

ALL STEEL REINFORCING SHALL BE GALVANIZED.

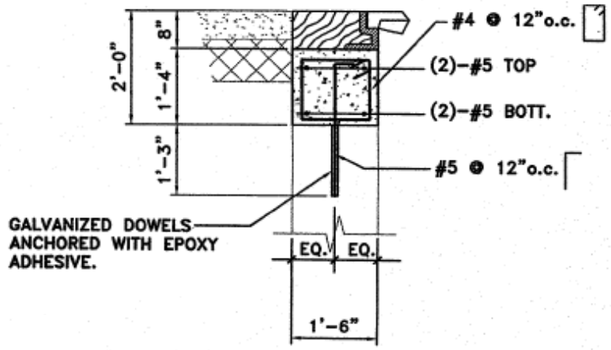
NUMBER 050
FOURTH AVENUE REGULATOR
NEWARK

PASSAIC VALLEY
SEWERAGE COMMISSIONERS

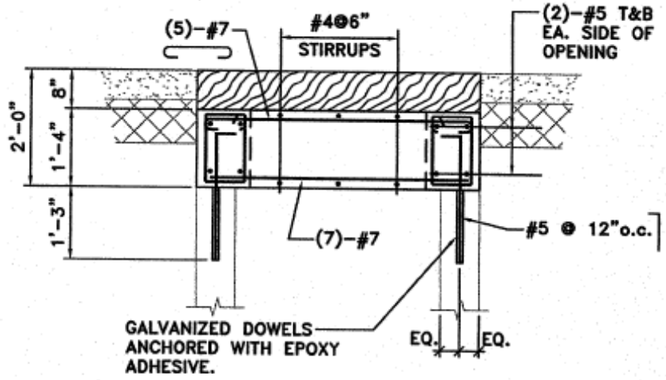
COMBINED SEWER SYSTEM
FACILITIES INVENTORY AND
ASSESSMENT ANALYSIS



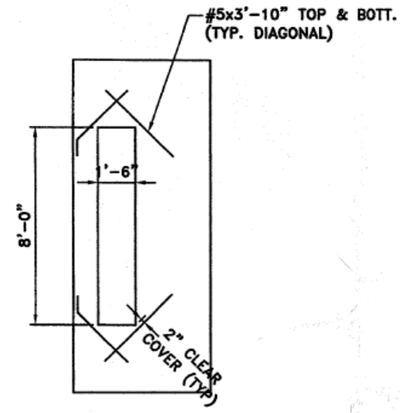

**DETAIL 1**
SCALE: 1/2" = 1'-0"



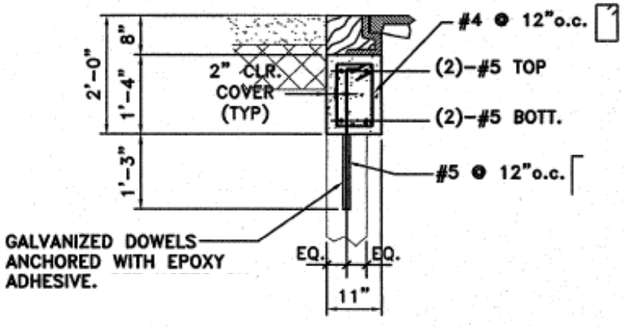

**DETAIL 3**
SCALE: 1/2" = 1'-0"



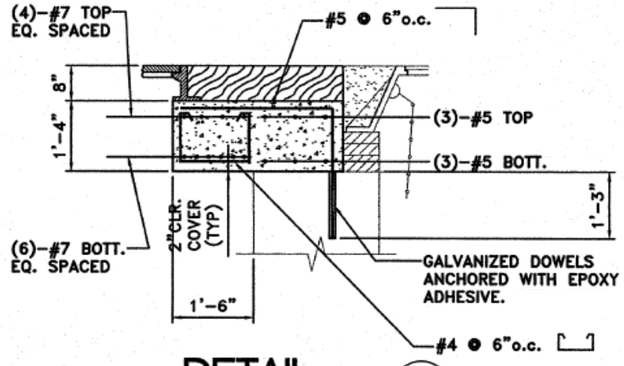

**SECTION J**
SCALE: 1/2" = 1'-0"



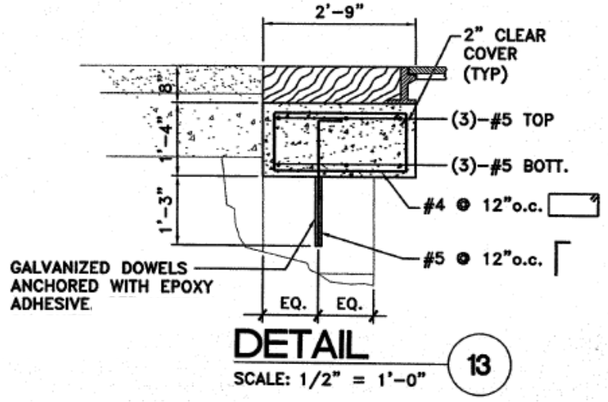

**ADDITIONAL REINFORCING AT OPENINGS**
SCALE: 1/4" = 1'-0"



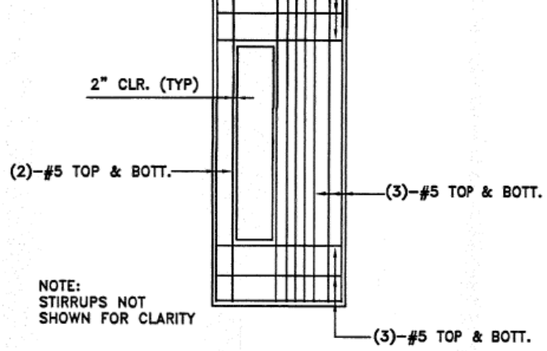

**DETAIL 2**
SCALE: 1/2" = 1'-0"



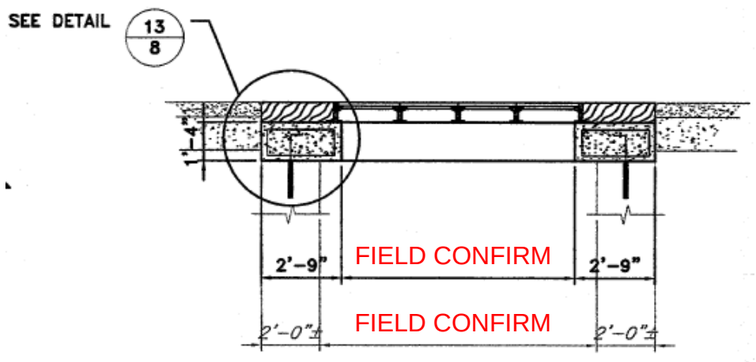

**DETAIL 4**
SCALE: 1/2" = 1'-0"



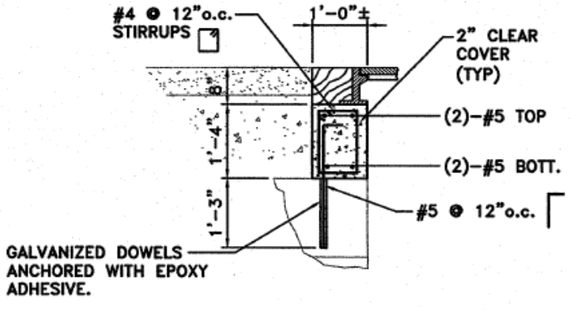

**DETAIL 13**
SCALE: 1/2" = 1'-0"




**SLAB MAIN REINFORCING PLAN**
SCALE: 1/4" = 1'-0"




**SECTION H**
SCALE: 1/4" = 1'-0"




**DETAIL 5**
SCALE: 1/2" = 1'-0"

Passaic Valley Sewerage Commission
Contract No. B301
.
Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

NOTES:
1. ALL STEEL REINFORCING SHALL BE GALVANIZED.
2. CONTRACTOR SHALL CONFIRM ALL DIMENSIONS

FOURTH (4TH) AVENUE AND JACKSON STREET REGULATORS – CONCRETE RESTORATION – TYPICAL CONSTRUCTION DETAILS

# CSO 050 Fourth Avenue Regulator

Sandcatcher Chamber - Before Repairs




Mortar Loss and Concrete Corrosion.

Sandcatcher Chamber - Before Repairs




Mortar Loss and Concrete Corrosion.

# CSO 050 Fourth Avenue Regulator

Sandcatcher Chamber - Before Repairs



Mortar Loss and Concrete Corrosion.

Sandcatcher Chamber - Before Repairs



Mortar Loss and Concrete Corrosion.

# CSO 050 Fourth Avenue Regulator

Sandcatcher Chamber - Before Repairs



Mortar Loss and Concrete Corrosion.

Sandcatcher Chamber - Before Repairs



Mortar Loss and Concrete Corrosion.

# CSO 050 Fourth Avenue Regulator

Sandcatcher Chamber - During Repairs



Apply Raven 755 ReSurfacer Cement.

Sandcatcher Chamber - During Repairs



Apply Raven 755 ReSurfacer Cement.

*August 24, 2024*

# CSO 050 Fourth Avenue Regulator

Sandcatcher Chamber - During Repairs




Apply Raven 755 ReSurfacer Cement.

Sandcatcher Chamber - During Repairs




Apply Raven 755 ReSurfacer Cement.

# CSO 050 Fourth Avenue Regulator

Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

Sandcatcher Chamber - After Repairs

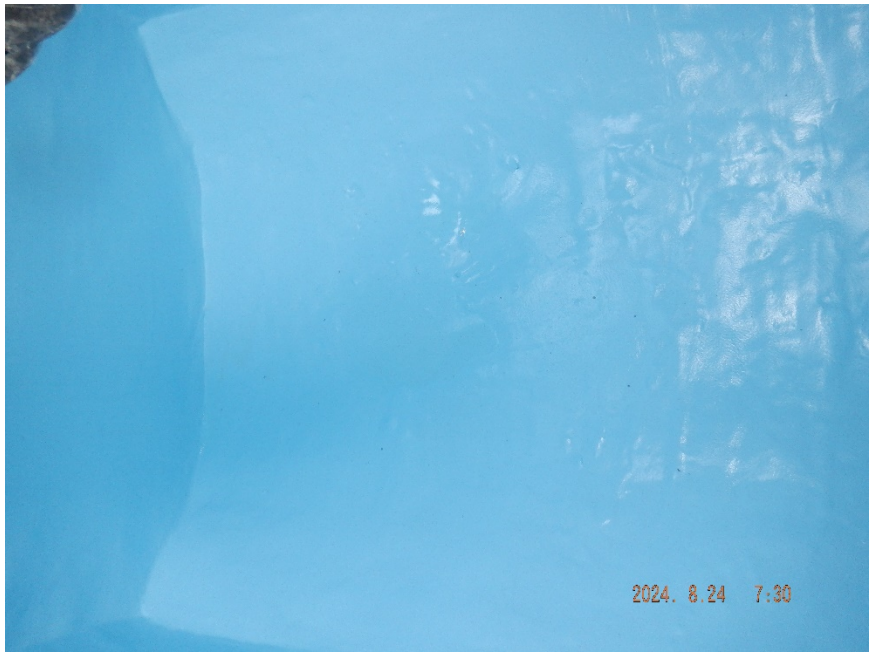



Apply Raven 405 Epoxy (125 mils).

*August 24, 2024*

# CSO 050 Fourth Avenue Regulator

Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

*August 24, 2024*

# CSO 050 Fourth Avenue Regulator

Heavy Duty Access Frame & Covers



Heavy Duty Access Frame & Covers



*August 24, 2024*

# CSO 050 Fourth Avenue Regulator

Heavy Duty Access Frame & Covers



Heavy Duty Access Frame & Covers



August 24, 2024

# CSO 050 Fourth Avenue Regulator

Heavy Duty Access Frame & Covers




Heavy Duty Access Frame & Covers



**LOCATION PLAN**




**CSO No. 037 (Dukes Street) within Town of Kearny**

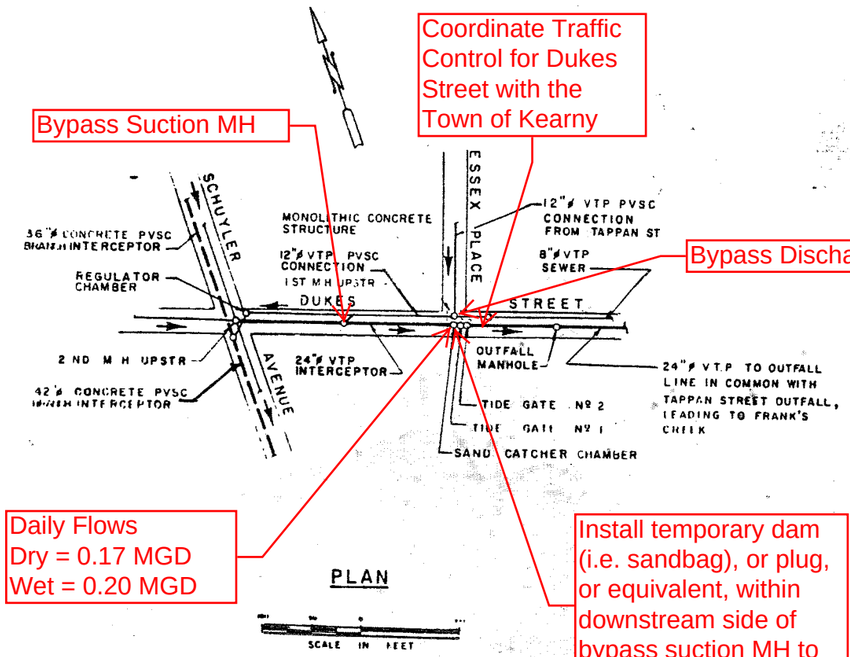
 **FIGURE 037-1**

(1) Total area to be coated = 195 s.f. Sandcatcher

Bypass Suction MH

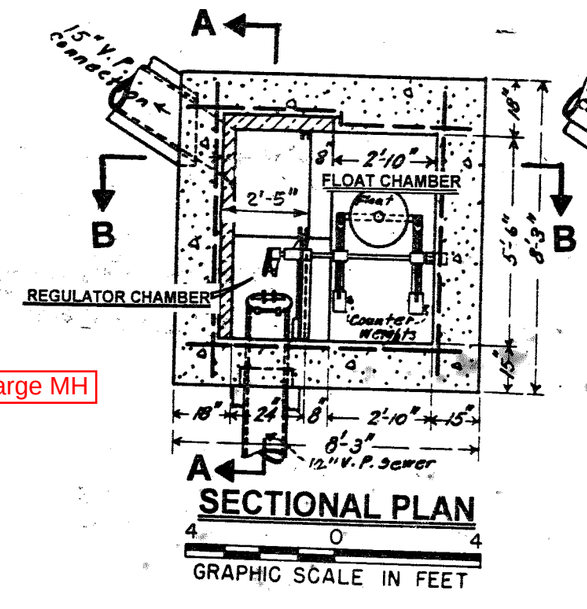
Coordinate Traffic Control for Dukes Street with the Town of Kearny

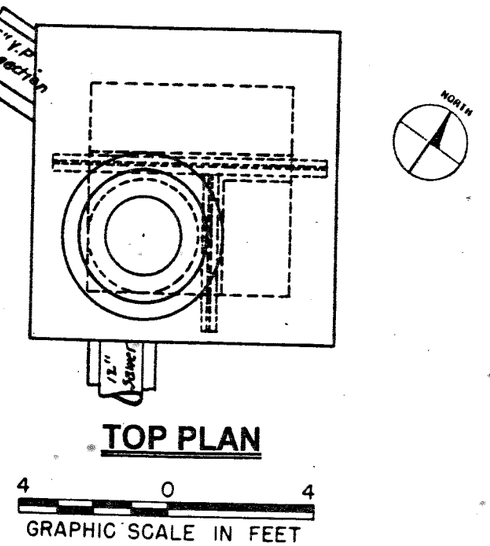
Bypass Discharge MH

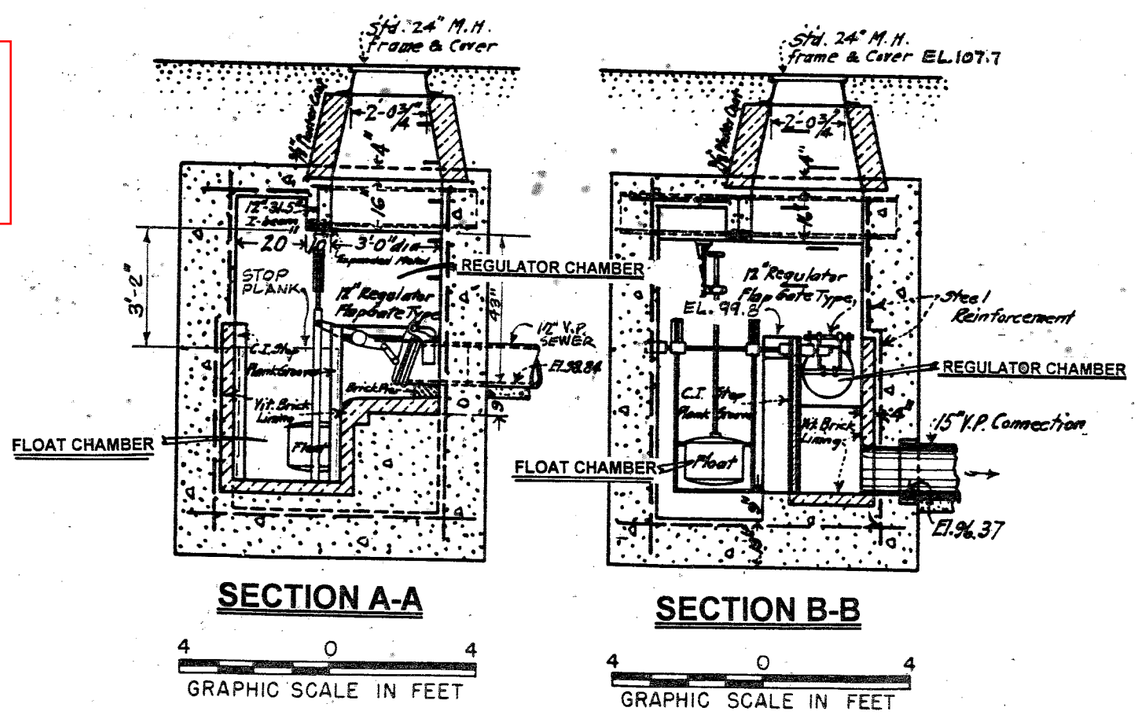



Daily Flows
Dry = 0.17 MGD
Wet = 0.20 MGD

Install temporary dam (i.e. sandbag), or plug, or equivalent, within downstream side of bypass suction MH to isolate sandcatcher




Passaic Valley Sewerage Commission
Contract No. B301

.

Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

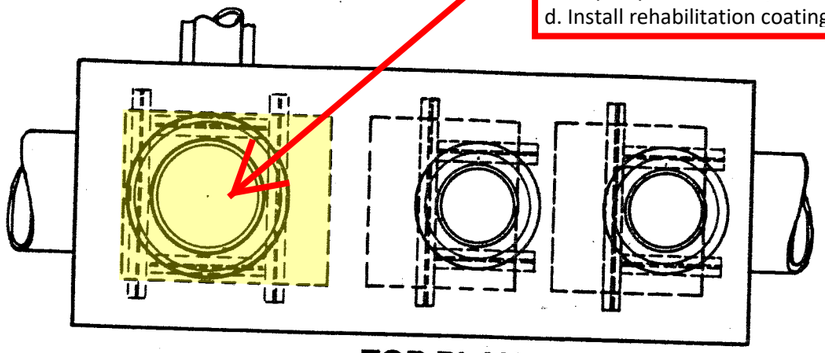
**NUMBER 037**
**DUKE STREET REGULATOR**
**KEARNY**

**PASSAIC VALLEY SEWERAGE COMMISSIONERS**

**COMBINED SEWER SYSTEM FACILITIES INVENTORY AND ASSESSMENT ANALYSIS**

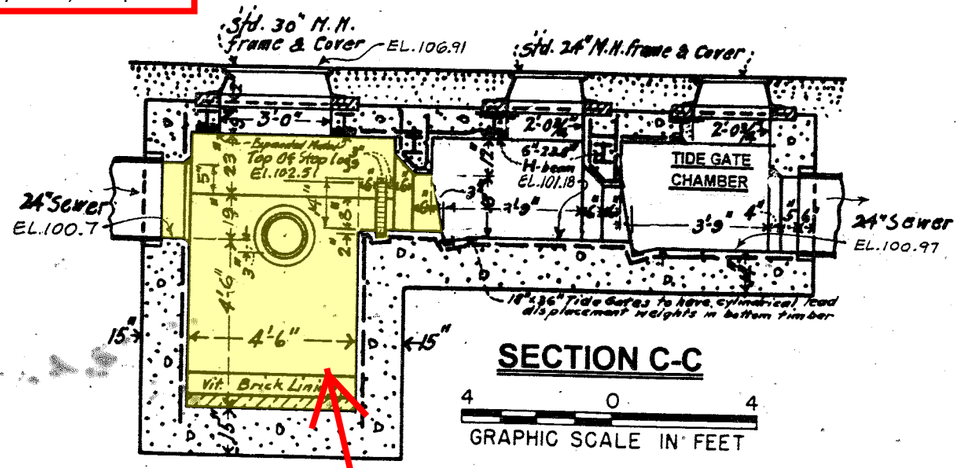
 **FIGURE 037-2**

**1. Exposed aggregate within Sandcatcher should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.



**TOP PLAN**

4 0 4
GRAPHIC SCALE IN FEET

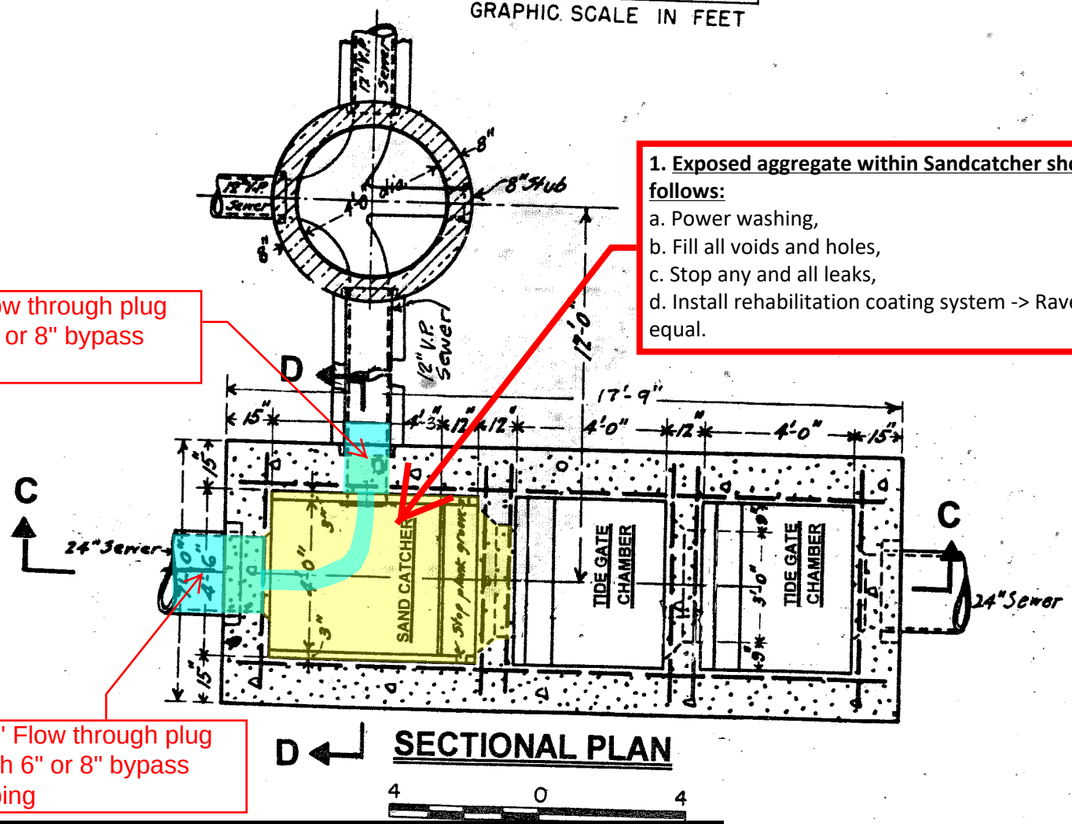



**SECTION C-C**

4 0 4
GRAPHIC SCALE IN FEET

**1. Exposed aggregate within Sandcatcher should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

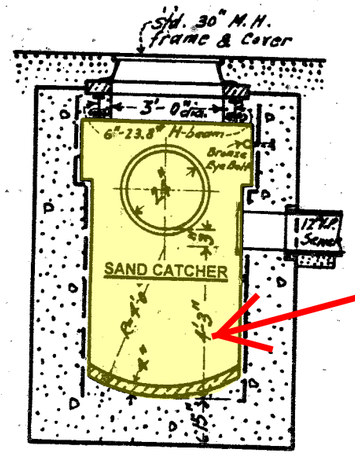
12" Flow through plug with 6" or 8" bypass piping




24" Flow through plug with 6" or 8" bypass piping

**SECTIONAL PLAN**

4 0 4




**SECTION D-D**

4 0 4
GRAPHIC SCALE IN FEET

**1. Exposed aggregate within Sandcatcher should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

Passaic Valley Sewerage Commission
Contract No. B301
.
Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

**NUMBER 037**
**DUKE STREET REGULATOR**
**KEARNY**

**PASSAIC VALLEY SEWERAGE COMMISSIONERS**

**COMBINED SEWER SYSTEM FACILITIES INVENTORY AND ASSESSMENT ANALYSIS**

# CSO 037 Dukes Street Regulator

Sandcatcher Chamber - Before Repairs




Mortar Loss and Concrete Corrosion.

Sandcatcher Chamber - During Repairs



Apply Raven 755 ReSurfacer Cement.

*April 21, 2023*

# CSO 037 Dukes Street Regulator

Sandcatcher Chamber - During Repairs




Apply Raven 175 Epoxy Primer.

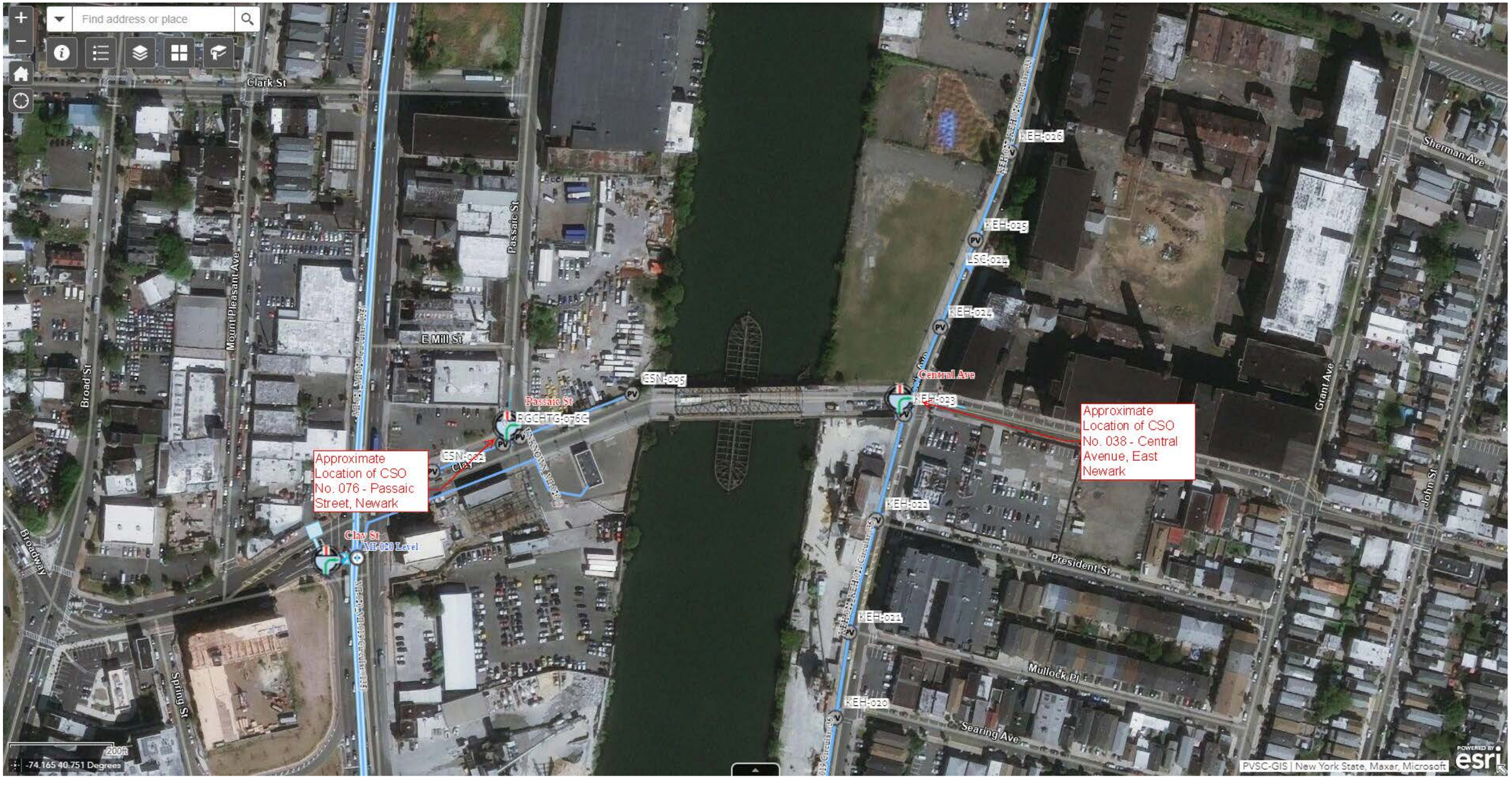
Sandcatcher Chamber - During Repairs



Apply Raven 405 Epoxy (125 mils).

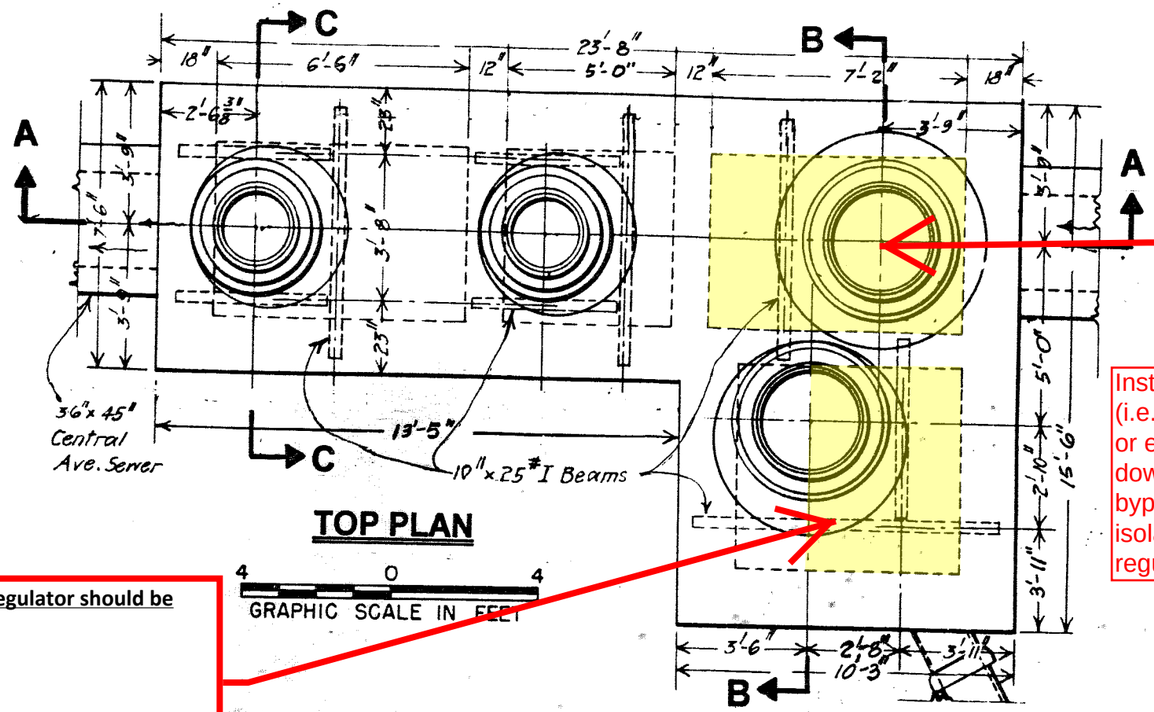
*April 21, 2023*

**LOCATION PLAN**




**CSO No. 038 (Central Avenue) within Borough of East Newark & CSO No. 076 (Passaic Street) within City of Newark**

 FIGURE 038-1

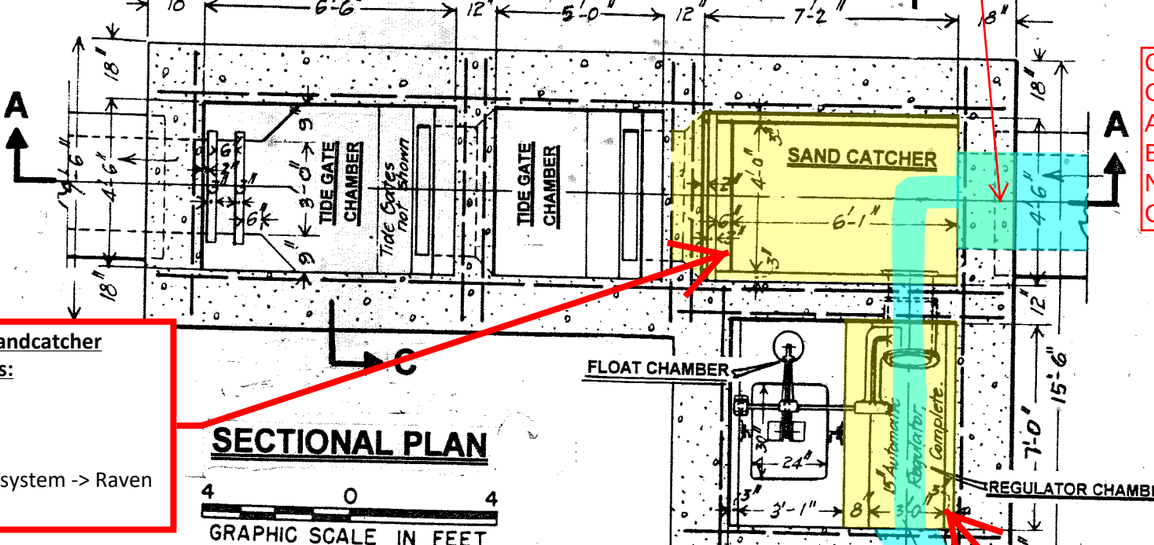



TOP PLAN

4 0 4

GRAPHIC SCALE IN FEET

**1. Exposed aggregate within Regulator should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.




SECTIONAL PLAN

4 0 4

GRAPHIC SCALE IN FEET

**1. Exposed aggregate within Sandcatcher should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

**1. Exposed aggregate within Sandcatcher should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

(1) Total area to be coated = 289 s.f. Sandcatcher

.

(2) Total area to be coated = 294 s.f. Regulator

.

(3) Total area to be coated = 25 s.f Sewerside Manhole

.

(4) Total area to be coated = 25 s.f Riverside Manhole

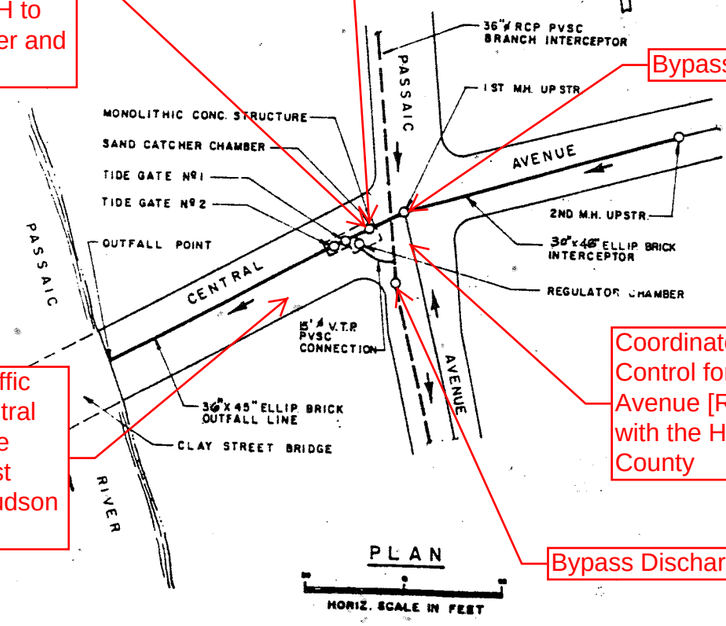
Install temporary dam (i.e. sandbag), or plug, or equivalent, within downstream side of bypass suction MH to isolate sandcatcher and regulator

Daily Flows
Dry = 0.14 MGD
Wet = 0.27 MGD

36" Flow through plug with 6" or 8" bypass piping

15" Flow through plug with 6" or 8" bypass piping

Coordinate Traffic Control for Central Avenue with the Borough of East Newark and Hudson County




Coordinate Traffic Control for Passaic Avenue [Route 699] with the Hudson County

Bypass Discharge MH

**1. Exposed aggregate within Regulator should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

Passaic Valley Sewerage Commission
Contract No. B301

.

Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

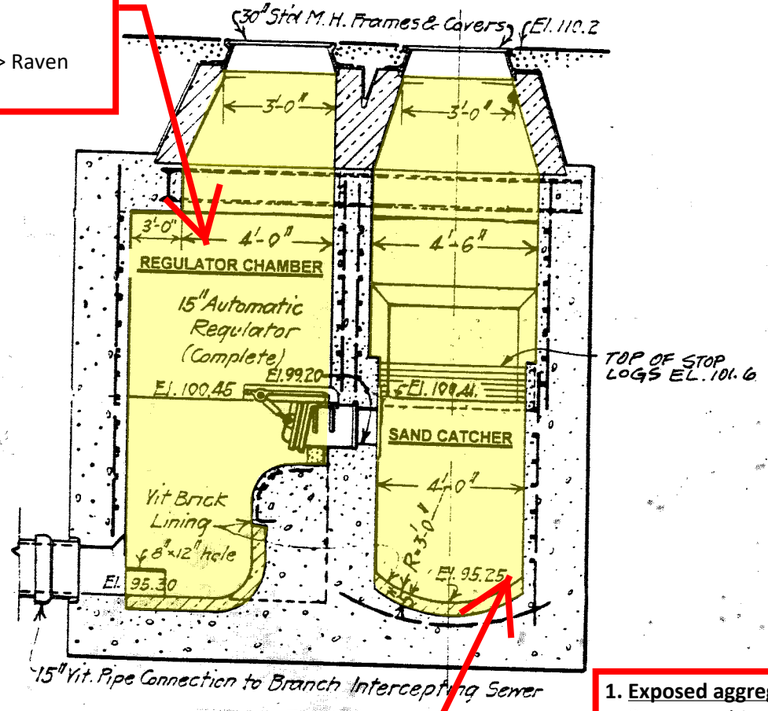
**NUMBER 038**
**CENTRAL AVENUE REGULATOR**
**E. NEWARK**

**PASSAIC VALLEY SEWERAGE COMMISSIONERS**

**COMBINED SEWER SYSTEM FACILITIES INVENTORY AND ASSESSMENT ANALYSIS**

 **FIGURE 038-2**

**1. Exposed aggregate within Regulator should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

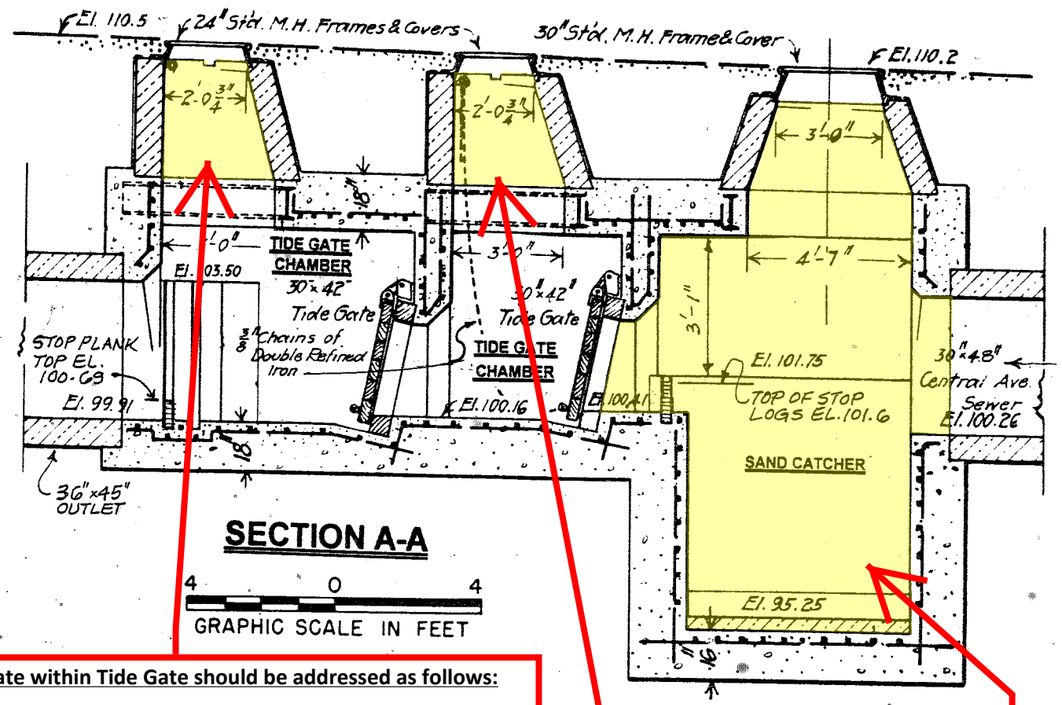



**SECTION B-B**

4 0 4
GRAPHIC SCALE IN FEET

**1. Exposed aggregate within Sandcatcher should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

**1. Exposed aggregate within Tide Gate should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

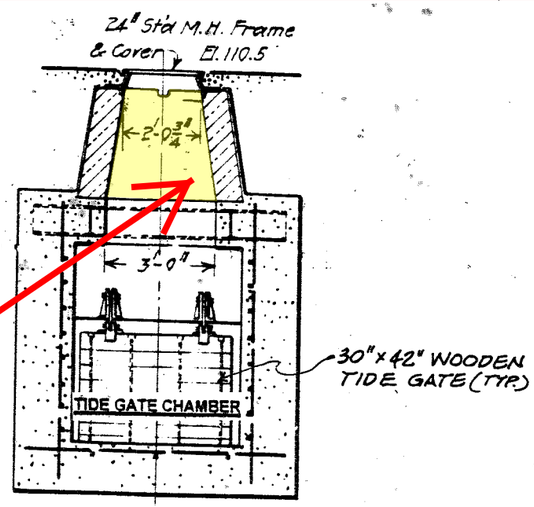



**SECTION A-A**

4 0 4
GRAPHIC SCALE IN FEET

**1. Exposed aggregate within Sandcatcher should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

**1. Exposed aggregate within Tide Gate should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.




**SECTION C-C**

4 0 4
GRAPHIC SCALE IN FEET

Passaic Valley Sewerage Commission
Contract No. B301
.
Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

**NUMBER 038**
**CENTRAL AVENUE REGULATOR**
**E. NEWARK**

**PASSAIC VALLEY SEWERAGE COMMISSIONERS**

**COMBINED SEWER SYSTEM FACILITIES INVENTORY AND ASSESSMENT ANALYSIS**

# CSO 038 Central Avenue Regulator

Sandcatcher Chamber - Before Repairs



Mortar Loss and Concrete Corrosion.

Sandcatcher Chamber - Before Repairs



Mortar Loss and Concrete Corrosion.

*September 21, 2023*

# CSO 038 Central Avenue Regulator

Sandcatcher Chamber - Before Repairs



Mortar Loss and Concrete Corrosion.

Sandcatcher Chamber - Before Repairs



Mortar Loss and Concrete Corrosion.

# CSO 038 Central Avenue Regulator

Sandcatcher Chamber - Before Repairs



Mortar Loss and Concrete Corrosion.

Sandcatcher Chamber - Before Repairs



Mortar Loss and Concrete Corrosion.

# CSO 038 Central Avenue Regulator

Regulator Chamber - Before Repairs




Mortar Loss and Concrete Corrosion.

Regulator Chamber - Before Repairs



Mortar Loss and Concrete Corrosion.

# CSO 038 Central Avenue Regulator

Sandcatcher Chamber - During Repairs



Apply Raven 755 ReSurfacer Cement.

Sandcatcher Chamber - During Repairs




Apply Raven 755 ReSurfacer Cement.

*September 21, 2023*

# CSO 038 Central Avenue Regulator

Sandcatcher Chamber - During Repairs




Apply Raven 755 ReSurfacer Cement.

Sandcatcher Chamber - During Repairs




Apply Raven 755 ReSurfacer Cement.

*September 21, 2023*

# CSO 038 Central Avenue Regulator

Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

*September 21, 2023*

# CSO 038 Central Avenue Regulator

Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

*September 21, 2023*

# CSO 038 Central Avenue Regulator

Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

Sandcatcher Chamber - After Repairs



Apply Raven 405 Epoxy (125 mils).

*September 21, 2023*

# CSO 038 Central Avenue Regulator

Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

# CSO 038 Central Avenue Regulator

Regulator Chamber - After Repairs



Apply Raven 405 Epoxy (125 mils).

Regulator Chamber - After Repairs



Apply Raven 405 Epoxy (125 mils).

*September 21, 2023*

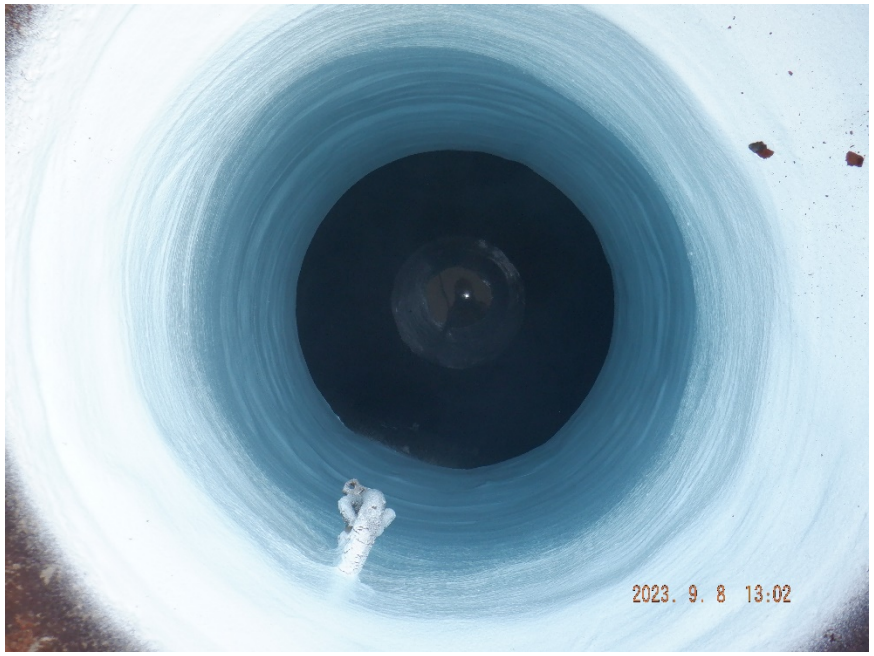
# CSO 038 Central Avenue Regulator

Riversise Tidegate Chamber Manhole - After Repairs




Apply Raven 405 Epoxy (125 mils).

Sewersise Tidegate Chamber Manhole - After Repairs




Apply Raven 405 Epoxy (125 mils).

# CSO 038 Central Avenue Regulator

Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

Sandcatcher Chamber - After Repairs

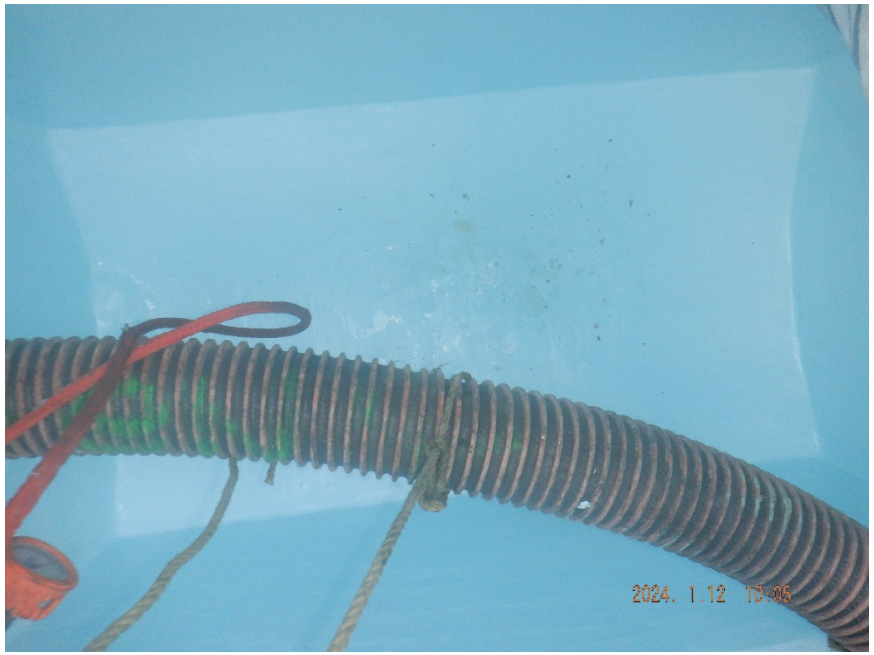



Apply Raven 405 Epoxy (125 mils).

January 12, 2024

# CSO 038 Central Avenue Regulator

Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

January 12, 2024

 FIGURE 076-1

**1. Exposed aggregate within Sandcatcher should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

(1) Total area to be coated = 352 s.f. Sandcatcher

18" Flow through plug with 6/8"" bypass piping

Install temporary dam (i.e. sandbag), or plug, or equivalent, within downstream side of bypass suction MH to isolate sandcatcher

Bypass Discharge MH

Daily Flows
Dry = 0.30 MGD
Wet = 0.34 MGD

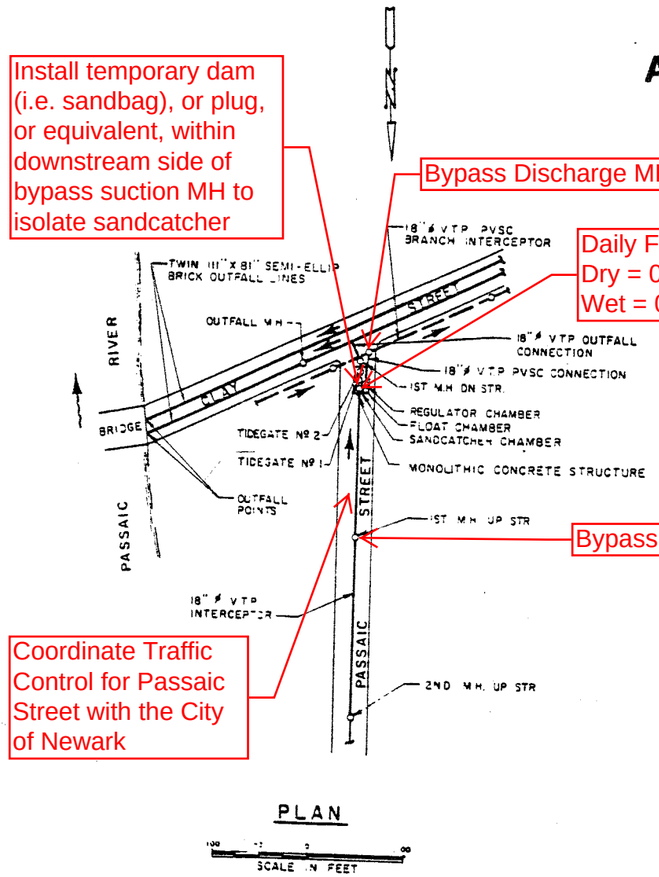
Coordinate Traffic Control for Passaic Street with the City of Newark

Bypass Suction MH

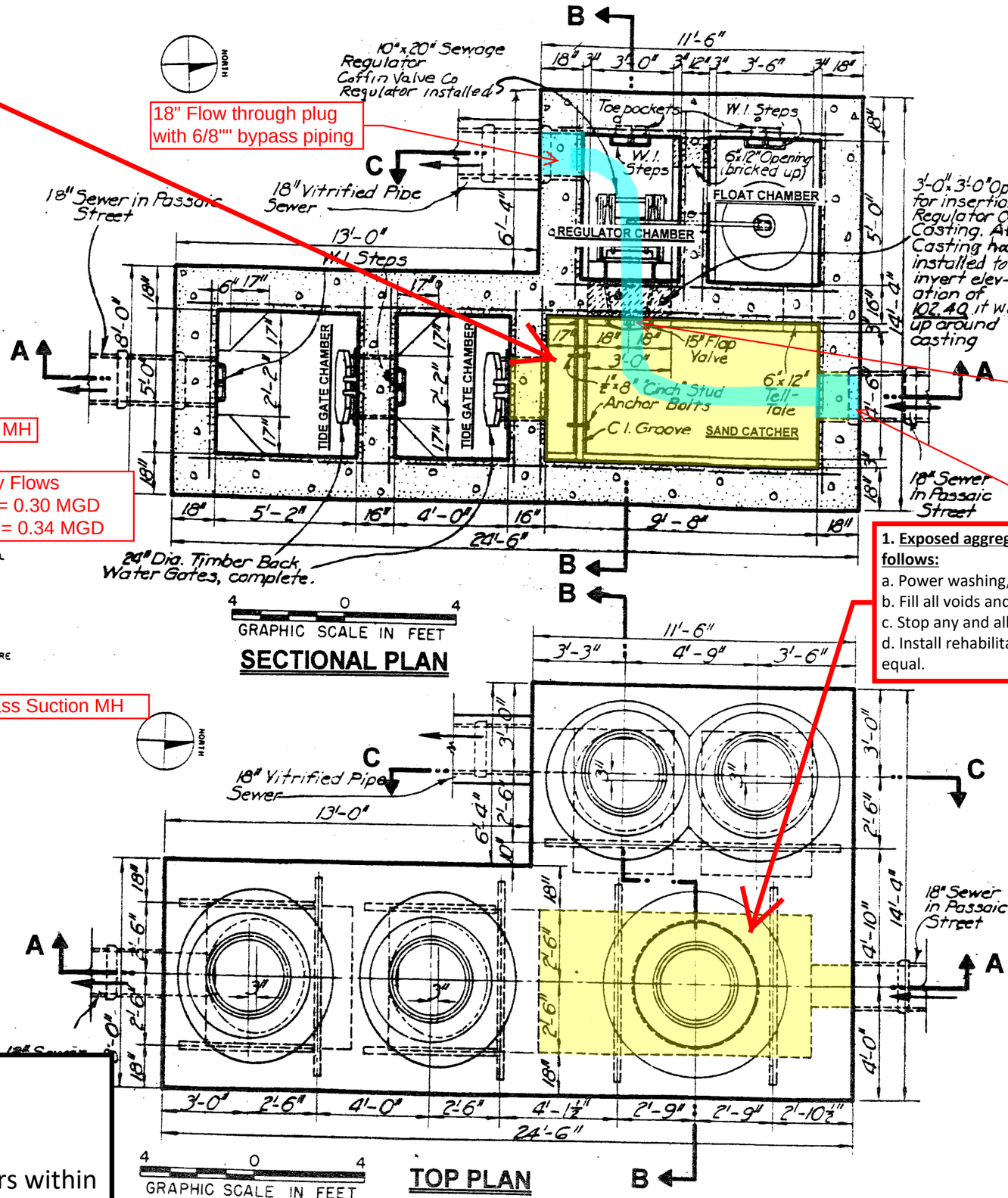
Contractor shall protect existing flap valve during the installation of the rehabilitation coating system, including the temporary removal and reinstallation.

18" Flow through plug with 6" or 8" bypass piping

**1. Exposed aggregate within Sandcatcher should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.




PLAN
SCALE IN FEET




Passaic Valley Sewerage Commission
Contract No. B301
.
Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

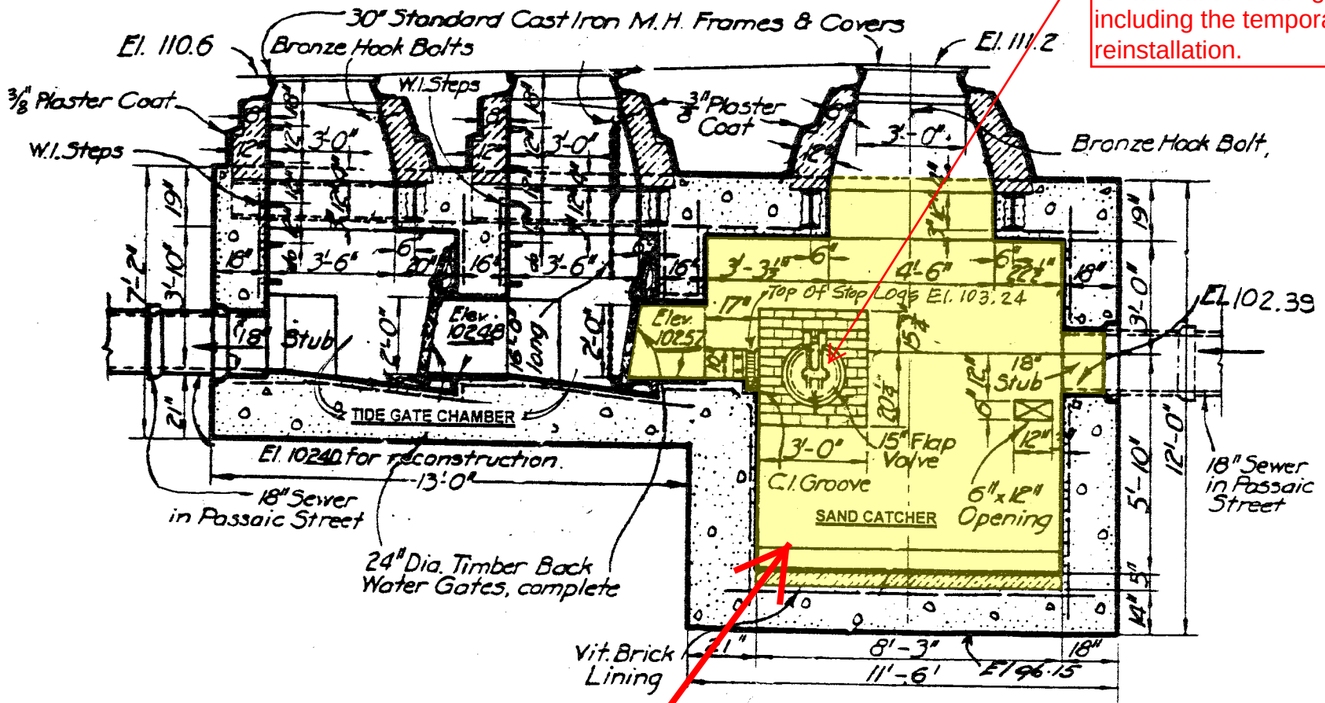
NUMBER 076
PASSAIC STREET REGULATOR
NEWARK

PASSAIC VALLEY
SEWERAGE COMMISSIONERS

COMBINED SEWER SYSTEM
FACILITIES INVENTORY AND
ASSESSMENT ANALYSIS

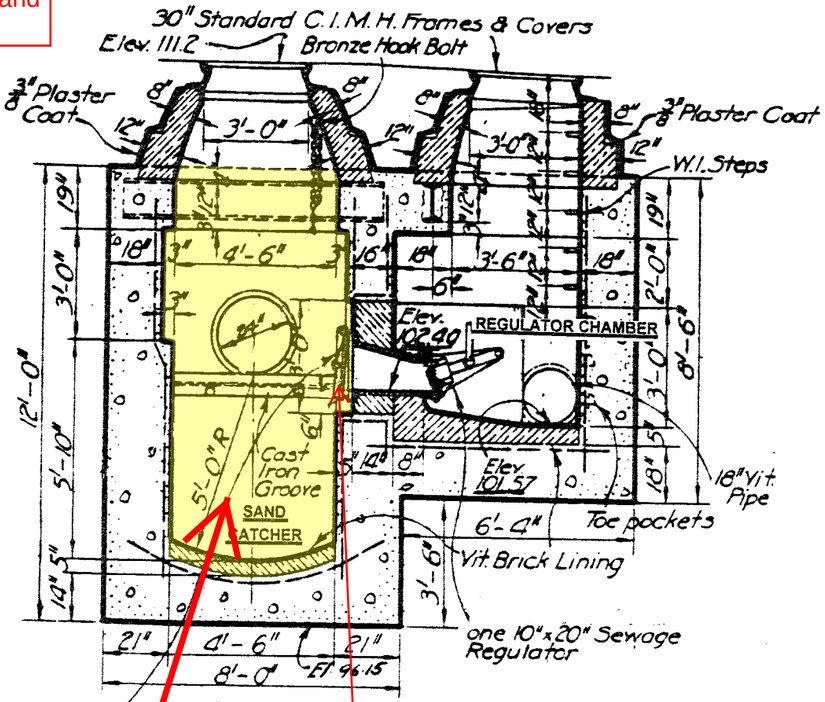
 FIGURE 076-2

Contractor shall protect existing flap valve during the installation of the rehabilitation coating system, including the temporary removal and reinstallation.




SECTION A-A

4 0 4
GRAPHIC SCALE IN FEET




SECTION B-B

4 0 4
GRAPHIC SCALE IN FEET

**1. Exposed aggregate within Sandcatcher should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

**1. Exposed aggregate within Sandcatcher should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

Contractor shall protect existing flap valve during the installation of the rehabilitation coating system, including the temporary removal and reinstallation.

Passaic Valley Sewerage Commission
Contract No. B301
.
Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

NUMBER 076
PASSAIC STREET REGULATOR
NEWARK

PASSAIC VALLEY
SEWERAGE COMMISSIONERS

COMBINED SEWER SYSTEM
FACILITIES INVENTORY AND
ASSESSMENT ANALYSIS

# CSO 076 Passaic Street Regulator

Sandcatcher Chamber - During Repairs




Apply Raven 755 ReSurfacer Cement.

Sandcatcher Chamber - During Repairs



Apply Raven 755 ReSurfacer Cement.

January 12, 2024

# CSO 076 Passaic Street Regulator

Sandcatcher Chamber - During Repairs



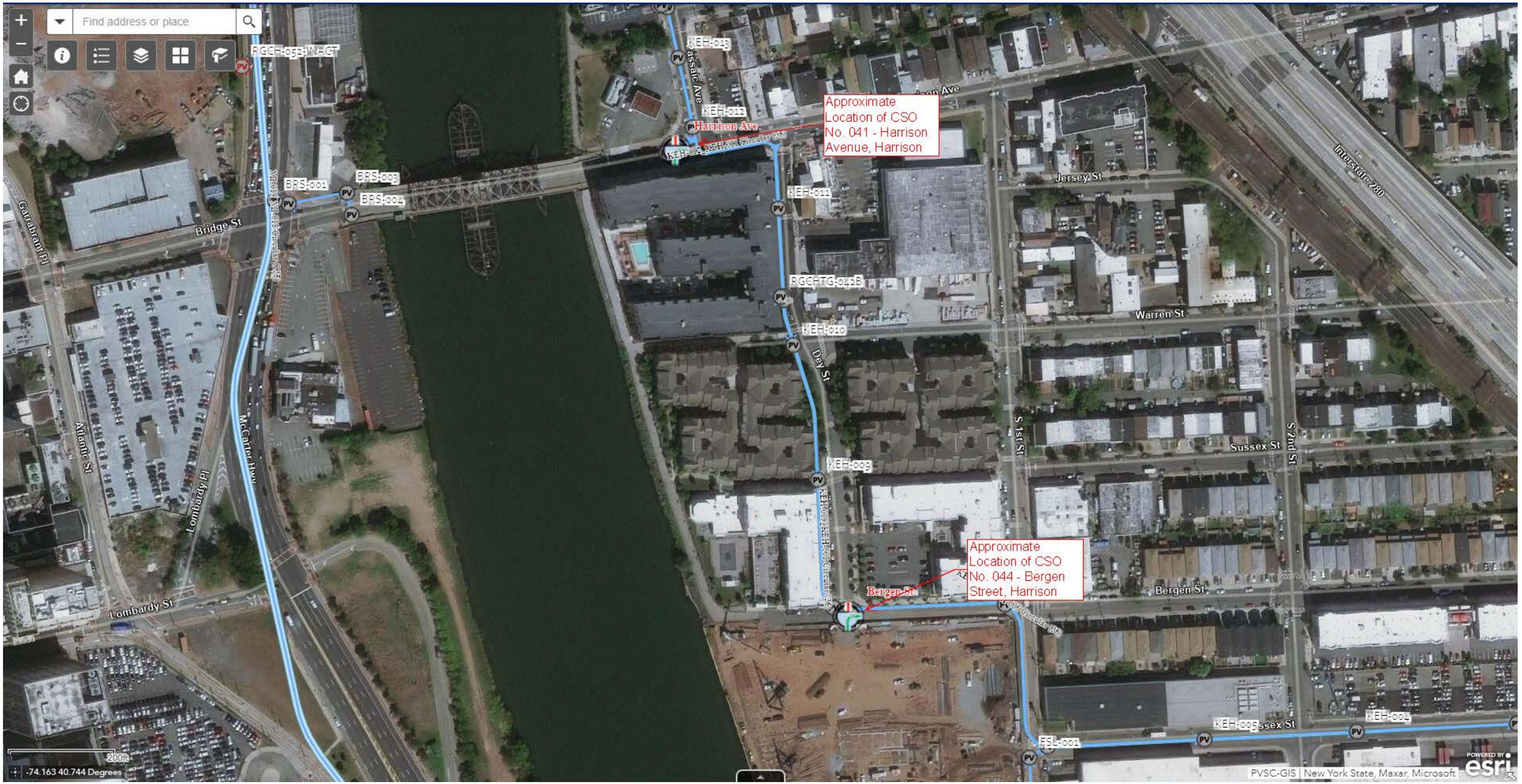

Apply Raven 755 ReSurfacer Cement.

Sandcatcher Chamber - During Repairs




Apply Raven 755 ReSurfacer Cement.

## LOCATION PLAN

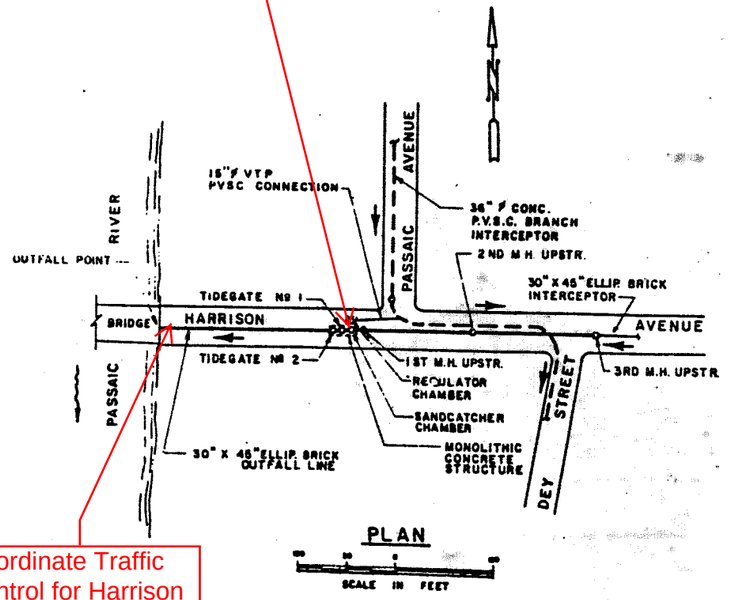



**CSO No. 041 (Harrison Avenue) & CSO No. 044 (Bergen Street) within Town of Harrison**

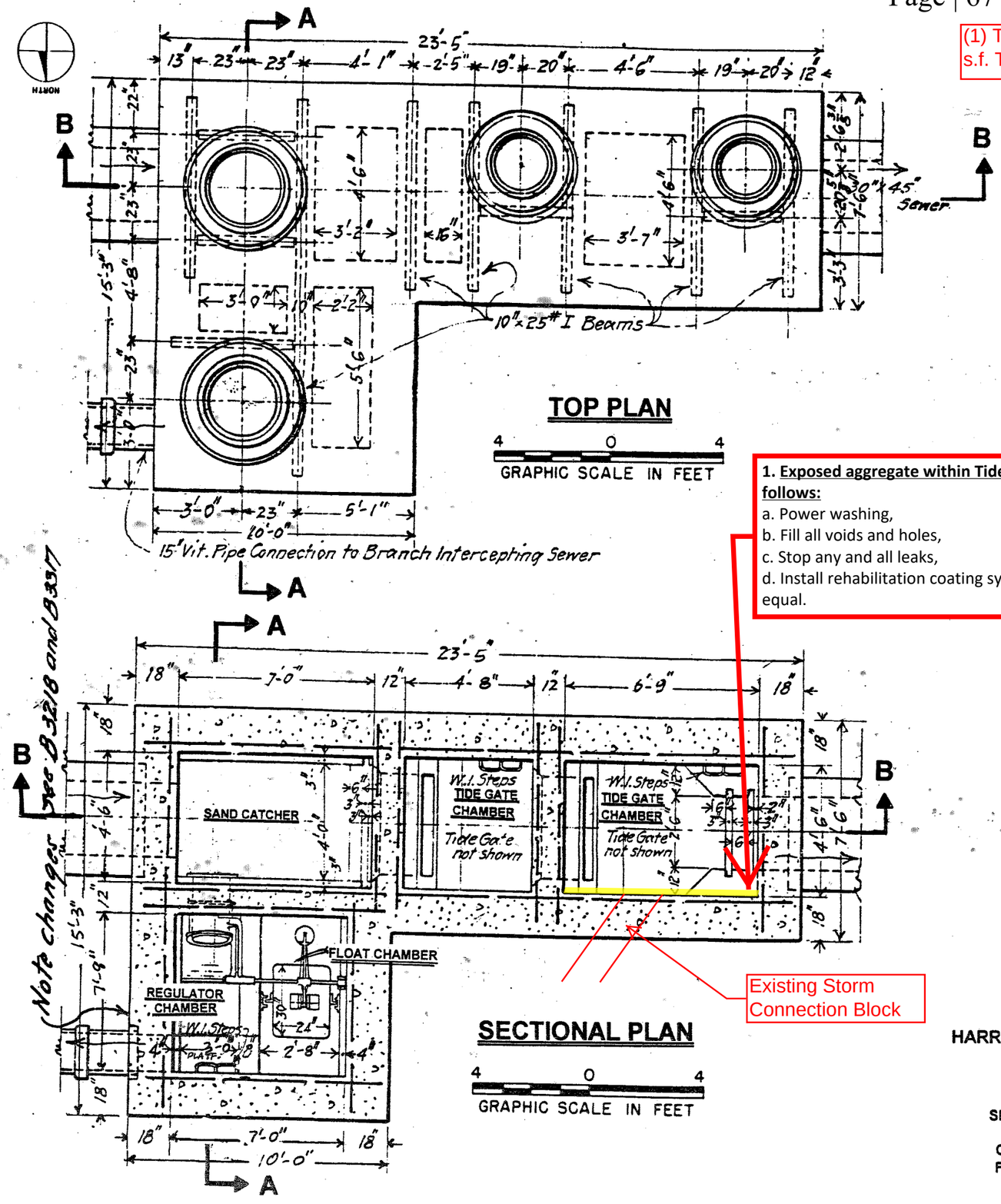
 **FIGURE 041-1**

(1) Total area to be coated = 27 s.f. Tide Gate

Daily Flows
Dry = 0.77 MGD
Wet = 1.08 MGD




Coordinate Traffic Control for Harrison Avenue [Route 508] with Hudson County and the Town of Harrison




**1. Exposed aggregate within Tide Gate should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

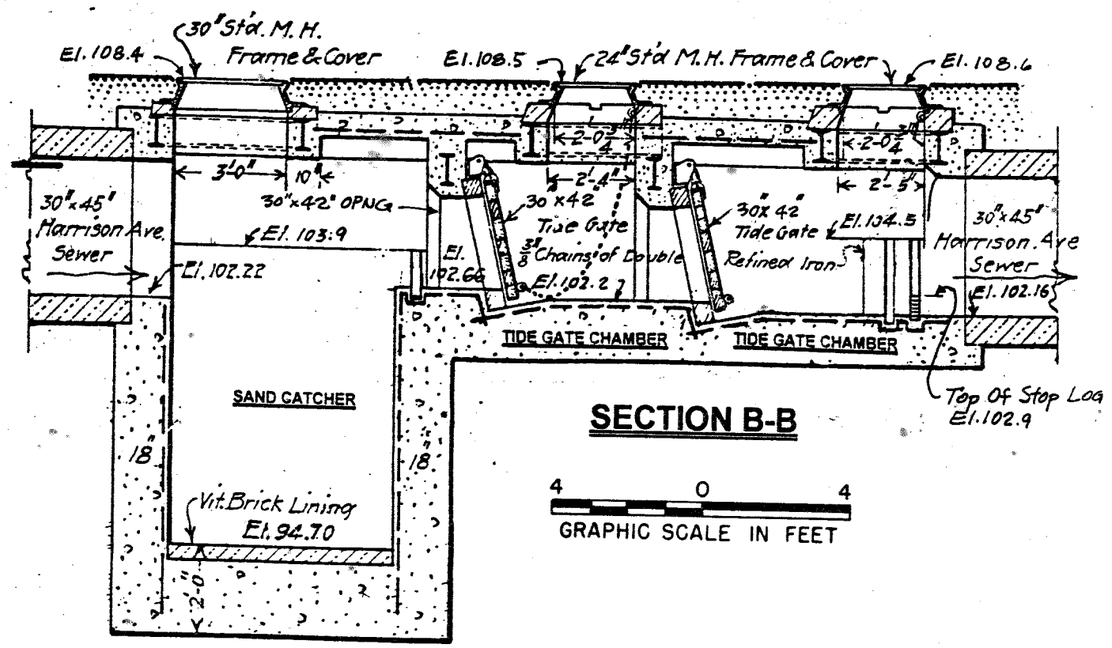
Existing Storm Connection Block

Passaic Valley Sewerage Commission
Contract No. B301
.
Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

NUMBER 041
HARRISON AVENUE REGULATOR
HARRISON

PASSAIC VALLEY
SEWERAGE COMMISSIONERS

COMBINED SEWER SYSTEM
FACILITIES INVENTORY AND
ASSESSMENT ANALYSIS




Passaic Valley Sewerage Commission
Contract No. B301
.
Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

**NUMBER 041**
**HARRISON AVENUE REGULATOR**
**HARRISON**

**PASSAIC VALLEY SEWERAGE COMMISSIONERS**

**COMBINED SEWER SYSTEM FACILITIES INVENTORY AND ASSESSMENT ANALYSIS**

# CSO 041 Harrison Avenue Regulator

Sandcatcher Chamber - Before Repairs



Mortar Loss and Concrete Corrosion.

Sandcatcher Chamber - Before Repairs




Mortar Loss and Concrete Corrosion.

# CSO 041 Harrison Avenue Regulator

Sandcatcher Chamber - During Repairs



Apply Raven 755 ReSurfacer Cement.

Sandcatcher Chamber - During Repairs



Apply Raven 755 ReSurfacer Cement.

*August 29, 2023*

# CSO 041 Harrison Avenue Regulator

Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

Sandcatcher Chamber - After Repairs



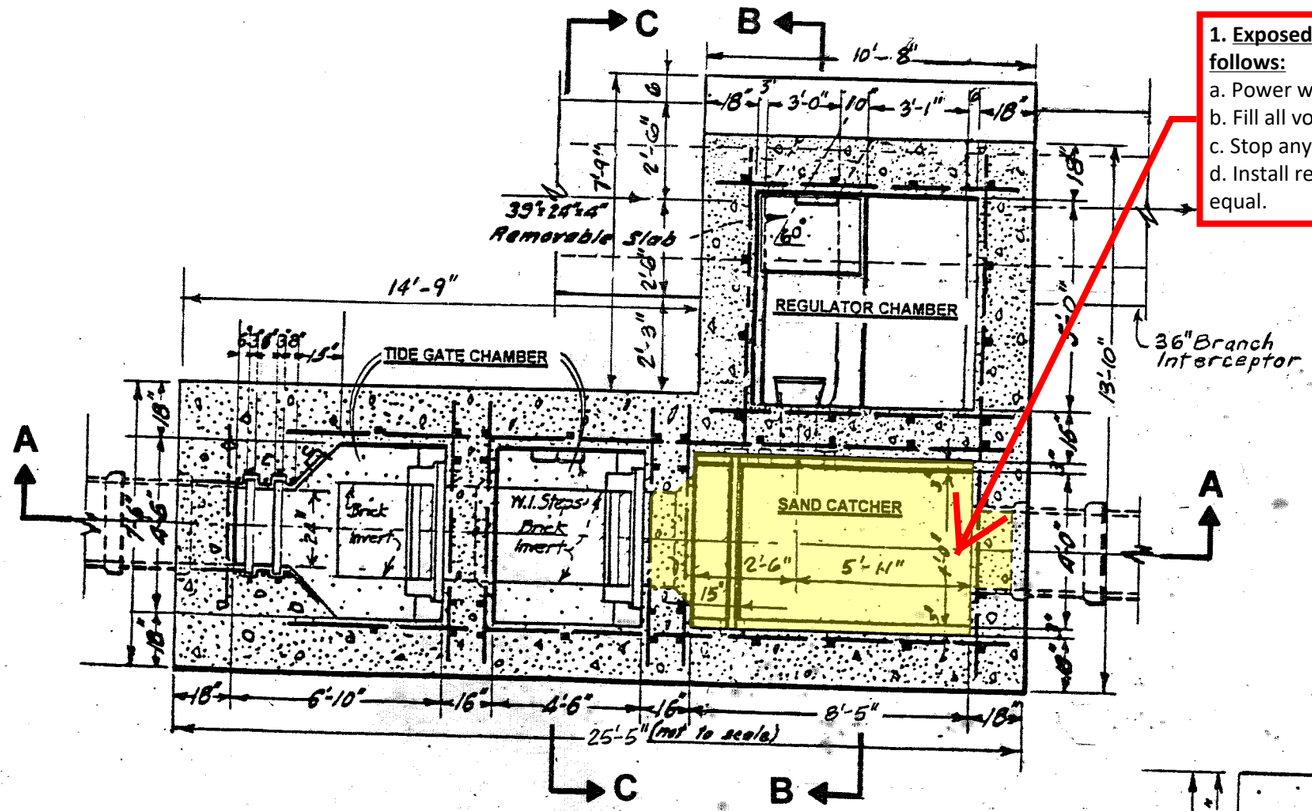

Apply Raven 405 Epoxy (125 mils).

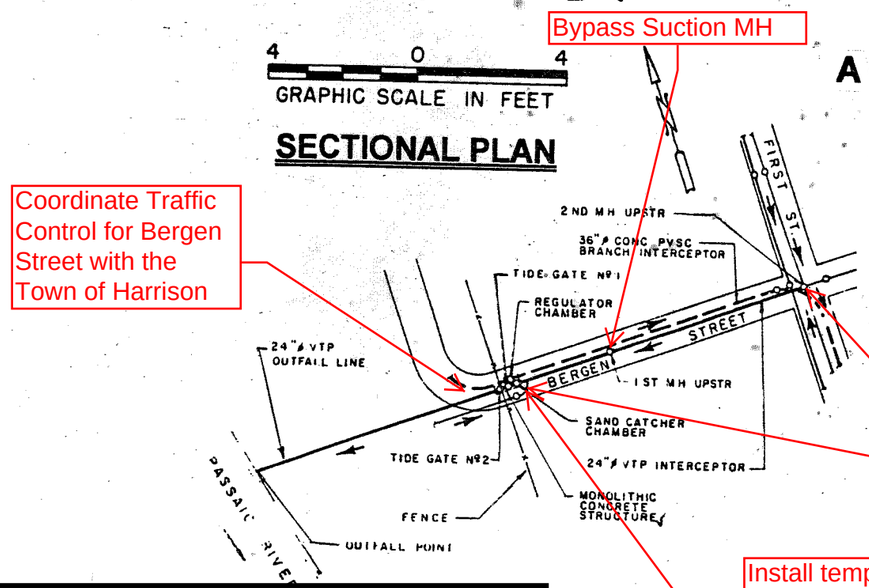
*August 29, 2023*

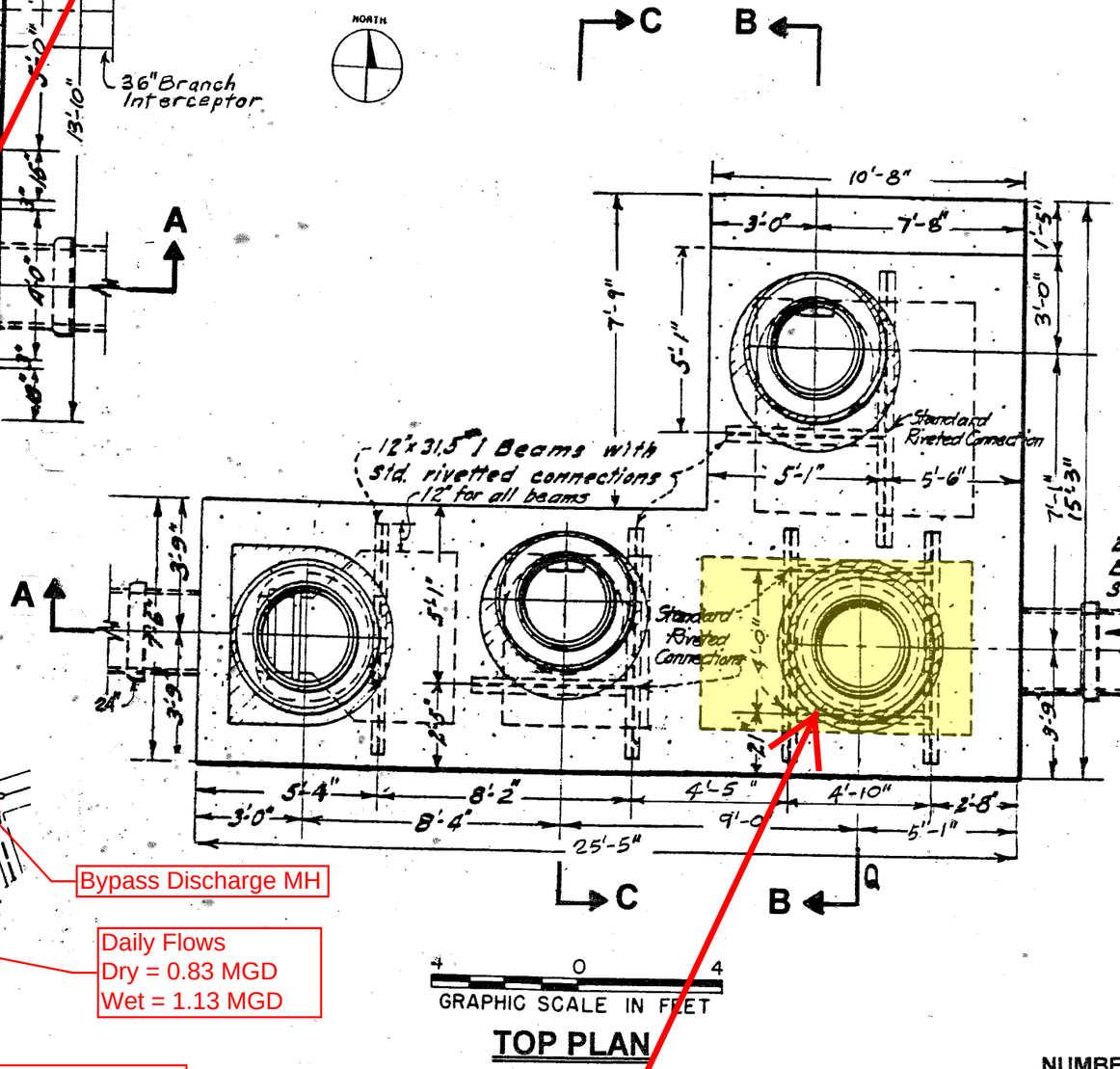
FIGURE 044-1

**1. Exposed aggregate within Sandcatcher should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

(1) Total area to be coated = 266 s.f. Sandcatcher




Bypass Suction MH

Coordinate Traffic Control for Bergen Street with the Town of Harrison

Bypass Discharge MH

Daily Flows
Dry = 0.83 MGD
Wet = 1.13 MGD

Install temporary dam (i.e. sandbag), or plug, or equivalent, within downstream side of bypass suction MH to isolate sandcatcher

**1. Exposed aggregate within Sandcatcher should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or PPG Protective & Marine Coatings, or equal.

Passaic Valley Sewerage Commission
Contract No. B301

.

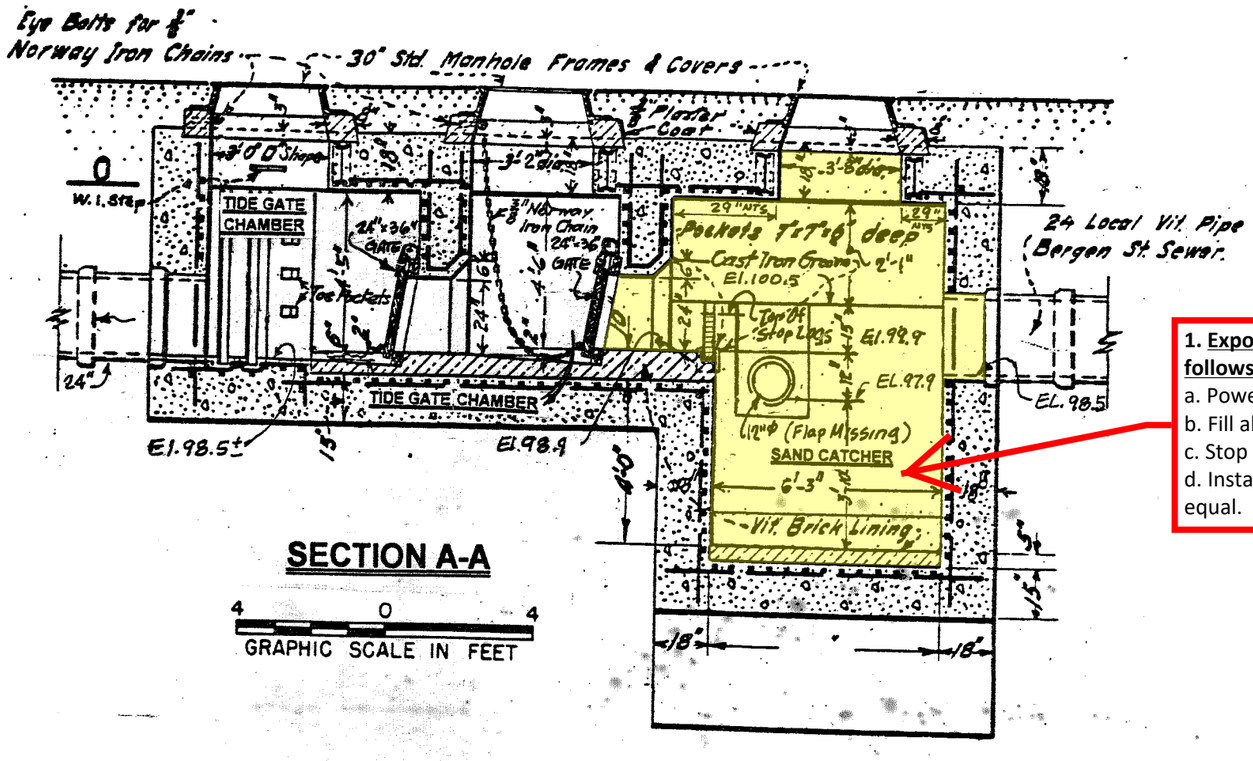
Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

NUMBER 044
BERGEN STREET REGULATOR
HARRISON

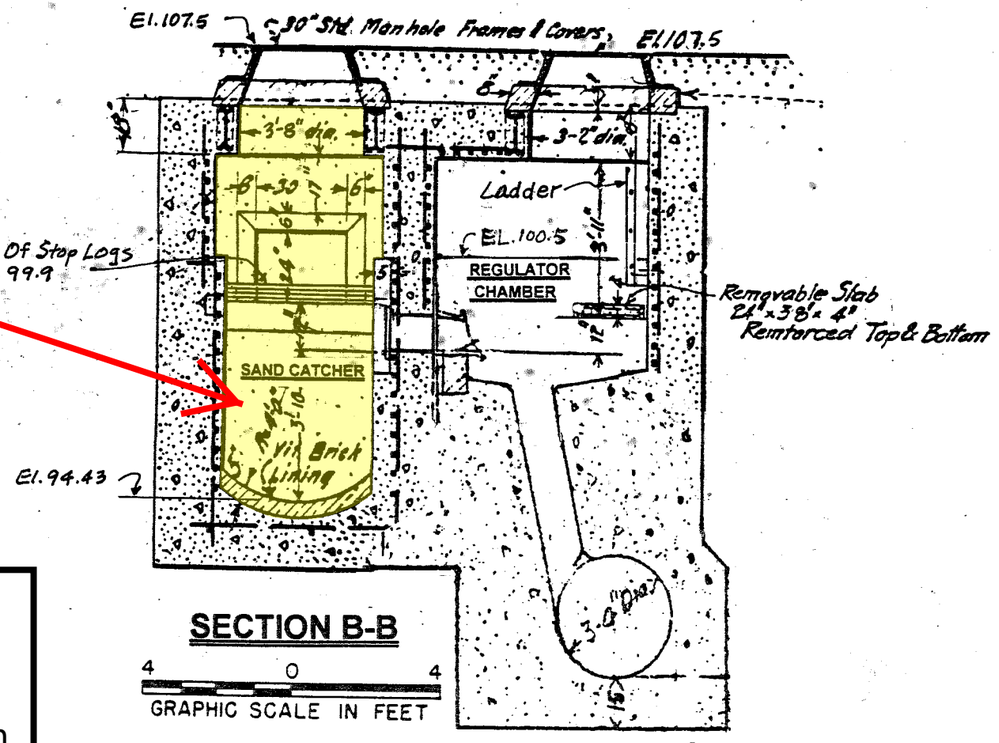
PASSAIC VALLEY SEWERAGE COMMISSIONERS

COMBINED SEWER SYSTEM FACILITIES INVENTORY AND ASSESSMENT ANALYSIS

 **FIGURE 044-2**




**1. Exposed aggregate within Sandcatcher should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.




**1. Exposed aggregate within Sandcatcher should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

Passaic Valley Sewerage Commission
Contract No. B301

.

Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

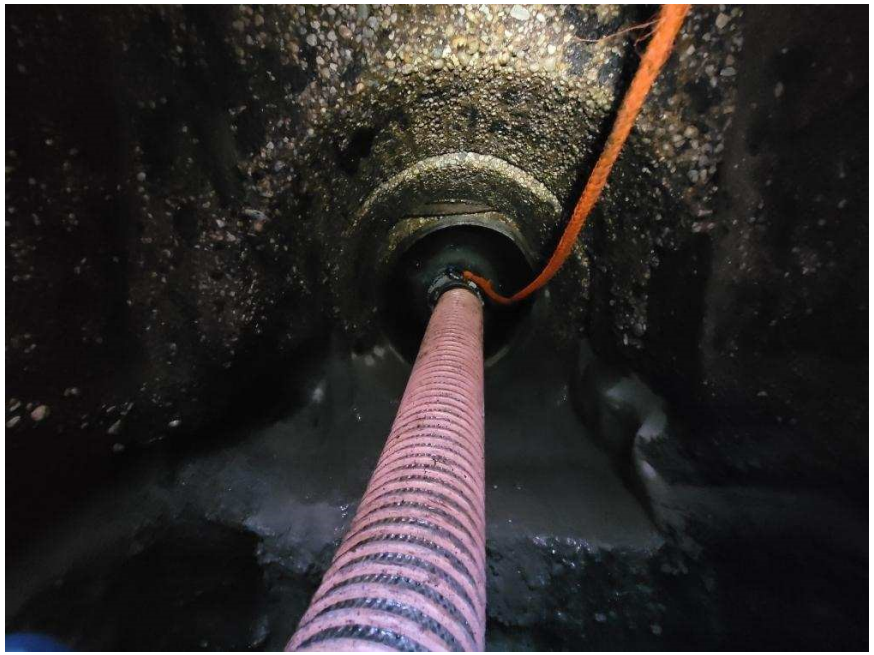
**NUMBER 044**
**BERGEN STREET REGULATOR**
**HARRISON**

**PASSAIC VALLEY SEWERAGE COMMISSIONERS**

**COMBINED SEWER SYSTEM FACILITIES INVENTORY AND ASSESSMENT ANALYSIS**

# CSO 044 Bergen Street Regulator

Sandcatcher Chamber - Before Repairs



Mortar Loss and Concrete Corrosion.

Sandcatcher Chamber - Before Repairs



Mortar Loss and Concrete Corrosion.

# CSO 044 Bergen Street Regulator

Sandcatcher Chamber - Before Repairs



Mortar Loss and Concrete Corrosion.

Sandcatcher Chamber - Before Repairs



Mortar Loss and Concrete Corrosion.

# CSO 044 Bergen Street Regulator

Sandcatcher Chamber - During Repairs



Apply Raven 755 ReSurfacer Cement.

Sandcatcher Chamber - During Repairs



Apply Raven 755 ReSurfacer Cement.

*April 28, 2023*

# CSO 044 Bergen Street Regulator

Sandcatcher Chamber - During Repairs



Apply Raven 755 ReSurfacer Cement.

Sandcatcher Chamber - During Repairs



Apply Raven 755 ReSurfacer Cement.

*April 28, 2023*

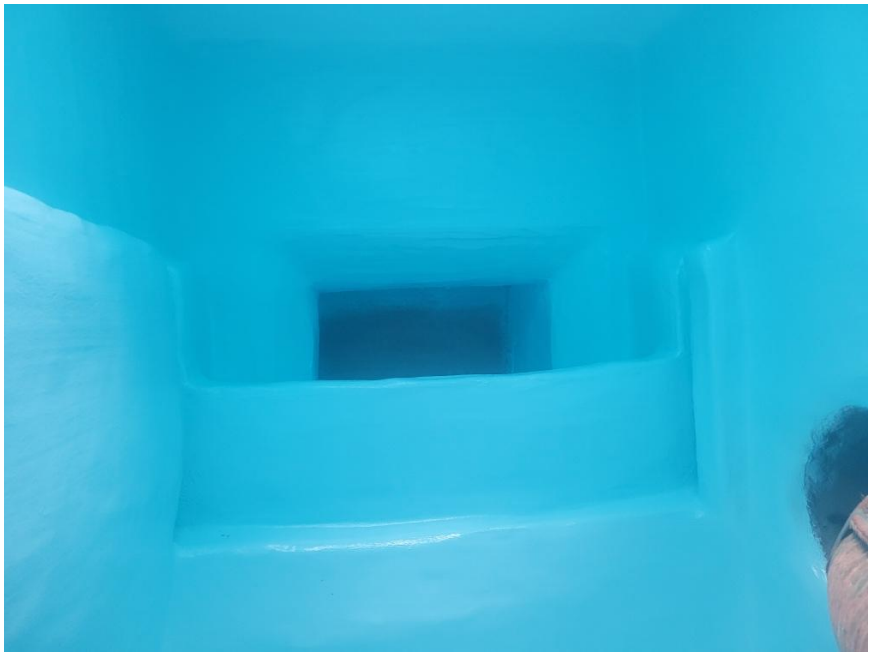
# CSO 044 Bergen Street Regulator

Sandcatcher Chamber - After Repairs



Apply Raven 405 Epoxy (125 mils).

Sandcatcher Chamber - After Repairs



Apply Raven 405 Epoxy (125 mils).

*April 28, 2023*

# CSO 044 Bergen Street Regulator

Sandcatcher Chamber - After Repairs



Apply Raven 405 Epoxy (125 mils).

Sandcatcher Chamber - After Repairs



Apply Raven 405 Epoxy (125 mils).

*April 28, 2023*

**LOCATION PLAN**




**CSO No. 043 (Middlesex Street) within Town of Harrison**

**FIGURE 043-1**

**1. Exposed aggregate within Regulator should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

(1) Total area to be coated = 143 s.f. Regulator Chamber

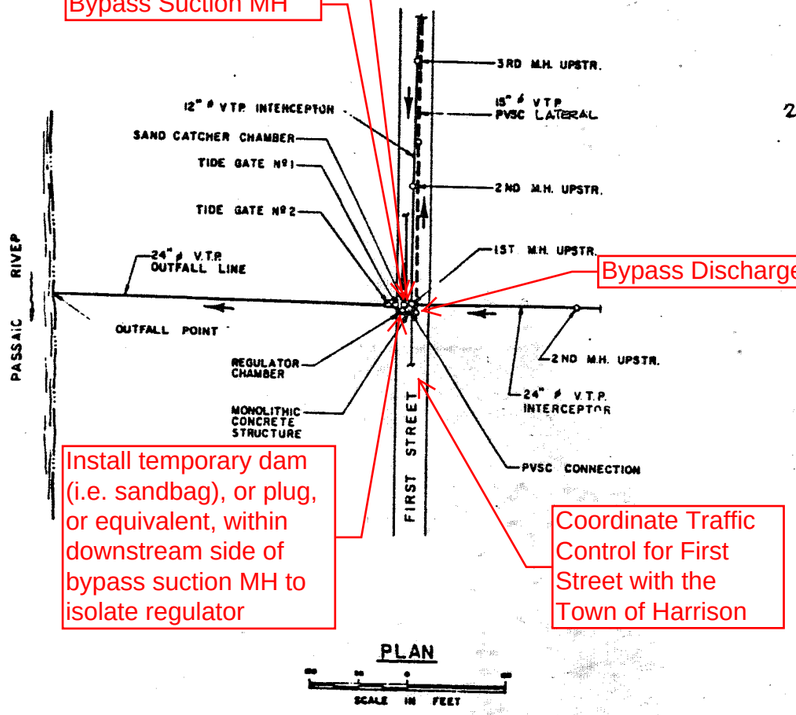
Daily Flows
Dry = 0.72 MGD
Wet = 0.98 MGD

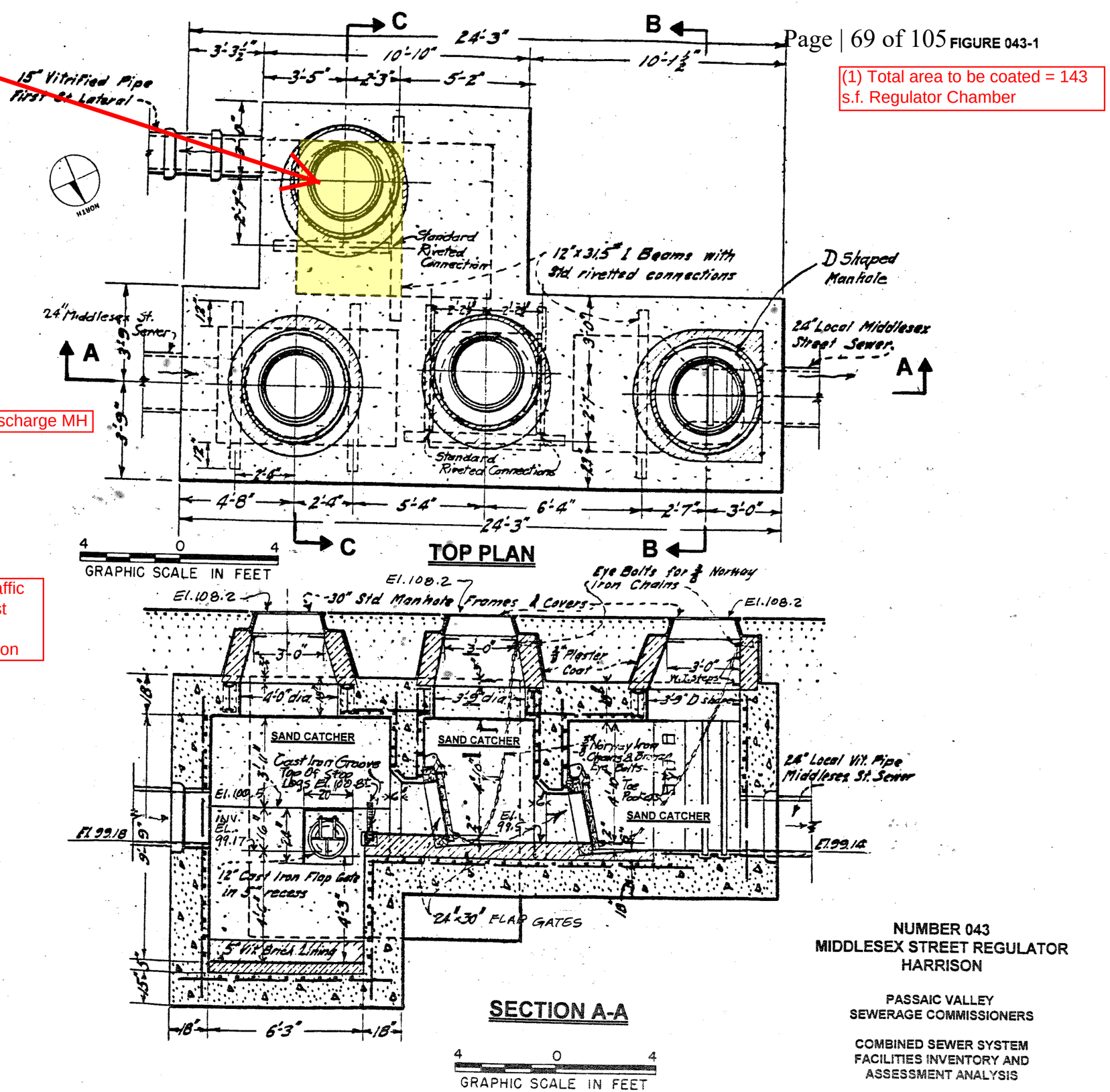
Bypass Suction MH

Bypass Discharge MH

Install temporary dam (i.e. sandbag), or plug, or equivalent, within downstream side of bypass suction MH to isolate regulator

Coordinate Traffic Control for First Street with the Town of Harrison




Passaic Valley Sewerage Commission
Contract No. B301
.
Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

NUMBER 043
MIDDLESEX STREET REGULATOR
HARRISON

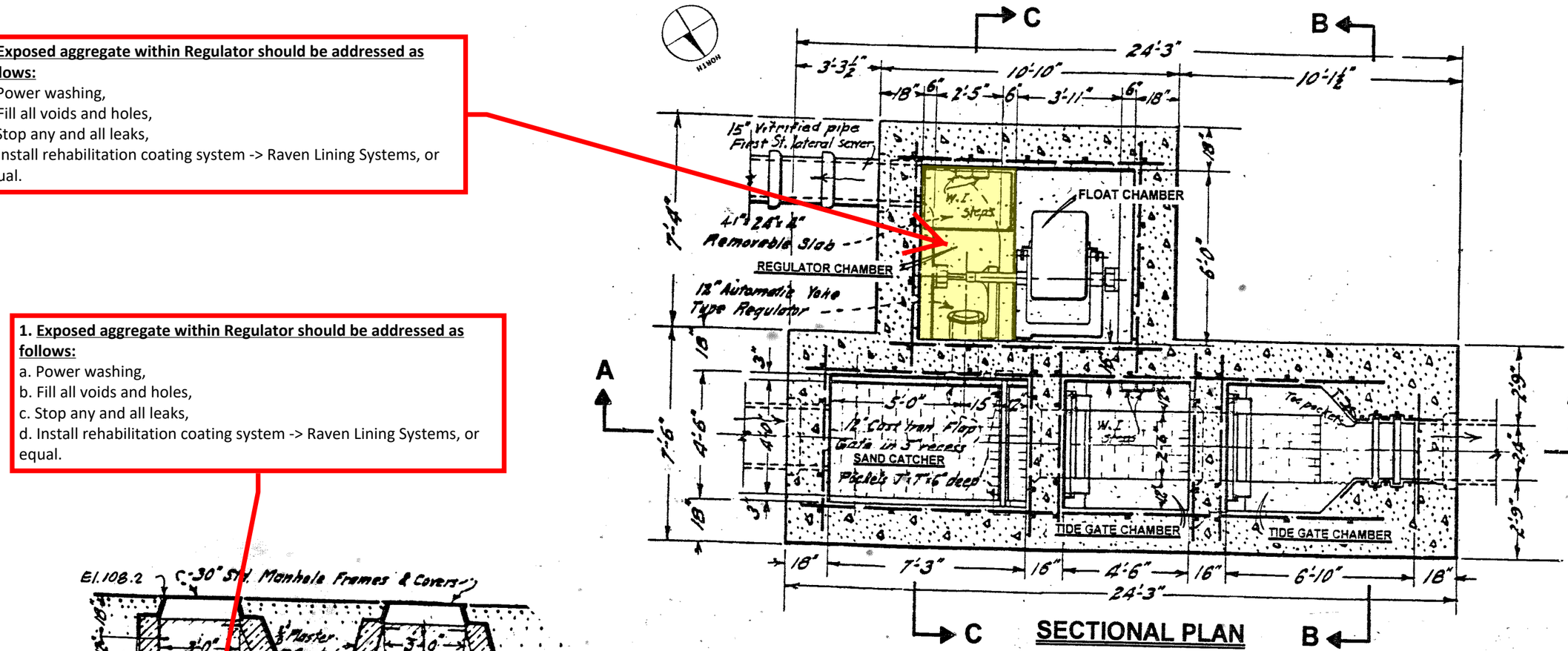
PASSAIC VALLEY
SEWERAGE COMMISSIONERS

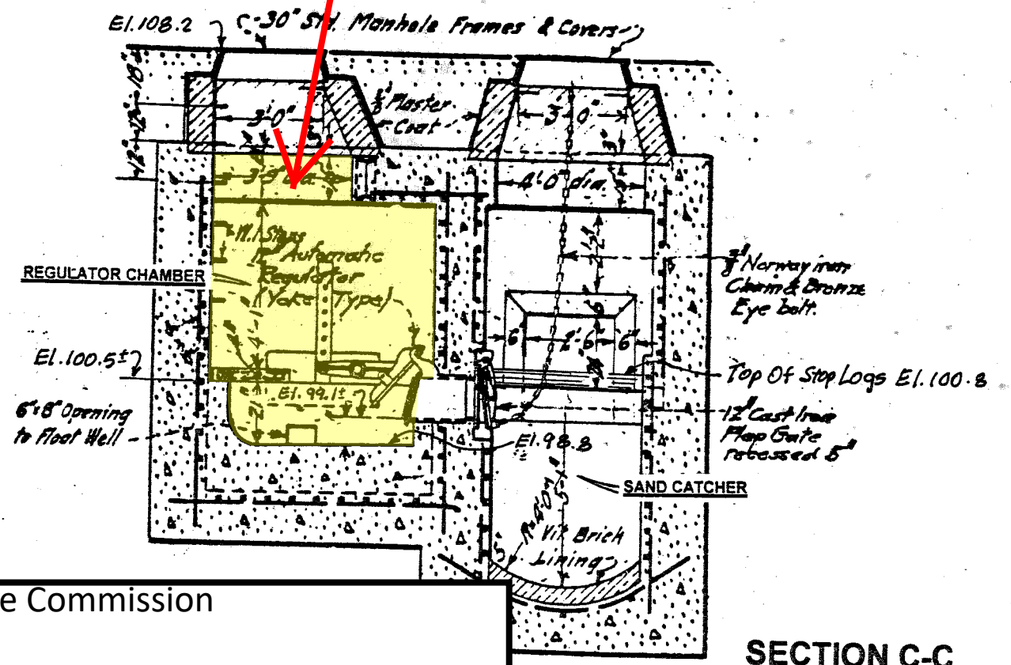
COMBINED SEWER SYSTEM
FACILITIES INVENTORY AND
ASSESSMENT ANALYSIS

 FIGURE 043-2

**1. Exposed aggregate within Regulator should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

**1. Exposed aggregate within Regulator should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.




Passaic Valley Sewerage Commission
Contract No. B301
.
Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

NUMBER 043
MIDDLESEX STREET REGULATOR
HARRISON

PASSAIC VALLEY
SEWERAGE COMMISSIONERS

COMBINED SEWER SYSTEM
FACILITIES INVENTORY AND
ASSESSMENT ANALYSIS

# CSO 043 Middlesex Street Regulator

Regulator Chamber - Before Repairs



Mortar Loss and Concrete Corrosion.

*May 4, 2023*

# CSO 043 Middlesex Street Regulator

Regulator Chamber - During Repairs



Apply Raven 755 ReSurfacer Cement.

*May 4, 2023*

# CSO 043 Middlesex Street Regulator

Regulator Chamber - After Repairs



Apply Raven 405 Epoxy (125 mils).

*May 4, 2023*

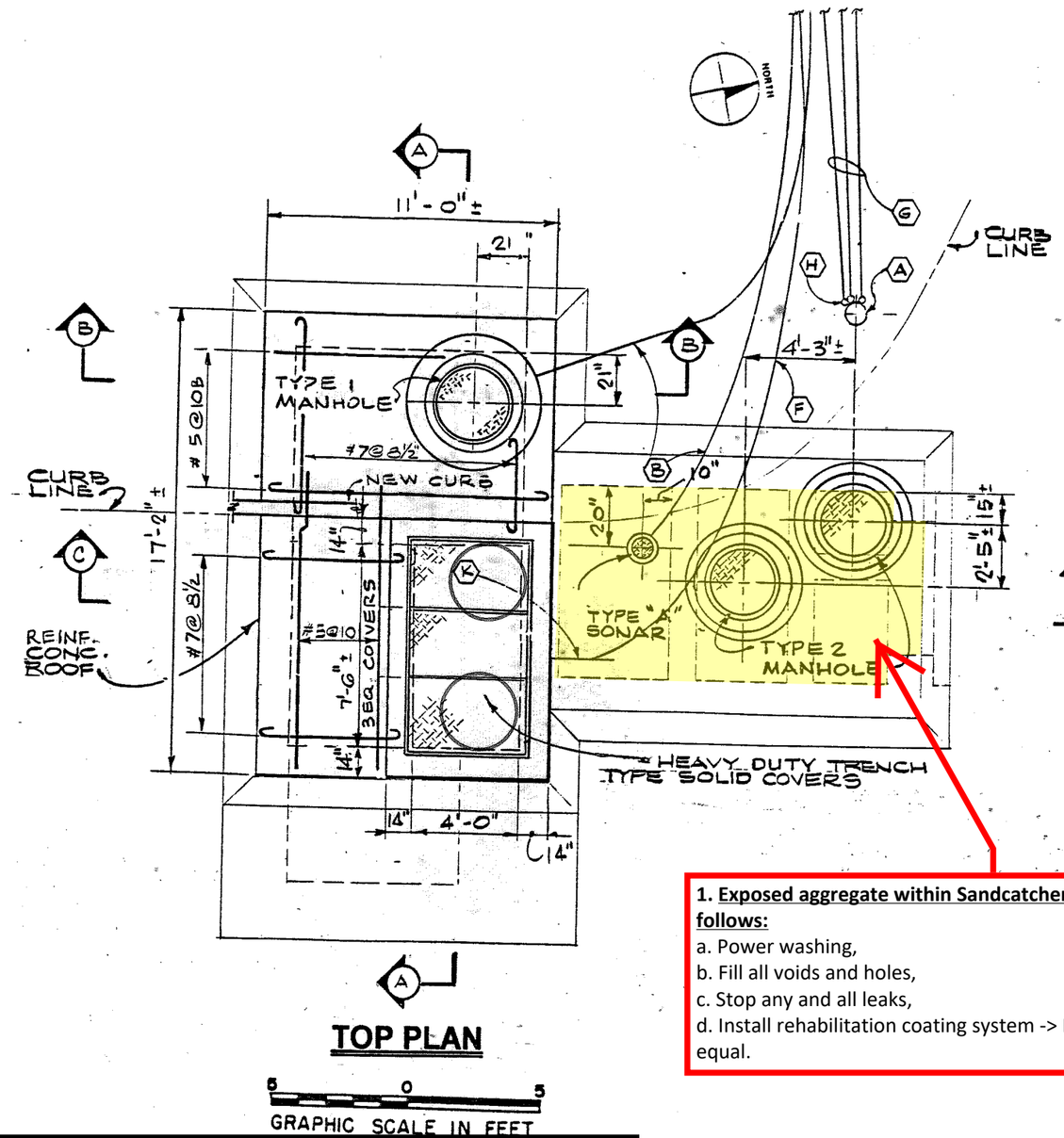
**LOCATION PLAN**




**CSO No. 046 (Verona Avenue) within City of Newark**

 **FIGURE 046-1**

(1) Total area to be coated = 532 s.f. Sandcatcher



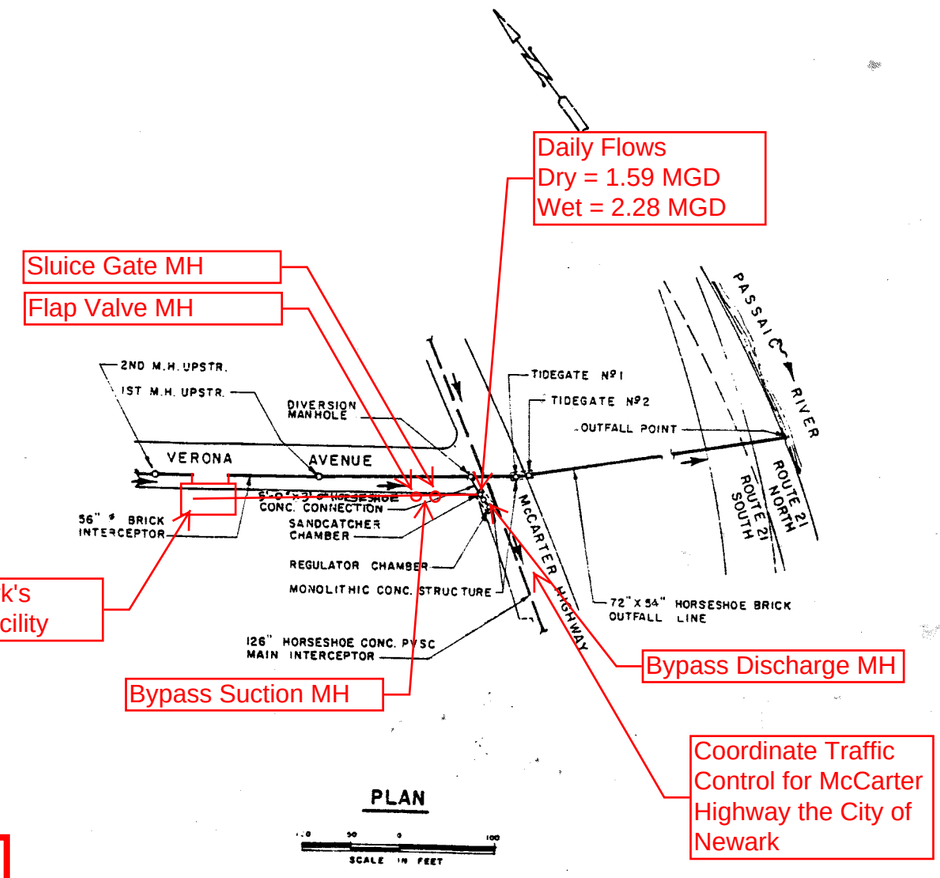

**TOP PLAN**

GRAPHIC SCALE IN FEET

Daily Flows
Dry = 1.59 MGD
Wet = 2.28 MGD

Sluice Gate MH

Flap Valve MH




City of Newark's Screening Facility

Bypass Suction MH

Bypass Discharge MH

Coordinate Traffic Control for McCarter Highway the City of Newark

**1. Exposed aggregate within Sandcatcher should be addressed as follows:**

a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

Passaic Valley Sewerage Commission
Contract No. B301
.
Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

**NUMBER 046**
**VERONA AVENUE REGULATOR**
**NEWARK**

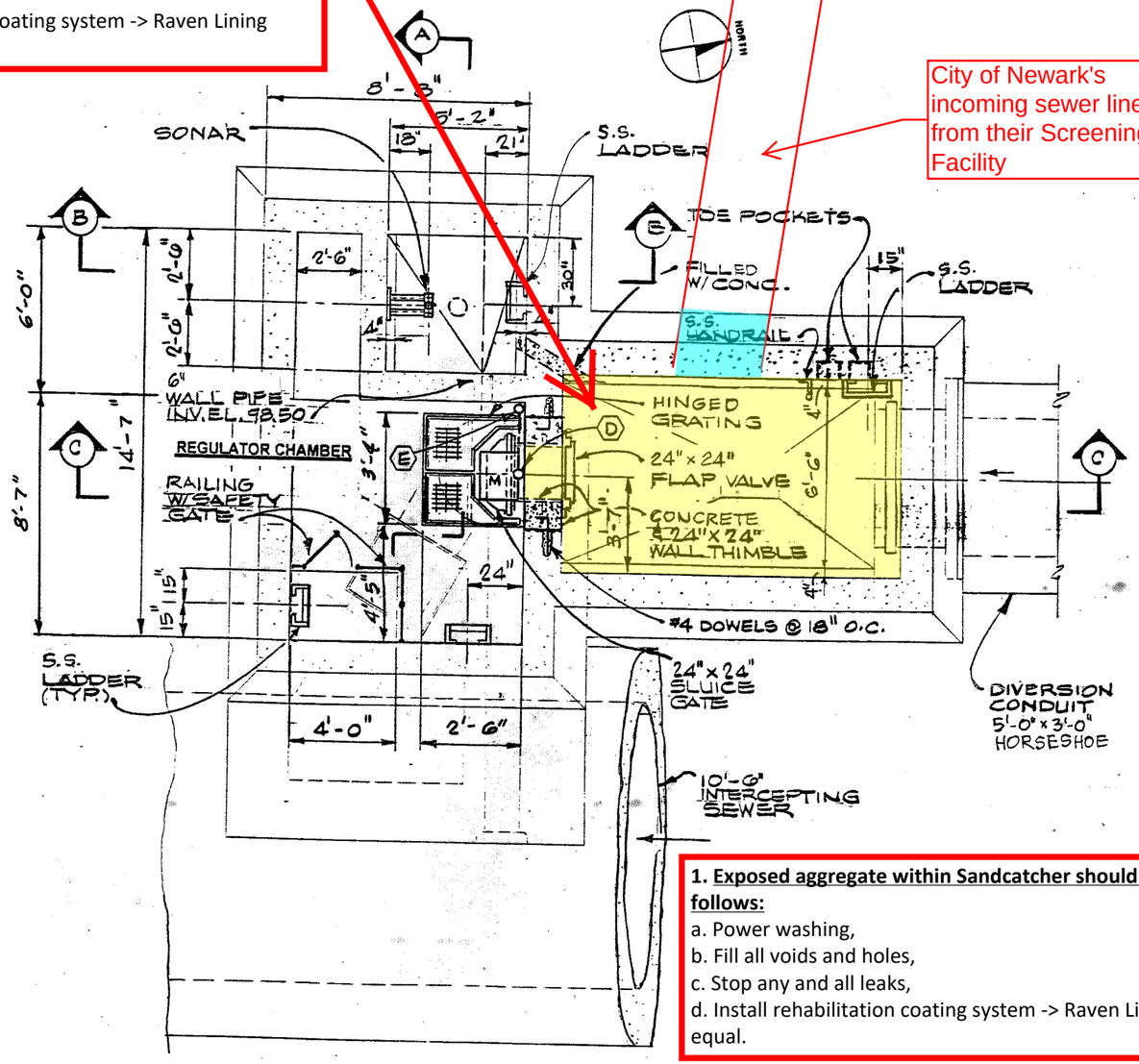
**PASSAIC VALLEY SEWERAGE COMMISSIONERS**

**COMBINED SEWER SYSTEM FACILITIES INVENTORY AND ASSESSMENT ANALYSIS**

**FIGURE 046-2**

**1. Exposed aggregate within Sandcatcher should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or Systems, or equal.

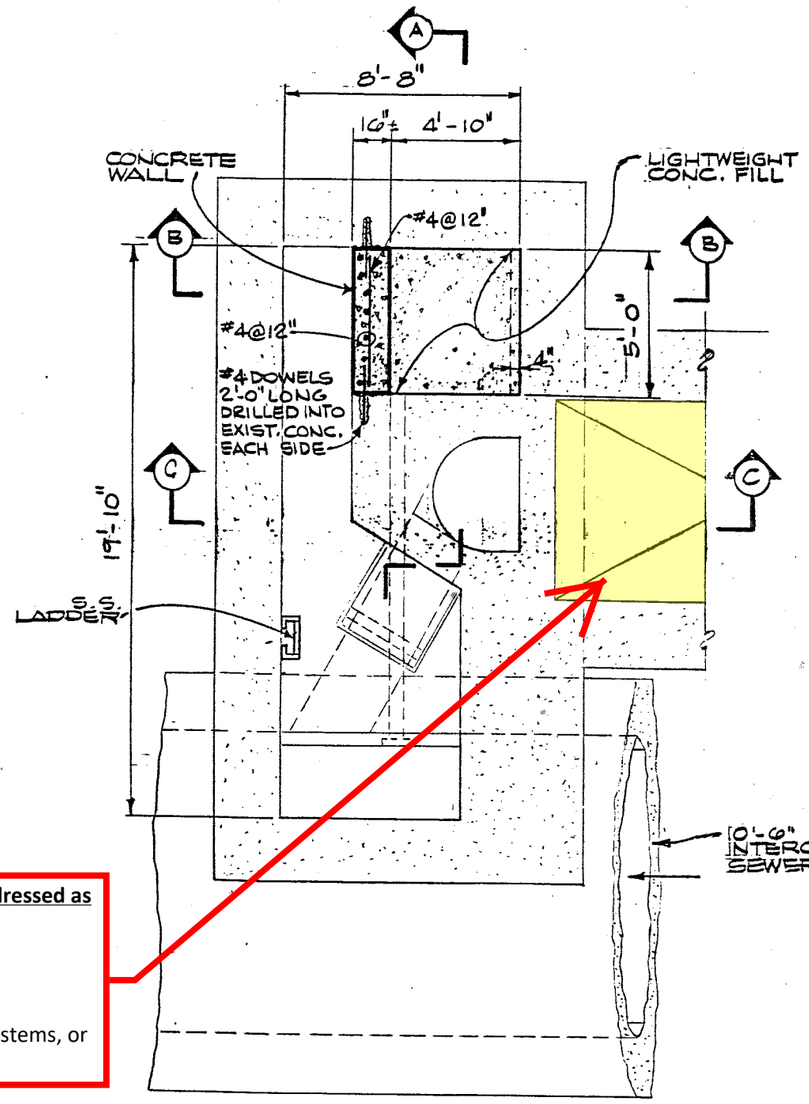
City of Newark's incoming sewer line from their Screening Facility




**SECTIONAL PLAN AT EL. 106.7**

5 0 5

**1. Exposed aggregate within Sandcatcher should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.




**SECTIONAL PLAN AT EL. 96.5**

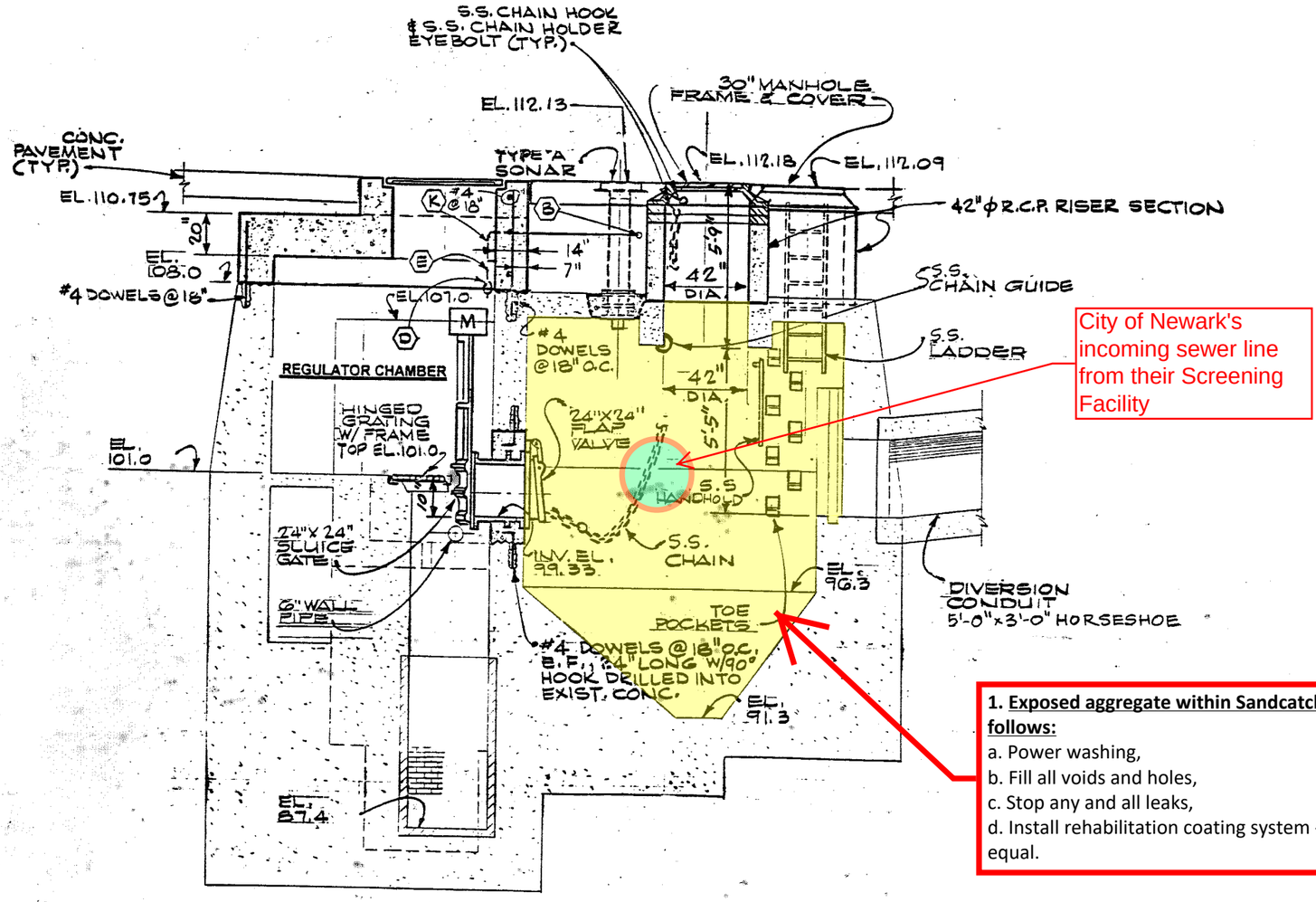
5 0 5
GRAPHIC SCALE IN FEET

Passaic Valley Sewerage Commission
Contract No. B301
.
Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

**NUMBER 046**
**VERONA AVENUE REGULATOR**
**NEWARK**

**PASSAIC VALLEY SEWERAGE COMMISSIONERS**

**COMBINED SEWER SYSTEM FACILITIES INVENTORY AND ASSESSMENT ANALYSIS**




City of Newark's incoming sewer line from their Screening Facility

**1. <u>Exposed aggregate within Sandcatcher should be addressed as follows:</u>**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

## SECTION C-C

5 0 5
GRAPHIC SCALE IN FEET

Passaic Valley Sewerage Commission
Contract No. B301
.
Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

**NUMBER 046**
**VERONA AVENUE REGULATOR**
**NEWARK**

**PASSAIC VALLEY SEWERAGE COMMISSIONERS**

**COMBINED SEWER SYSTEM FACILITIES INVENTORY AND ASSESSMENT ANALYSIS**

**LOCATION PLAN**




**CSO No. 058 (Polk Street) & CSO No. 059 (Freeman Street) within City of Newark**

 **FIGURE 058-1**

(1) Total area to be coated = 1,112 s.f. Sandcatcher

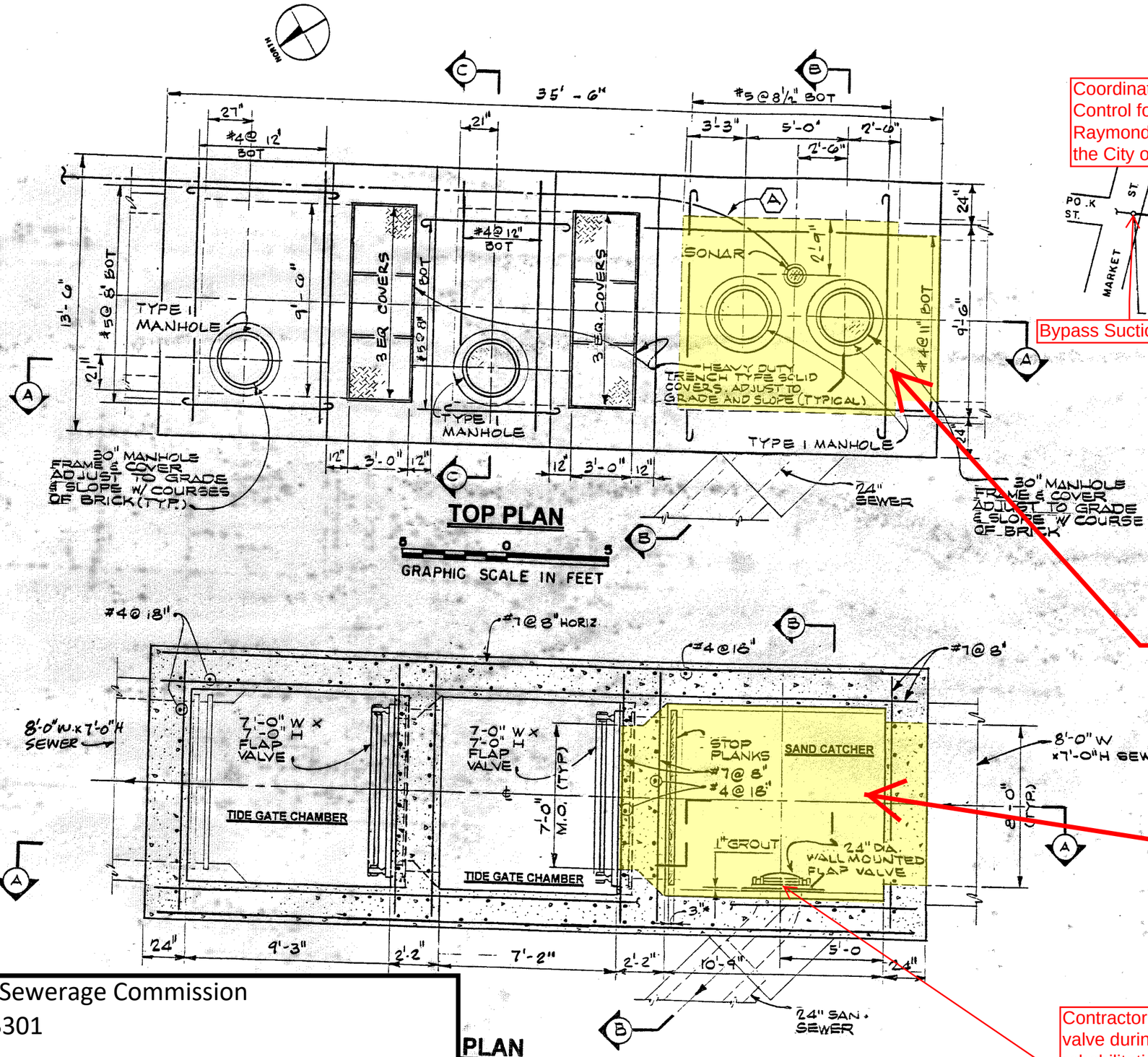
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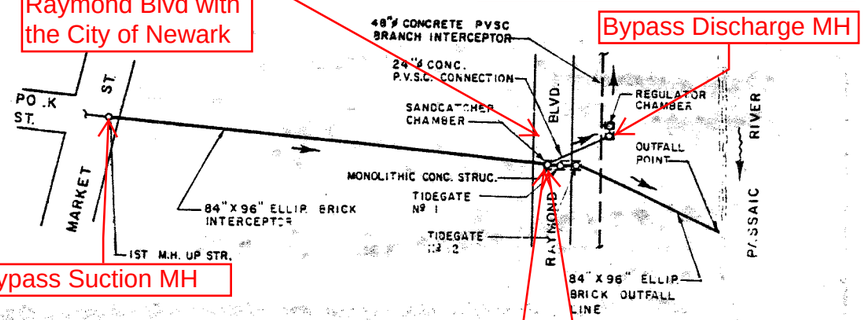
(2) Total area to be coated = 568 s.f. Regulator

Coordinate Traffic Control for Raymond Blvd with the City of Newark

Bypass Discharge MH

Bypass Suction MH




Install temporary dam (i.e. sandbag), or plug, or equivalent, within downstream side of bypass suction MH to isolate sandcatcher and regulator

Daily Flows
Dry = 1.63 MGD
Wet = 1.66 MGD

**1. Exposed aggregate within Sandcatcher should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

**1. Exposed aggregate within Sandcatcher should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

Contractor shall protect existing flap valve during the installation of the rehabilitation coating system, including the temporary removal and reinstallation.

Passaic Valley Sewerage Commission
Contract No. B301

.

Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

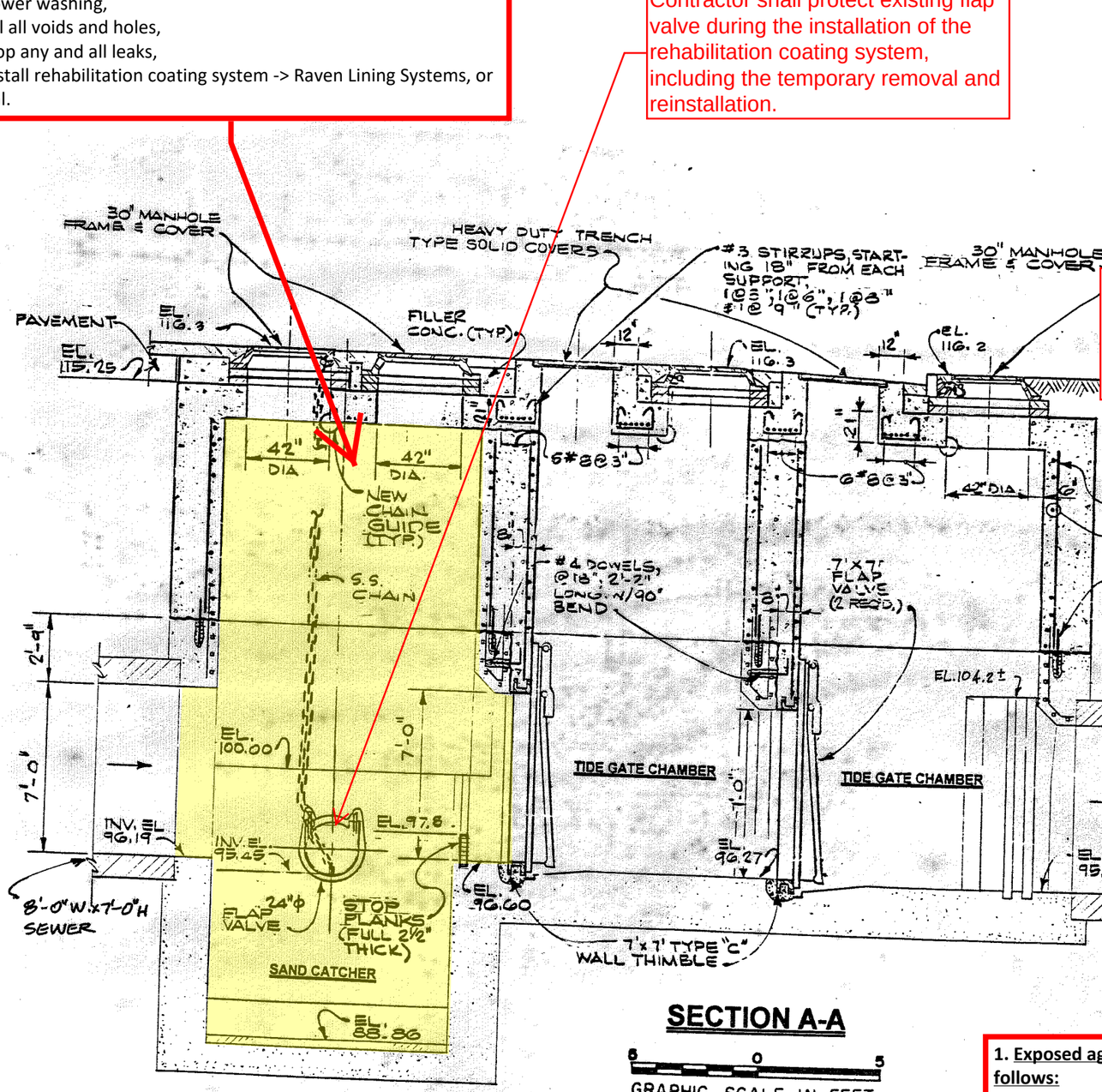
**NUMBER 058**
**POLK STREET REGULATOR**
**NEWARK**

**PASSAIC VALLEY SEWERAGE COMMISSIONERS**

**COMBINED SEWER SYSTEM FACILITIES INVENTORY AND ASSESSMENT ANALYSIS**

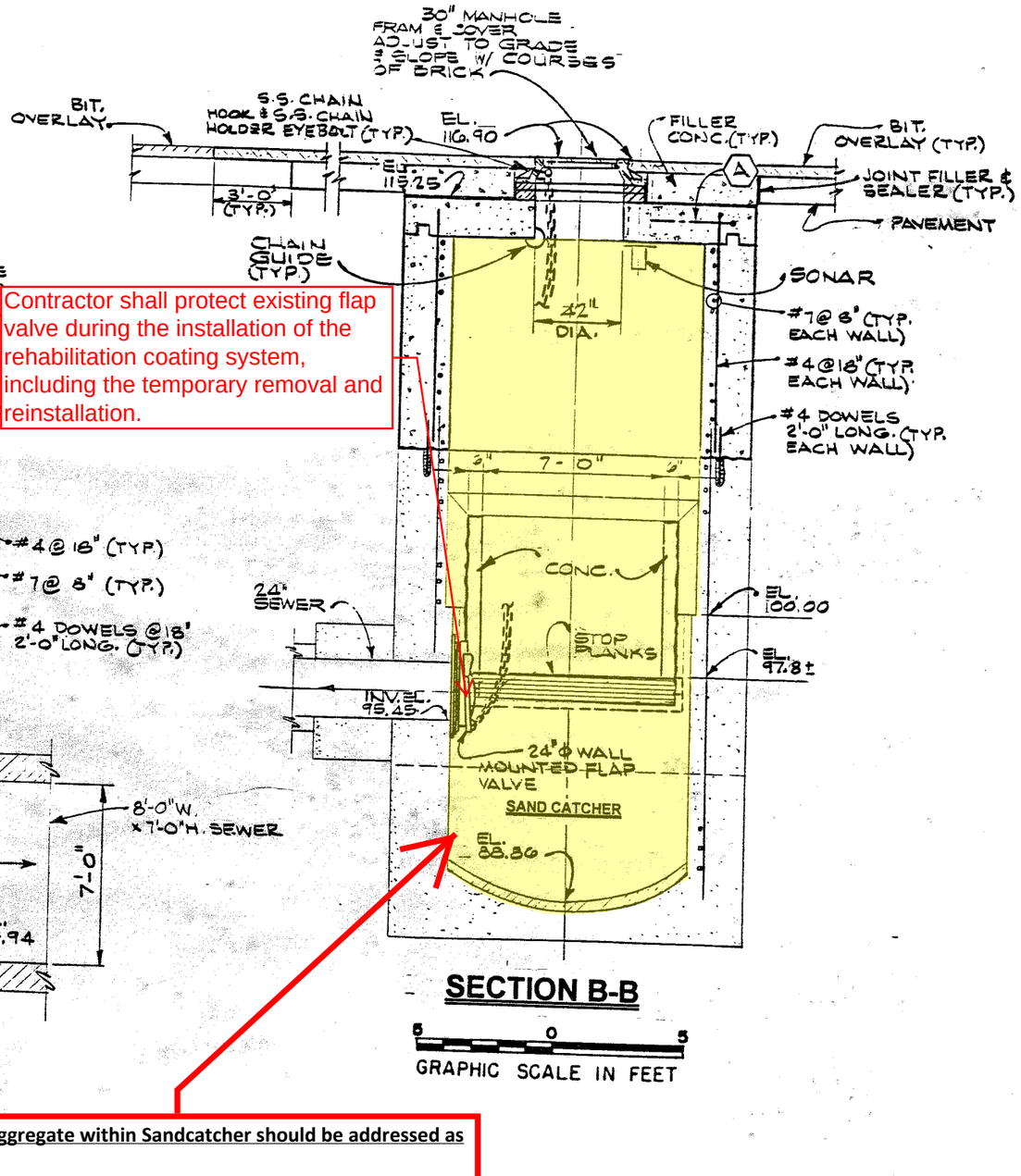
**1. Exposed aggregate within Sandcatcher should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

Contractor shall protect existing flap valve during the installation of the rehabilitation coating system, including the temporary removal and reinstallation.




## SECTION A-A

GRAPHIC SCALE IN FEET




## SECTION B-B

GRAPHIC SCALE IN FEET

**1. Exposed aggregate within Sandcatcher should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

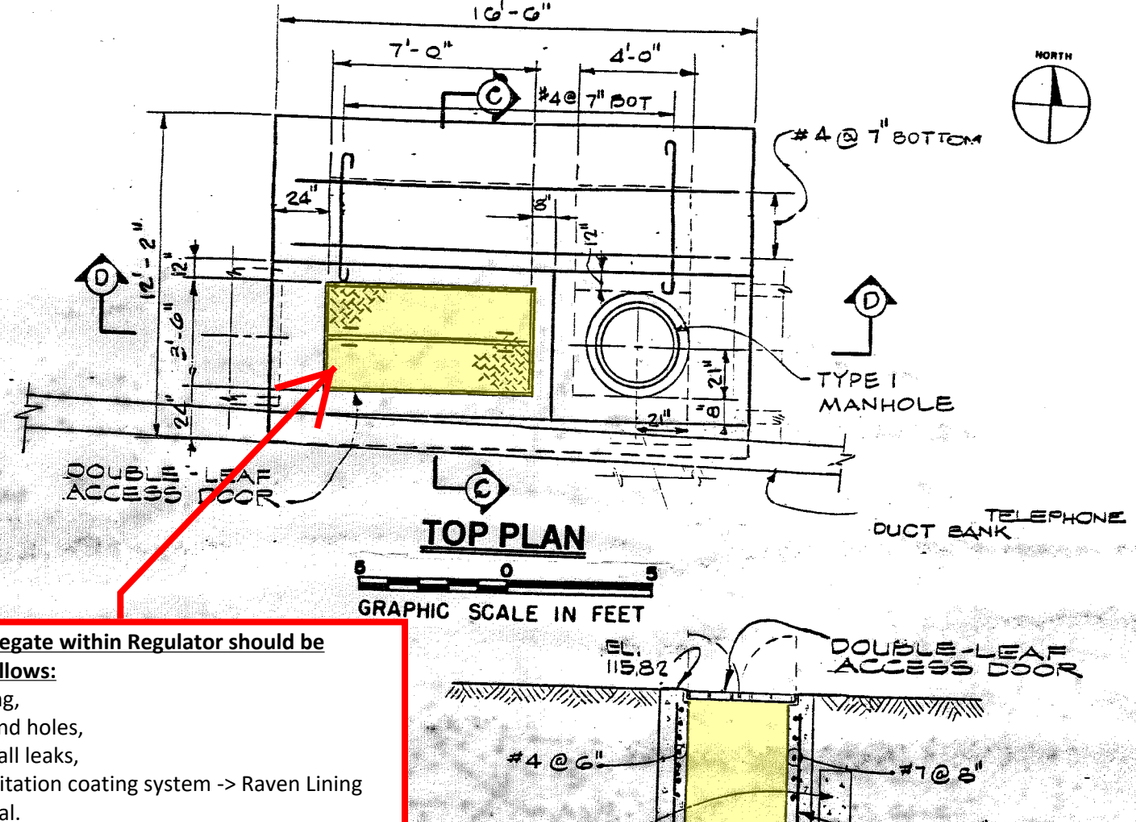
Passaic Valley Sewerage Commission
Contract No. B301
.
Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

**NUMBER 058**
**POLK STREET REGULATOR**
**NEWARK**

**PASSAIC VALLEY SEWERAGE COMMISSIONERS**

**COMBINED SEWER SYSTEM FACILITIES INVENTORY AND ASSESSMENT ANALYSIS**

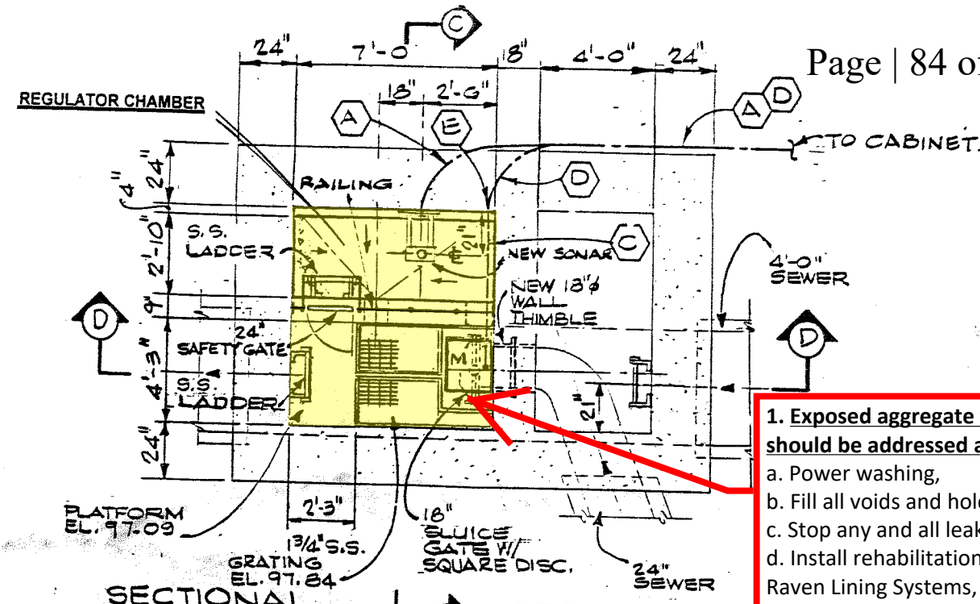
 FIGURE 058-3




TOP PLAN

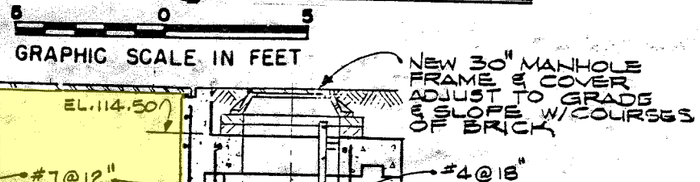



GRAPHIC SCALE IN FEET

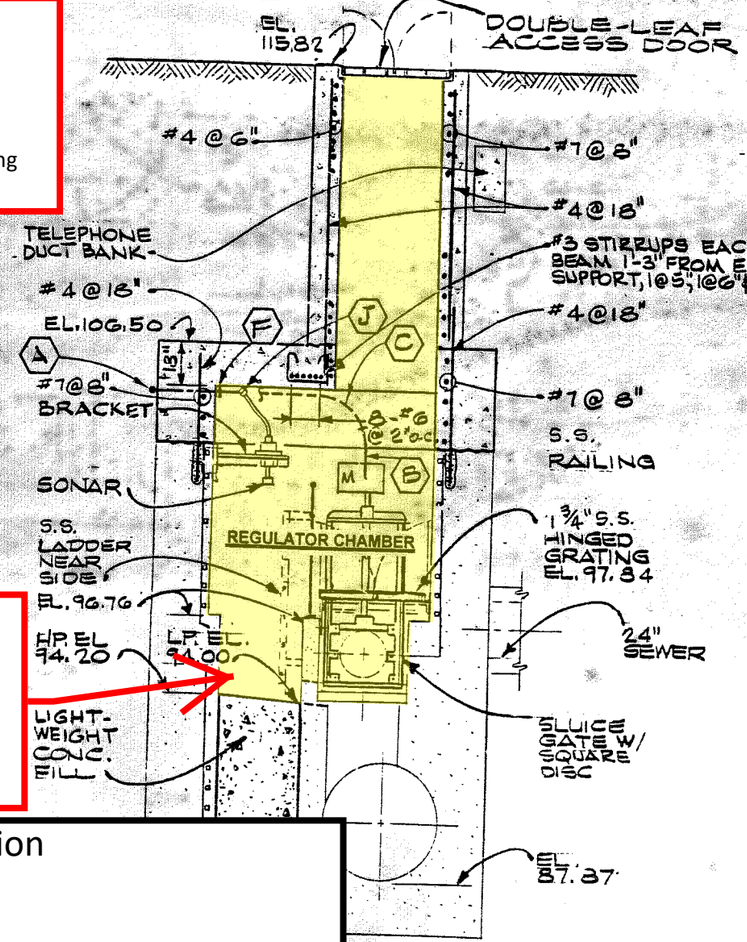



SECTIONAL

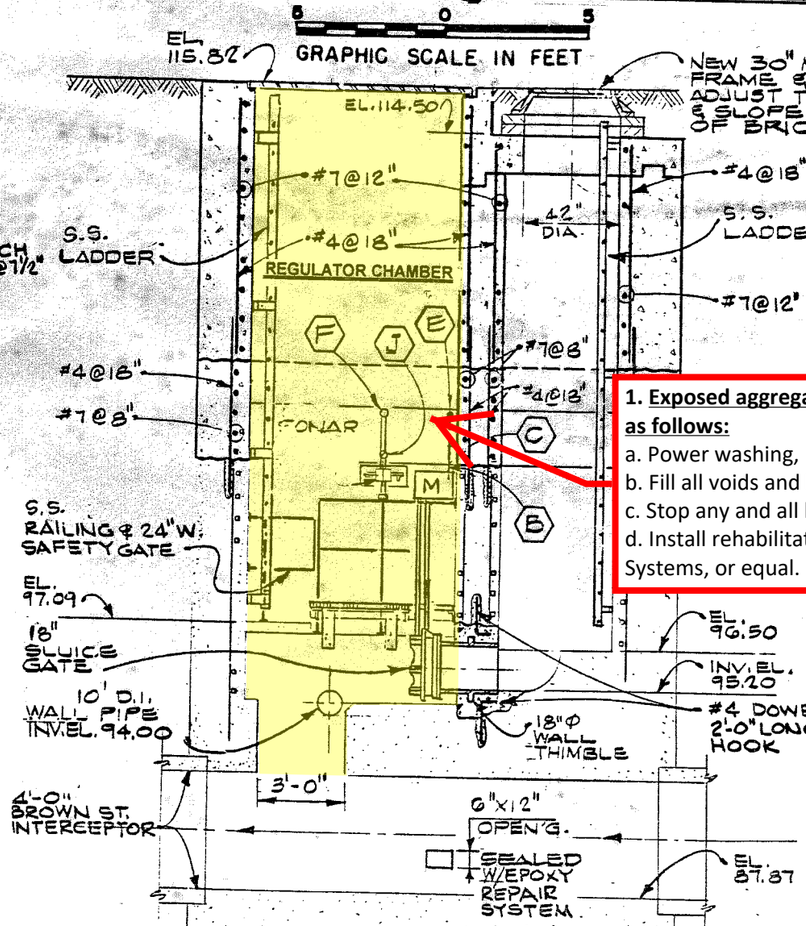
SECTIONAL PLAN




GRAPHIC SCALE IN FEET




N C-C




SECTION D-D

**1. Exposed aggregate within Regulator should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

**1. Exposed aggregate within Regulator should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

**1. Exposed aggregate within Regulator should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

**1. Exposed aggregate within Regulator should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

Passaic Valley Sewerage Commission
Contract No. B301
.
Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

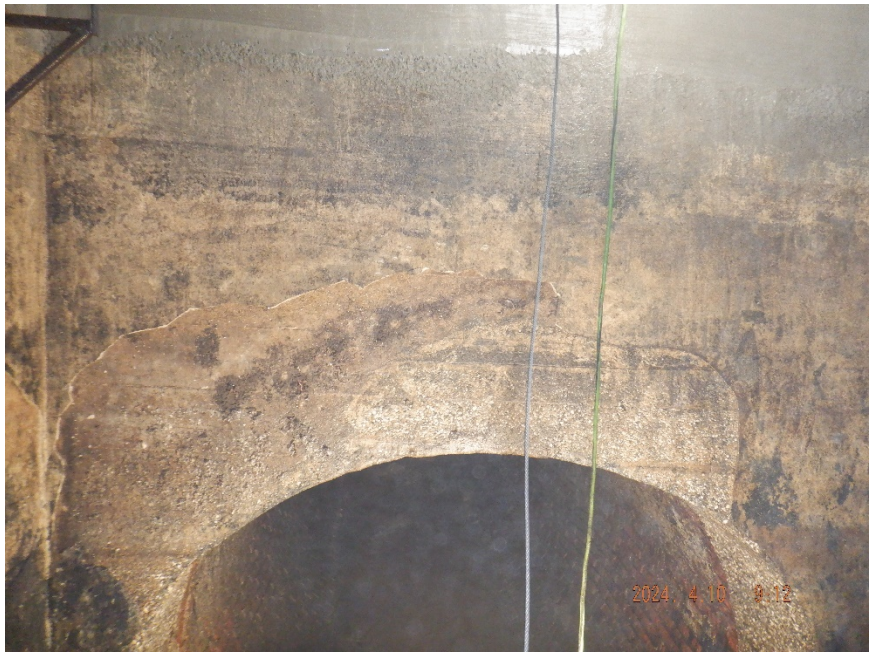
**NUMBER 058**
**POLK STREET REGULATOR**
**NEWARK**

PASSAIC VALLEY SEWERAGE COMMISSIONERS

COMBINED SEWER SYSTEM FACILITIES INVENTORY AND ASSESSMENT ANALYSIS

# CSO 058 Polk Street Regulator

Sandcatcher Chamber - Before Repairs



Mortar Loss and Concrete Corrosion.

Sandcatcher Chamber - Before Repairs



Mortar Loss and Concrete Corrosion.

*May 10, 2024*

# CSO 058 Polk Street Regulator

Sandcatcher Chamber - Before Repairs




Mortar Loss and Concrete Corrosion.

Sandcatcher Chamber - Before Repairs




Mortar Loss and Concrete Corrosion.

*May 10, 2024*

# CSO 058 Polk Street Regulator

Sandcatcher Chamber - Before Repairs




Mortar Loss and Concrete Corrosion.

Sandcatcher Chamber - Before Repairs




Mortar Loss and Concrete Corrosion.

*May 10, 2024*

# CSO 058 Polk Street Regulator

Sandcatcher Chamber - During Repairs




Apply Raven 755 ReSurfacer Cement.

Sandcatcher Chamber - During Repairs




Apply Raven 755 ReSurfacer Cement.

*May 10, 2024*

# CSO 058 Polk Street Regulator

Sandcatcher Chamber - During Repairs




Apply Raven 755 ReSurfacer Cement.

Sandcatcher Chamber - During Repairs

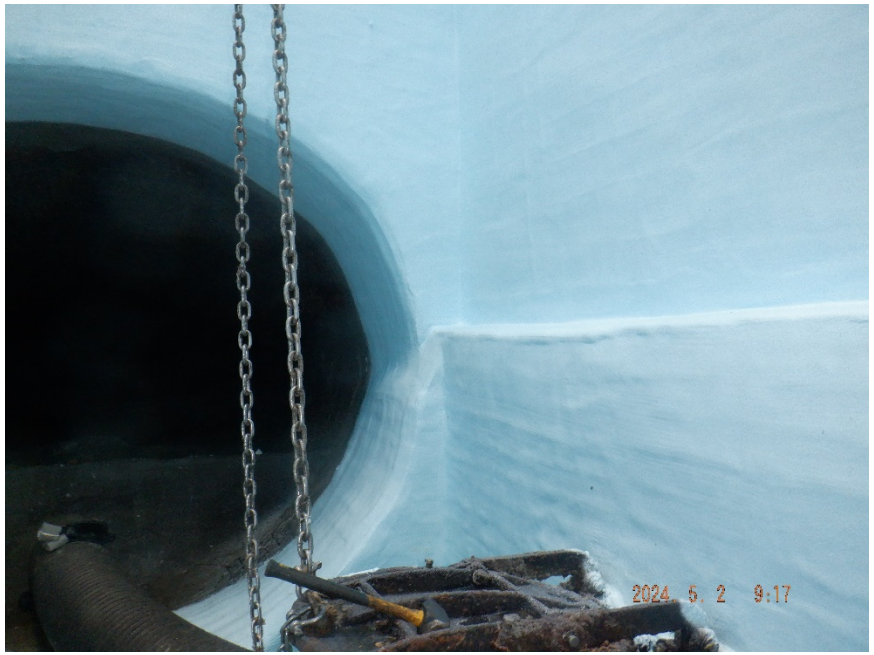



Apply Raven 755 ReSurfacer Cement.

*May 10, 2024*

# CSO 058 Polk Street Regulator

Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

*May 10, 2024*

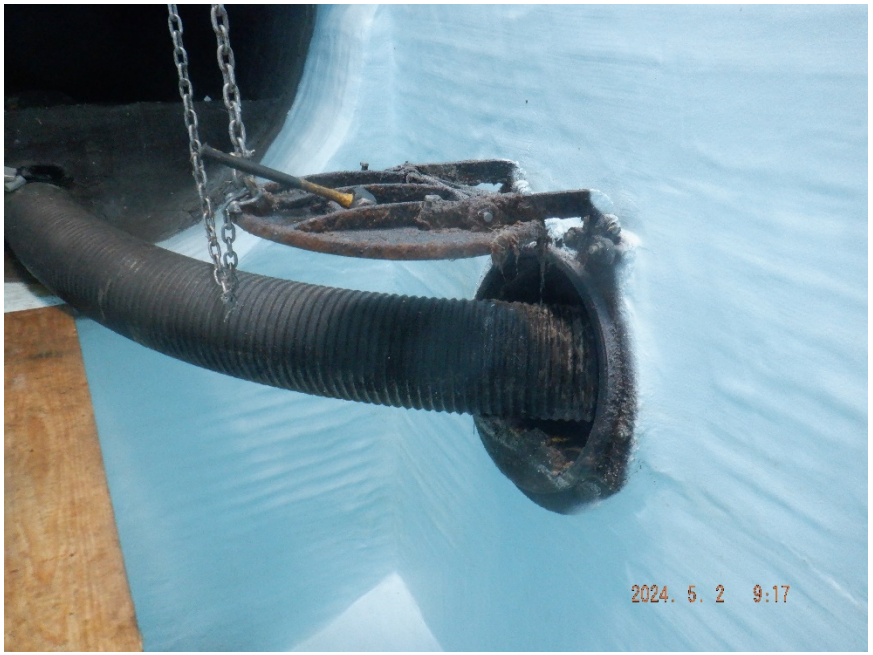
# CSO 058 Polk Street Regulator

Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

*May 10, 2024*

# CSO 058 Polk Street Regulator

Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

*May 10, 2024*

# CSO 058 Polk Street Regulator

Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

*May 10, 2024*

# CSO 058 Polk Street Regulator

Regulator Chamber - During Repairs




Apply Raven 755 ReSurfacer Cement.

Regulator Chamber - During Repairs



Apply Raven 755 ReSurfacer Cement.

*May 10, 2024*

# CSO 058 Polk Street Regulator

Regulator Chamber - After Repairs



Apply Raven 405 Epoxy (125 mils).

Regulator Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

*May 10, 2024*

 FIGURE 059-1

**1. Exposed aggregate within Sandcatcher should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

**1. Exposed aggregate within Sandcatcher should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

Contractor shall protect existing flap valve during the installation of the rehabilitation coating system, including the temporary removal and reinstallation.

(1) Total area to be coated = 609 s.f. Sandcatcher
.
(2) Total area to be coated = 629 s.f. Regulator

24" Flow through plug with 12" bypass piping

Install temporary dam (i.e. sandbag), or plug, or equivalent, within downstream side of bypass suction MH to isolate sandcatcher and regulator

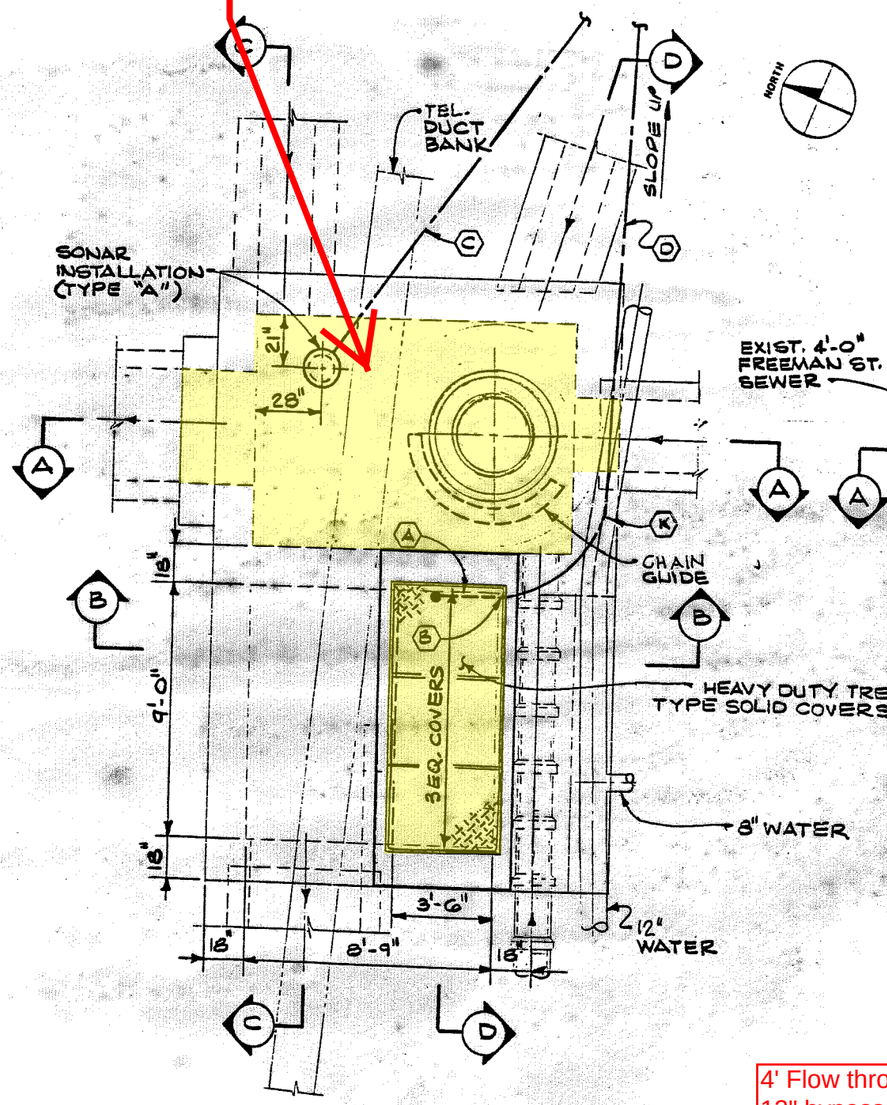
Daily Flows
Dry = 1.00 MGD
Wet = 1.20 MGD

Bypass Discharge MH

Bypass Suction MH

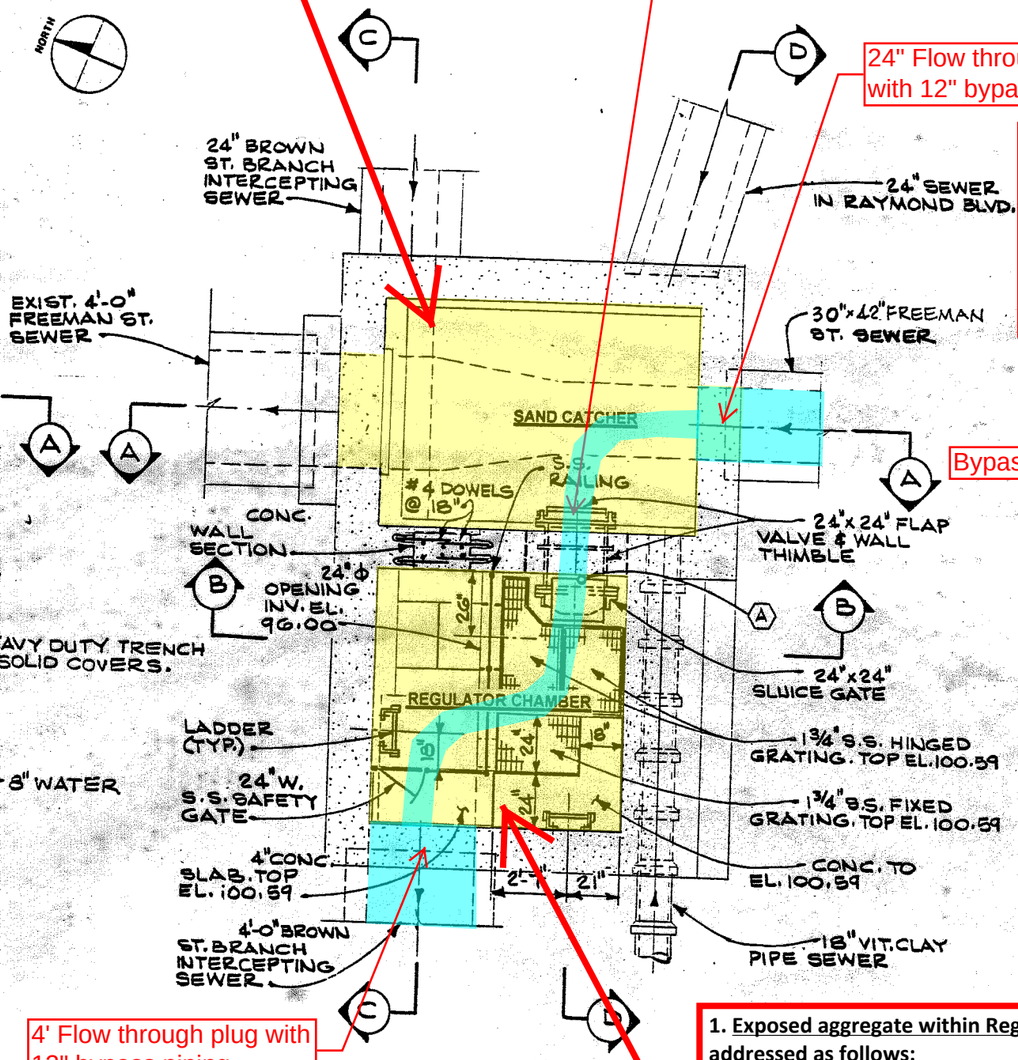
Coordinate Traffic Control for Raymond Boulevard with the City of Newark

4' Flow through plug with 12" bypass piping



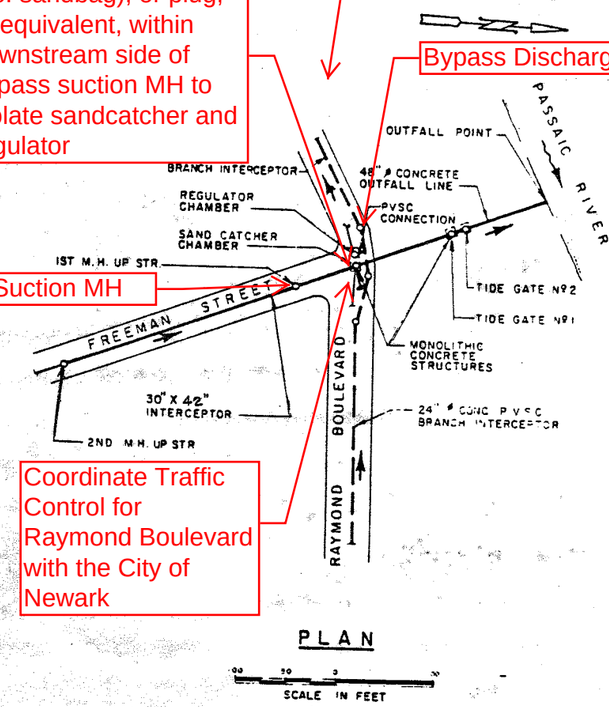

TOP PLAN

SCALE IN FEET




SECTIONAL PLAN

GRAPHIC SCALE IN FEET




PLAN

SCALE IN FEET

**1. Exposed aggregate within Regulator should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

Passaic Valley Sewerage Commission
Contract No. B301
.
Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

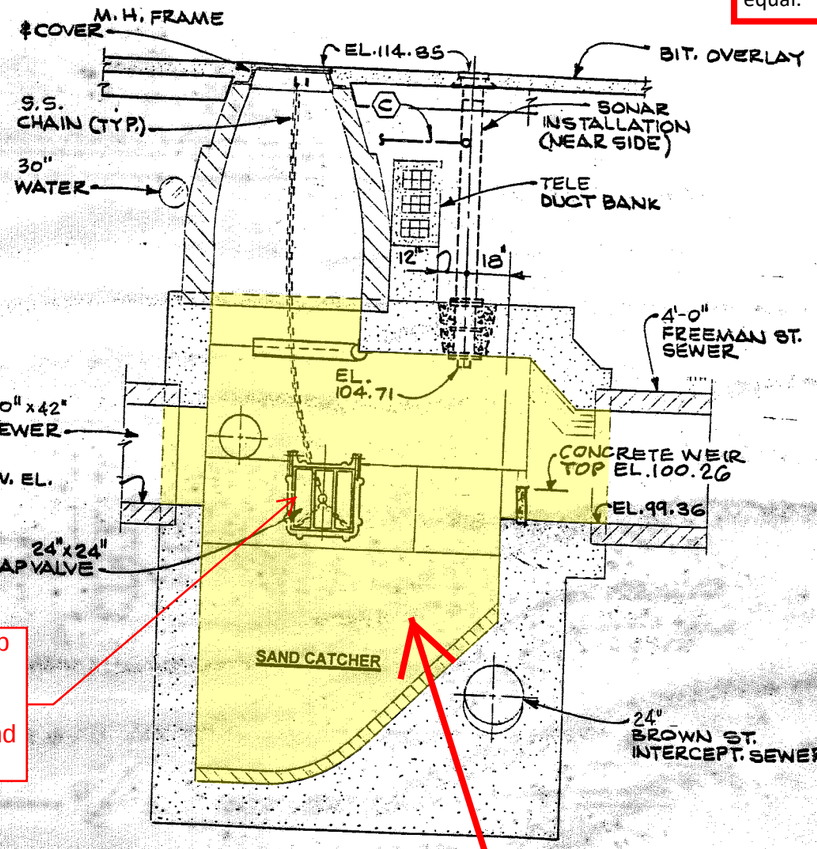
**NUMBER 059**
**FREEMAN STREET REGULATOR**
**NEWARK**

**PASSAIC VALLEY SEWERAGE COMMISSIONERS**

**COMBINED SEWER SYSTEM FACILITIES INVENTORY AND ASSESSMENT ANALYSIS**

FIGURE 059-2

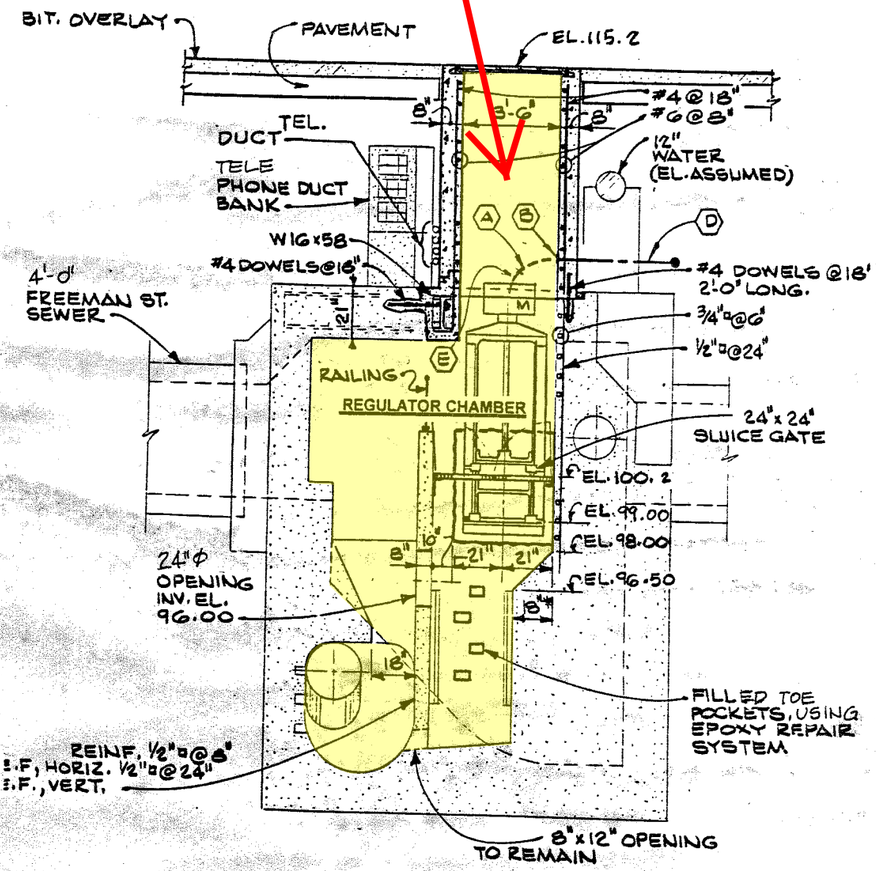
**1. Exposed aggregate within Regulator should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.




Contractor shall protect existing flap valve during the installation of the rehabilitation coating system, including the temporary removal and reinstallation.

## SECTION A-A

5 0 5
GRAPHIC SCALE IN FEET




## SECTION B-B

5 0 5
GRAPHIC SCALE IN FEET

**1. Exposed aggregate within Sandcatcher should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

Passaic Valley Sewerage Commission
Contract No. B301
.
Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

NUMBER 059
FREEMAN STREET REGULATOR
NEWARK

PASSAIC VALLEY SEWERAGE COMMISSIONERS

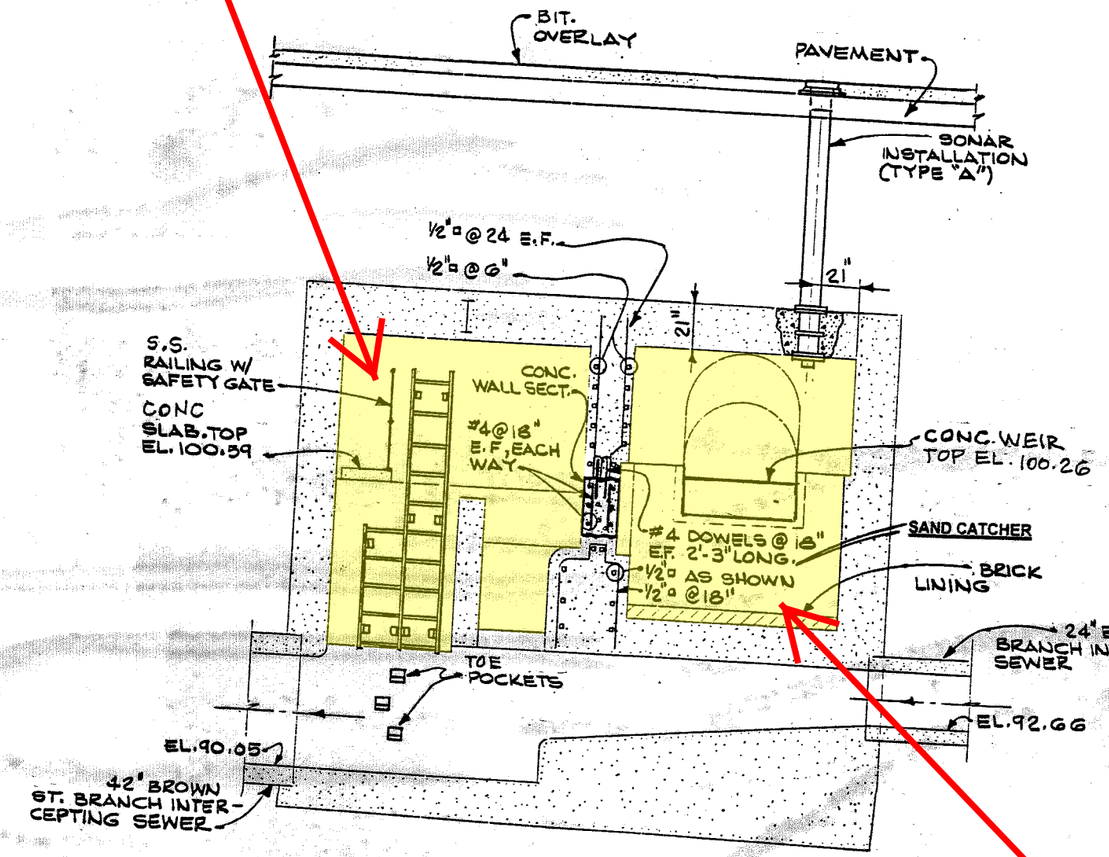
COMBINED SEWER SYSTEM FACILITIES INVENTORY AND ASSESSMENT ANALYSIS

FIGURE 059-3

**1. Exposed aggregate within Regulator should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

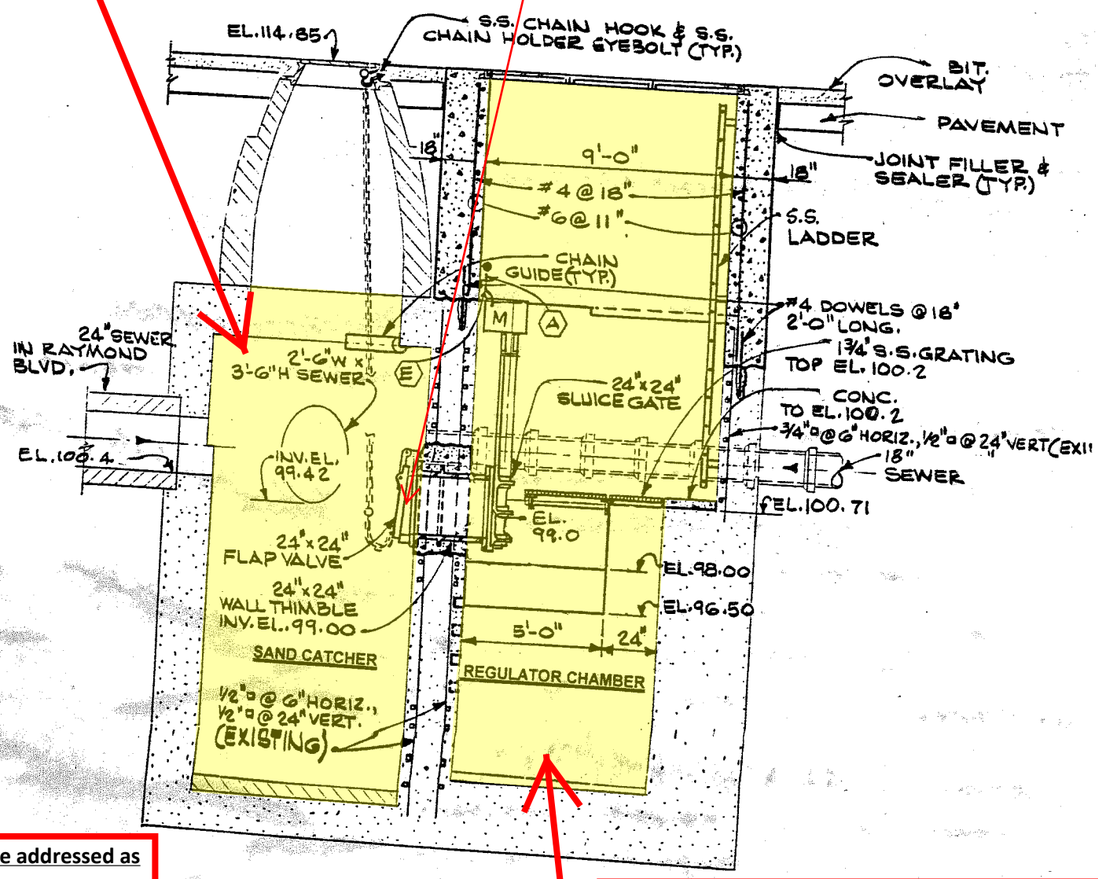
**1. Exposed aggregate within Sandcatcher should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

Contractor shall protect existing flap valve during the installation of the rehabilitation coating system, including the temporary removal and reinstallation.




SECTION C-C

GRAPHIC SCALE IN FEET (5 0 5)




SECTION D-D

GRAPHIC SCALE IN FEET (5 0 5)

**1. Exposed aggregate within Sandcatcher should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

**1. Exposed aggregate within Regulator should be addressed as follows:**
a. Power washing,
b. Fill all voids and holes,
c. Stop any and all leaks,
d. Install rehabilitation coating system -> Raven Lining Systems, or equal.

Passaic Valley Sewerage Commission
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.
Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark

**NUMBER 059**
**FREEMAN STREET REGULATOR**
**NEWARK**

**PASSAIC VALLEY SEWERAGE COMMISSIONERS**

**COMBINED SEWER SYSTEM**

# CSO 059 Freeman Street Regulator

Sandcatcher Chamber - Before Repairs




Mortar Loss and Concrete Corrosion.

Sandcatcher Chamber - Before Repairs




Mortar Loss and Concrete Corrosion.

# CSO 059 Freeman Street Regulator

Sandcatcher Chamber - Before Repairs



Mortar Loss and Concrete Corrosion.

Sandcatcher Chamber - Before Repairs



Mortar Loss and Concrete Corrosion.

*March 27, 2024*

# CSO 059 Freeman Street Regulator

Sandcatcher Chamber - During Repairs




Apply Raven 755 ReSurfacer Cement.

Sandcatcher Chamber - During Repairs




Apply Raven 755 ReSurfacer Cement.

*March 27, 2024*

# CSO 059 Freeman Street Regulator

Sandcatcher Chamber - During Repairs




Apply Raven 755 ReSurfacer Cement.

Sandcatcher Chamber - During Repairs




Apply Raven 755 ReSurfacer Cement.

*March 27, 2024*

# CSO 059 Freeman Street Regulator

Sandcatcher Chamber - After Repairs



Apply Raven 405 Epoxy (125 mils).

Sandcatcher Chamber - After Repairs



Apply Raven 405 Epoxy (125 mils).

*March 27, 2024*

# CSO 059 Freeman Street Regulator

Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

Sandcatcher Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

*March 27, 2024*

# CSO 059 Freeman Street Regulator

Regulator Chamber - Before Repairs



Mortar Loss and Concrete Corrosion.

Regulator Chamber - Before Repairs



Mortar Loss and Concrete Corrosion.

# CSO 059 Freeman Street Regulator

Regulator Chamber - Before Repairs



Mortar Loss and Concrete Corrosion.

Regulator Chamber - Before Repairs



Mortar Loss and Concrete Corrosion.

*March 27, 2024*

# CSO 059 Freeman Street Regulator

Regulator Chamber - During Repairs



Apply Raven 755 ReSurfacer Cement.

Regulator Chamber - During Repairs



Apply Raven 755 ReSurfacer Cement.

*March 27, 2024*

# CSO 059 Freeman Street Regulator

Regulator Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

Regulator Chamber - After Repairs




Apply Raven 405 Epoxy (125 mils).

*March 27, 2024*

# Contract No. B301
# Miscellaneous Repairs CSO Regulator Chambers within Paterson, Harrison, Kearny, and Newark Project

* THANK YOU !!!

* QUESTIONS ???

**Eric Granholm, P.E., ENV SP** | Senior Civil Engineer I
(P) 973-817-5802 | email: EGranholm@pvsc.com

600 Wilson Avenue, Newark, New Jersey 07105
P (973) 344-1800
www.nj.gov/pvsc

*"Protecting Public Health and the Environment"*