

STANDARD  
CONSTRUCTION  
DETAILS

STORM DRAINAGE

AUGUST 2010



# TABLE OF CONTENTS

## STORM DRAINAGE

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|  |        |
|--|--------|
| GENERAL NOTES  | SD-D01 |
| CONCRETE & ASPHALT STREET & DRIVE REPAIR   | SD-D02 |
| RCP STORM SEWER PIPE BEDDING   | SD-D03 |
| WATER MAIN LOWERING & UTILITY SUPPORT DETAILS                                    | SD-D04 |
| CONNECTION TO EXISTING RCP STORM DRAIN PIPE COLLAR                               | SD-D05 |
| TYPE "A" STORM SEWER MANHOLE ( FOR 18" TO 30" RCP)                               | SD-D06 |
| TYPE "B" STORM SEWER MANHOLE ( FOR 33" TO 78" RCP)                               | SD-D07 |
| STORM MANHOLE FRAME & COVER  | SD-D08 |
| WYE INLET DETAIL   | SD-D09 |
| STANDARD CURB INLET  | SD-D10 |
| RECESSED CURB INLET  | SD-D11 |
| STANDARD CURB INLET: 4', 6', 8' & 10' INLETS                                     | SD-D12 |
| TYPICAL SECTION "B": STD. & RECESSED CURB INLETS<br>(4', 6', 8' & 10' INLETS)    | SD-D13 |
| REINFORCING STEEL SCHEDULE: 4', 6', 8' & 10' INLETS                              | SD-D14 |
| RECESSED BRICK TOP CURB INLET: 4', 6', 8' & 10' INLETS                           | SD-D15 |
| BRICK TOP STD. CURB INLET: 4', 6', 8' & 10' INLETS                               | SD-D16 |
| TYPICAL SECTION "B": BRICK TOP CURB INLETS<br>(4', 6', 8' & 10' INLETS)          | SD-D17 |
| REINFORCING STEEL SCHEDULE: 4', 6', 8' & 10' INLETS<br>(BRICK ON INLET)          | SD-D18 |
| STD. CURB INLET: 12', 14', 16' & 20' INLETS                                      | SD-D19 |
| TYPICAL SECTION "B": STD. & RECESSED CURB INLETS<br>(12', 14', 16' & 20' INLETS) | SD-D20 |
| REINFORCING STEEL SCHEDULE: 12', 14', 16' & 20' INLETS                           | SD-D21 |
| REINFORCING BAR DIAGRAMS   | SD-D22 |
| PRECAST CURB INLET   | SD-D23 |
| INLET FRAME & COVER  | SD-D24 |
| COMBINATION INLET: TWO GRATE INLET   | SD-D25 |
| COMBINATION INLET: THREE GRATE INLET   | SD-D26 |
| COMBINATION INLET: FOUR GRATE INLET  | SD-D27 |
| TYPICAL SECTION "B": COMBINATION INLET<br>(TWO, THREE & FOUR GRATE INLETS)       | SD-D28 |
| COMBINATION INLETS: GRATE DETAILS & BAR DIAGRAMS                                 | SD-D29 |
| TWO GRATE INLET  | SD-D30 |
| THREE GRATE INLET  | SD-D31 |
| FOUR GRATE INLET   | SD-D32 |
| SIX GRATE INLET  | SD-D33 |
| GRATE DETAIL   | SD-D34 |
| STORM RELATED FLUMES   | SD-D35 |
| SUBSURFACE DRAINAGE DETAIL   | SD-D36 |

## STORM SEWER – GENERAL NOTES:

1. ALL CONCRETE DRAINAGE STRUCTURES SHALL BE CLASS C CONCRETE MINIMUM.
2. ALL CRUSHED STONE SHALL BE 3/4", PASSING #4 SIEVE (GRADE 4).
3. ALL FIELD JOINTS WILL BE APPROVED BY THE TOWN ENGINEER IF NECESSARY. FIELD JOINTS SHALL BE WIPED ON THE INSIDE AND OUTSIDE TO PROVIDE FOR SMOOTH FLOW OF WATER.
4. RAMNECK COMPOUND OR APPROVED EQUAL SHALL BE USED FOR JOINT SEALS.
5. ALL STORM SEWER PIPE SHALL BE CAMERA INSPECTED AFTER THE INSTALLATION OF ALL PAVING AND UTILITIES AND PRIOR TO FINAL ACCEPTANCE OF THE PROJECT.

*Addison!*

PUBLIC WORKS DEPARTMENT

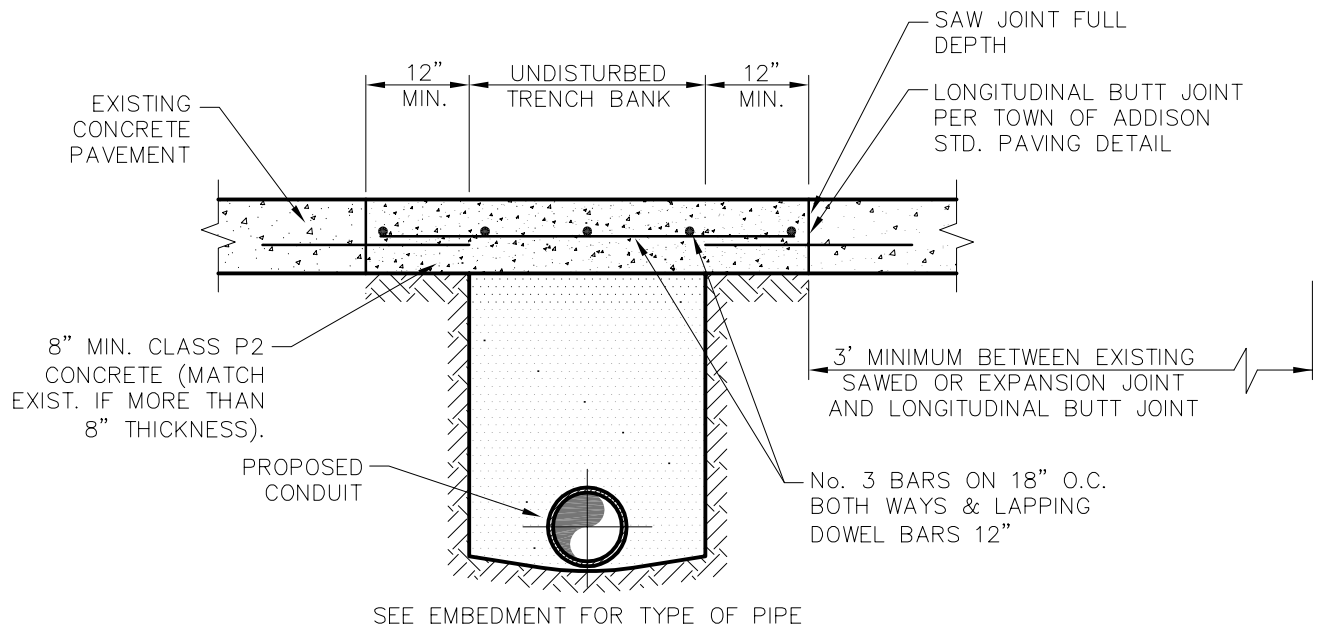
STORM SEWER  
GENERAL NOTES

STANDARD CONSTRUCTION DETAILS  
STORM DRAINAGE

DATE:  
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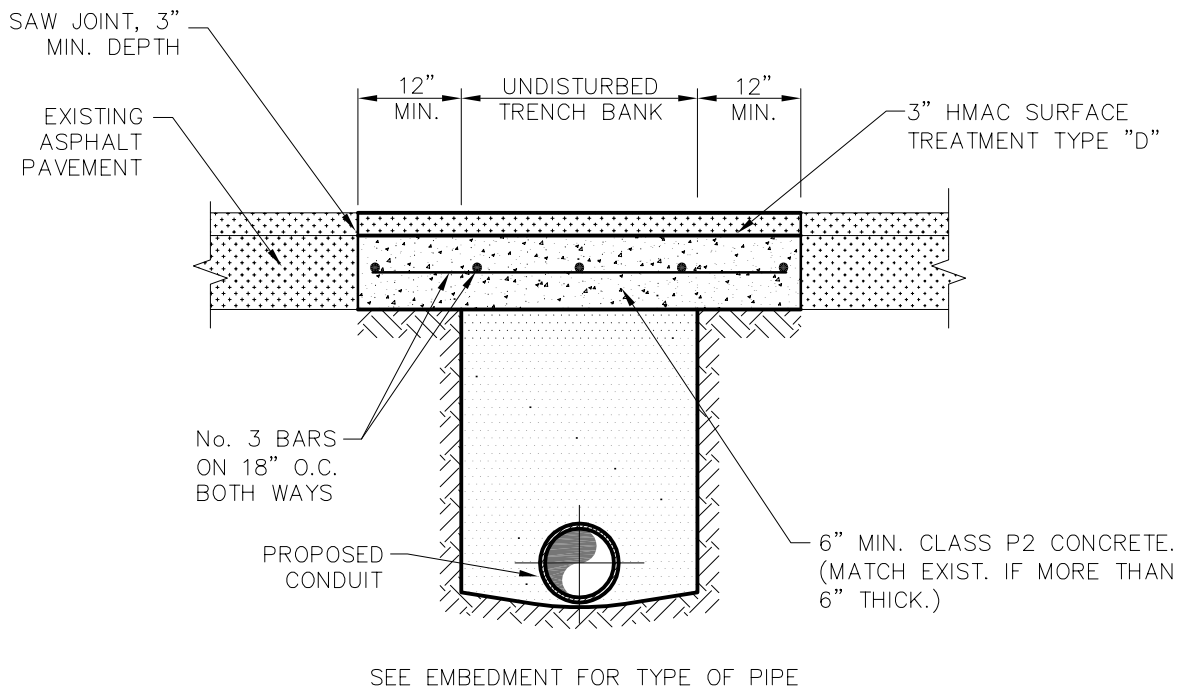
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SHEET :  
SD-D01



**CONCRETE STREET OR DRIVE REPAIR**

NTS



**ASPHALT STREET OR DRIVE REPAIR**

NTS

- NOTES:
1. ALL JOINTS SHALL BE PARALLEL OR PERPENDICULAR TO THE DIRECTION OF TRAVEL.



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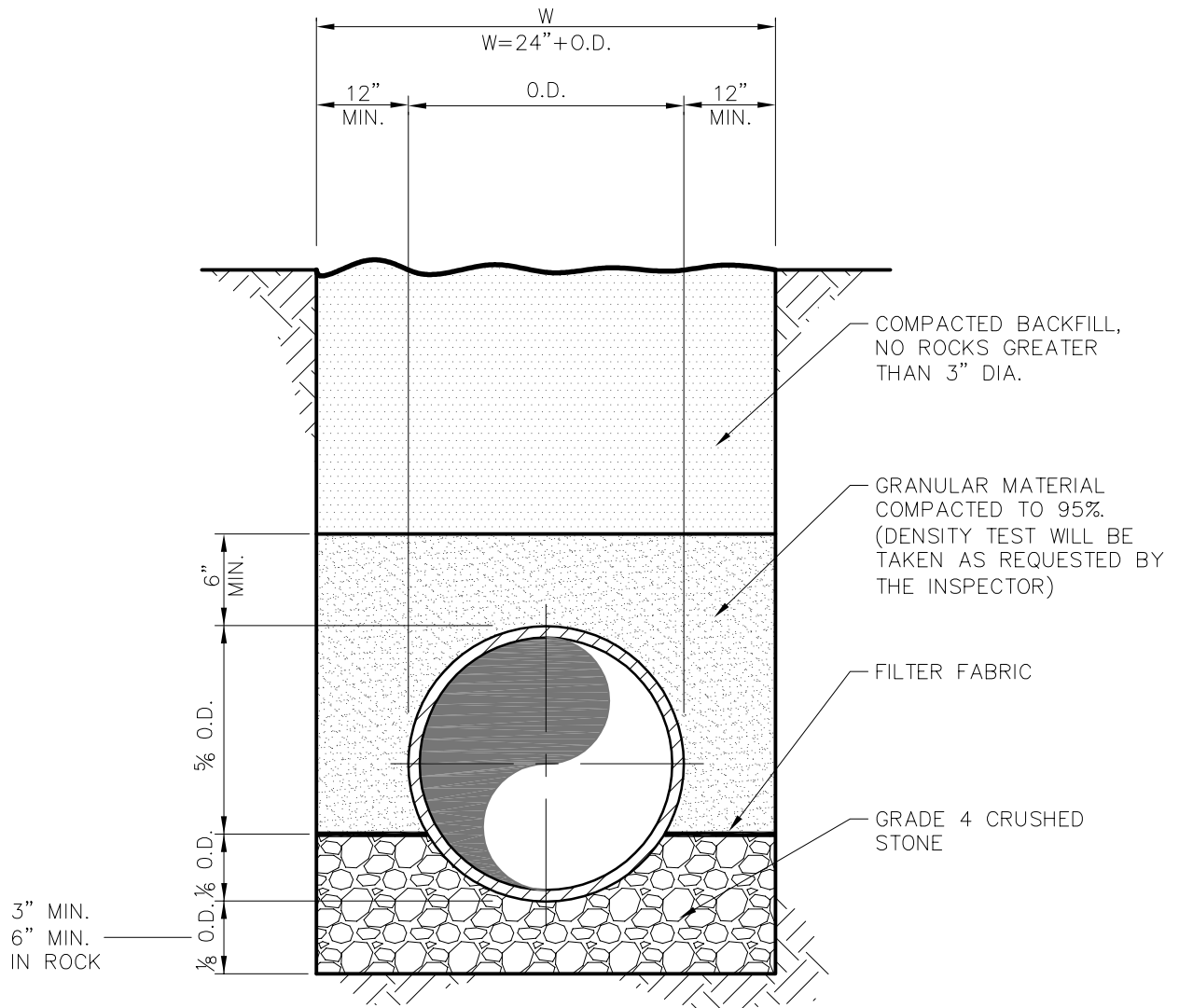
**CONCRETE & ASPHALT STREET & DRIVE REPAIR**

**STANDARD CONSTRUCTION DETAILS STORM DRAINAGE**

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SHEET :  
SD-D02



### RCP STORM SEWER PIPE BEDDING

NTS

**NOTE:**

1. THE DEPTH OF TRENCH BELOW THE PROPOSED CONDUIT SHALL BE AS FOLLOWS:
  - 3" MIN. FOR 27" PIPE & SMALLER.
  - 4" MIN. FOR 30" TO 60" PIPE.
  - 6" MIN. FOR 66" PIPE OR LARGER.



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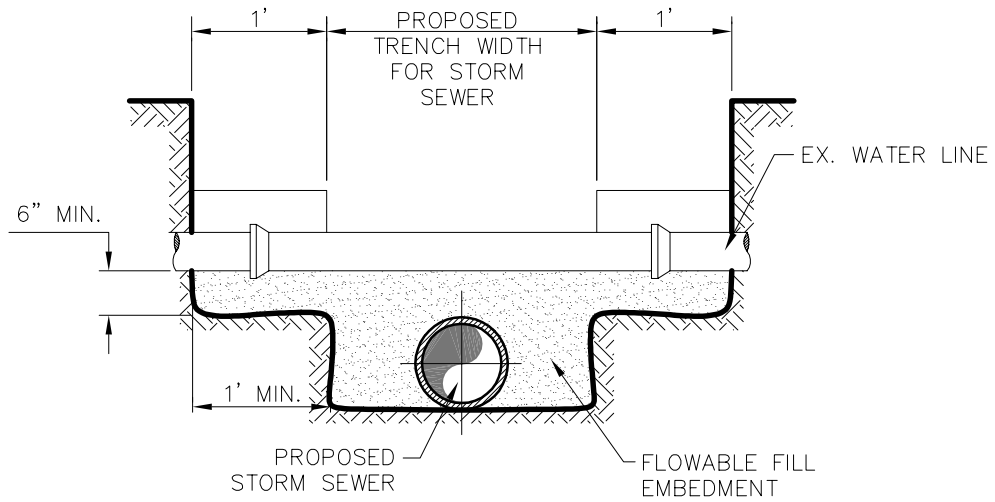
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### STANDARD CONSTRUCTION DETAILS STORM DRAINAGE

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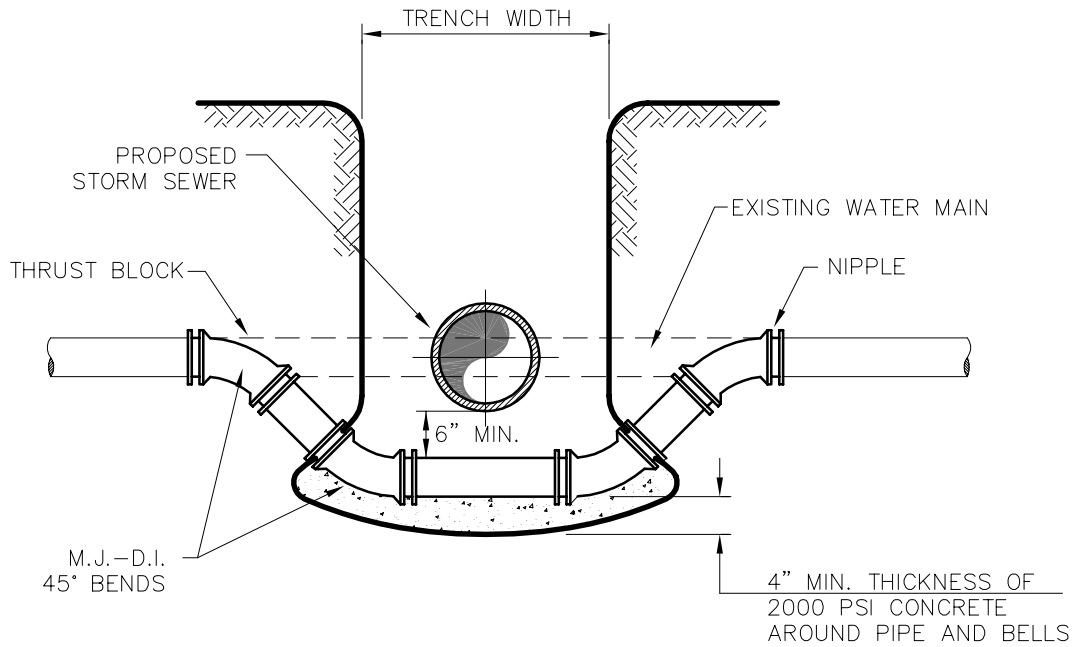
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SD-D03



**UTILITY SUPPORT DETAIL**

NTS



**WATER MAIN LOWERING DETAIL**

NTS

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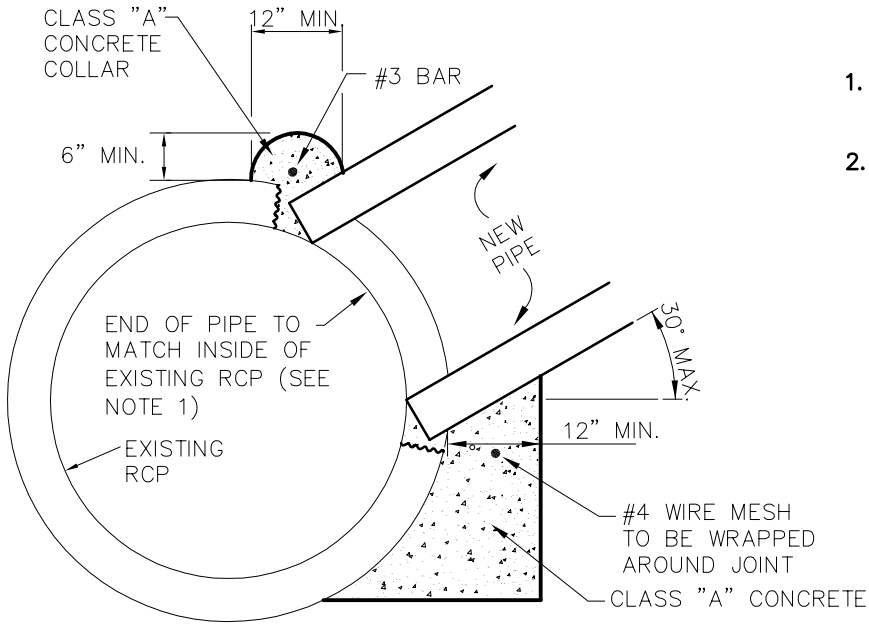
WATER MAIN LOWERING & UTILITY SUPPORT DETAILS

STANDARD CONSTRUCTION DETAILS  
STORM DRAINAGE

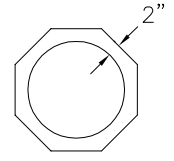
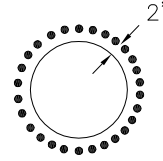
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SD-D04

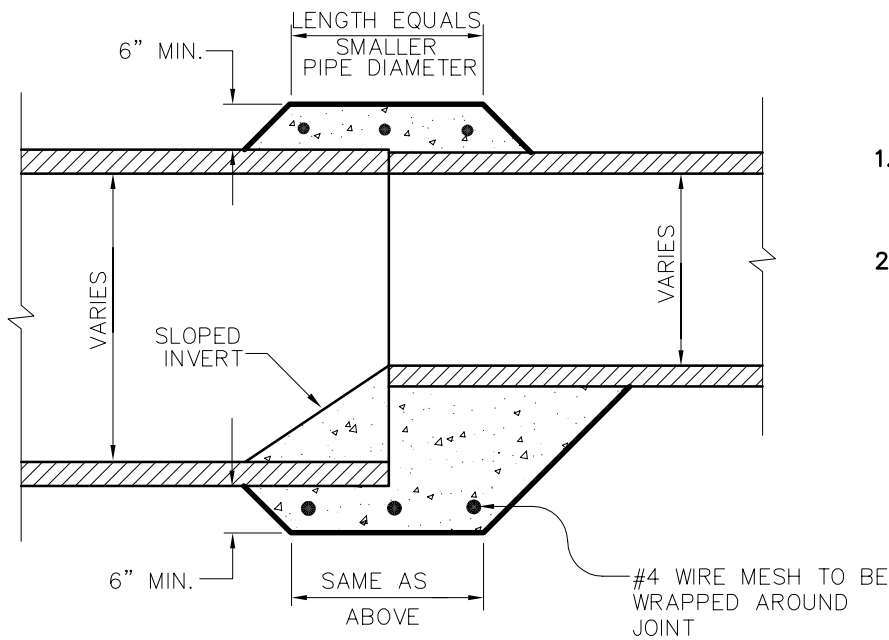


- NOTES:**
1. MAXIMUM DIAMETER OF NEW PIPE EQUALS ONE HALF OF EXISTING PIPE'S DIAMETER.
  2. REMOVAL OF PLUG FROM EXISTING RCP TO BE ACCOMPLISHED BY USING A MASONRY DRILL AT A SPACING EQUAL TO THE DRILL BIT DIAMETER IN A CIRCULAR PATTERN OR A MASONRY SAW IN AN OCTAGONAL PATTERN PER DETAIL.



**CONNECTION TO EXISTING  
RCP STORM DRAIN**

NTS



- NOTES:**
1. THIS PROCEDURE/DETAIL WILL ONLY BE USED WHEN A PREFAB REDUCTION IS NOT POSSIBLE.
  2. CONCRETE SHALL BE CLASS A.

**PIPE COLLAR**

NTS

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PUBLIC WORKS DEPARTMENT

CONNECTION TO EXISTING  
RCP STORM DRAIN  
PIPE COLLAR

STANDARD CONSTRUCTION DETAILS  
STORM DRAINAGE

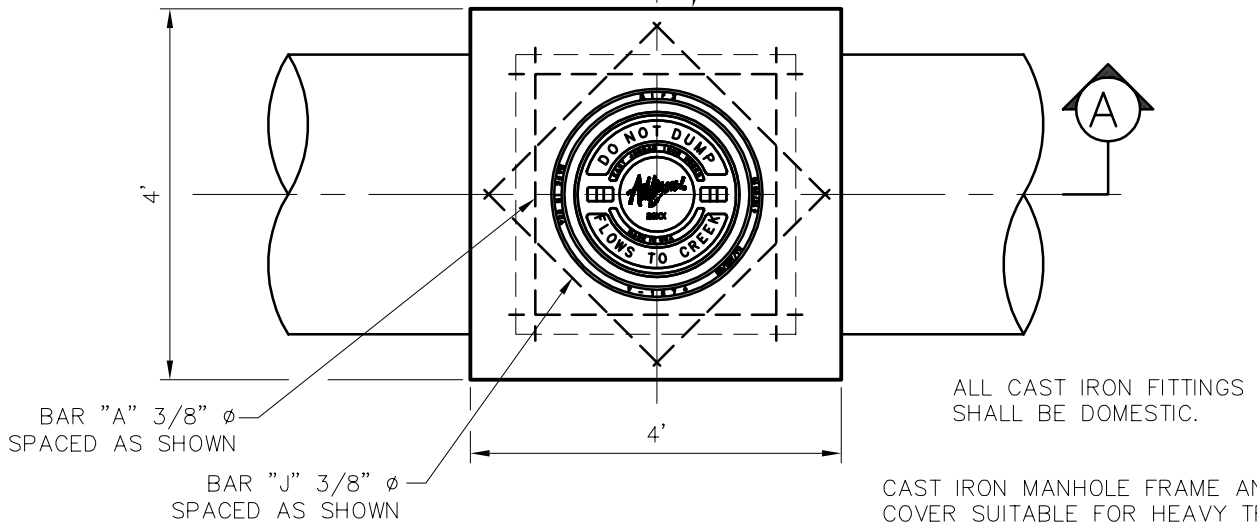
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SHEET :  
SD-D05

**NOTE:**  
SEE TOWN OF ADDISON STD.  
FRAME AND COVER DETAIL.

PROVIDE 3/4" PREMOLDED EXPANSION  
JOINT BETWEEN MANHOLE AND  
CONCRETE PAVEMENT AND SEALED WITH  
SILICONE.

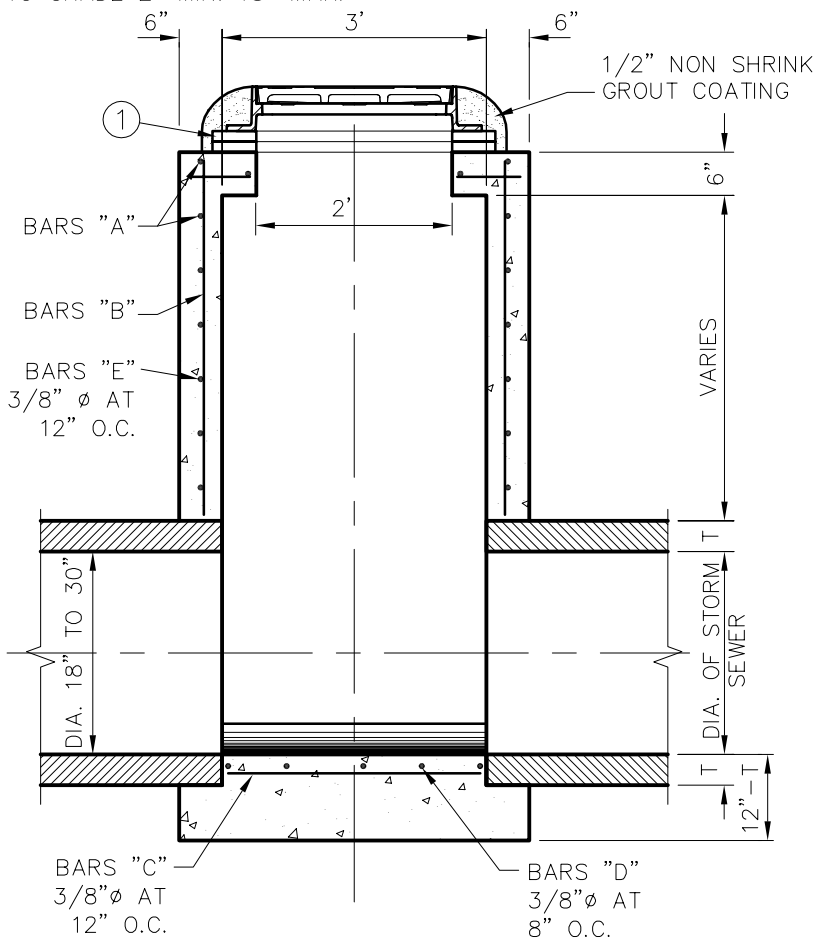


ALL CAST IRON FITTINGS  
SHALL BE DOMESTIC.

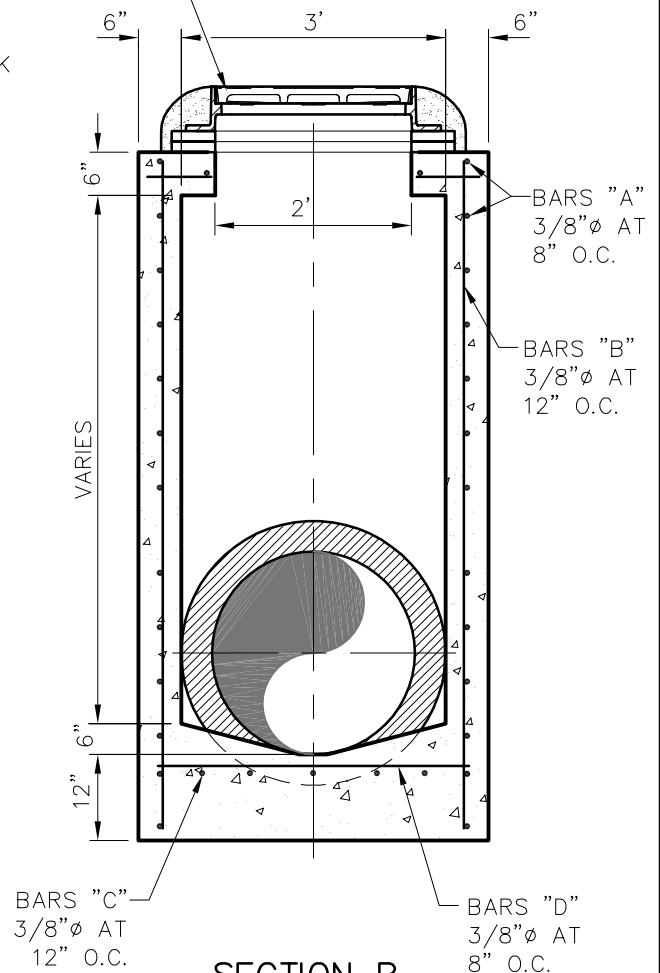
CAST IRON MANHOLE FRAME AND  
COVER SUITABLE FOR HEAVY TRAFFIC.  
MANHOLE RIM TO BE SET FLUSH  
WITH PAVEMENT OR 1" TO 4" ABOVE  
GRADE IN NON-PAVED AREAS

① USE PRECAST CONCRETE GRADE  
RINGS SET IN MORTAR TO RAISE  
TO GRADE 2" MIN. 18" MAX.

**PLAN**  
NTS



**SECTION A**  
NTS



**SECTION B**  
NTS

*Addison!*

PUBLIC WORKS DEPARTMENT

TYPE "A" STORM SEWER  
MANHOLE  
(FOR 18" TO 30" RCP)

STANDARD CONSTRUCTION DETAILS  
STORM DRAINAGE

DATE:  
AUGUST, 2010

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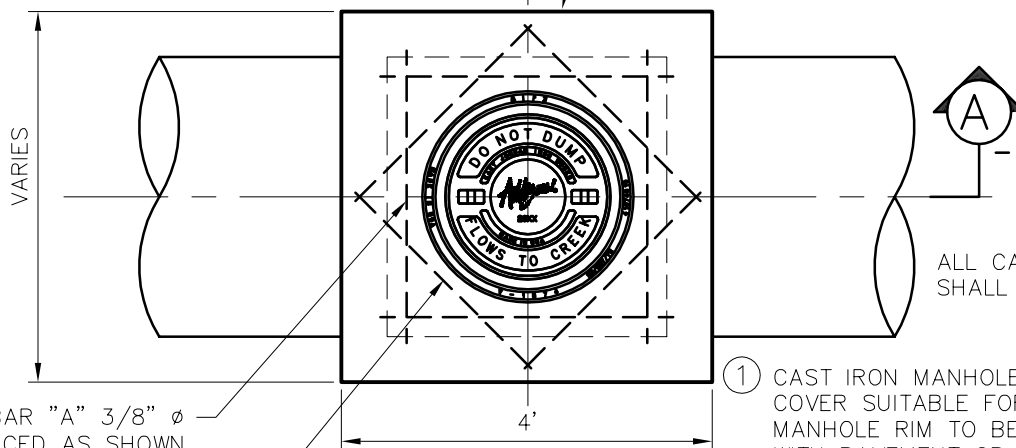
SHEET :  
SD-D06



**NOTE:**  
SEE TOWN OF ADDISON STD.  
FRAME AND COVER DETAIL.



PROVIDE 3/4" PREMOLDED EXPANSION  
JOINT BETWEEN MANHOLE AND CONCRETE  
PAVEMENT AND SEALED WITH SILICONE.



BAR "A" 3/8"  $\phi$   
SPACED AS SHOWN

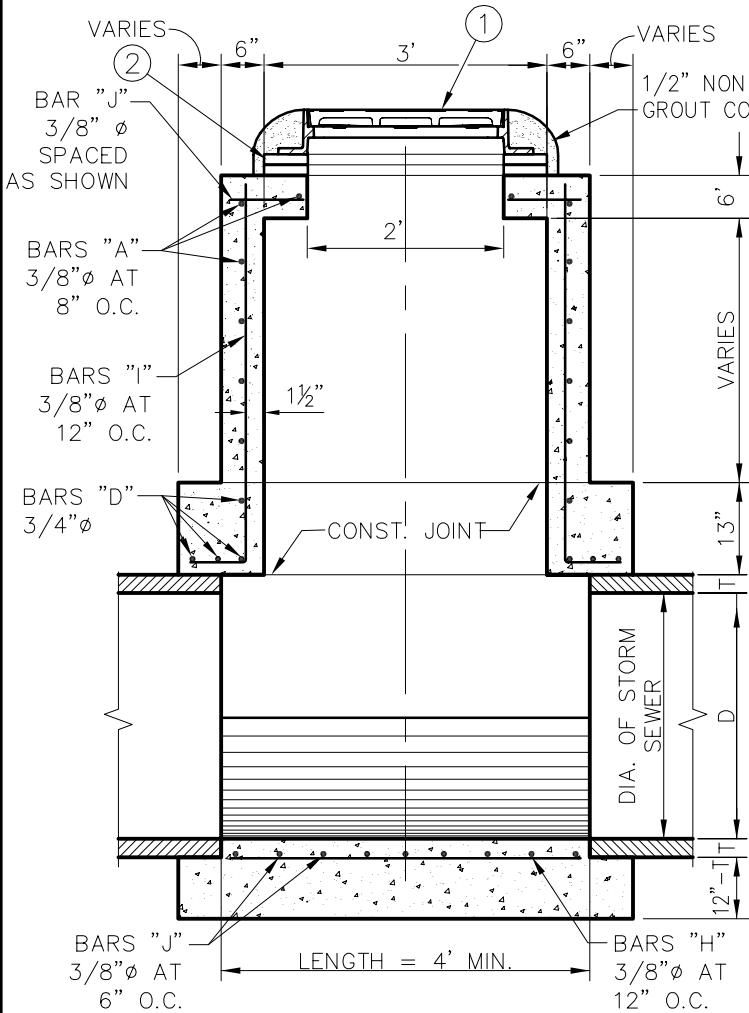
BAR "J" 3/8"  $\phi$   
SPACED AS SHOWN

NOTE :  
MAXIMUM PIPE SIZE  
TO BE USED 78"  $\phi$

- ① CAST IRON MANHOLE FRAME AND COVER SUITABLE FOR HEAVY TRAFFIC. MANHOLE RIM TO BE SET FLUSH WITH PAVEMENT OR 1" TO 4" ABOVE GRADE IN NON-PAVED AREAS
- ② USE PRECAST CONCRETE GRADE RINGS SET IN MORTAR TO RAISE TO GRADE 2" MIN. 18" MAX.

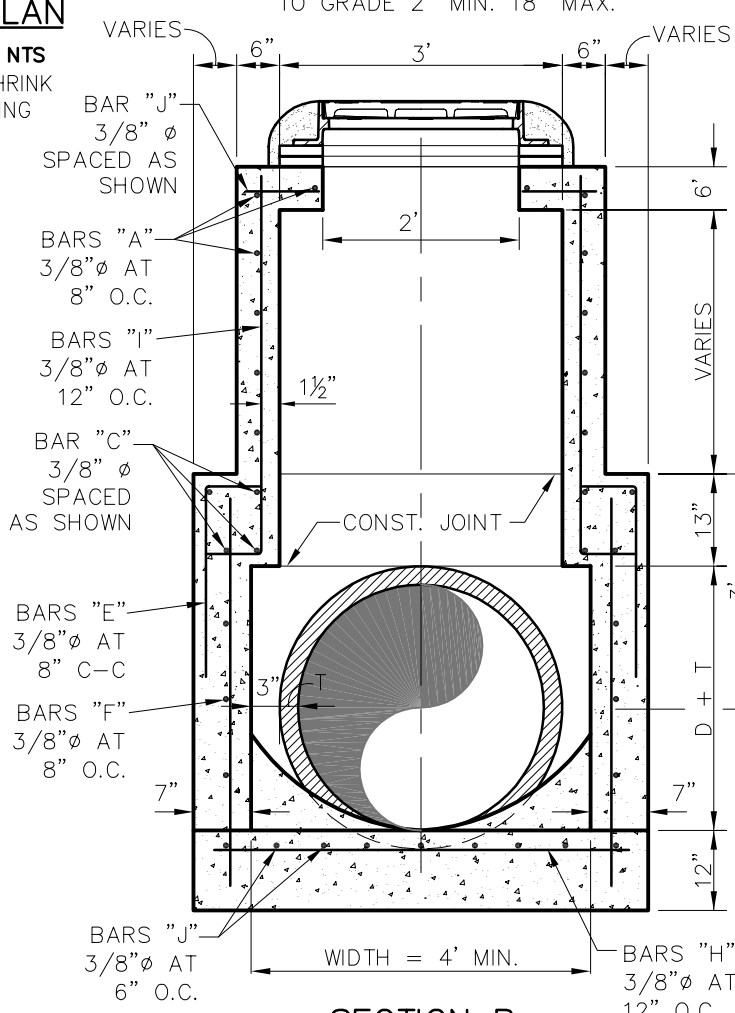
ALL CAST IRON FITTINGS  
SHALL BE DOMESTIC.

**PLAN**



**SECTION A**

NTS



**SECTION B**

NTS

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PUBLIC WORKS DEPARTMENT

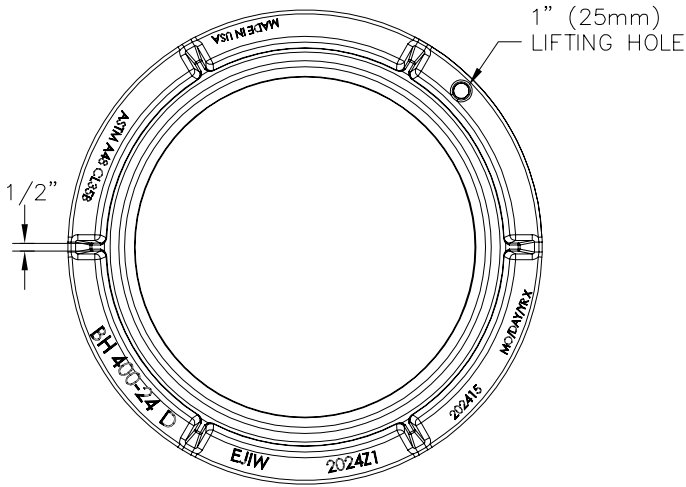
TYPE "B" STORM SEWER  
MANHOLE  
(FOR 33" TO 78" RCP)

STANDARD CONSTRUCTION DETAILS  
STORM DRAINAGE

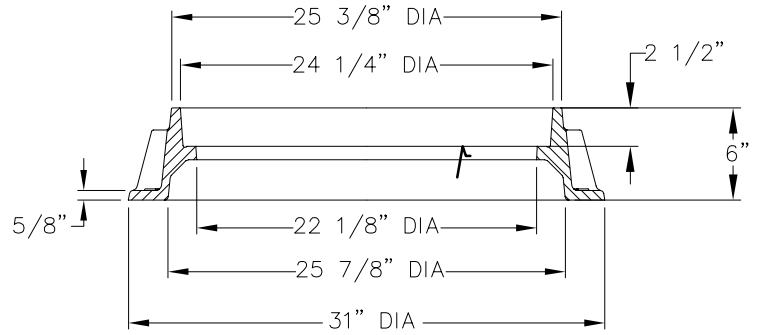
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SHEET :  
SD-D07

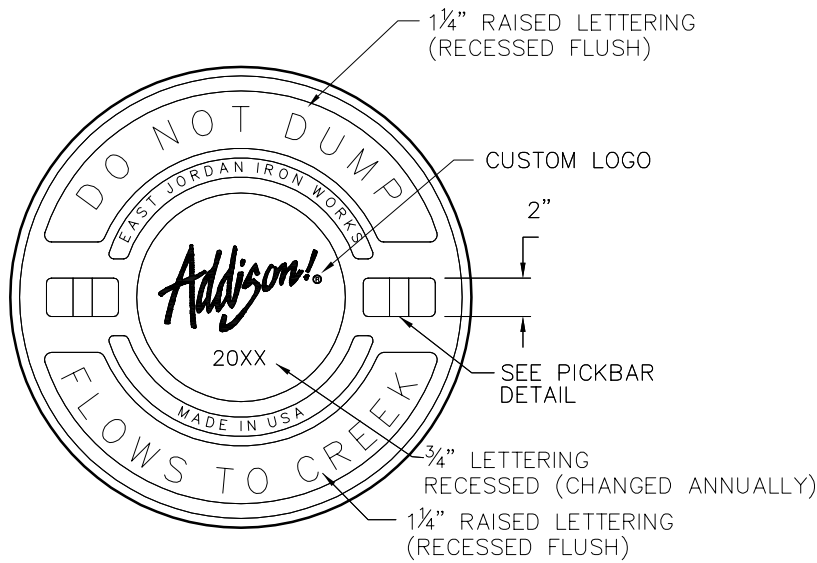


**FRAME PLAN**

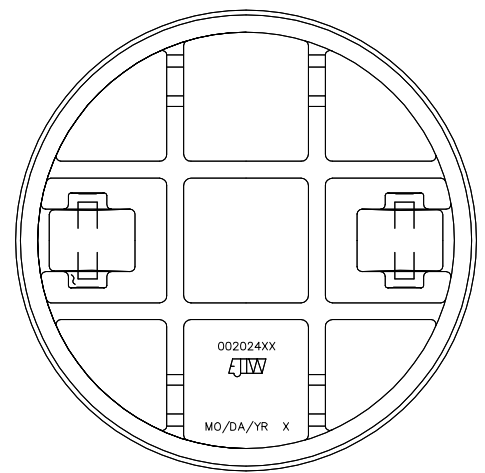


✓ MACHINED SURFACE

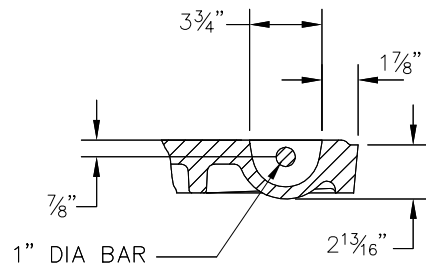
**FRAME SECTION**



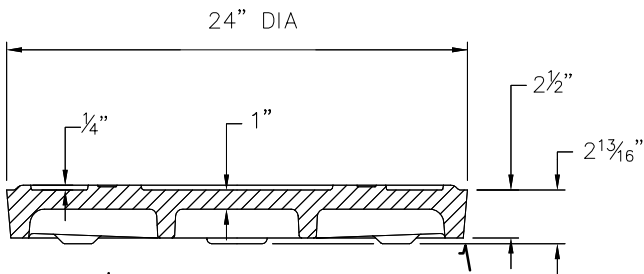
**COVER**



**BOTTOM VIEW OF COVER**



**PICKBAR DETAIL**



✓ MACHINED SURFACE

**COVER SECTION**

**NOTE:**  
 FRAME AND COVER SHALL BE EAST JORDAN IRON WORKS FRAME PRODUCT #00202415 AND COVER PRODUCT #NCR08-0060A OR APPROVED EQUAL AND SHALL BE GRAY CAST IRON CONFORMING TO ASTM A48-CL35B.

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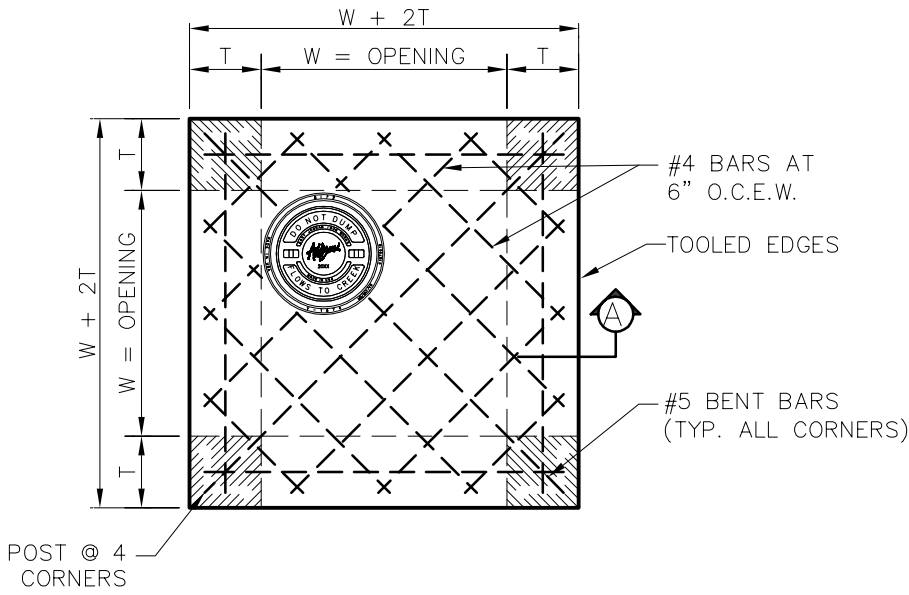
STORM MANHOLE  
 FRAME & COVER

STANDARD CONSTRUCTION DETAILS  
 STORM DRAINAGE

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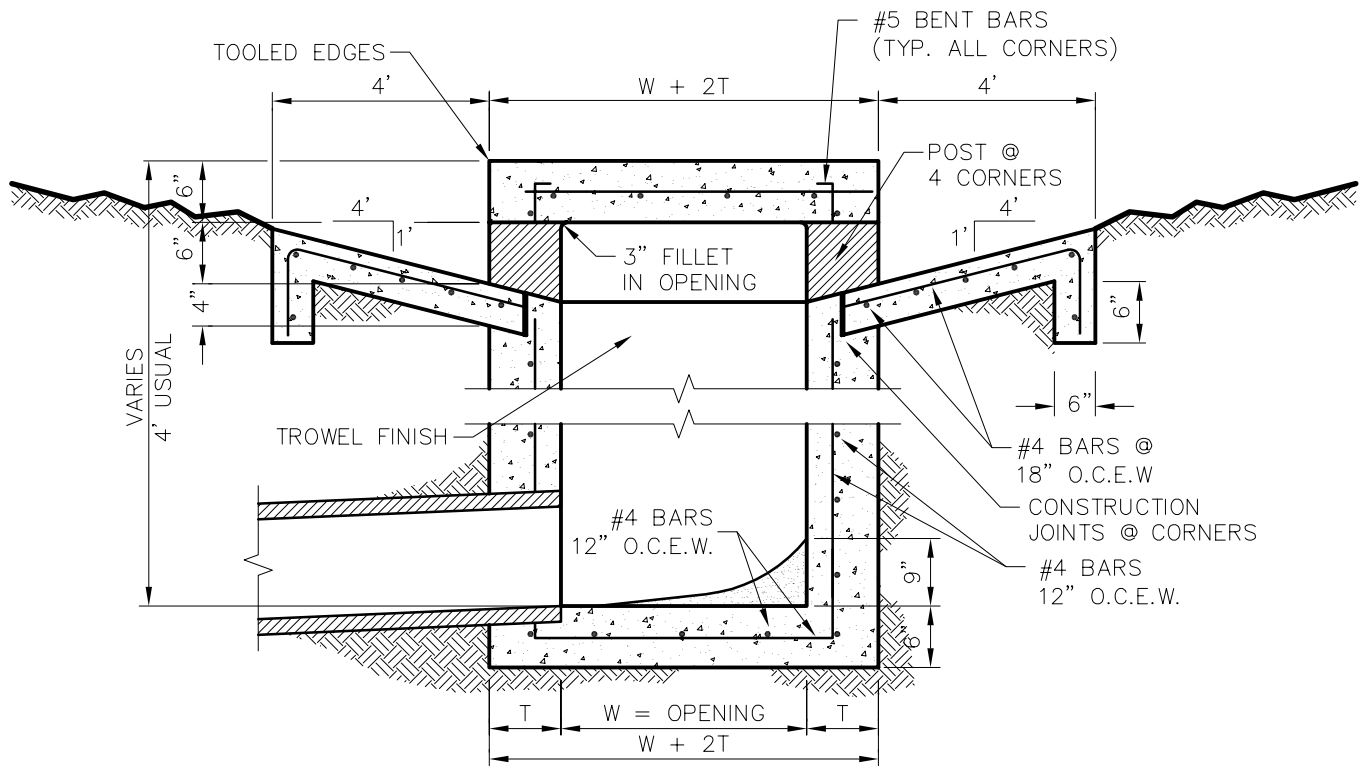
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SHEET :  
 SD-D08



| INLET SIZE | T  | W     |
|------------|----|-------|
| 2' SQUARE  | 7" | 2'-0" |
| 3' SQUARE  | 7" | 3'-0" |
| 4' SQUARE  | 7" | 4'-0" |
| 5' SQUARE  | 8" | 5'-0" |
| 6' SQUARE  | 9" | 6'-0" |

**PLAN OF TOP SLAB**  
NTS



**SECTION A**  
NTS

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PUBLIC WORKS DEPARTMENT

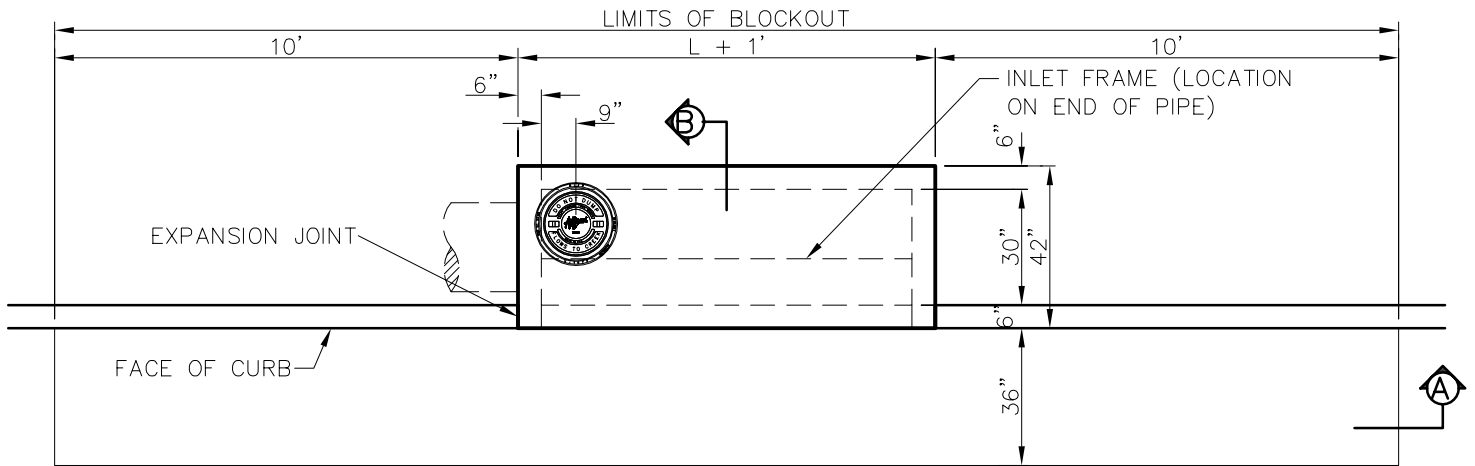
WYE INLET DETAIL

STANDARD CONSTRUCTION DETAILS  
STORM DRAINAGE

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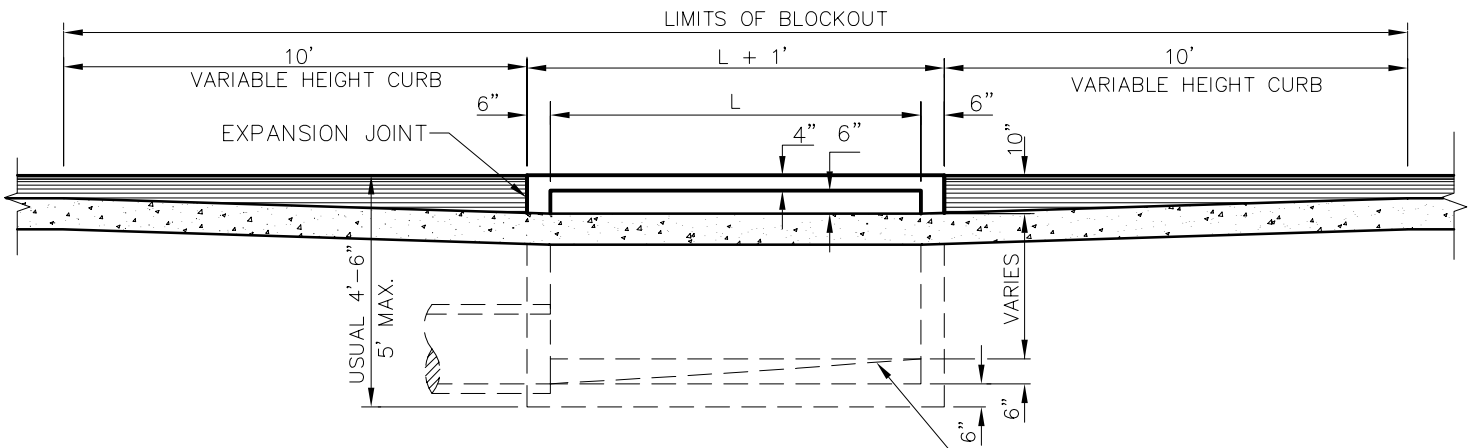
REV DATE:  
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SHEET :  
SD-D09



### PLAN-STANDARD INLET

NTS



WARP TO SUIT CONDITIONS  
 1/2" MORTAR FINISH, TROWELLED  
 TO SMOOTH HARD SURFACE.

### SECTION A

NTS

**NOTE:**

1. PIPE MAY BE PLACED IN ANY WALL, BUT SHALL NOT ENTER ANY CORNER OR BOTTOM.
2. #3 BAR 18" O.C.E.W. IN BLOCK OUT DRILLED INTO EXISTING CONCRETE.
3. BACKFILL AROUND INLET SHALL BE FLOWABLE BACKFILL PER NCTCOG 504.2.3.4

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PUBLIC WORKS DEPARTMENT

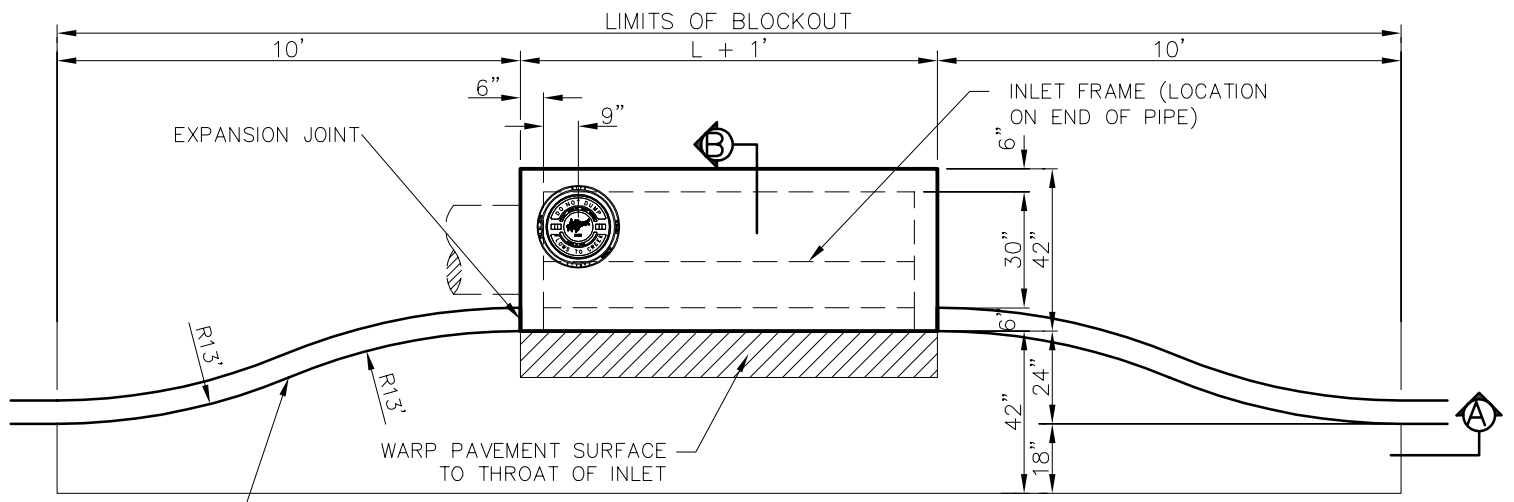
### STANDARD CURB INLET

### STANDARD CONSTRUCTION DETAILS STORM DRAINAGE

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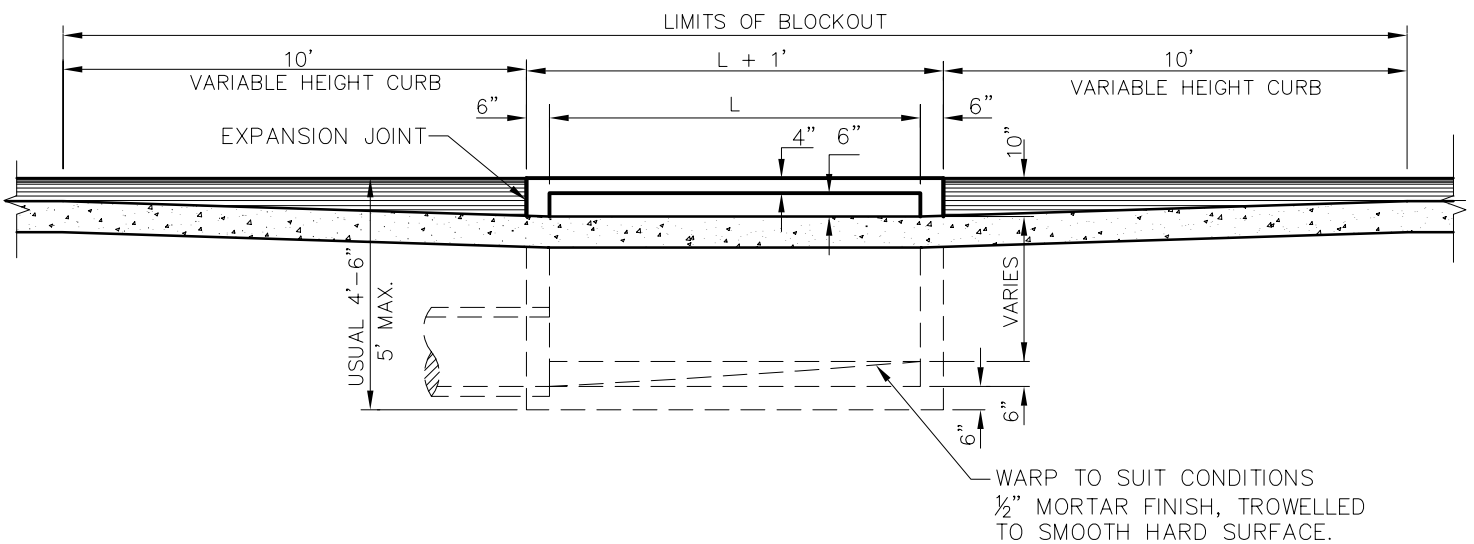
REV DATE:  
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SHEET :  
 SD-D10



**PLAN-STANDARD INLET**

NTS



**SECTION A**

NTS

**NOTE:**

1. PIPE MAY BE PLACED IN ANY WALL, BUT SHALL NOT ENTER ANY CORNER OR BOTTOM.
2. #3 BAR 18" O.C.E.W. IN BLOCK OUT DRILLED INTO EXISTING CONCRETE.
3. BACKFILL AROUND INLET SHALL BE FLOWABLE BACKFILL PER NCTCOG 504.2.3.4.

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**RECESSED CURB INLET**

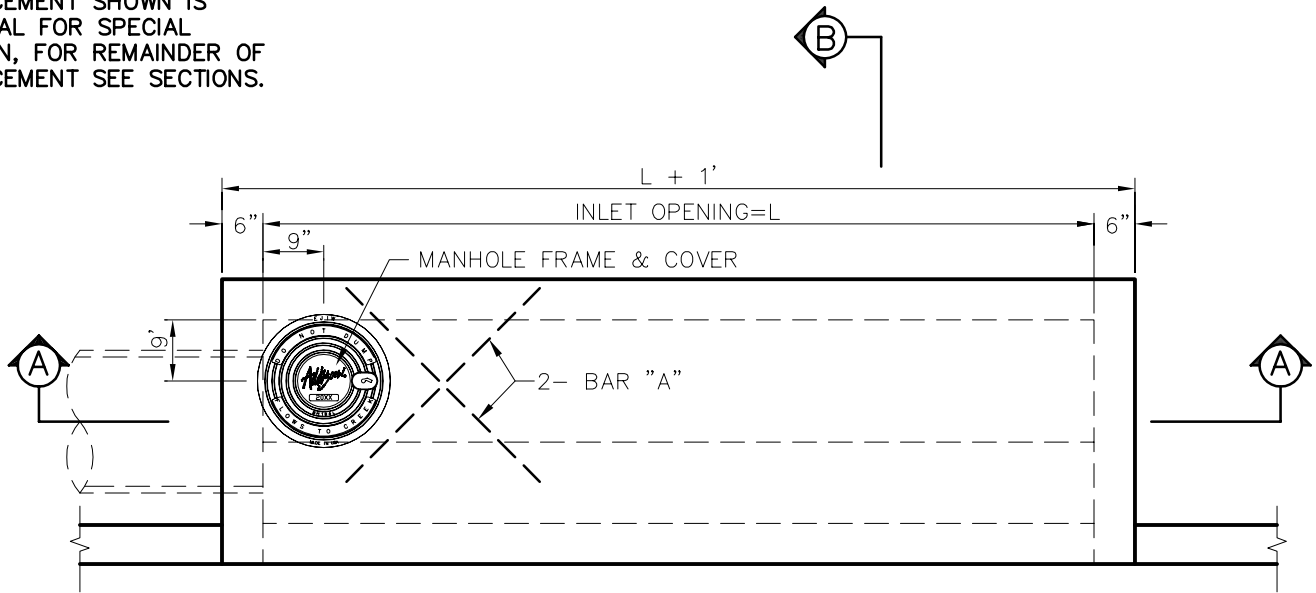
**STANDARD CONSTRUCTION DETAILS  
STORM DRAINAGE**

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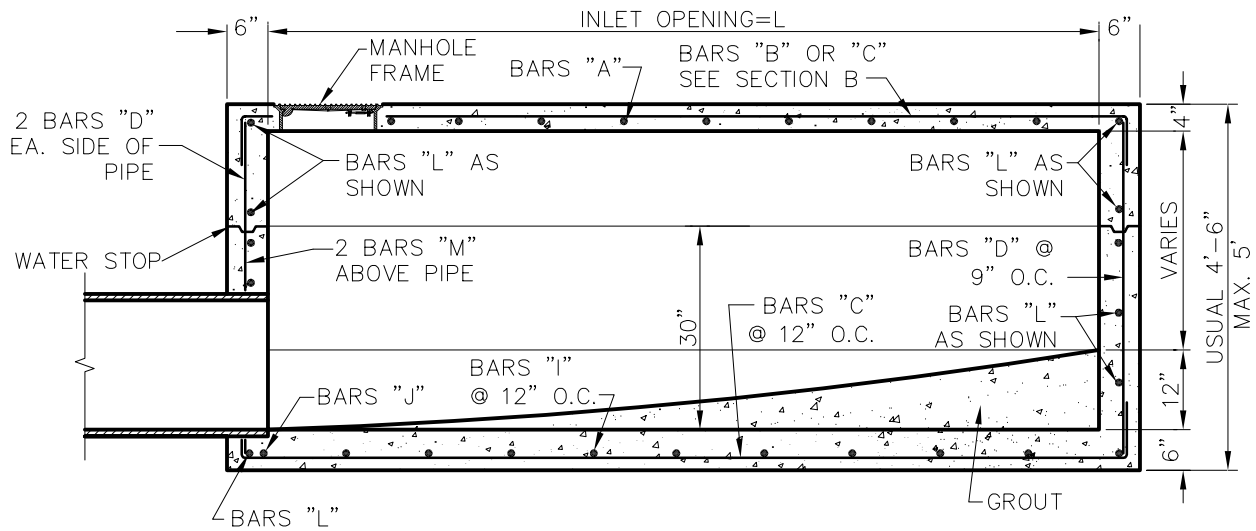
SHEET :  
SD-D11

NOTE:  
 REINFORCEMENT SHOWN IS  
 ADDITIONAL FOR SPECIAL  
 CONDITION, FOR REMAINDER OF  
 REINFORCEMENT SEE SECTIONS.



PLAN-STANDARD INLET

NTS



SECTION A

NTS

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PUBLIC WORKS DEPARTMENT

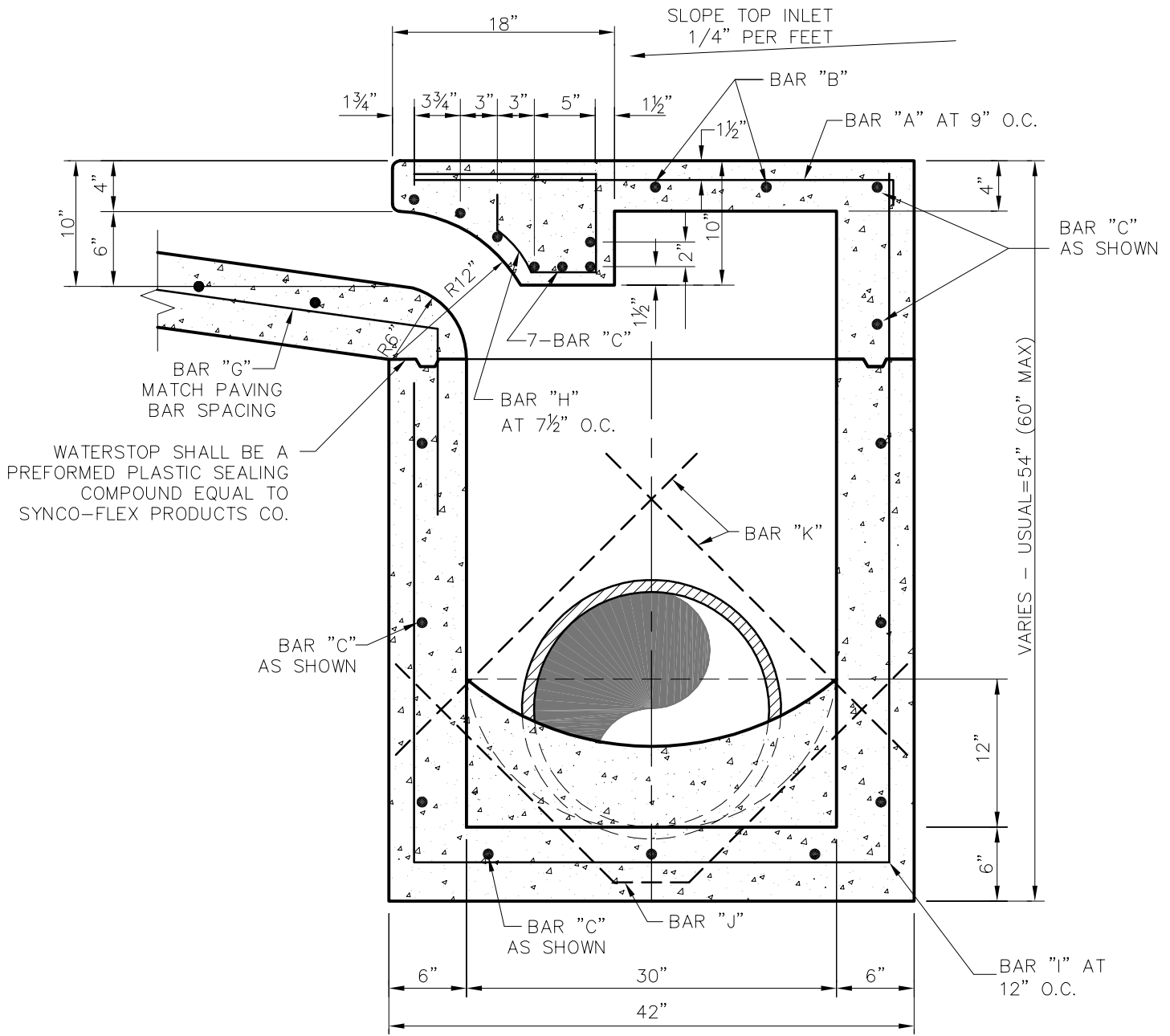
STANDARD CURB INLET 4, 6,  
 8 & 10 FOOT INLETS

STANDARD CONSTRUCTION DETAILS  
 STORM DRAINAGE

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 SD-D12



**SECTION "B"**

NTS



PUBLIC WORKS DEPARTMENT

TYPICAL SECTION "B"  
 STANDARD & RECESSED CURB  
 INLETS  
 (4, 6, 8 & 10 FOOT INLETS)

STANDARD CONSTRUCTION DETAILS  
STORM DRAINAGE

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SD-D13

| REINFORCING STEEL SCHEDULE                  |          |                 |          |                |        |       |   |
|---|----------|-----------------|----------|----------------|--------|-------|---|
| DIMENSIONS SHOWN ARE FOR MAXIMUM SIZE INLET |          |                 |          |                |        |       |   |
| INLET LENGTH                                | BAR TYPE | BAR DIA. (1/8") | NO REQ'D | BAR DIMENSIONS |        |       |   |
|   |          |                 |          | A              | B      | C     |   |
| 4'  | A        | 3               | 6        | 3'-2"          | 0'-3"  | -     |   |
|   | B        | 3               | 2        | 2'-10"         | -      | -     |   |
|   | C        | 4               | 18       | 4'-8"          | 0'-6"  | -     |   |
|   | D        | 4               | 9        | 4'-8"          | -      | -     |   |
|   | G        | 3               | 4        | 2'-0"          | 1'-3"  | -     |   |
|   | H        | 3               | 7        | *              | *      | *     |   |
|   | I        | 4               | 3        | 3'-2"          | 3'-2"  | 4'-8" |   |
|   | J        | 5               | 1        | *              | *      | *     |   |
|   | K        | 5               | 2        | 3'-2"          | 0'-6"  | -     |   |
|   | L        | 4               | 11       | 3'-2"          | 0'-6"  | -     |   |
|   | M        | 4               | 2        | 3'-0"***       | -      | -     |   |
|   | 6'       | A               | 3        | 9              | 3'-2"  | 0'-3" | - |
|   |          | B               | 3        | 2              | 4'-10" | -     | - |
| C   |          | 4               | 18       | 6'-8"          | 0'-6"  | -     |   |
| D   |          | 4               | 9        | 4'-8"          | -      | -     |   |
| G   |          | 3               | 6        | 2'-0"          | 1'-3"  | -     |   |
| H   |          | 3               | 11       | *              | *      | *     |   |
| I   |          | 4               | 5        | 3'-2"          | 3'-2"  | 4'-8" |   |
| J   |          | 5               | 1        | *              | *      | *     |   |
| K   |          | 5               | 2        | 3'-2"          | 0'-6"  | -     |   |
| L   |          | 4               | 11       | 3'-2"          | 0'-6"  | -     |   |
| M   |          | 4               | 2        | 3'-0"***       | -      | -     |   |
| 8'  |          | A               | 3        | 12             | 3'-2"  | 0'-3" | - |
|   |          | B               | 3        | 2              | 6'-10" | -     | - |
|   | C        | 4               | 18       | 8'-8"          | 0'-6"  | -     |   |
|   | D        | 4               | 9        | 4'-8"          | -      | -     |   |
|   | G        | 3               | 7        | 2'-0"          | 1'-3"  | -     |   |
|   | H        | 3               | 14       | *              | *      | *     |   |
|   | I        | 4               | 7        | 3'-2"          | 3'-2"  | 4'-8" |   |
|   | J        | 5               | 1        | *              | *      | *     |   |
|   | K        | 5               | 2        | 3'-2"          | 0'-6"  | -     |   |
|   | L        | 4               | 11       | 3'-2"          | 0'-6"  | -     |   |
|   | M        | 4               | 2        | 3'-0"***       | -      | -     |   |
|   | 10'      | A               | 3        | 15             | 3'-2"  | 0'-3" | - |
|   |          | B               | 3        | 2              | 8'-10" | -     | - |
| C   |          | 4               | 18       | 10'-8"         | 0'-6"  | -     |   |
| D   |          | 4               | 9        | 4'-8"          | -      | -     |   |
| G   |          | 3               | 9        | 2'-0"          | 1'-3"  | -     |   |
| H   |          | 3               | 17       | *              | *      | *     |   |
| I   |          | 4               | 9        | 3'-2"          | 3'-2"  | 4'-8" |   |
| J   |          | 5               | 1        | *              | *      | *     |   |
| K   |          | 5               | 2        | 3'-2"          | 0'-6"  | -     |   |
| L   |          | 4               | 11       | 3'-2"          | 0'-6"  | -     |   |
| M   |          | 4               | 2        | 3'-0"***       | -      | -     |   |

\* SEE DIAGRAM FOR DIMENSIONS  
 \*\* FIELD CUT AS REQUIRED TO ACCOMMODATE DRAIN PIPE



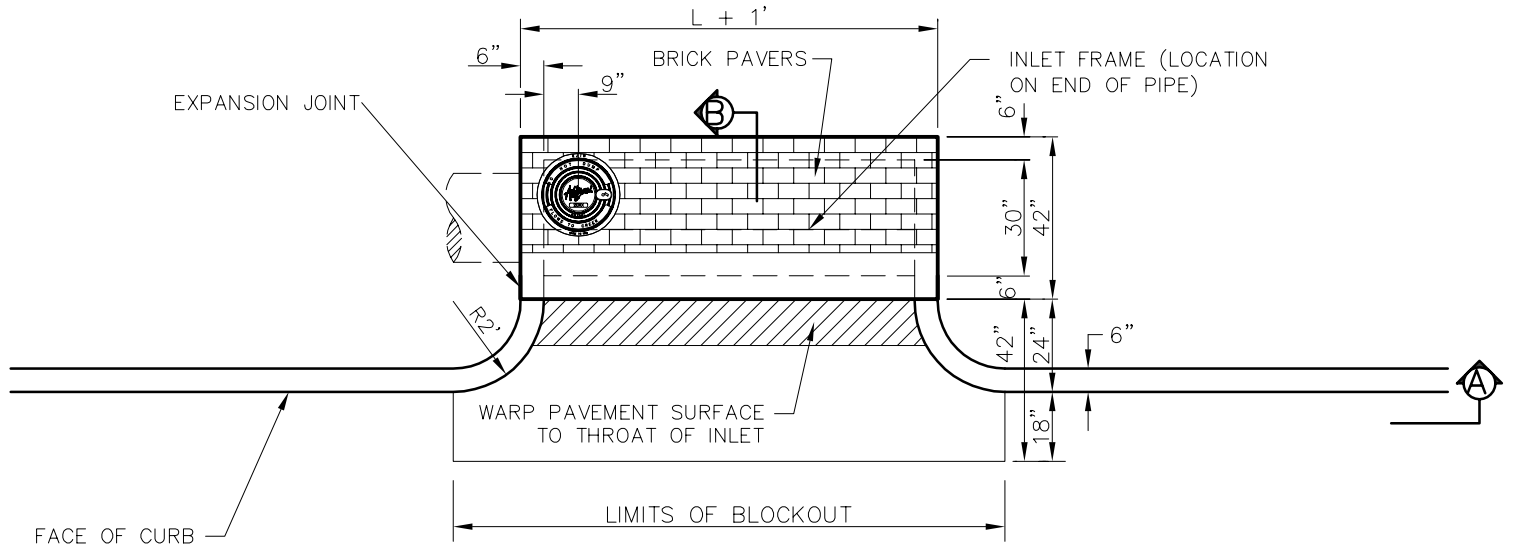
PUBLIC WORKS DEPARTMENT

REINFORCING STEEL SCHEDULE  
 4, 6, 8 & 10 FOOT INLETS

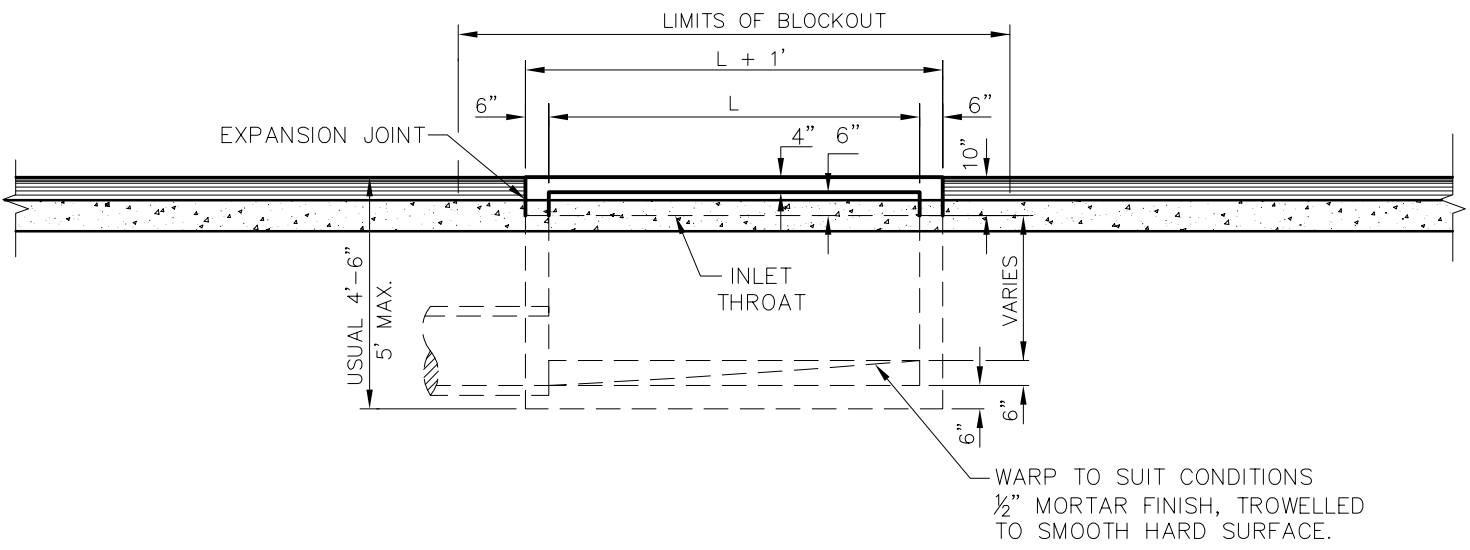
STANDARD CONSTRUCTION DETAILS  
 STORM DRAINAGE

|                       |                |                   |
|-----------------------|----------------|-------------------|
| DATE:<br>AUGUST, 2010 | REV DATE:<br>- | SHEET :<br>SD-D14 |
|-----------------------|----------------|-------------------|





**PLAN-BRICK TOP INLET**  
NTS



**SECTION A**  
NTS

- NOTE:**
1. PIPE MAY BE PLACED IN ANY WALL, BUT SHALL NOT ENTER ANY CORNER OR BOTTOM.
  2. #3 BAR 18" O.C.E.W. IN BLOCK OUT DRILLED INTO EXISTING CONCRETE.
  3. BACKFILL AROUND INLET SHALL BE FLOWABLE BACKFILL PER NCTCOG 504.2.3.4.



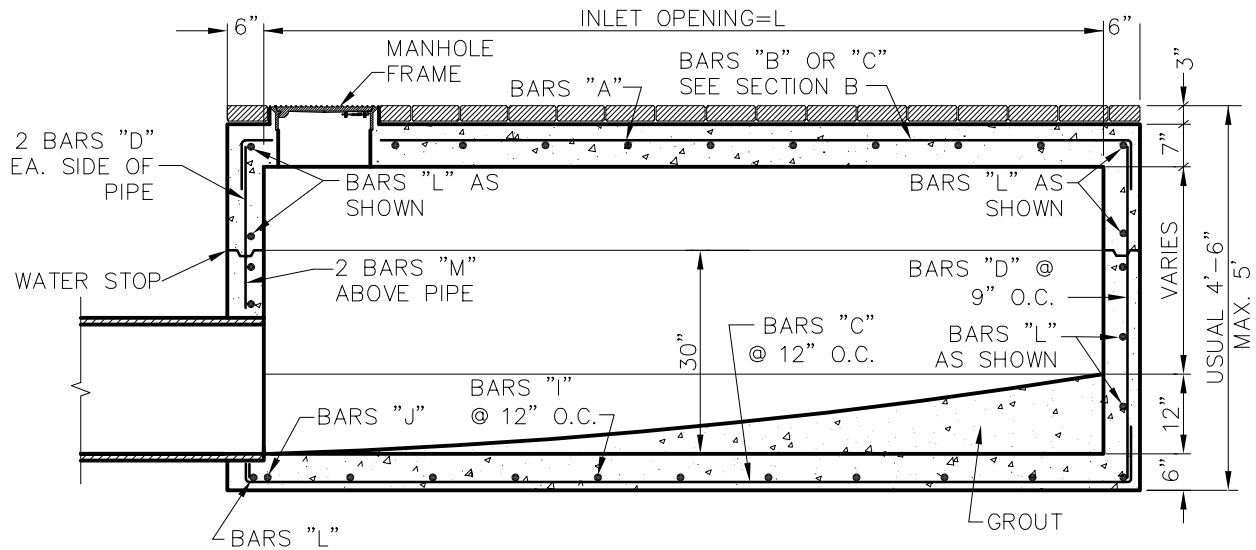
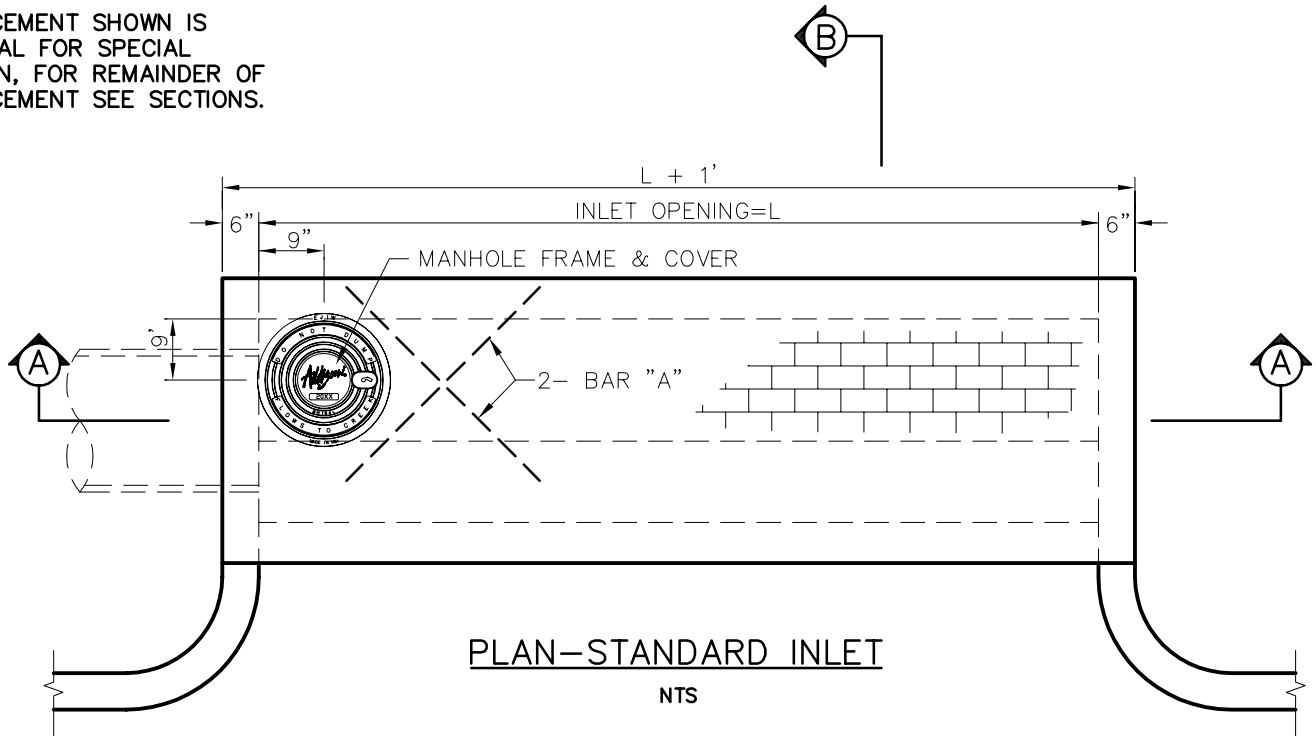
PUBLIC WORKS DEPARTMENT

RECESSED BRICK TOP CURB INLET  
4, 6, 8 & 10 FOOT INLETS

STANDARD CONSTRUCTION DETAILS  
STORM DRAINAGE

|                       |                |                   |
|-----------------------|----------------|-------------------|
| DATE:<br>AUGUST, 2010 | REV DATE:<br>- | SHEET :<br>SD-D15 |
|-----------------------|----------------|-------------------|

NOTE:  
 REINFORCEMENT SHOWN IS  
 ADDITIONAL FOR SPECIAL  
 CONDITION, FOR REMAINDER OF  
 REINFORCEMENT SEE SECTIONS.



*Addison!*

PUBLIC WORKS DEPARTMENT

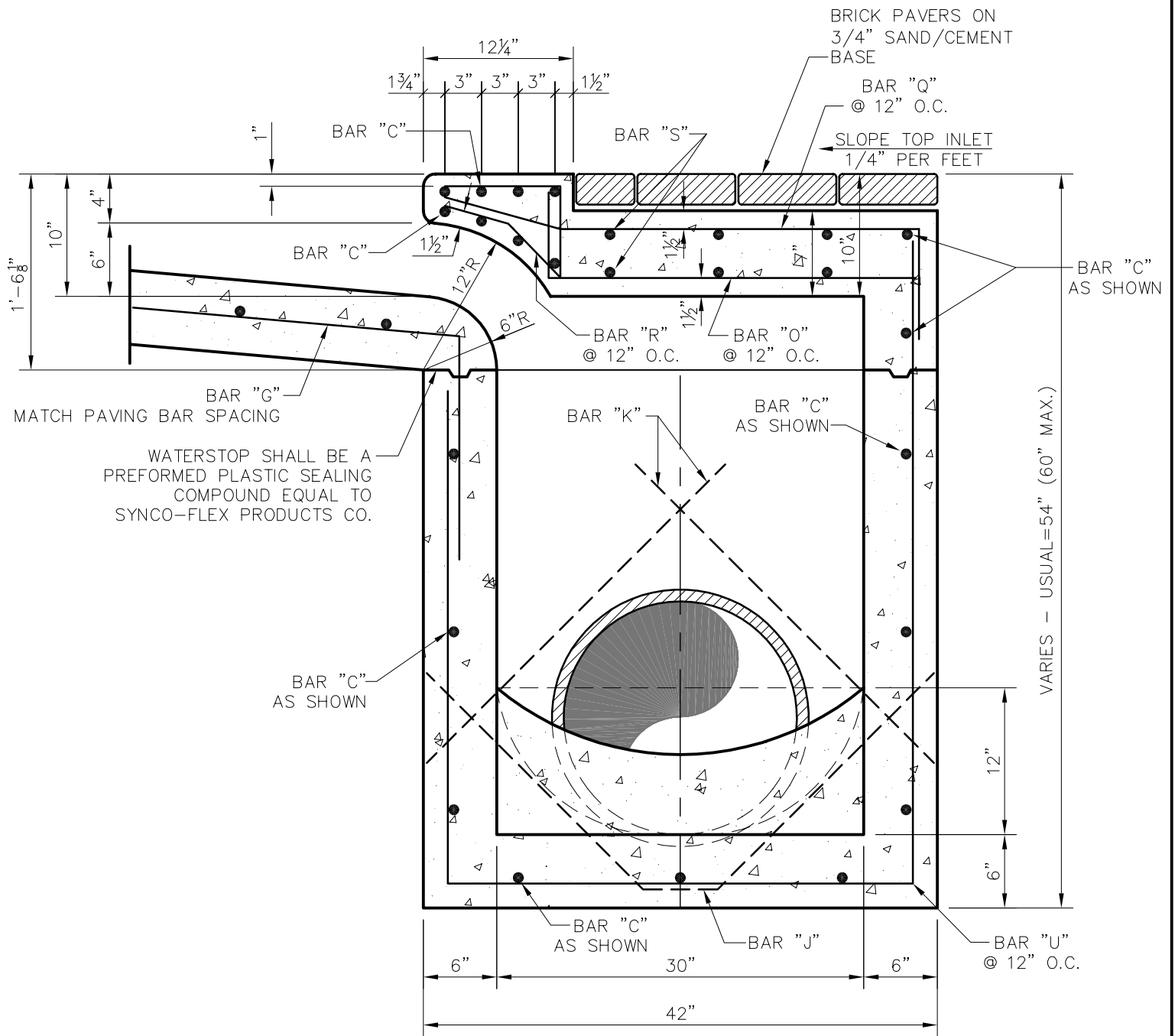
RECESSED BRICK TOP  
 CURB INLET 4, 6, 8 & 10  
 FOOT INLETS

STANDARD CONSTRUCTION DETAILS  
 STORM DRAINAGE

DATE:  
 AUGUST, 2010

REV DATE:  
 -

SHEET :  
 SD-D16



*Addison!*

PUBLIC WORKS DEPARTMENT

TYPICAL SECTION "B"  
BRICK TOP CURB INLETS  
(4, 6, 8 & 10 FOOT INLETS)

STANDARD CONSTRUCTION DETAILS  
STORM DRAINAGE

DATE:  
AUGUST, 2010

REV DATE:  
-

SHEET :  
SD-D17

| REINFORCING STEEL SCHEDULE                  |          |                 |          |                |        |       |
|---|----------|-----------------|----------|----------------|--------|-------|
| DIMENSIONS SHOWN ARE FOR MAXIMUM SIZE INLET |          |                 |          |                |        |       |
| INLET LENGTH                                | BAR TYPE | BAR DIA. (1/8") | NO REQ'D | BAR DIMENSIONS |        |       |
|   |          |                 |          | A              | B      | C     |
| 4'  | C        | 4               | 19       | 4'-8"          | 0'-6"  | -     |
|   | D        | 4               | 9        | 4'-5"          | -      | -     |
|   | G        | 3               | 4        | 2'-0"          | 1'-3"  | -     |
|   | J        | 5               | 1        | *              | *      | *     |
|   | K        | 5               | 2        | 3'-2"          | 0'-6"  | -     |
|   | L        | 4               | 11       | 3'-2"          | 0'-6"  | -     |
|   | M        | 4               | 2        | 3'-0"***       | -      | -     |
|   | O        | 6               | 6        | 2'-5"          | 7"     | -     |
|   | Q        | 4               | 6        | *              | *      | *     |
|   | R        | 3               | 5        | *              | *      | *     |
| 6'  | S        | 5               | 6        | 4'-8"          | 8-1/2" | -     |
|   | T        | 4               | 2        | 36"            | -      | -     |
|   | U        | 5               | 3        | 3'-2"          | 3'-2"  | 4'-5" |
|   | C        | 4               | 19       | 6'-8"          | 0'-6"  | -     |
|   | D        | 4               | 9        | 4'-5"          | -      | -     |
|   | G        | 3               | 6        | 2'-0"          | 1'-3"  | -     |
|   | J        | 5               | 1        | *              | *      | *     |
|   | K        | 5               | 2        | 3'-2"          | 0'-6"  | -     |
|   | L        | 4               | 11       | 3'-2"          | 0'-6"  | -     |
|   | M        | 4               | 2        | 3'-0"***       | -      | -     |
| 8'  | O        | 6               | 8        | 2'-5"          | 7"     | -     |
|   | Q        | 4               | 8        | *              | *      | *     |
|   | R        | 3               | 7        | *              | *      | *     |
|   | S        | 5               | 6        | 6'-8"          | 8-1/2" | -     |
|   | T        | 4               | 2        | 36"            | -      | -     |
|   | U        | 5               | 5        | 3'-2"          | 3'-2"  | 4'-5" |
|   | C        | 4               | 19       | 8'-8"          | 0'-6"  | -     |
|   | D        | 4               | 9        | 4'-5"          | -      | -     |
|   | G        | 3               | 7        | 2'-0"          | 1'-3"  | -     |
|   | J        | 5               | 1        | *              | *      | *     |
| 10'   | K        | 5               | 2        | 3'-2"          | 0'-6"  | -     |
|   | L        | 4               | 11       | 3'-2"          | 0'-6"  | -     |
|   | M        | 4               | 2        | 3'-0"***       | -      | -     |
|   | O        | 6               | 10       | 2'-5"          | 7"     | -     |
|   | Q        | 4               | 10       | *              | *      | *     |
|   | R        | 3               | 9        | *              | *      | *     |
|   | S        | 5               | 6        | 8'-8"          | 8-1/2" | -     |
|   | T        | 4               | 2        | 36"            | -      | -     |
|   | U        | 5               | 7        | 3'-2"          | 3'-2"  | 4'-5" |
|   | 10'      | C               | 4        | 19             | 10'-8" | 0'-6" |
| D   |          | 4               | 9        | 4'-5"          | -      | -     |
| G   |          | 3               | 9        | 2'-0"          | 1'-3"  | -     |
| J   |          | 5               | 1        | *              | *      | *     |
| K   |          | 5               | 2        | 3'-2"          | 0'-6"  | -     |
| L   |          | 4               | 11       | 3'-2"          | 0'-6"  | -     |
| M   |          | 4               | 2        | 3'-0"***       | -      | -     |
| O   |          | 6               | 12       | 2'-5"          | 7"     | -     |
| Q   |          | 4               | 12       | *              | *      | *     |
| R   |          | 3               | 11       | *              | *      | *     |
| 10'   | S        | 5               | 6        | 10'-10"        | 8-1/2" | -     |
|   | T        | 4               | 2        | 36"            | -      | -     |
|   | U        | 5               | 9        | 3'-2"          | 3'-2"  | 4'-5" |

\* SEE DIAGRAM FOR DIMENSIONS

\*\* FIELD CUT AS REQUIRED TO ACCOMMODATE DRAIN PIPE



PUBLIC WORKS DEPARTMENT

REINFORCING STEEL SCHEDULE  
4, 6, 8 & 10 FOOT INLETS  
(BRICK ON INLET)

STANDARD CONSTRUCTION DETAILS  
STORM DRAINAGE

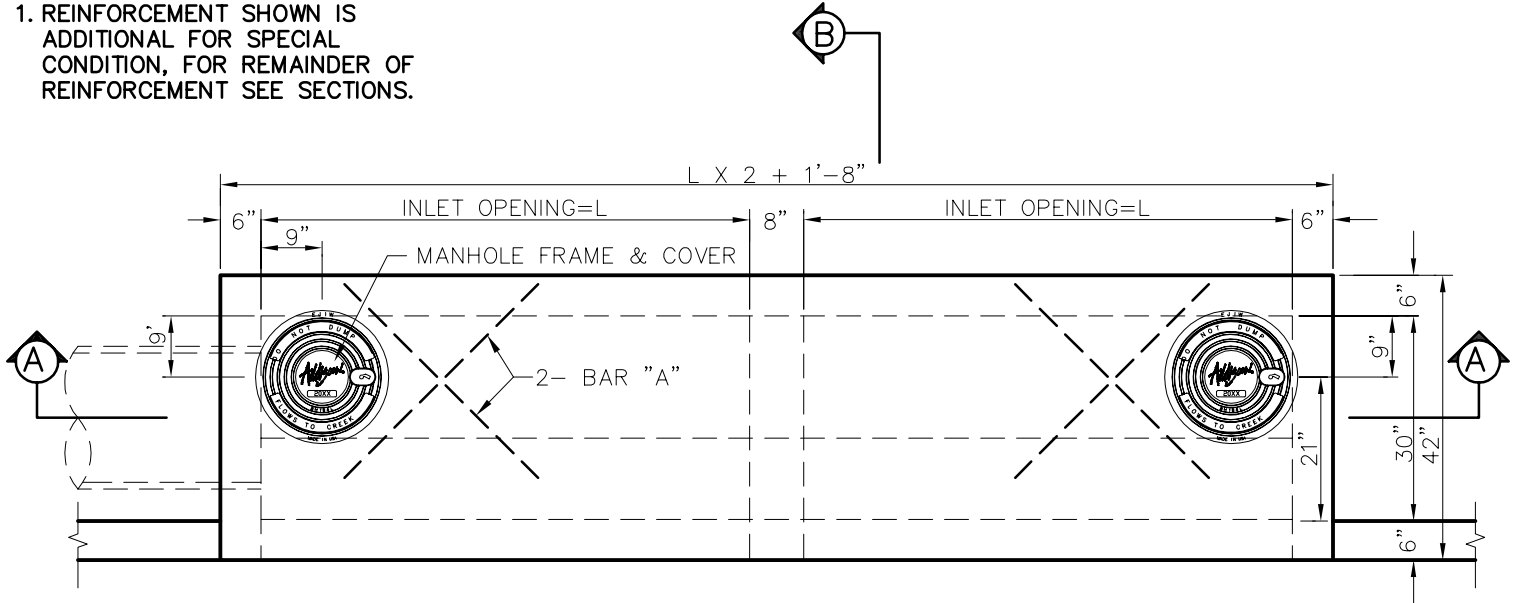
DATE:  
AUGUST, 2010

REV DATE:  
-

SHEET :  
SD-D18

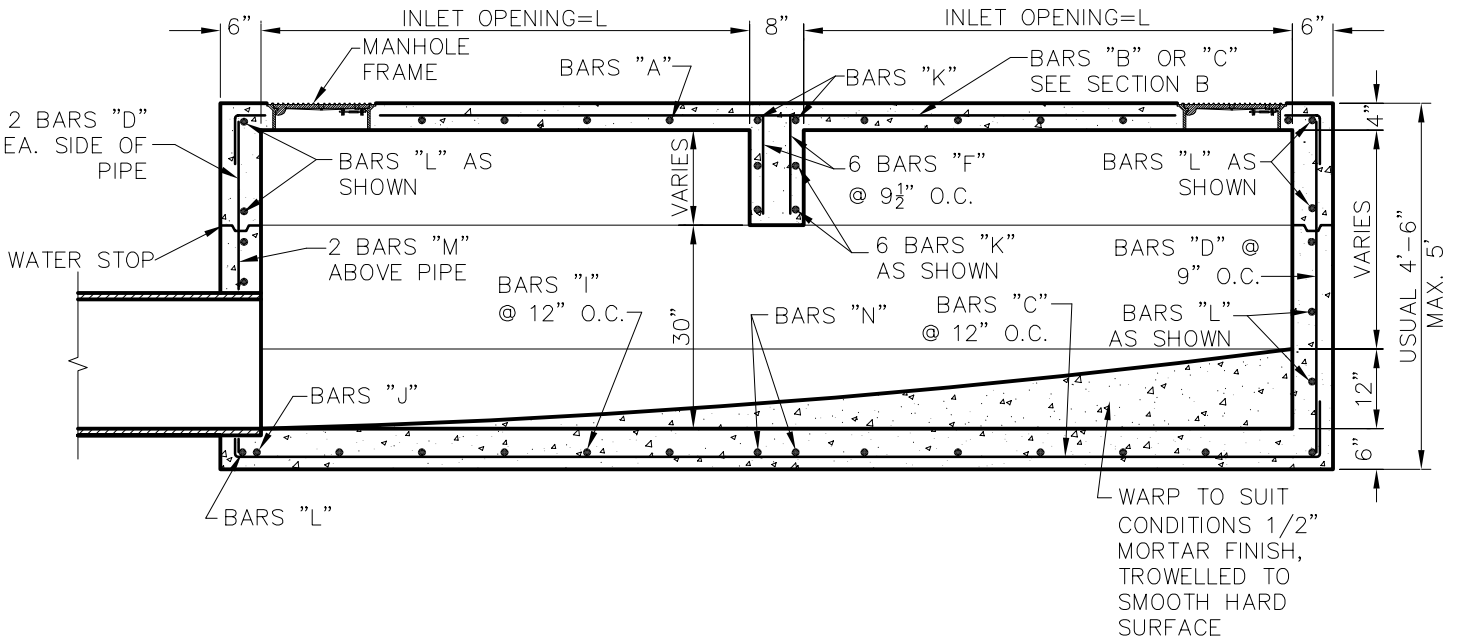
**NOTE:**

1. REINFORCEMENT SHOWN IS  
ADDITIONAL FOR SPECIAL  
CONDITION, FOR REMAINDER OF  
REINFORCEMENT SEE SECTIONS.



**PLAN-STANDARD INLET**

NTS



**SECTION A**

NTS

**NOTE:**

1. BACKFILL AROUND INLET SHALL  
BE FLOWABLE BACKFILL PER  
NCTCOG 504.2.3.4

*Addison!*

PUBLIC WORKS DEPARTMENT

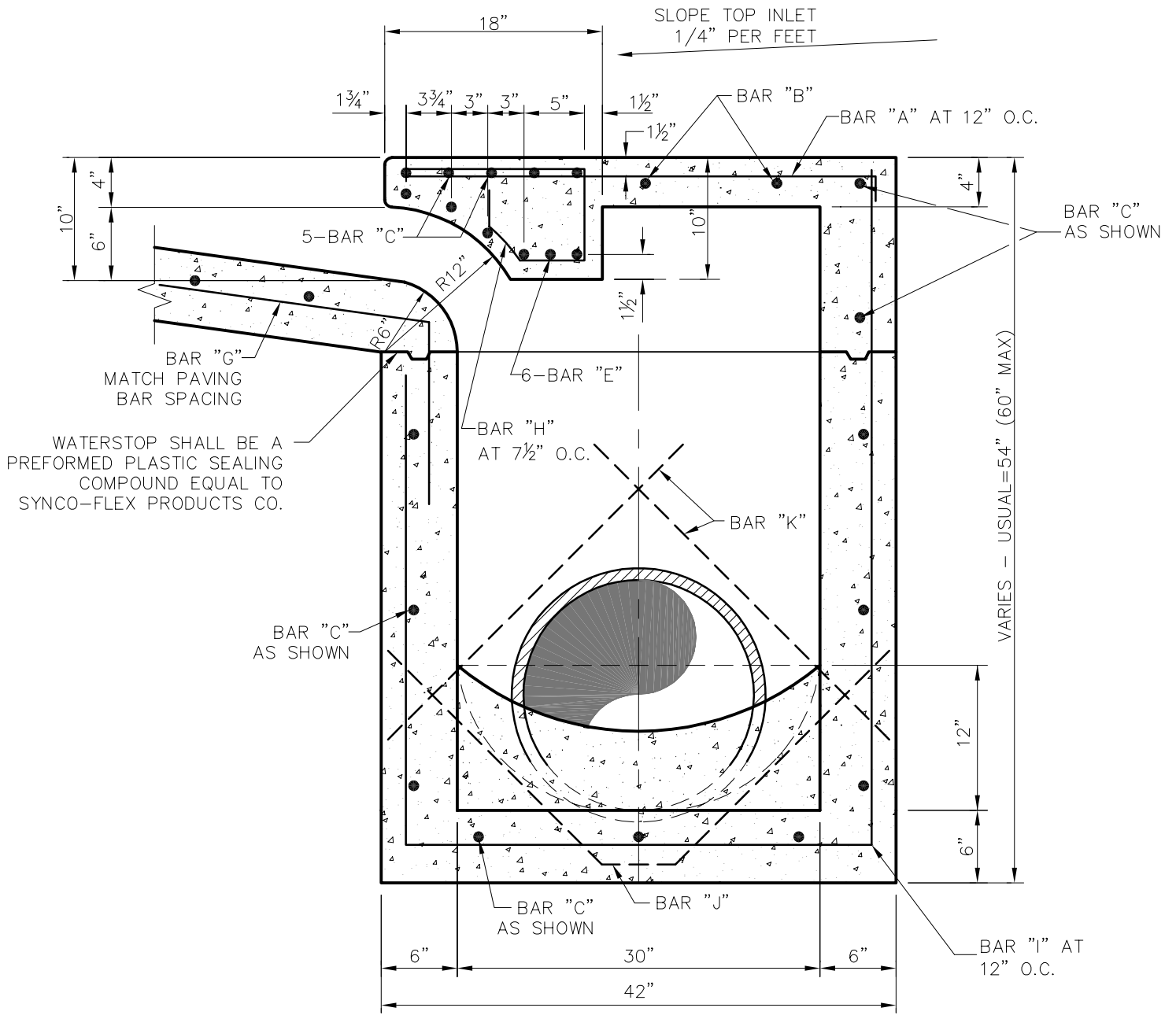
STANDARD CURB INLET  
12, 14, 16 & 20 FOOT INLETS

STANDARD CONSTRUCTION DETAILS  
STORM DRAINAGE

DATE:  
AUGUST, 2010

REV DATE:  
-

SHEET :  
SD-D19



**SECTION "B"**

NTS

*Addison!*

PUBLIC WORKS DEPARTMENT

TYPICAL SECTION "B"  
STANDARD & RECESSED CURB  
INLETS  
(12, 14, 16 & 20 FOOT INLETS)

STANDARD CONSTRUCTION DETAILS  
STORM DRAINAGE

DATE:  
AUGUST, 2010

REV DATE:  
-

SHEET :  
SD-D20

**REINFORCING STEEL SCHEDULE**  
DIMENSIONS ARE FOR MAXIMUM SIZE INLETS

| INLET LENGTH | BAR TYPE | BAR DIA (1/8") | NO REQ'D | BAR DIMENSIONS |       |       | INLET LENGTH | BAR TYPE | BAR DIA. (1/8") | NO REQ'D | BAR DIMENSIONS |       |       |
|--------------|----------|----------------|----------|----------------|-------|-------|--------------|----------|-----------------|----------|----------------|-------|-------|
|              |          |                |          | A              | B     | C     |              |          |                 |          | A              | B     | C     |
| 6'           | A        | 3              | 12       | 3'-2"          | 0'-6" | -     | 8'           | A        | 3               | 16       | 3'-2"          | 0'-6" | -     |
|              | B        | 3              | 2        | 11'-6"         | -     | -     |              | B        | 3               | 2        | 15'-6"         | -     | -     |
|              | C        | 4              | 16       | 13'-4"         | 0'-6" | -     |              | C        | 4               | 16       | 17'-4"         | 0'-6" | -     |
|              | D        | 4              | 9        | 4'-8"          | -     | -     |              | D        | 4               | 9        | 4'-8"          | -     | -     |
|              | E        | 5              | 6        | 13'-4"         | -     | -     |              | E        | 5               | 6        | 17'-4"         | -     | -     |
|              | F        | 4              | 10       | 1'-2"          | -     | -     |              | F        | 4               | 10       | 1'-2"          | -     | -     |
|              | G        | 3              | 11       | 2'-0"          | 1'-3" | -     |              | G        | 3               | 13       | 2'-0"          | 1'-3" | -     |
|              | H        | 3              | 20       | *              | *     | *     |              | H        | 3               | 26       | *              | *     | *     |
|              | I        | 4              | 12       | 3'-2"          | 3'-2" | 4'-8" |              | I        | 4               | 16       | 3'-2"          | 3'-2" | 4'-8" |
|              | J        | 5              | 1        | *              | *     | *     |              | J        | 5               | 1        | *              | *     | *     |
|              | K        | 5              | 8        | 3'-2"          | 0'-6" | -     |              | K        | 5               | 8        | 3'-2"          | 0'-6" | -     |
| L            | 4        | 11             | 3'-2"    | 0'-6"          | -     | L     | 4            | 11       | 3'-2"           | 0'-6"    | -              |       |       |
| M            | 4        | 2              | 3'-0"*** | -              | -     | M     | 4            | 2        | 3'-0"***        | -        | -              |       |       |
| N            | 4        | 2              | 3'-2"    | 4'-8"          | -     | N     | 4            | 2        | 3'-2"           | 4'-8"    | -              |       |       |
| 7'           | A        | 3              | 14       | 3'-2"          | 0'-6" | -     | 10'          | A        | 3               | 20       | 3'-2"          | 0'-6" | -     |
|              | B        | 3              | 2        | 13'-6"         | -     | -     |              | B        | 3               | 2        | 19'-6"         | -     | -     |
|              | C        | 4              | 16       | 15'-4"         | 0'-6" | -     |              | C        | 4               | 16       | 21'-4"         | 0'-6" | -     |
|              | D        | 4              | 9        | 4'-8"          | -     | -     |              | D        | 4               | 9        | 4'-8"          | -     | -     |
|              | E        | 5              | 6        | 15'-4"         | -     | -     |              | E        | 5               | 6        | 21'-4"         | -     | -     |
|              | F        | 4              | 10       | 1'-2"          | -     | -     |              | F        | 4               | 10       | 1'-2"          | -     | -     |
|              | G        | 3              | 12       | 2'-0"          | 1'-3" | -     |              | G        | 3               | 16       | 2'-0"          | 1'-3" | -     |
|              | H        | 3              | 22       | *              | *     | *     |              | H        | 3               | 32       | *              | *     | *     |
|              | I        | 4              | 14       | 3'-2"          | 3'-2" | 4'-8" |              | I        | 4               | 20       | 3'-2"          | 3'-2" | 4'-8" |
|              | J        | 5              | 1        | *              | *     | *     |              | J        | 5               | 1        | *              | *     | *     |
|              | K        | 5              | 8        | 3'-2"          | 0'-6" | -     |              | K        | 5               | 8        | 3'-2"          | 0'-6" | -     |
| L            | 4        | 11             | 3'-2"    | 0'-6"          | -     | L     | 4            | 11       | 3'-2"           | 0'-6"    | -              |       |       |
| M            | 4        | 2              | 3'-0"*** | -              | -     | M     | 4            | 2        | 3'-0"***        | -        | -              |       |       |
| N            | 4        | 2              | 3'-2"    | 4'-8"          | -     | N     | 4            | 2        | 3'-2"           | 4'-8"    | -              |       |       |

\* SEE DIAGRAM FOR DIMENSION

\*\* FIELD CUT AS REQUIRED TO ACCOMMODATE DRAIN PIPE

*Addison!*

PUBLIC WORKS DEPARTMENT

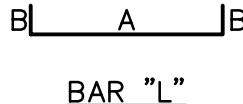
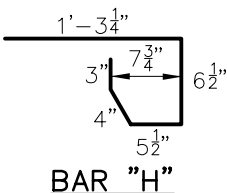
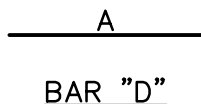
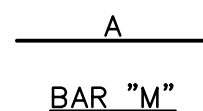
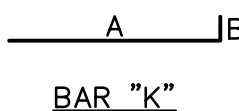
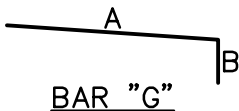
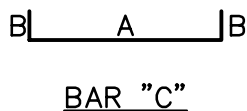
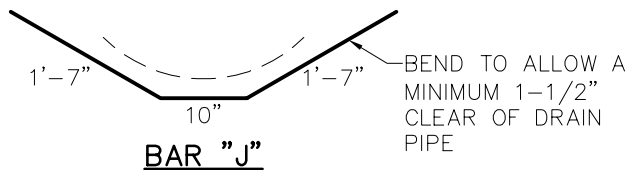
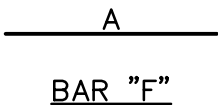
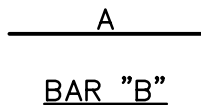
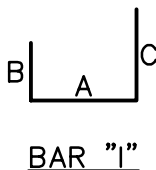
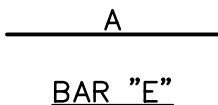
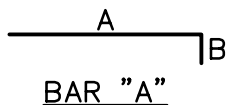
REINFORCING STEEL SCHEDULE  
12, 14, 16 & 20 FOOT INLETS

STANDARD CONSTRUCTION DETAILS  
STORM DRAINAGE

DATE:  
AUGUST, 2010

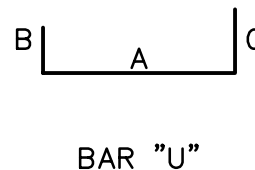
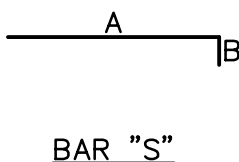
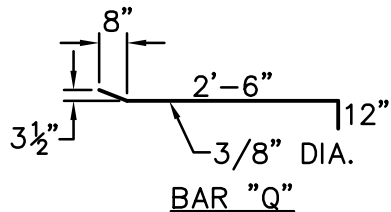
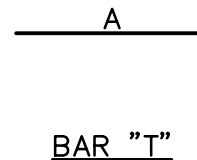
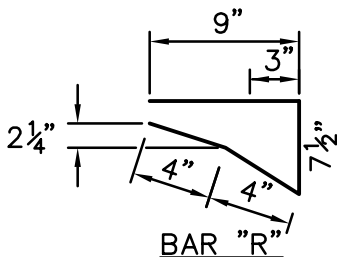
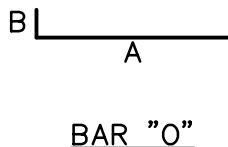
REV DATE:  
-

SHEET :  
SD-D21



REINFORCING BAR  
DIAGRAMS

NTS



BAR DIAGRAMS  
(BRICK ON INLET)

NTS

NOTE:  
BAR DESIGNATIONS AND DIMENSIONS ARE DIFFERENT  
FROM STEEL SCHEDULE FOR REGULAR INLETS

*Addison!*

PUBLIC WORKS DEPARTMENT

REINFORCING BAR  
DIAGRAMS

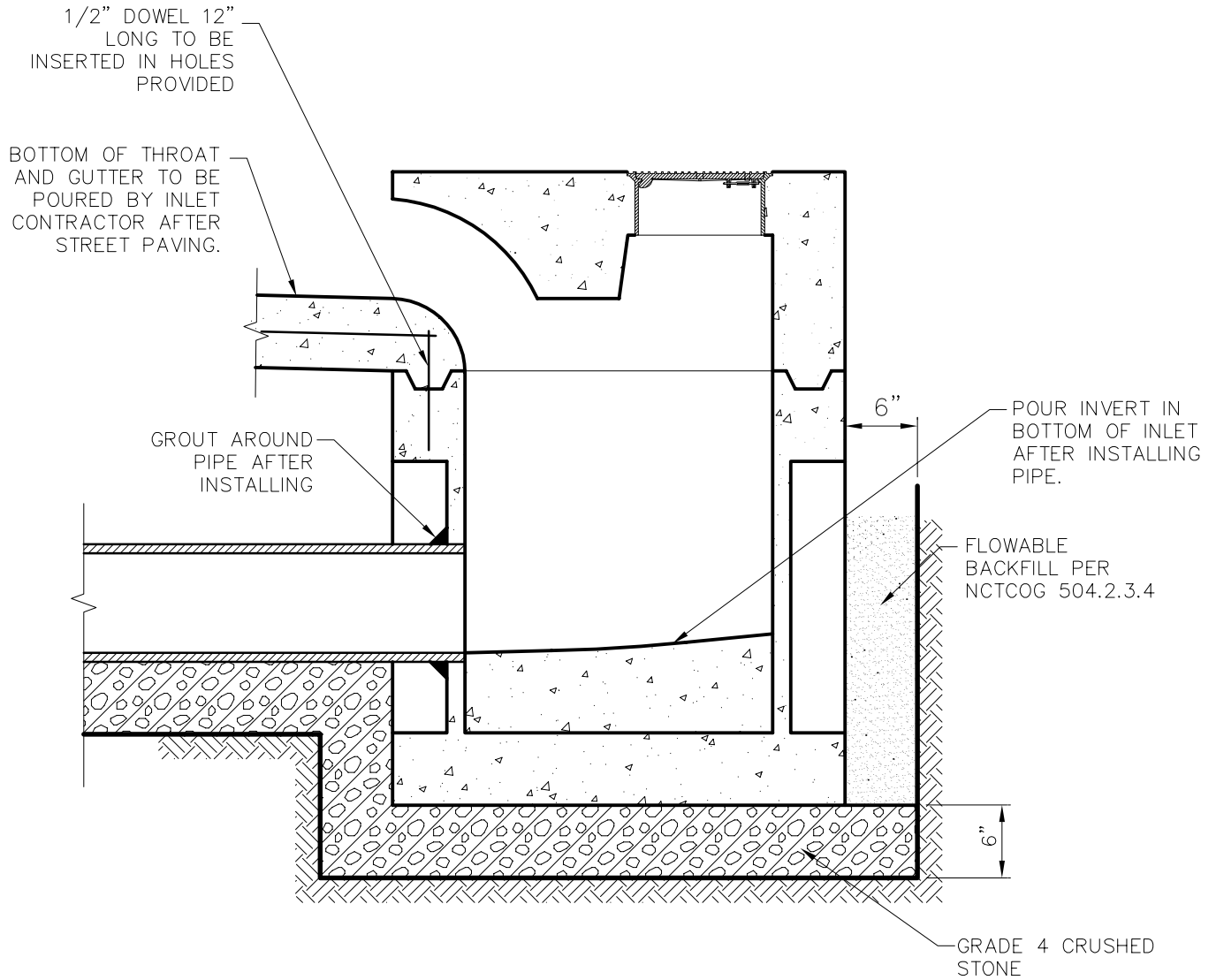
STANDARD CONSTRUCTION DETAILS  
STORM DRAINAGE

DATE:  
AUGUST, 2010

REV DATE:  
-

SHEET :  
SD-D22





**INSTALLATION DRAWING FOR PRECAST 5'  
AND 10' CURB INLETS**

NTS

**NOTES:**

1. FOR PRECAST INLET THE FLOOR OF THE EXCAVATION MUST PROVIDE A FIRM, LEVEL BED FOR THE BASE SECTION TO REST UPON.
2. PIPES SHALL CONNECT TO THE SIDES OF THE INLETS. CONNECTIONS NOT TO BE MADE AT CORNERS OR BOTTOM.
3. PRECAST INLETS MUST BE APPROVED BY PUBLIC WORKS DEPARTMENT.

*Addison!*

PUBLIC WORKS DEPARTMENT

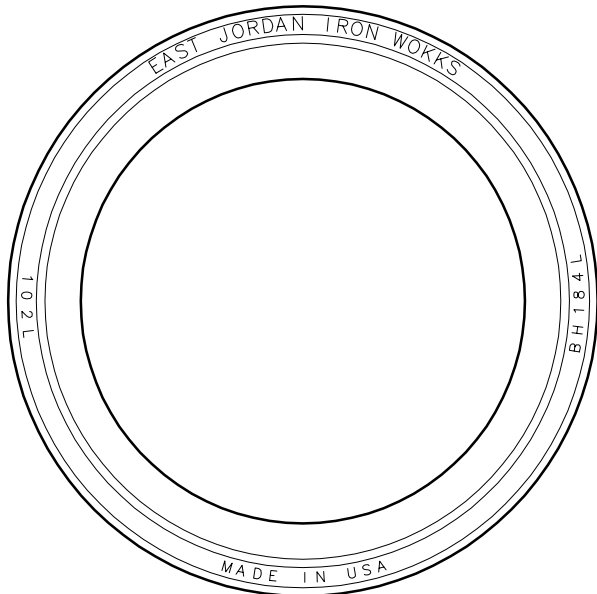
PRECAST CURB INLET

STANDARD CONSTRUCTION DETAILS  
STORM DRAINAGE

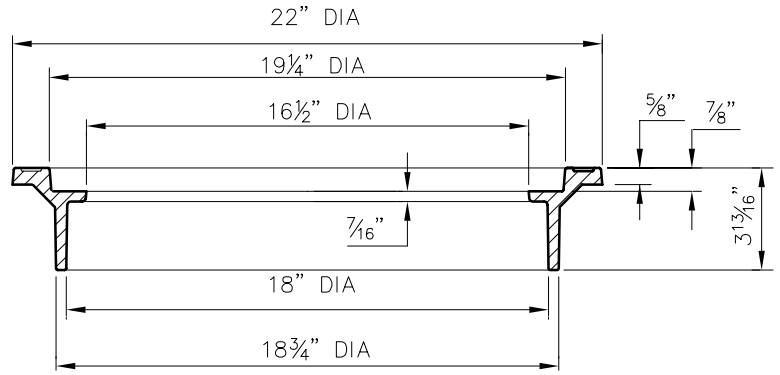
DATE:  
AUGUST, 2010

REV DATE:  
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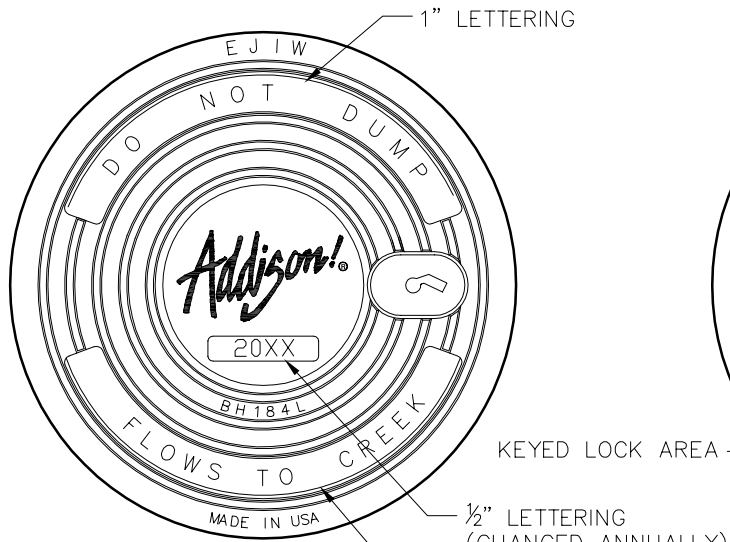
SHEET :  
SD-D23



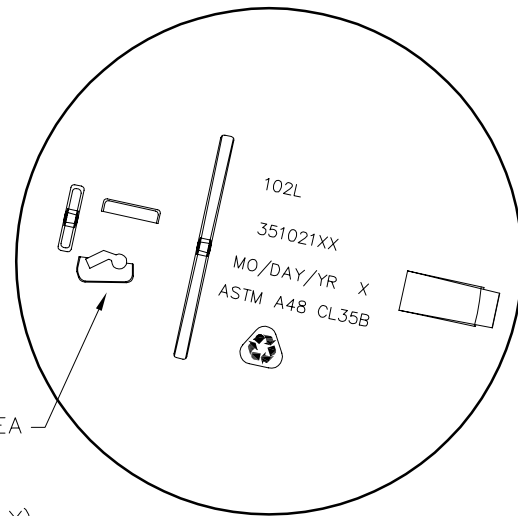
RING



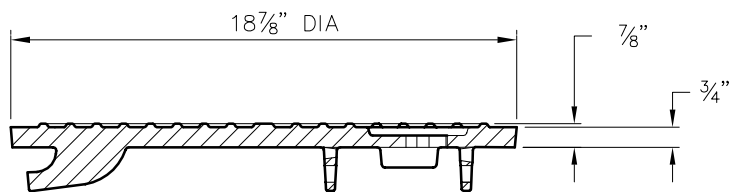
RING SECTION



COVER



COVER BOTTOM VIEW



COVER SECTION

NOTE:  
 FRAME AND COVER SHALL BE EAST JORDAN IRON WORKS FRAME PRODUCT #35202000 AND COVER PRODUCT #NCR08-0060B OR APPROVED EQUAL AND SHALL BE GRAY CAST IRON CONFORMING TO ASTM A48-CL35B.



PUBLIC WORKS DEPARTMENT

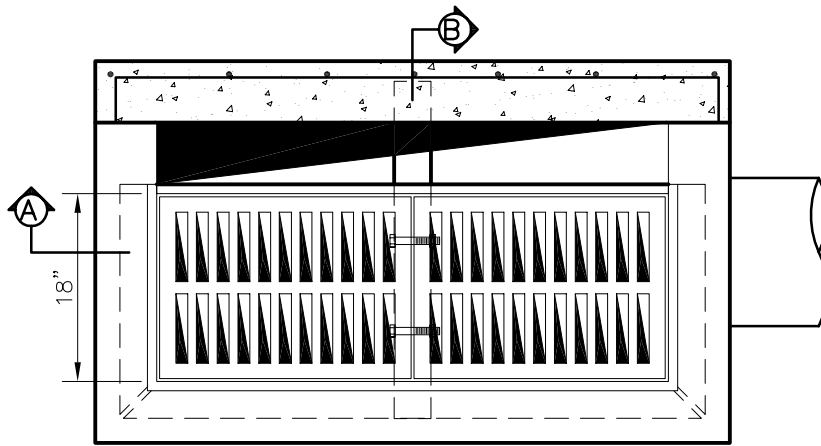
INLET  
 FRAME & COVER

STANDARD CONSTRUCTION DETAILS  
 STORM DRAINAGE

DATE:  
 AUGUST, 2010

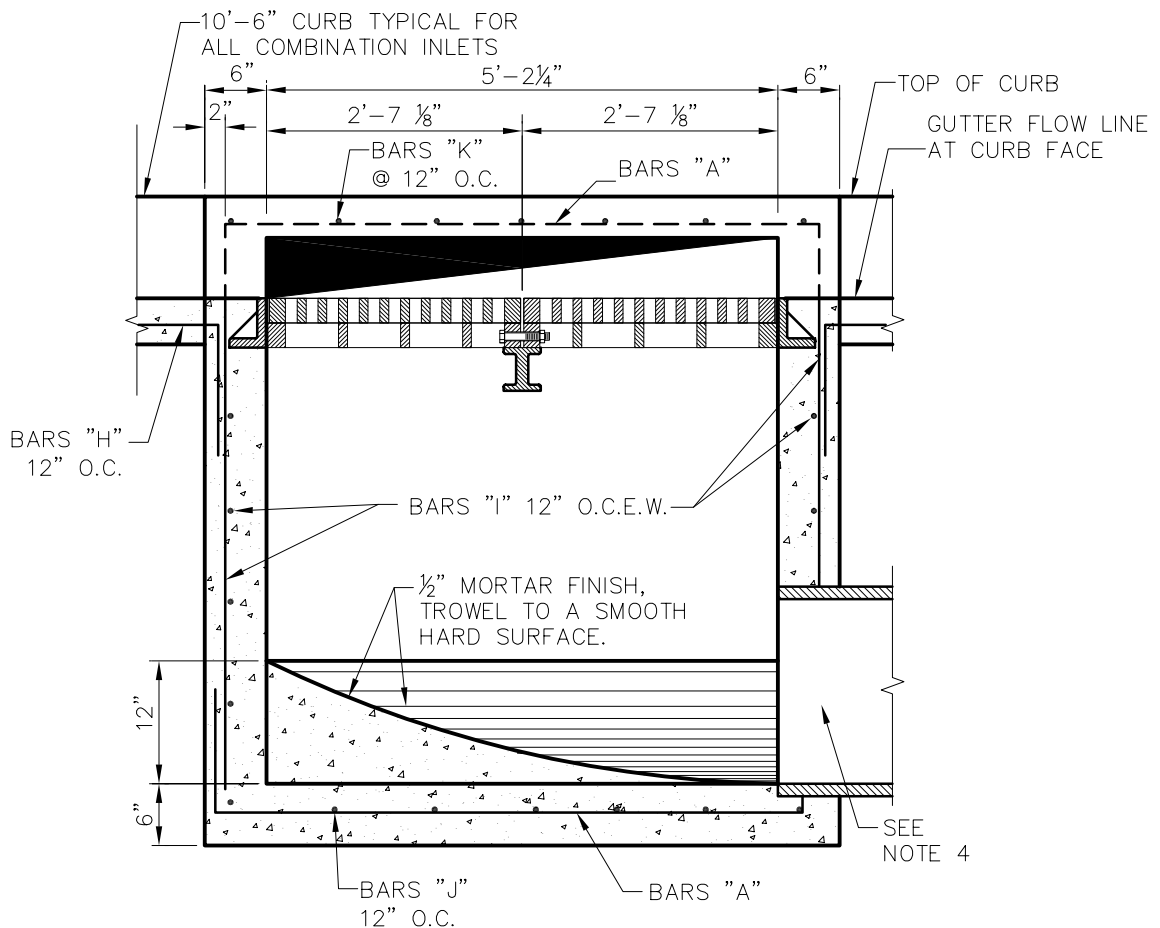
REV DATE:  
 -

SHEET :  
 SD-D24



**PLAN**

NTS



**SECTION A**

NTS

**NOTES:**

1. COMBINATION INLETS TO BE USED IN ALL ALLEYS WHERE INLETS ARE REQUIRED.
2. ALL LAPS AND EXTENSION OF REINFORCING BARS SHALL BE 36 BAR DIAMETERS UNLESS NOTED OTHERWISE.
3. TACK WELD GRATES IN PLACE.
4. PIPE MAY BE PLACED IN ANY WALL, BUT SHALL NOT ENTER ANY CORNER OR BOTTOM.
5. ALL CAST IRON FITTINGS SHALL BE DOMESTIC.
6. ALL FASTENERS SHALL BE GALVANIZED.

*Addison!*

PUBLIC WORKS DEPARTMENT

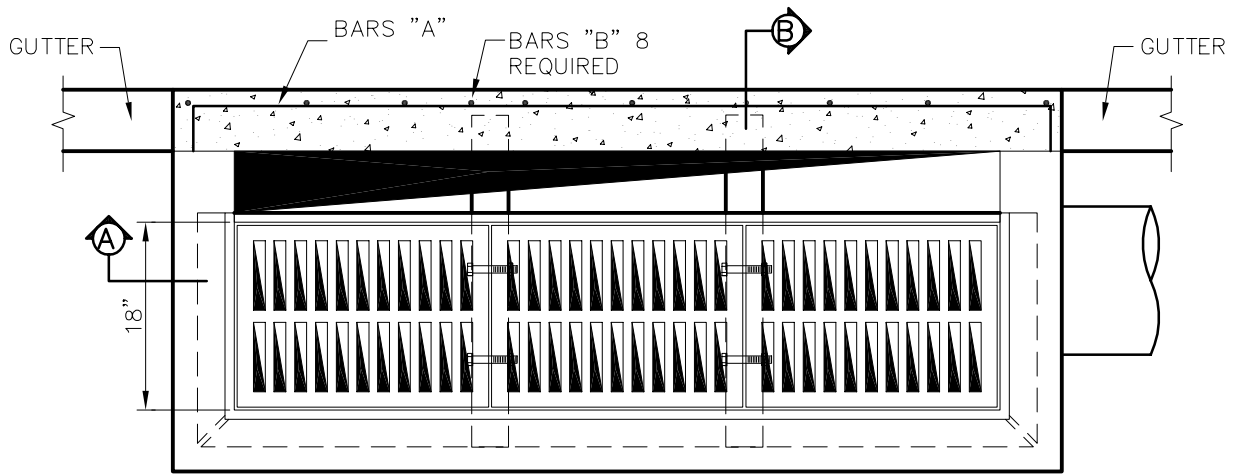
COMBINATION INLET  
TWO GRATE INLET

STANDARD CONSTRUCTION DETAILS  
STORM DRAINAGE

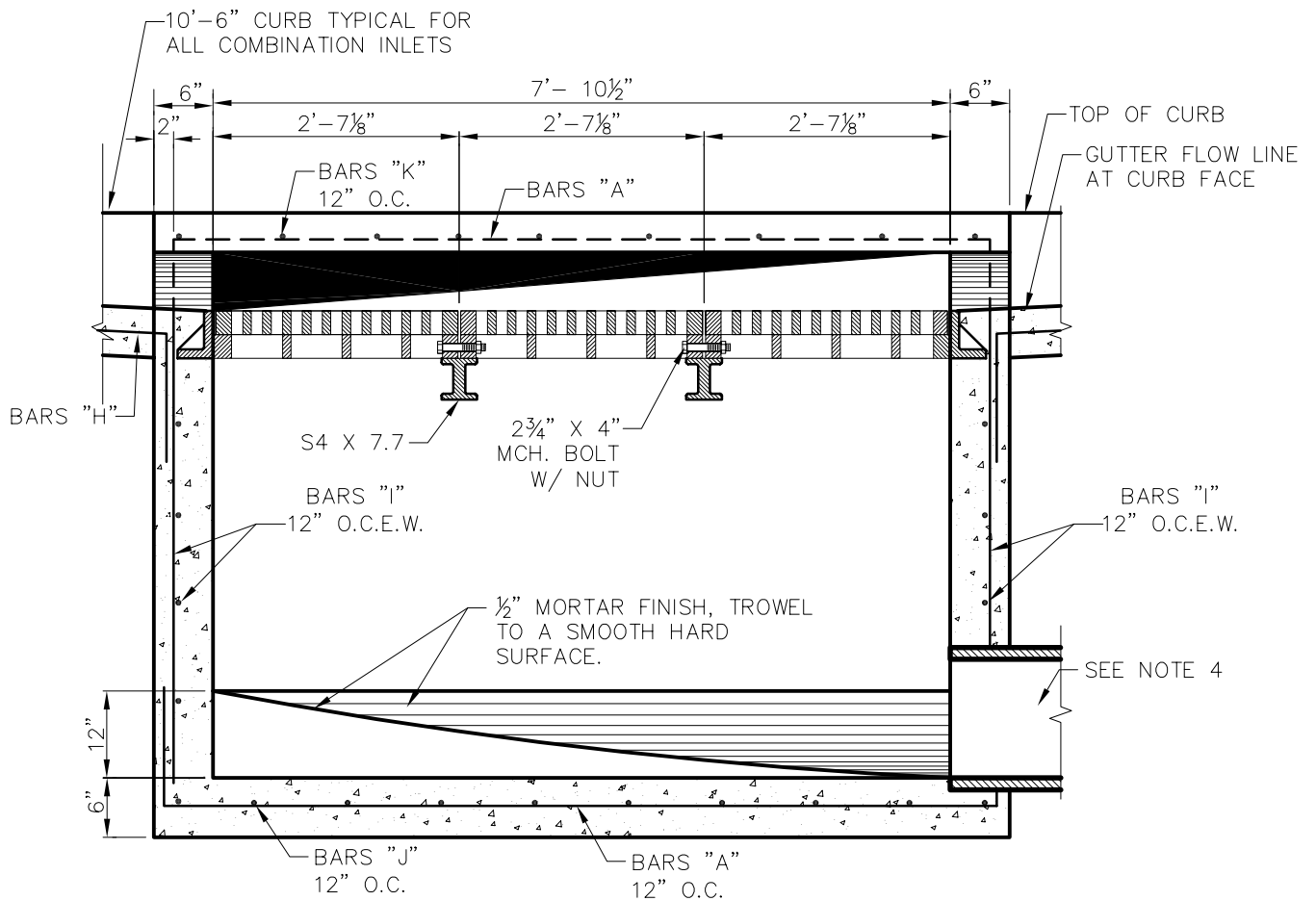
DATE:  
AUGUST, 2010

REV DATE:  
-

SHEET :  
SD-D25



**PLAN**  
NTS



**SECTION A**  
NTS

**NOTES:**

1. COMBINATION INLETS TO BE USED IN ALL ALLEYS WHERE INLETS ARE REQUIRED.
2. ALL LAPS AND EXTENSION OF REINFORCING BARS SHALL BE 36 BAR DIAMETERS UNLESS NOTED OTHERWISE.
3. TACK WELD GRATES IN PLACE.
4. PIPE MAY BE PLACED IN ANY WALL, BUT SHALL NOT ENTER ANY CORNER OR BOTTOM.
5. ALL CAST IRON FITTINGS SHALL BE DOMESTIC.
6. ALL FASTENERS SHALL BE GALVANIZED.

*Addison!*

PUBLIC WORKS DEPARTMENT

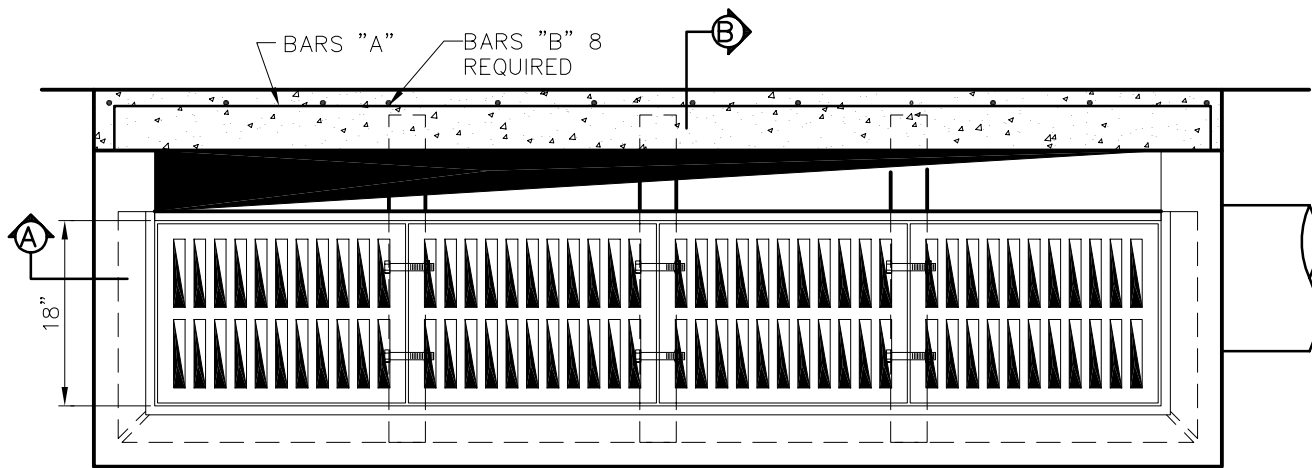
COMBINATION INLET  
THREE GRATE INLET

STANDARD CONSTRUCTION DETAILS  
STORM DRAINAGE

DATE:  
AUGUST, 2010

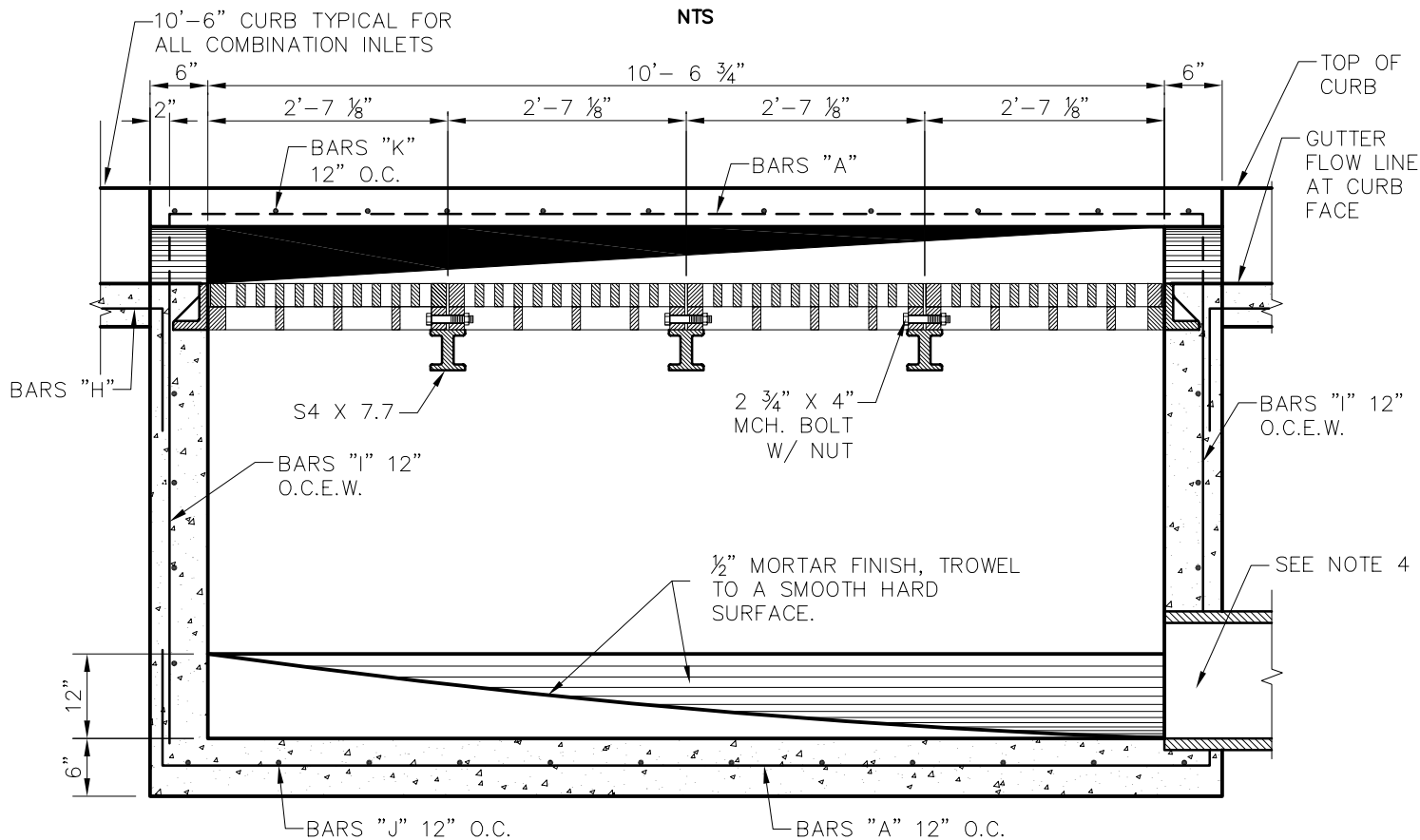
REV DATE:  
-

SHEET :  
SD-D26



**PLAN**

NTS



**SECTION A**

NTS

**NOTES:**

1. COMBINATION INLETS TO BE USED IN ALL ALLEYS WHERE INLETS ARE REQUIRED.
2. ALL LAPS AND EXTENSION OF REINFORCING BARS SHALL BE 36 BAR DIAMETERS UNLESS NOTED OTHERWISE.
3. TACK WELD GRATES IN PLACE.
4. PIPE MAY BE PLACED IN ANY WALL, BUT SHALL NOT ENTER ANY CORNER OR BOTTOM.
5. ALL CAST IRON FITTINGS SHALL BE DOMESTIC.
6. ALL FASTENERS SHALL BE GALVANIZED.

*Addison!*

PUBLIC WORKS DEPARTMENT

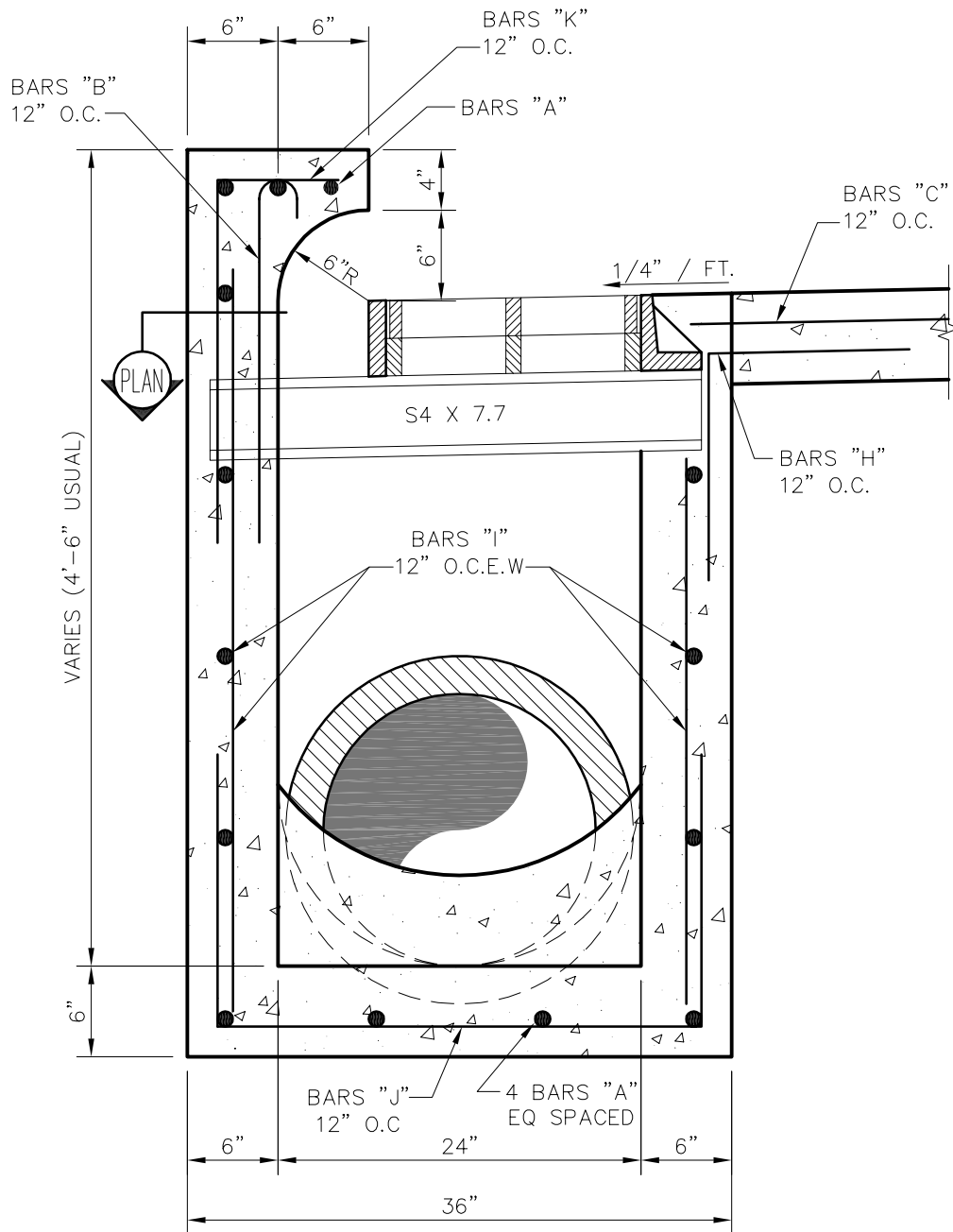
COMBINATION INLET  
FOUR GRATE INLET

STANDARD CONSTRUCTION DETAILS  
STORM DRAINAGE

DATE:  
AUGUST, 2010

REV DATE:  
-

SHEET :  
SD-D27



**SECTION B**  
NTS

**NOTES:**

1. COMBINATION INLETS TO BE USED IN ALL ALLEYS WHERE INLETS ARE REQUIRED.
2. ALL LAPS AND EXTENSION OF REINFORCING BARS SHALL BE 36 BAR DIAMETERS UNLESS NOTED OTHERWISE.
3. TACK WELD GRATES IN PLACE.
4. PIPE MAY BE PLACED IN ANY WALL, BUT SHALL NOT ENTER ANY CORNER OR BOTTOM.
5. ALL CAST IRON FITTINGS SHALL BE DOMESTIC.
6. ALL FASTENERS SHALL BE GALVANIZED.

*Addison!*

PUBLIC WORKS DEPARTMENT

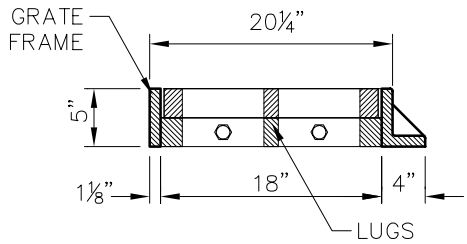
TYPICAL SECTION "B"  
COMBINATION INLET  
TWO, THREE & FOUR GRATE  
INLETS

STANDARD CONSTRUCTION DETAILS  
STORM DRAINAGE

DATE:  
AUGUST, 2010

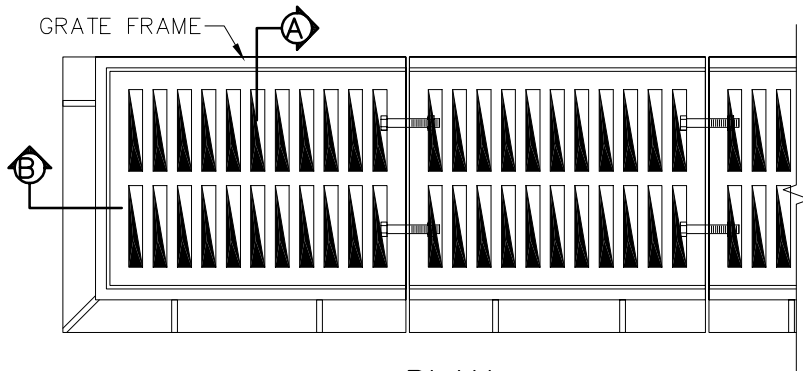
REV DATE:  
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SHEET :  
SD-D28



**SECTION A**

NTS

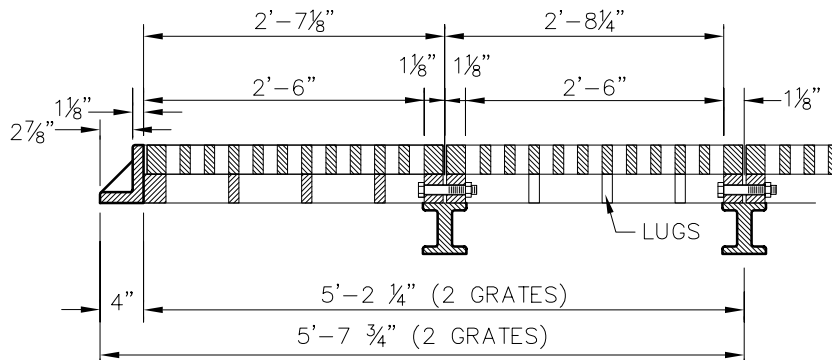


**PLAN**

NTS

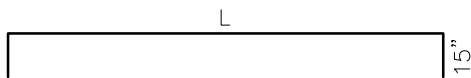
**NOTES:**

1. ALL LAPS AND EXTENSION OF REINFORCING BARS SHALL BE 36 BAR IN DIAMETERS UNLESS NOTED OTHERWISE.
2. TACK WELD GRATES IN PLACE.
3. PIPE MAY BE PLACED IN ANY WALL, BUT SHALL NOT ENTER ANY CORNER OR BOTTOM.
4. GRATE AND FRAME SHALL BE PATTERN No. 814AS MANUFACTURED BY BASS & HAYES FOUNDRY, INC. OR APPROVED EQUAL.
5. ALL CAST IRON FITTINGS SHALL BE DOMESTIC.
6. ALL FASTENERS SHALL BE GALVANIZED.



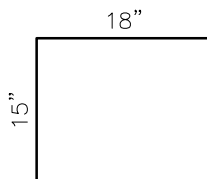
**SECTION B**

NTS

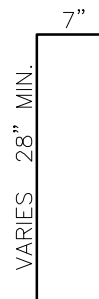


**BARS "A" 5/8"φ**

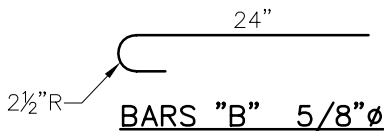
TWO GRATE INLET , L=5'-10 1/4"  
 THREE GRATE INLET , L=8'-6 1/2"  
 FOUR GRATE INLET , L=11'-2 3/4"



**BARS "H" 5/8"φ**



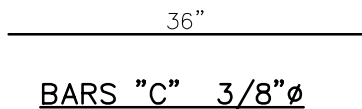
**BARS "K" 5/8"φ**



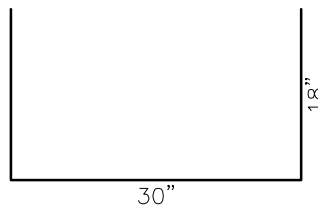
**BARS "B" 5/8"φ**



**BARS "I" 5/8"φ**



**BARS "C" 3/8"φ**



**BARS "J" 5/8"φ**



PUBLIC WORKS DEPARTMENT

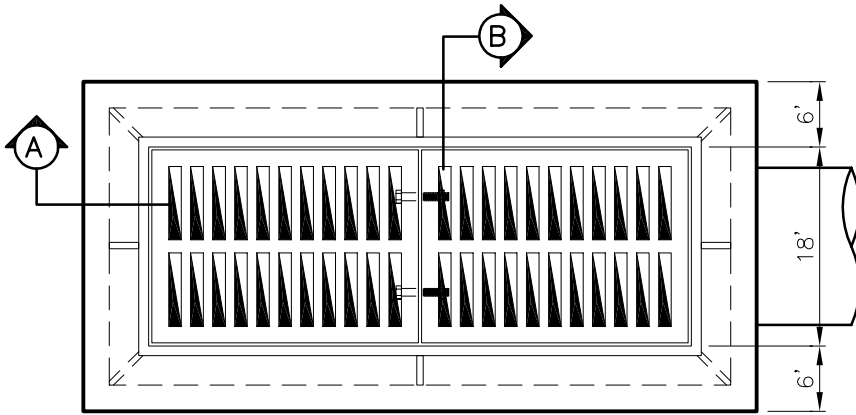
COMBINATION INLETS  
 GRATE DETAILS AND BAR  
 DIAGRAMS

STANDARD CONSTRUCTION DETAILS  
 STORM DRAINAGE

DATE:  
 AUGUST, 2010

REV DATE:  
 -

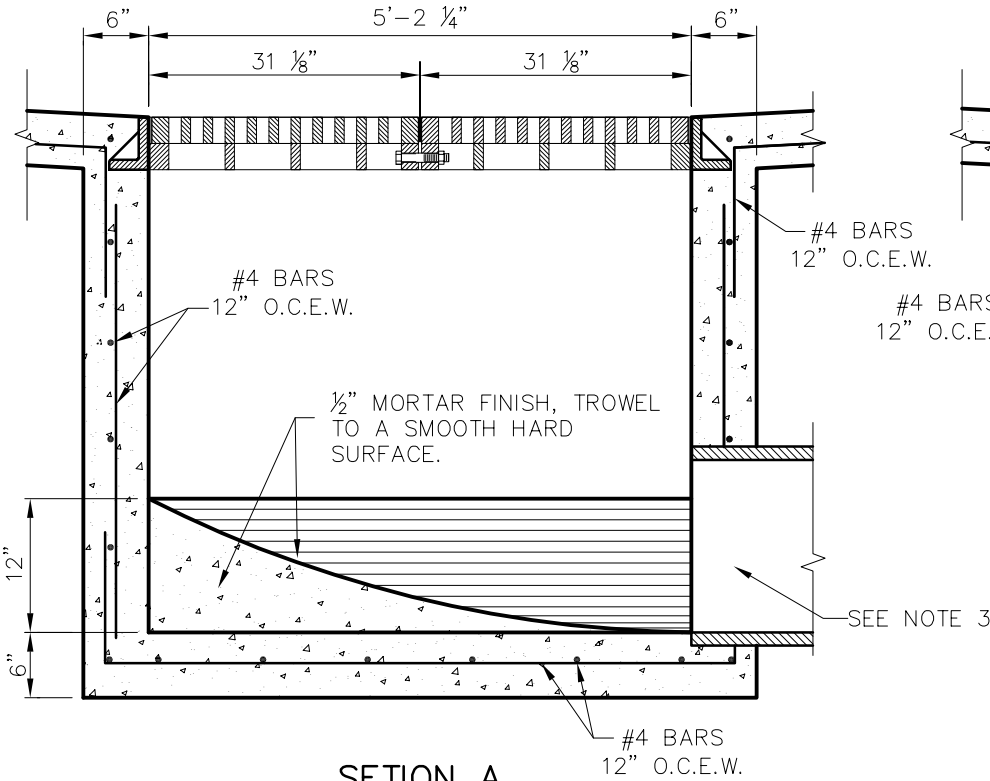
SHEET :  
 SD-D29



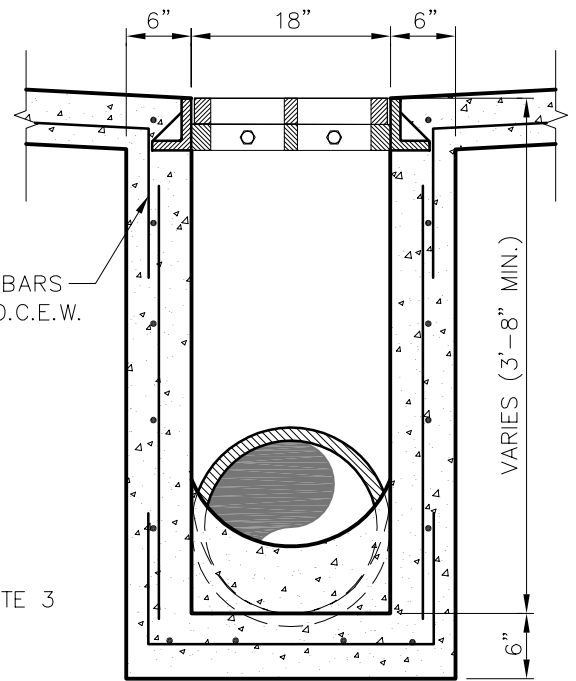
**PLAN**  
NTS

**NOTES:**

1. ALL LAPS AND EXTENSION OF REINFORCING BARS SHALL BE 36 BAR DIAMETERS UNLESS NOTED OTHERWISE.
2. TACK WELD GRATES IN PLACE.
3. PIPE MAY BE PLACED IN ANY WALL, BUT SHALL NOT ENTER ANY CORNER OR BOTTOM.
4. ALL CAST IRON FITTINGS SHALL BE DOMESTIC.
5. ALL FASTENERS SHALL BE GALVANIZED.



**SECTION A**  
NTS



**SECTION B**  
NTS

*Addison!*

PUBLIC WORKS DEPARTMENT

TWO GRATE INLET

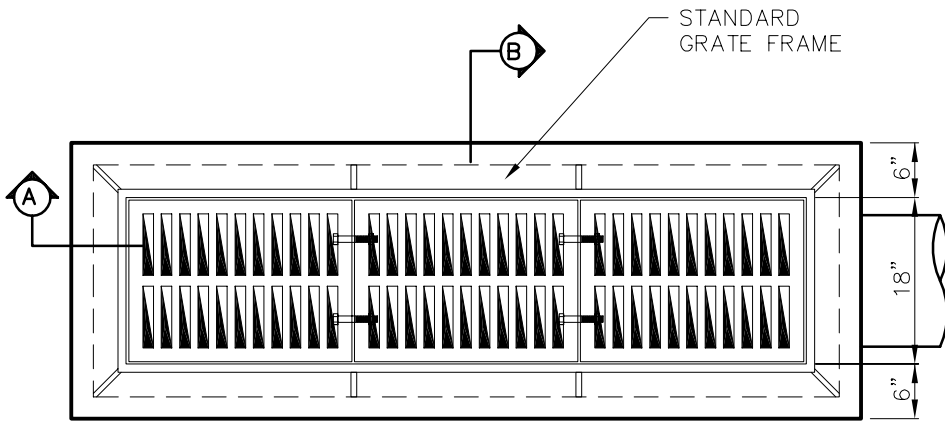
STANDARD CONSTRUCTION DETAILS  
STORM DRAINAGE

DATE:  
AUGUST, 2010

REV DATE:  
-

SHEET :  
SD-D30

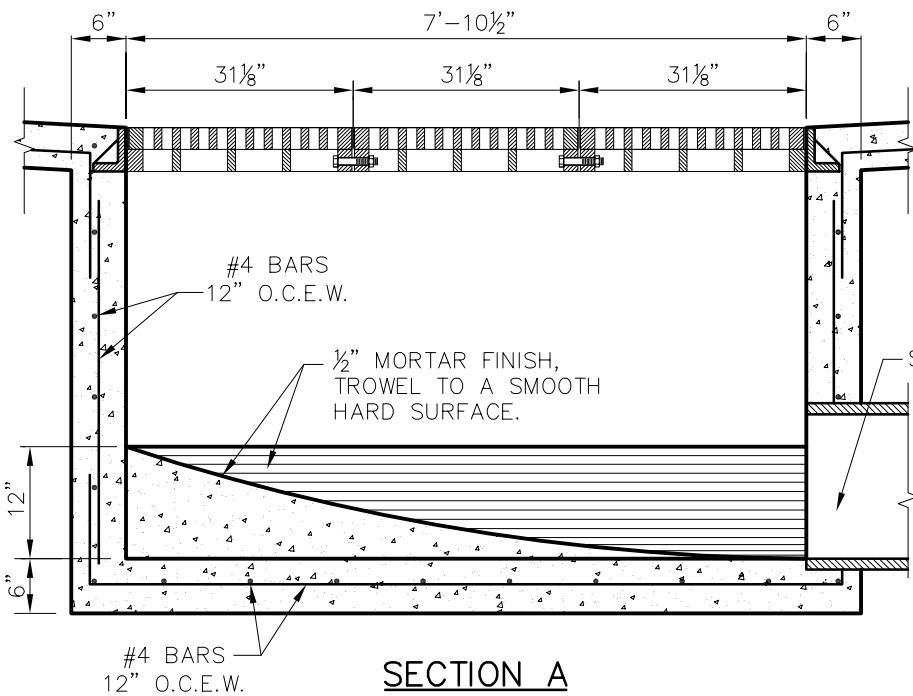




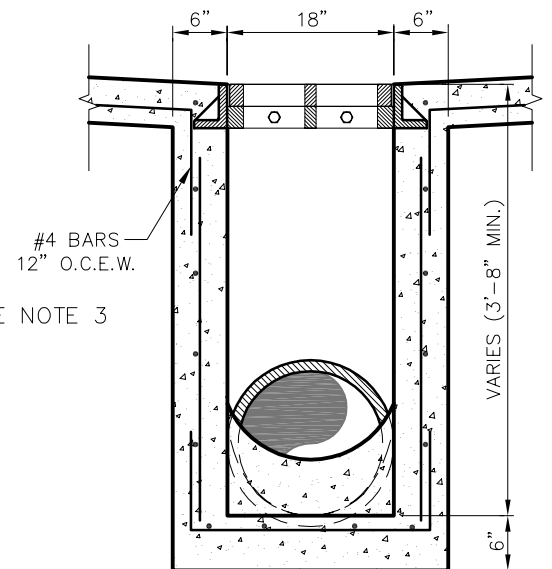
**PLAN**  
NTS

**NOTES:**

1. ALL LAPS AND EXTENSION OF REINFORCING BARS SHALL BE 36 BAR DIAMETERS UNLESS NOTED OTHERWISE.
2. TACK WELD GRATES IN PLACE.
3. PIPE MAY BE PLACED IN ANY WALL, BUT SHALL NOT ENTER ANY CORNER OR BOTTOM.
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5. ALL FASTENERS SHALL BE GALVANIZED.



**SECTION A**  
NTS



**SECTION B**  
NTS

*Addison!*

PUBLIC WORKS DEPARTMENT

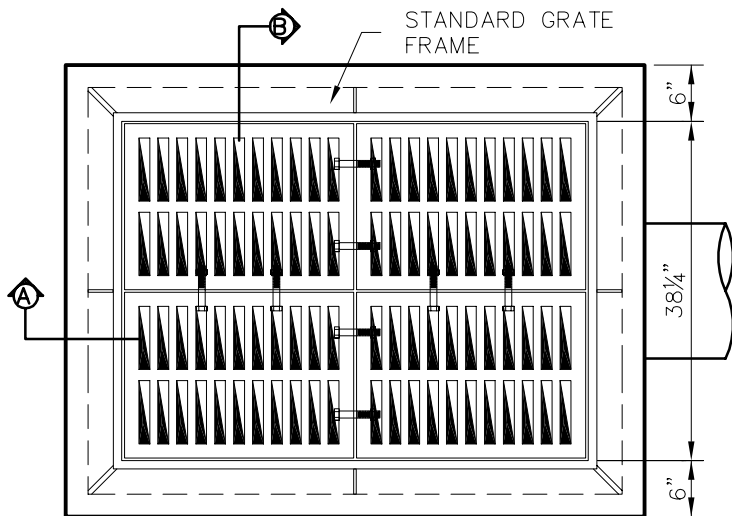
THREE GRATE INLET

STANDARD CONSTRUCTION DETAILS  
STORM DRAINAGE

DATE:  
AUGUST, 2010

REV DATE:  
-

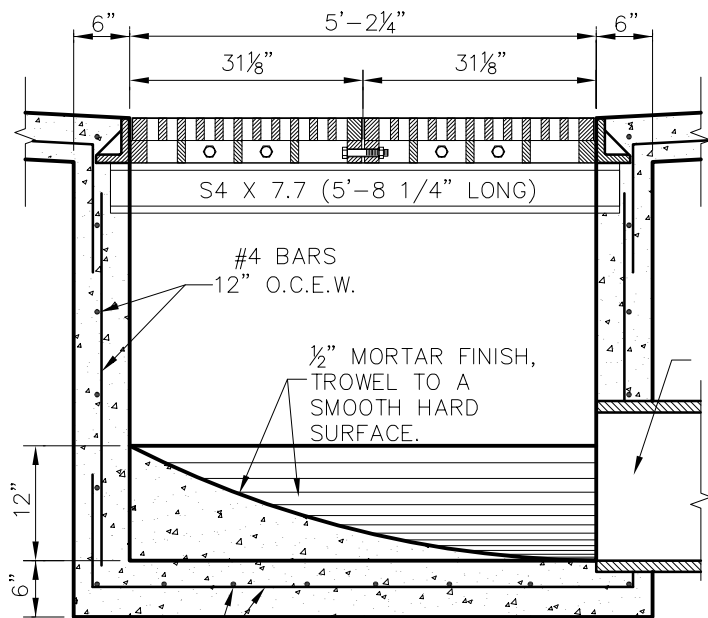
SHEET :  
SD-D31



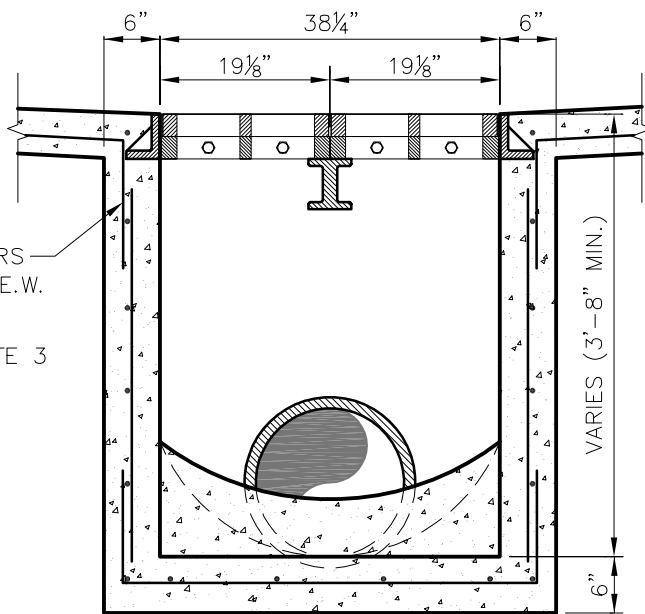
**PLAN**  
NTS

**NOTES:**

1. ALL LAPS AND EXTENSION OF REINFORCING BARS SHALL BE 36 BAR DIAMETERS UNLESS NOTED OTHERWISE.
2. TACK WELD GRATES IN PLACE.
3. PIPE MAY BE PLACED IN ANY WALL, BUT SHALL NOT ENTER ANY CORNER OR BOTTOM.
4. ALL CAST IRON FITTINGS SHALL BE DOMESTIC.
5. ALL FASTENERS SHALL BE GALVANIZED.



**SECTION A**  
NTS



**SECTION B**  
NTS

*Addison!*

PUBLIC WORKS DEPARTMENT

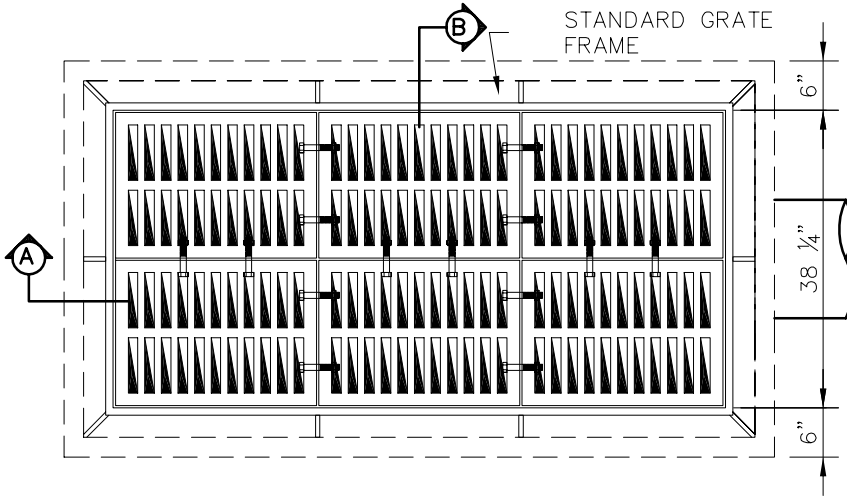
FOUR GRATE INLET

STANDARD CONSTRUCTION DETAILS  
STORM DRAINAGE

DATE:  
AUGUST, 2010

REV DATE:  
-

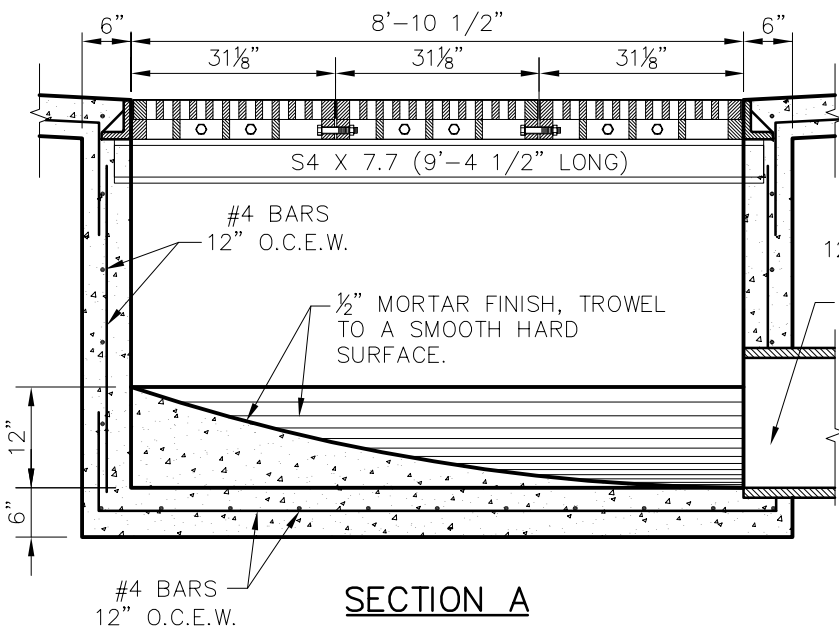
SHEET :  
SD-D32



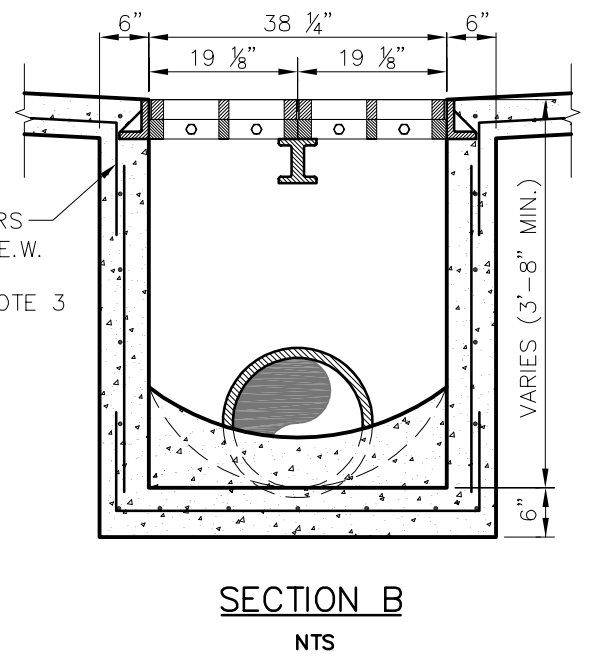
**PLAN**  
NTS

**NOTES:**

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5. ALL FASTENERS SHALL BE GALVANIZED.



**SECTION A**  
NTS



**SECTION B**  
NTS



PUBLIC WORKS DEPARTMENT

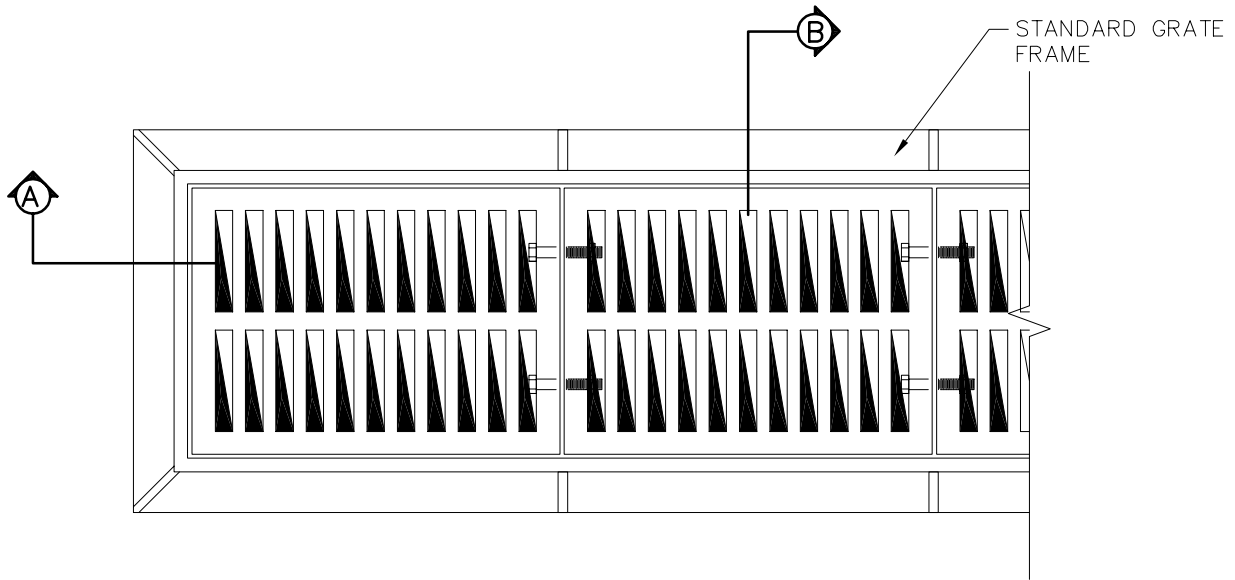
SIX GRATE INLET

STANDARD CONSTRUCTION DETAILS  
STORM DRAINAGE

DATE:  
AUGUST, 2010

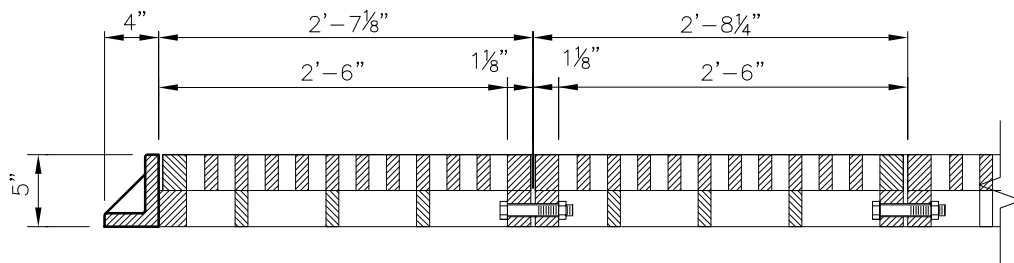
REV DATE:  
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SHEET :  
SD-D33



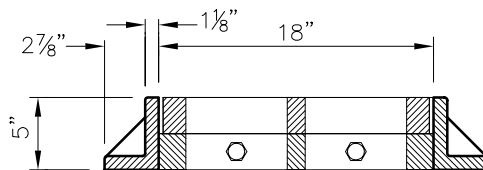
**PLAN**

NTS



**SECTION A**

NTS



**SECTION B**

NTS

**NOTES:**

1. GRATE AND FRAME SHALL BE PATTERN No. 814 AS MANUFACTURED BY BASS AND HAYES FOUNDRY OR APPROVED EQUAL.
2. ALL CAST IRON FITTINGS SHALL BE DOMESTIC.
3. ALL FASTENERS SHALL BE GALVANIZED.

*Addison!*

PUBLIC WORKS DEPARTMENT

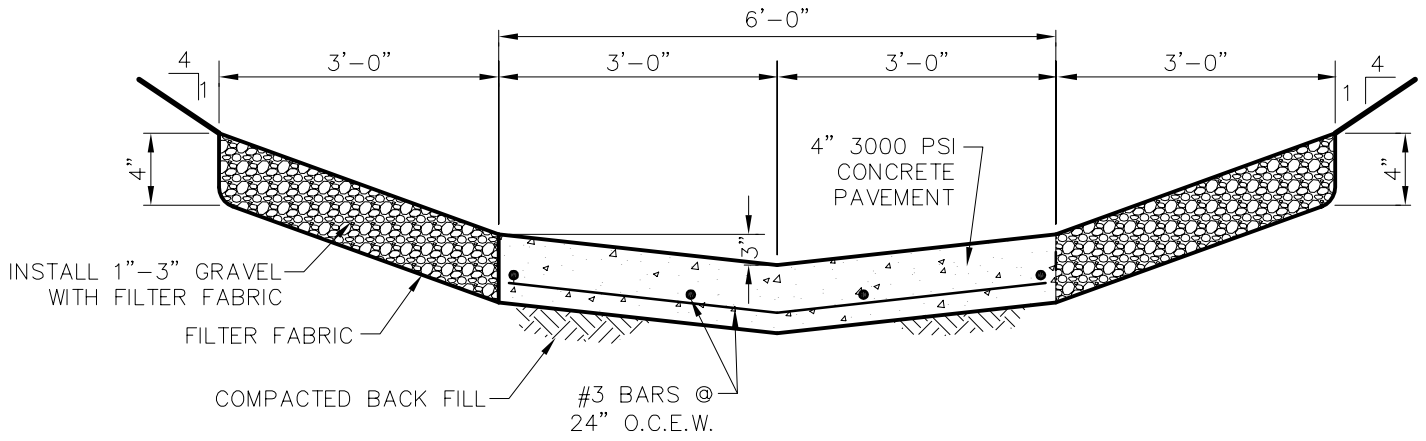
GRATE DETAIL

STANDARD CONSTRUCTION DETAILS  
STORM DRAINAGE

DATE:  
AUGUST, 2010

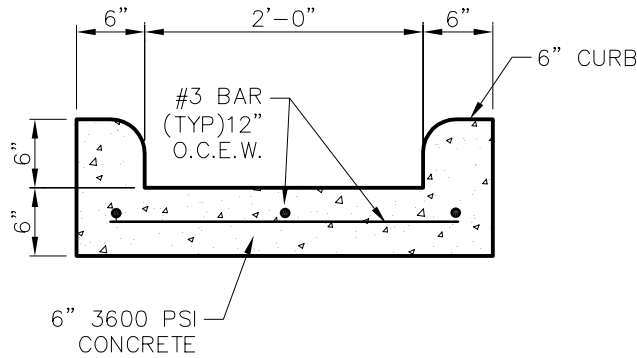
REV DATE:  
-

SHEET :  
SD-D34



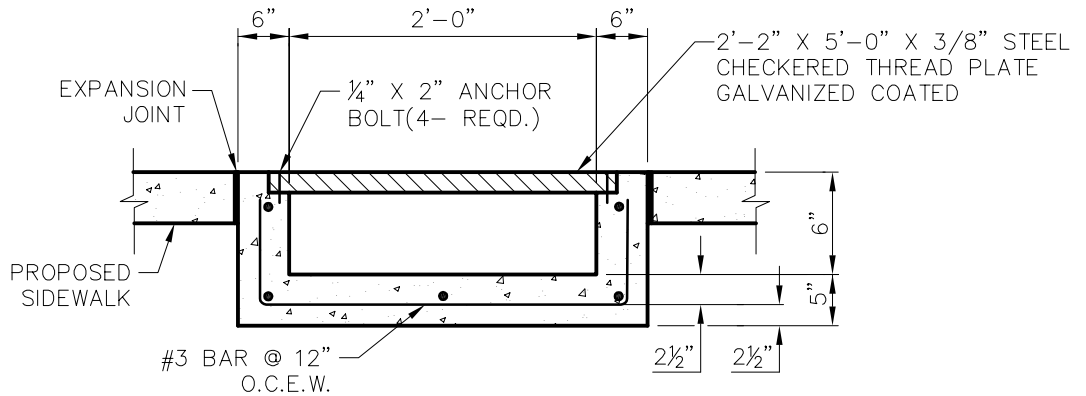
CONC. FLUME (CURBS REQUIRED AT CULVERT OUTFALL)\*  
DETENTION POND

NTS



CONC. FLUME IN THE BACK OF LOTS\*

NTS



CONC. FLUME WITH PLATE COVER\*

NTS

\*FOR ALL FLUMES THE MINIMUM SLOPE WILL BE 0.75%

*Addison!*

PUBLIC WORKS DEPARTMENT

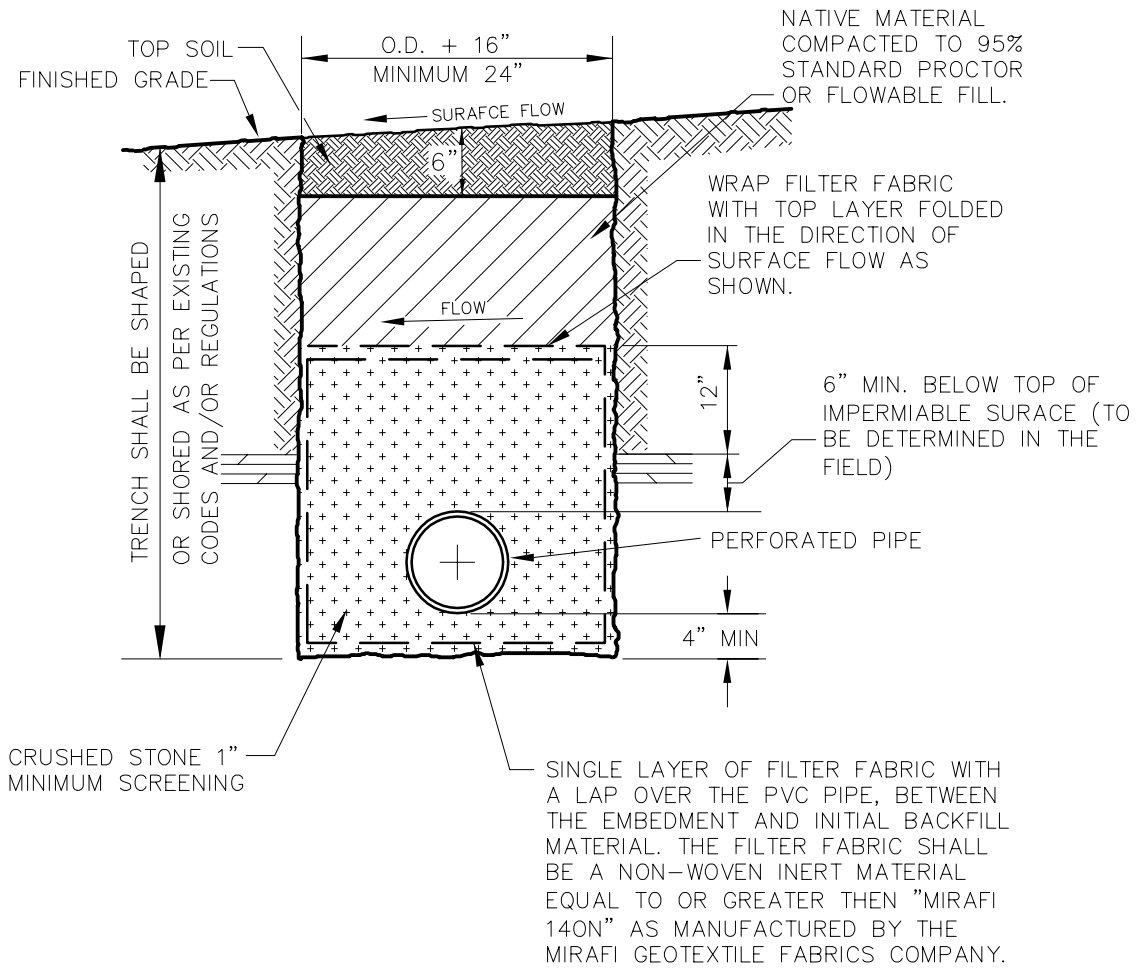
STORM RELATED FLUMES

STANDARD CONSTRUCTION DETAILS  
STORM DRAINAGE

DATE:  
AUGUST, 2010

REV DATE:  
-

SHEET :  
SD-D35



**GENERAL NOTES:**

1. THE SUBSURFACE DRAINAGE SYSTEM SHALL BE CONSTRUCTED WITH A MINIMUM SIZE OF SIX (6) INCH DIAMETER TYPE PS-46 PVC PIPE OR APPROVED EQUAL. THE PIPE SHALL MEET ALL CURRENT ASTM F758 REQUIREMENTS, AND SHALL HAVE GASKET TYPE JOINTS. THE PERFORATED AND CONDUCTING PIPES SHALL BE WHITE IN COLOR.
2. THE FINAL BACKFILL SHALL CONSIST OF AND BE PLACED IN ACCORDANCE WITH THE N.C.T.C.O.G. SPECIFICATIONS ITEM 6.2.9.
3. CLEANOUTS SHALL BE INSTALLED EVERY 200' AND AT THE END OF EACH PIPING SYSTEM.

*Addison!*

PUBLIC WORKS DEPARTMENT

SUBSURFACE DRAINAGE  
DETAIL

STANDARD CONSTRUCTION DETAILS  
STORM DRAINAGE

DATE:  
AUGUST, 2010

REV DATE:  
-

SHEET :  
SD-D36