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# **CITY OF EDINA ENGINEERING DEPARTMENT**



## **STANDARD DETAIL PLATES**

Updated Feb 2016

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### **ENGINEERING DEPARTMENT**

7450 Metro Boulevard • Edina, Minnesota 55439  
www.EdinaMN.gov • 952-826-0371 • Fax 952-826-0392



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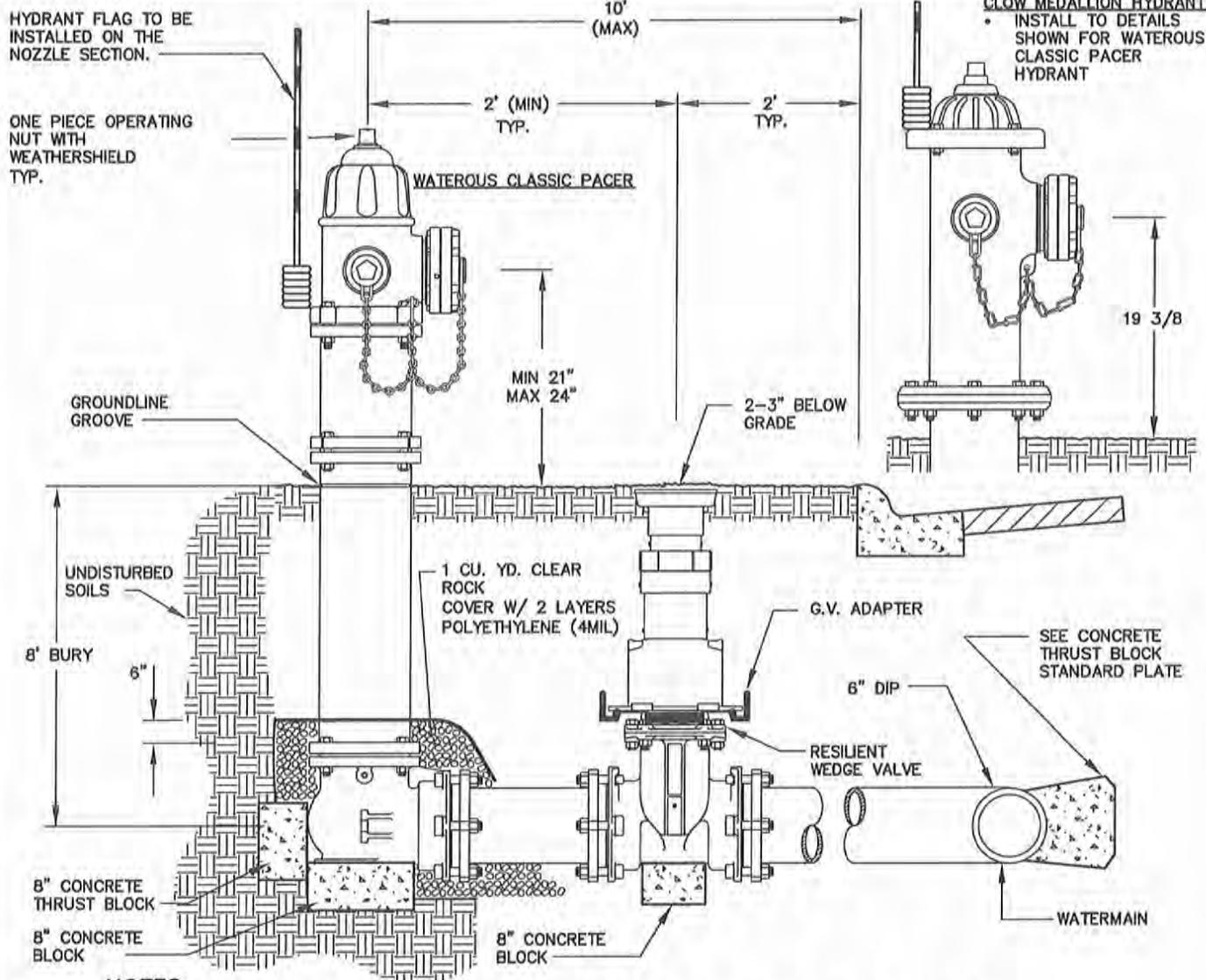
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## ENGINEERING DEPARTMENT

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**CLOW MEDALLION HYDRANT**  
 • INSTALL TO DETAILS SHOWN FOR WATEROUS CLASSIC PACER HYDRANT

**NOTES:**

HYDRANTS SHALL BE EITHER CLOW MEDALLION OR WATEROUS CLASSIC PACER MODEL WB67-250 BOTH SHOULD HAVE ONE (1)-FIVE AND ONE-QUARTER INCH (5 1/4") STORZ PUMPER NOZZLE WITH 16" BREAK OFF AND TWO (2)-TWO AND ONE-HALF INCH (2 1/2") THREADED NOZZLES.

ALL HYDRANTS AND GATE VALVES SHALL HAVE MECHANICAL JOINT CONNECTIONS. ALL VALVES TO OPEN COUNTER-CLOCKWISE

HYDRANTS TO CONFORM WITH DIMENSIONAL REQUIREMENTS FOR NONTHEADED CONNECTIONS IN ACCORDANCE WITH NFPA 1963 STANDARDS FOR FIRE HOSE CONNECTIONS.

ALL BACKFILL SHALL BE PROPERLY COMPACTED.

2 CANDYCANE STYLE FLAGS PER HYDRANT (ONE INSTALLED, ONE TO EDINA PUBLIC WORKS).

A ONE-PIECE HEAVY DUTY OPERATING VALVE ROD IS REQUIRED ON HYDRANTS THAT ARE EXTENDED 24" OR MORE.

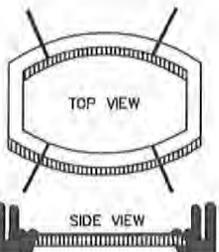
WHEN INSTALLING A HYDRANT ROD EXTENSION, THE NONBREAKABLE COUPLING SLEEVES GO ON THE BOTTOM AND THE BREAKABLE SLEEVES GO ON THE TOP OF THE EXTENSION ROD.

FIRE HYDRANTS SHALL BE PAINTED RED AT THE FACTORY.

POLYWRAP ALL PIPE AND FITTINGS, MEGA LUG ALL FITTINGS, INCLUDE CORROSION PROTECTION AT EACH JOINT.

ALL HYDRANTS SHALL BE INSTALLED WITH STORZ NOZZLE PERPENDICULAR TO ROADWAY.

WEEP HOLE TO REMAIN OPEN.



**GATE VALVE ADAPTOR:**  
 1/4" STEEL WITH PROTECTIVE COATING.  
 1/2" RUBBER GASKET INSTALLED BETWEEN GATE VALVE AND ADAPTOR.

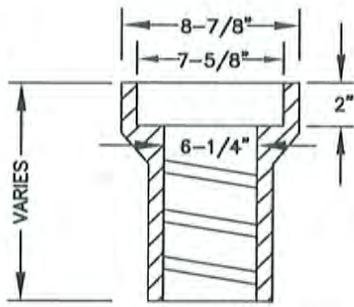


**CITY OF EDINA  
 ENGINEERING  
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**HYDRANT AND GATE VALVE**

*[Signature]*  
 APPROVED: CITY ENGINEER

REVISED:  
 01-16  
 STANDARD  
 PLATE  
 100

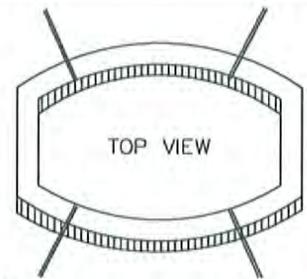


TYLER DROP LID NO. 6865 OR  
MUELLER COVER NO.  
H-10361 OR APPROVED EQUAL  
LABELED WATER

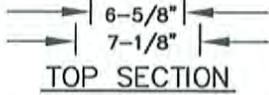


**GATE VALVE ADAPTOR:**  
1/4" STEEL WITH  
PROTECTIVE COATING.

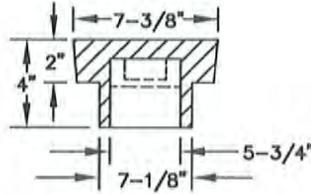
1/2" RUBBER GASKET  
INSTALLED BETWEEN GATE  
VALVE AND ADAPTOR.



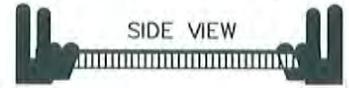
TOP VIEW



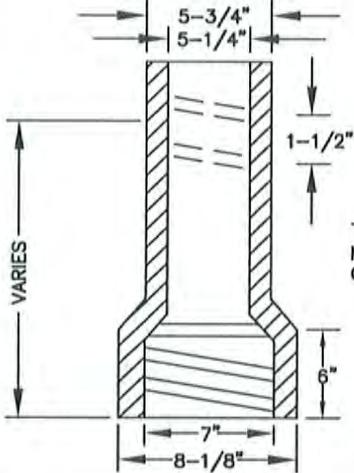
TOP SECTION



FINISHED GRADE



SIDE VIEW



EXTENSIONS

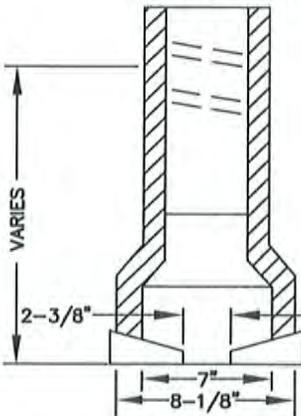
TYLER (NO. 58, 59 & 60)  
MUELLER (NO. 58 & 59)  
OR APPROVED EQUAL

ADJUST TOP TO 1/4" BELOW  
BLACKTOP GRADE OR 1" BELOW  
FINISHED BOULEVARD GRADE AND  
SHALL BE SET SO AS TO PROVIDE  
12" OF UPWARD ADJUSTMENT.

GATE VALVE BOX, SCREW TYPE,  
THREE PIECE, 5 1/4" SHAFT, SIZE G  
BOX 7"-6" EXTENDED NO. 6 ROUND  
BASE

GATE VALVE AND BOXES  
SHALL BE:  
TYLER SERIES NO. 6860  
MUELLER NO. H-10357 OR  
APPROVED EQUAL.

G.V. ADAPTOR AS  
MANUFACTURED BY ADAPTOR  
INC. OR APPROVED EQUAL.  
SEE ABOVE DETAIL.



MIDDLE SECTION

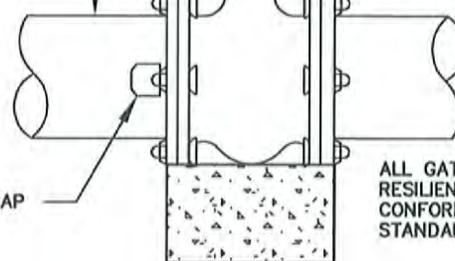
NOTES:  
ALL BOLTS INCLUDING T-BOLTS SHALL BE  
COR-BLUE.

OPERATING ROD EXTENSION SHALL BE  
INSTALLED ON ALL GATE VALVES DEEPER  
THAN 9'.

GATE VALVE AND BOX SHALL BE STRAIGHT,  
ALLOWING A 4" PVC PIPE TO SLIDE DOWN  
THE BOX AND OVER THE GATE OPERATING  
NUT.

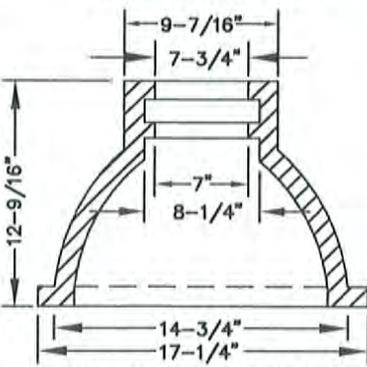
7.5' MINIMUM COVER

PROTECTO CAP



8" CONCRETE BLOCK

ALL GATE VALVES SHALL BE OF  
RESILIENT WEDGE TYPE  
CONFORMING TO AWWA C515  
STANDARDS.



NO. 6 ROUND BASE



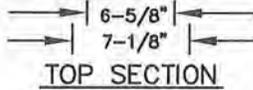
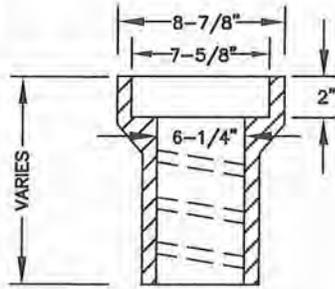
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WORKS  
DEPTS.

## GATE VALVE AND BOX

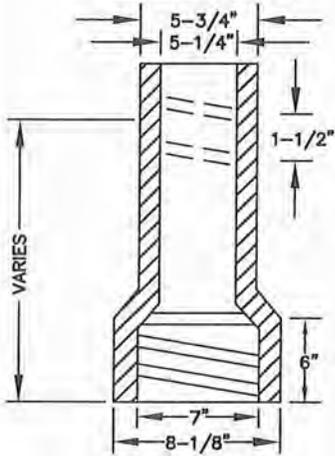
*Wayne A. Hulse*  
APPROVED: CITY ENGINEER

REVISED:  
01-08

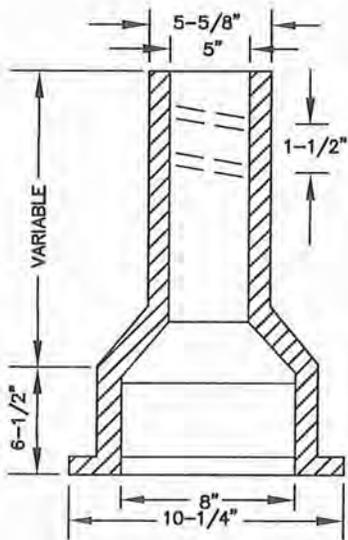
STANDARD  
PLATE  
105



TOP SECTION

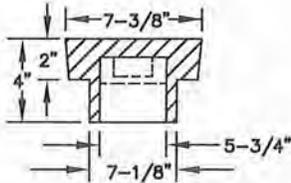


EXTENSIONS

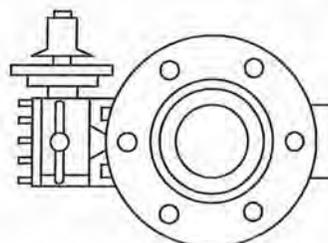
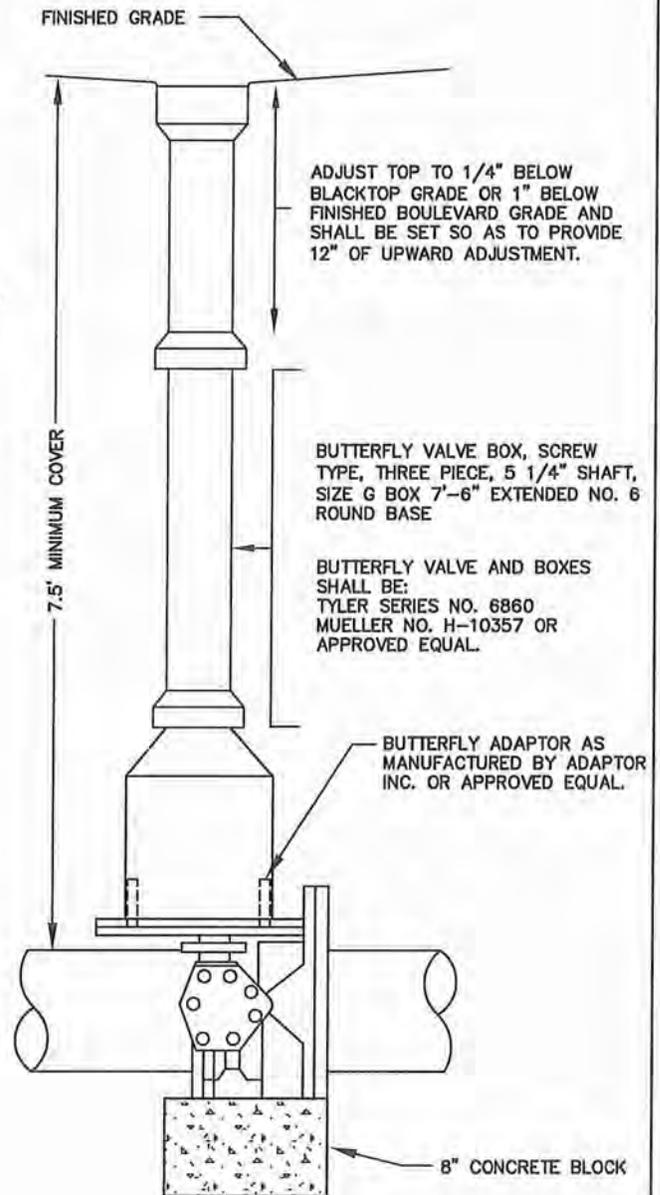


BOTTOM SECTION

TYLER DROP LID NO. 6865 OR  
MUELLER COVER NO.  
H-10361 OR APPROVED EQUAL  
LABELED WATER



TYLER (NO. 58, 59 & 60)  
MUELLER (NO. 58 & 59)  
OR APPROVED EQUAL



BUTTERFLY VALVES \*

\* ONLY RIGHT HANDED VALVES  
ALLOWED

1. AMERICAN FLOW CONTROL
2. HENRY PRATT "GROUNDHOG"
3. DRESSER 450
4. KENNEDY
5. MULLER

BUTTERFLY VALVES ARE TO BE  
USED ON 12" DIA. WATERMAIN  
AND LARGER OR AS APPROVED  
BY THE ENGINEER.

NOTES:  
ALL BOLTS INCLUDING T-BOLTS SHALL BE COR-BLUE.

OPERATING ROD EXTENSION SHALL BE INSTALLED ON ALL  
GATE VALVES DEEPER THAN 9'.

BUTTERFLY VALVE AND BOX SHALL BE STRAIGHT, ALLOWING A  
4" PVC PIPE TO SLIDE DOWN THE BOX AND OVER THE GATE  
OPERATING NUT.



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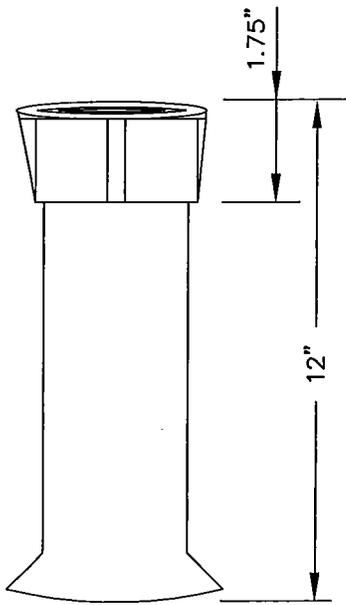
## BUTTERFLY VALVE AND BOX

*Wayne A. ...*  
APPROVED: CITY ENGINEER

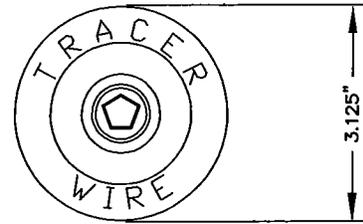
REVISED:  
01-13

STANDARD  
PLATE

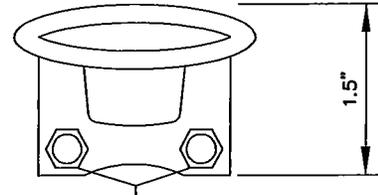
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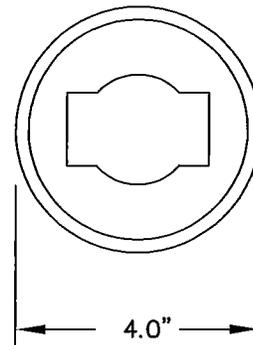
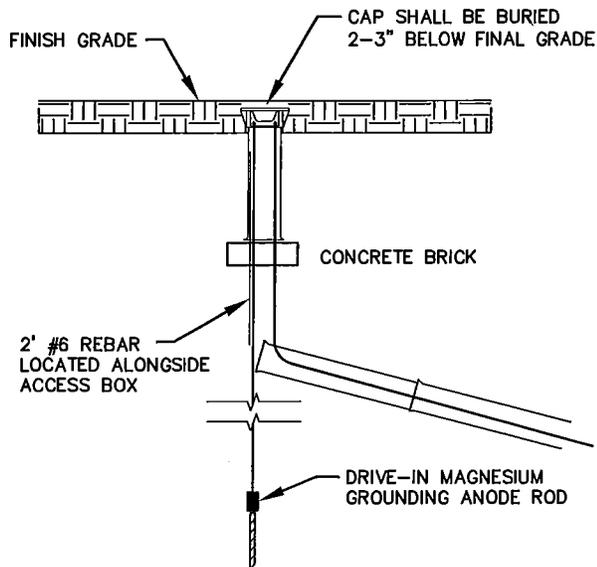
**COMPLETE BOX SIDE VIEW**



**LID TOP VIEW**



STAINLESS STEEL  
TERMINAL BOLTS  
**LID SIDE VIEW**



**COLLAR VIEW TOP**

TRACER WIRE ACCESS BOX SHALL BE A DRAINAGE & WATER SOLUTIONS MODEL #TRWAB OR APPROVED EQUAL. BOXES CONSTRUCTED IN PAVED AREAS REQUIRE THE INSTALLATION OF A FORD TYPE A SINGLE LID COVER OR APPROVED EQUAL. LEAVE A MINIMUM OF 2' OF TRACER WIRE SLACK IN BOX.

TRACER WIRE ACCESS BOX SHALL BE PAINTED BY THE CONTRACTOR IN THE FIELD WITH ENAMEL PAINT IN THE CORRESPONDING COLOR

- WATER = BLUE
- STORM SEWER/SUMP/SANITARY = GREEN
- ELECTRICAL = RED
- COMMUNICATION = ORANGE
- GAS = YELLOW

**NOTES:**

CASTING MUST CONFORM TO:  
ASTM SPECIFICATION A-48 CLASS 30  
COUNTRY OF ORIGIN: USA

ABS SHAFT MUST CONFORM TO:  
ASTM SPECIFICATIONS D-1788  
COUNTRY OF ORIGIN: USA



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**TRACER WIRE ACCESS BOX**

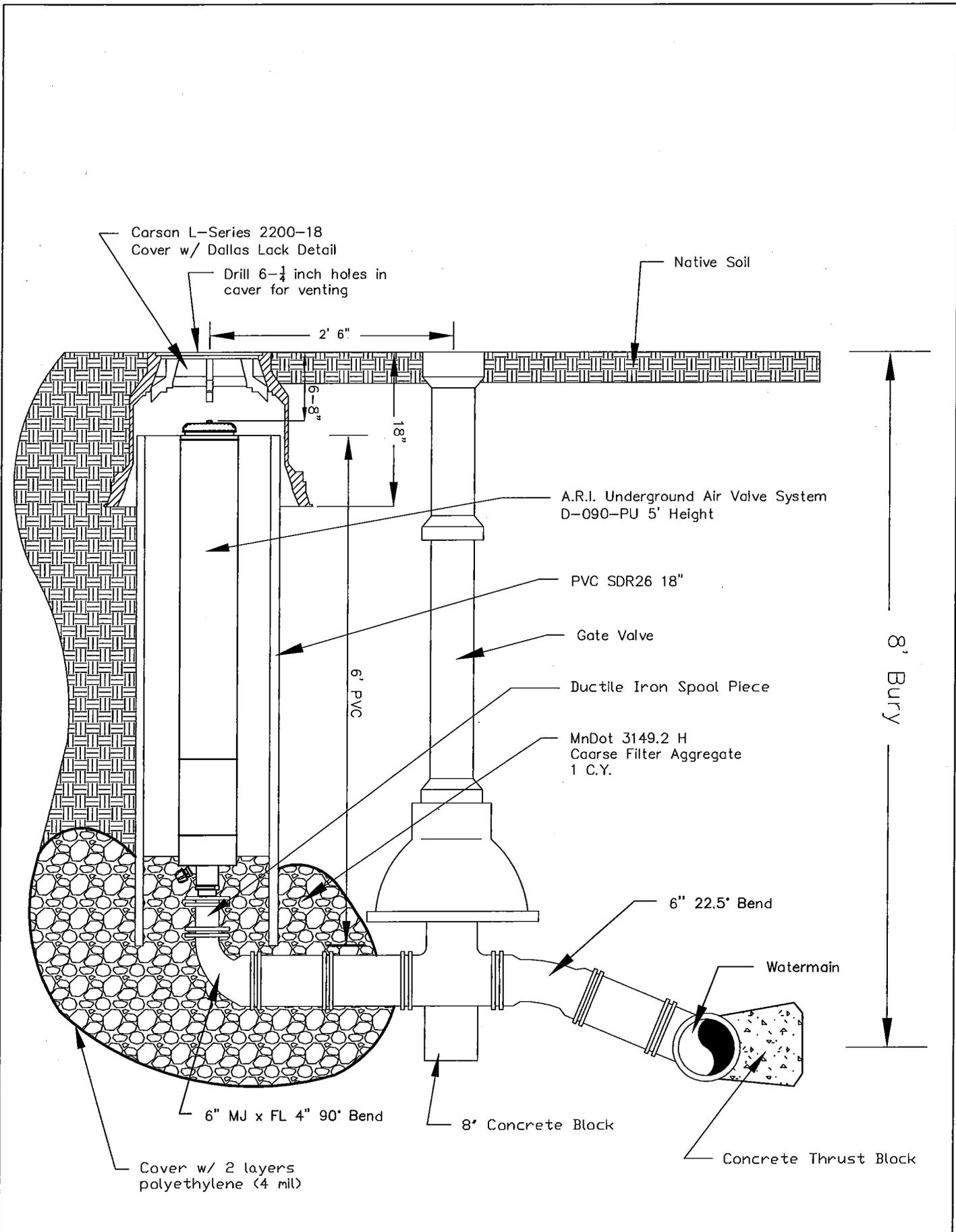
*[Signature]*

APPROVED: CITY ENGINEER

REVISED:  
01-16

STANDARD  
PLATE

110

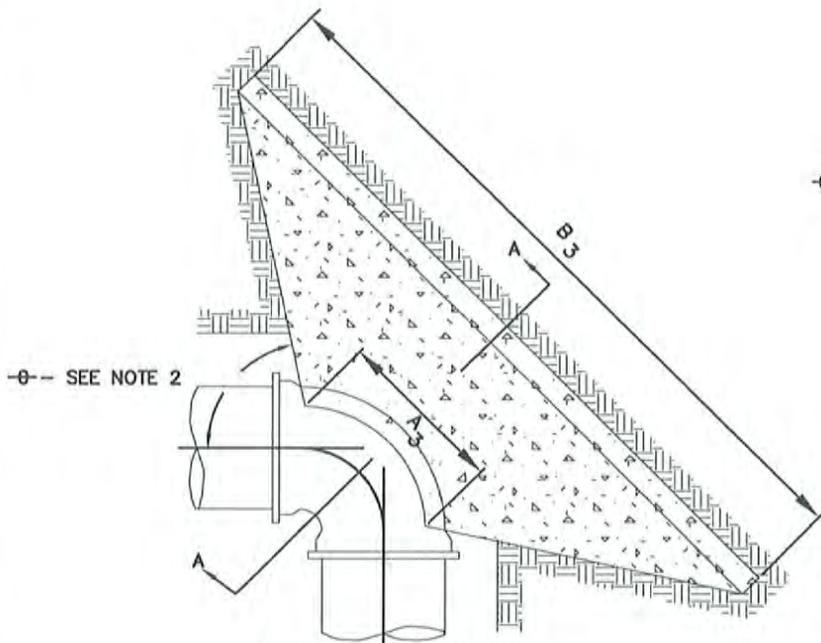


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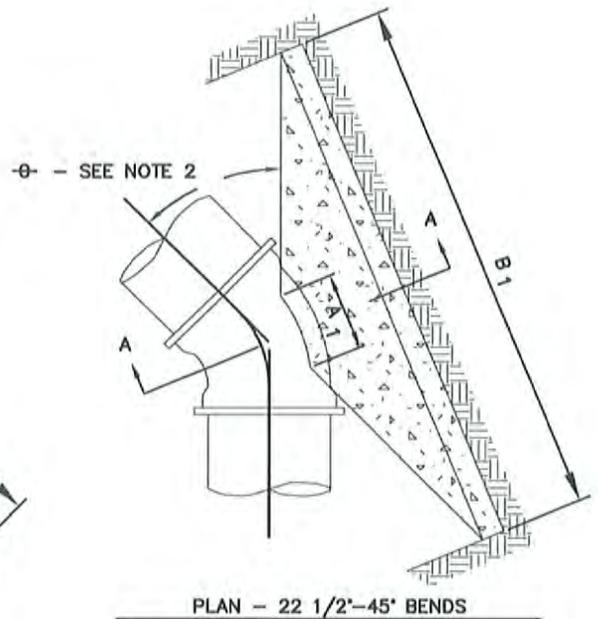
### AIR RELEASE VALVE AND GATE VALVE

*Zach A. Miller*  
APPROVED: CITY ENGINEER

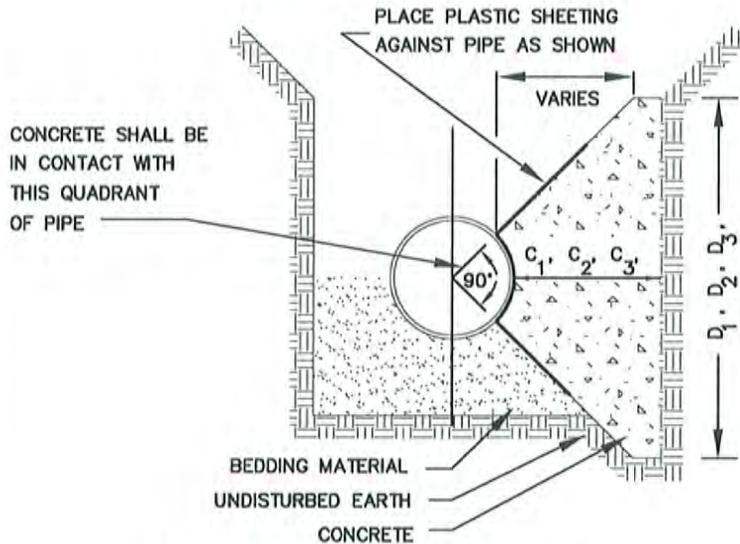
REVISED:  
01-15  
STANDARD  
PLATE  
115



PLAN - 90° BENDS

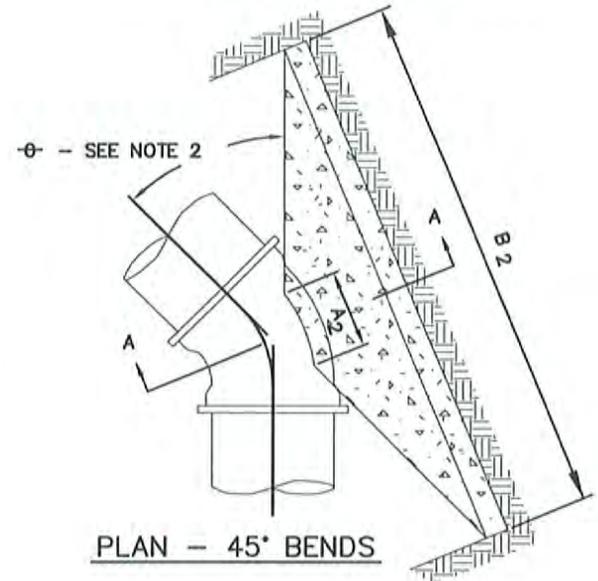


PLAN - 22 1/2°-45° BENDS



APPROXIMATE 1:1 SLOPE WHERE  
DEPTH BELOW PIPE EXCEEDS 6".

SECTION A-A



PLAN - 45° BENDS

**NOTES:**

1. DIMENSIONS IN TABLE ARE BASED ON A WATER PRESSURE OF 150 PSI AND AN EARTH RESISTANCE OF 1 TON PER SQ. FT.
2. DIMENSION C1,C2,C3 SHOULD BE AS LARGE ENOUGH TO MAKE ANGLE  $\geq 45$  DEGREES.
3. DIMENSION A1,A2,A3 SHOULD BE AS LARGE AS POSSIBLE WITHOUT INTERFERING WITH M.J. BOLTS.
4. SHAPE OF BACK OF BUTTRESS MAY VARY AS LONG AS POUR IS AGAINST FIRM UNDISTURBED EARTH.
5. MEGA LUGS MAY BE USED IN CONJUNCTION WITH MIXED CONCRETE THRUST BLOCKING.
6. READY MIX CONCRETE ONLY MAY BE USED (MNDOT SPEC. 2461, GRADE 'B')

**BUTTRESS DIMENSIONS**

PIPE SIZE	22 1/2° BEND		45° BEND		TEES/90° BEND	
	B <sub>1</sub>	D <sub>1</sub>	B <sub>2</sub>	D <sub>2</sub>	B <sub>3</sub>	D <sub>3</sub>
6"	1'-5"	1'-5"	1'-5"	1'-5"	2'-1"	1'-6"
8"	1'-5"	1'-5"	2'-1"	1'-6"	2'-8"	2'-0"
12"	1'-10"	1'-10"	3'-4"	2'-0"	4'-9"	2'-6"
16"	3'-0"	2'-0"	3'-10"	3'-0"	6'-2"	3'-6"
20"	3'-6"	2'-8"	5'-6"	3'-4"	8'-4"	4'-0"
24"	4'-4"	3'-0"	6'-10"	3'-10"	9'-8"	5'-0"



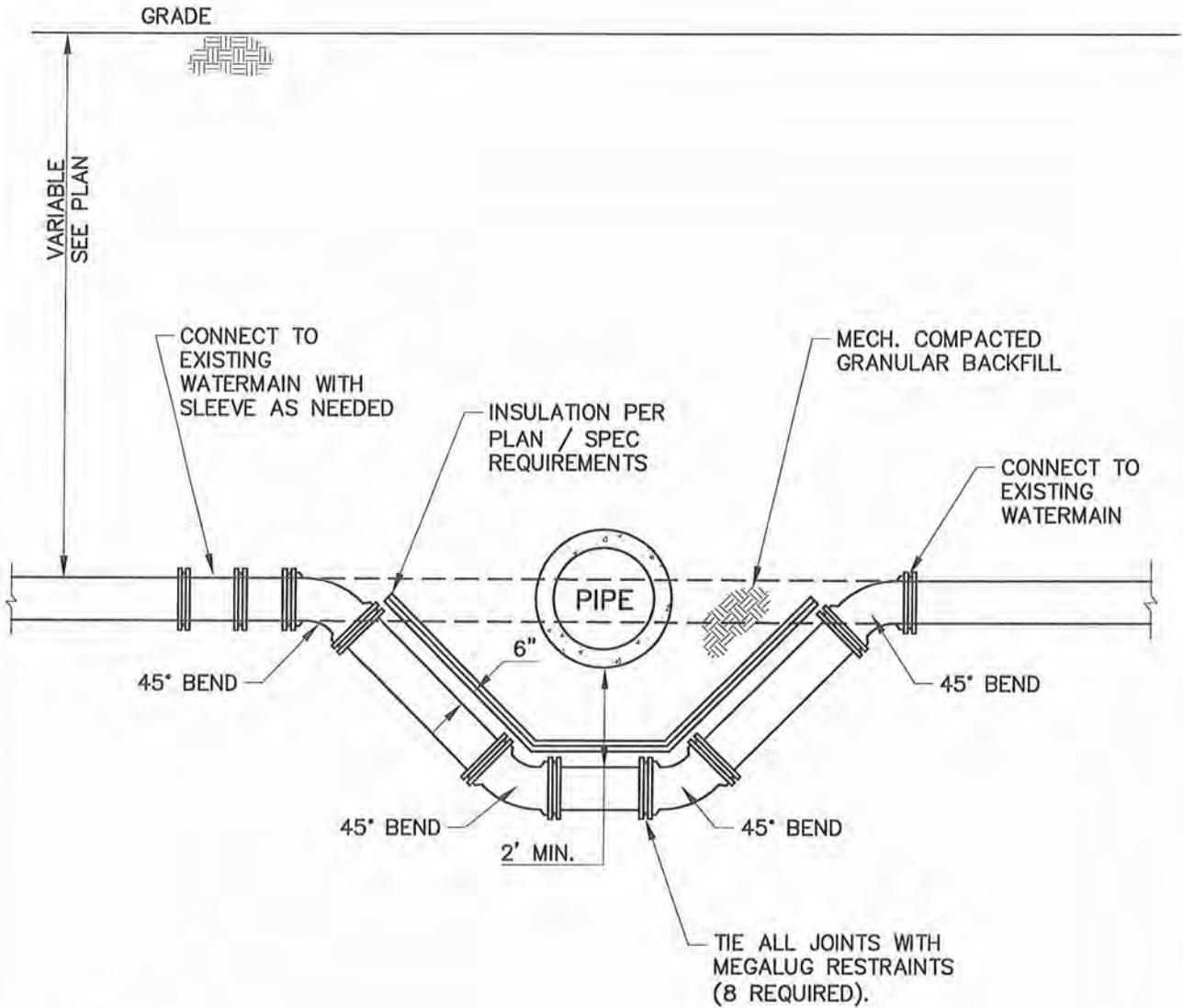
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**CONCRETE THRUST BLOCK**

*Wayne Leuel*  
APPROVED: CITY ENGINEER

REVISED:  
01-08

STANDARD  
PLATE  
120



NOTES:

1. USE MEGALUG THRUST RESTRAINTS ON ALL FITTINGS.
2. SEE STANDARD PLATE 120 TO DETERMINE THE REQUIRED CONCRETE THRUST BLOCKING.
3. INSTALL POLY WRAP AROUND ALL PIPE AS DIRECTED BY THE ENGINEER.
4. ALL NUTS AND BOLTS TO BE COR-BLUE OR APPROVED EQUAL.
5. MAINTAIN A 2.0' (MIN.) CLEAR ZONE SEPARATION BETWEEN CONFLICTING UTILITIES.



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OFFSET WATERMAIN

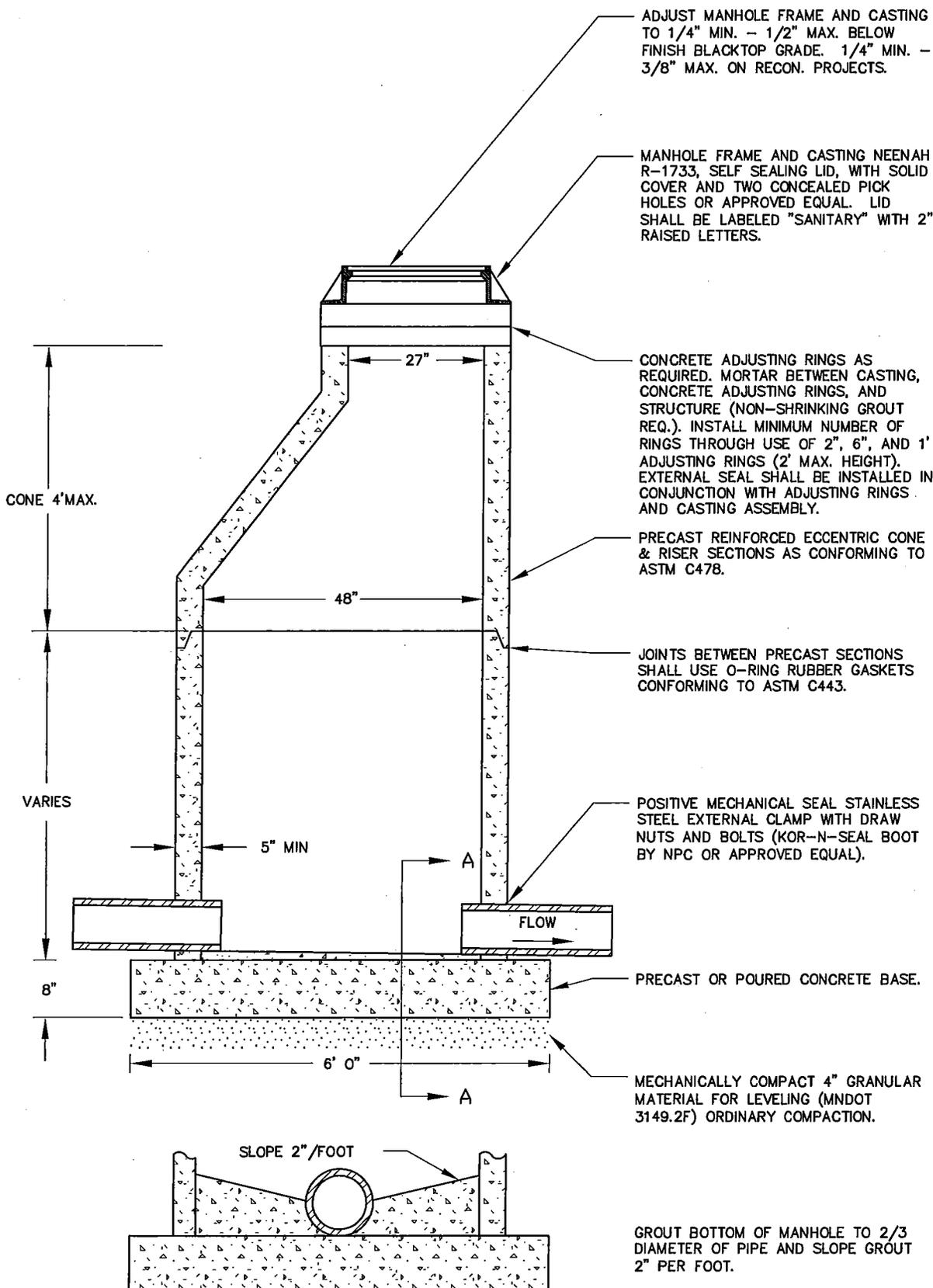
*Chad A. Miller*

APPROVED: CITY ENGINEER

REVISED:  
02-14

STANDARD  
PLATE

125



ADJUST MANHOLE FRAME AND CASTING TO 1/4" MIN. - 1/2" MAX. BELOW FINISH BLACKTOP GRADE. 1/4" MIN. - 3/8" MAX. ON RECON. PROJECTS.

MANHOLE FRAME AND CASTING NEENAH R-1733, SELF SEALING LID, WITH SOLID COVER AND TWO CONCEALED PICK HOLES OR APPROVED EQUAL. LID SHALL BE LABELED "SANITARY" WITH 2" RAISED LETTERS.

CONCRETE ADJUSTING RINGS AS REQUIRED. MORTAR BETWEEN CASTING, CONCRETE ADJUSTING RINGS, AND STRUCTURE (NON-SHRINKING GROUT REQ.). INSTALL MINIMUM NUMBER OF RINGS THROUGH USE OF 2", 6", AND 1' ADJUSTING RINGS (2' MAX. HEIGHT). EXTERNAL SEAL SHALL BE INSTALLED IN CONJUNCTION WITH ADJUSTING RINGS AND CASTING ASSEMBLY.

PRECAST REINFORCED ECCENTRIC CONE & RISER SECTIONS AS CONFORMING TO ASTM C478.

JOINTS BETWEEN PRECAST SECTIONS SHALL USE O-RING RUBBER GASKETS CONFORMING TO ASTM C443.

POSITIVE MECHANICAL SEAL STAINLESS STEEL EXTERNAL CLAMP WITH DRAW NUTS AND BOLTS (KOR-N-SEAL BOOT BY NPC OR APPROVED EQUAL).

PRECAST OR POURED CONCRETE BASE.

MECHANICALLY COMPACT 4" GRANULAR MATERIAL FOR LEVELING (MNDOT 3149.2F) ORDINARY COMPACTION.

GROUT BOTTOM OF MANHOLE TO 2/3 DIAMETER OF PIPE AND SLOPE GROUT 2" PER FOOT.

SECTION A-A



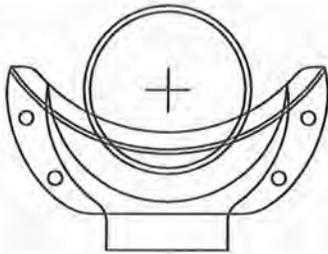
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STANDARD SANITARY  
SEWER MANHOLE

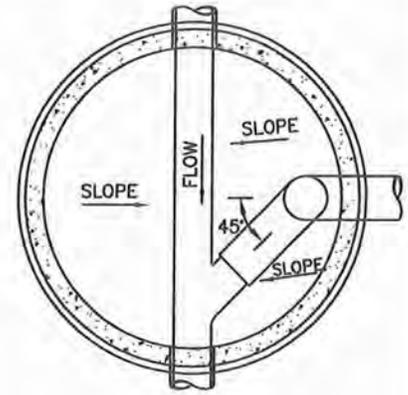
*Ed A. Miller*  
APPROVED: CITY ENGINEER

REVISED:  
01-16

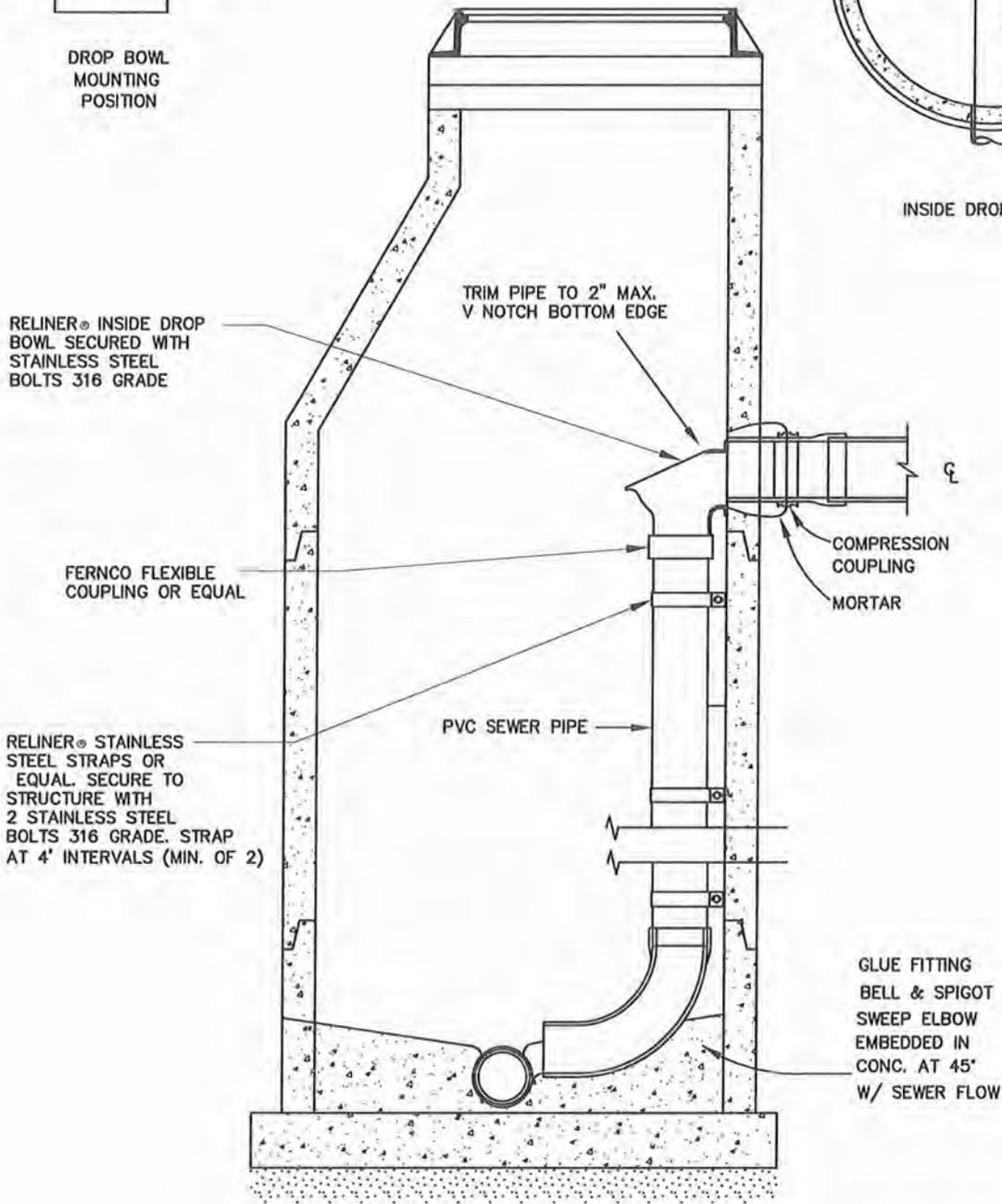
STANDARD  
PLATE  
200



DROP BOWL  
MOUNTING  
POSITION



INSIDE DROP - PLAN



NOTES:

1. ALL INSIDE DROP CONNECTIONS FOR SERVICES AND COLLECTOR SEWERS SHALL USE THE DROP BOWL AS PRODUCED BY:  
RELINER-DURAN, INC.  
53 MT. ARCHER RD,  
LYME, CT 06371  
(860)434-0277 FAX: (860)434-3195
2. SECURE DROP PIPE TO MANHOLE WALL WITH RELINER-DURAN, INC STAINLESS STEEL ADJUSTABLE CLAMPING BRACKETS.

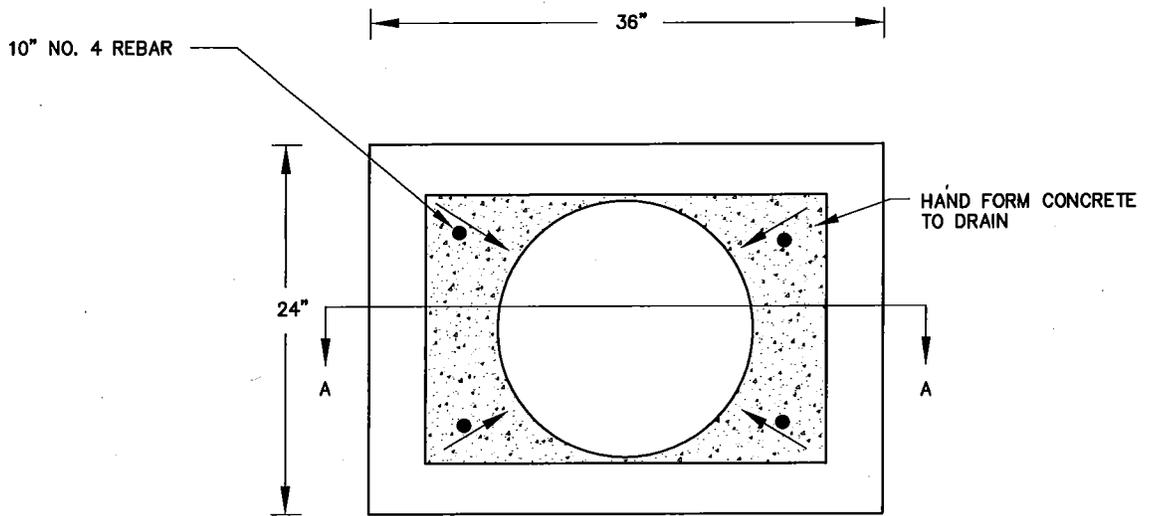


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WORKS  
DEPTS.

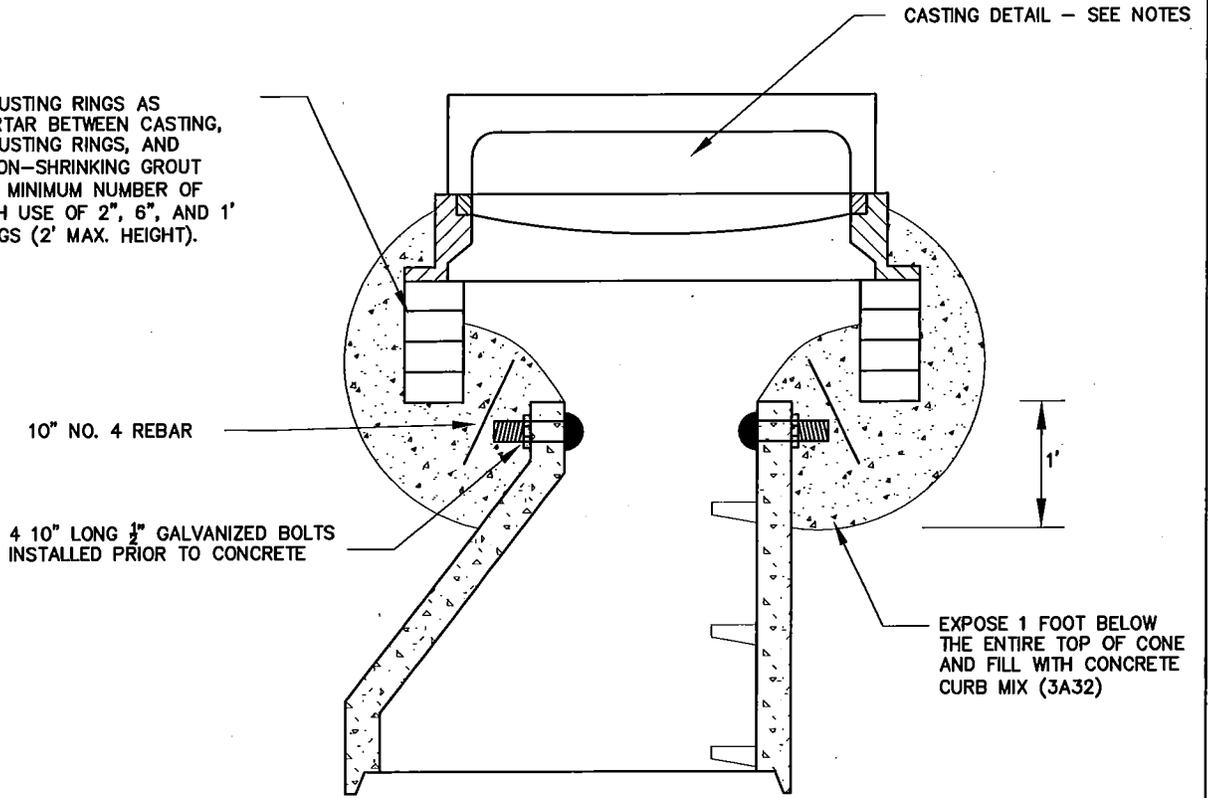
**SANITARY DROP MANHOLE  
(LOW-PROFILE INSIDE DROP)**

*Handwritten signature*  
APPROVED: CITY ENGINEER

REVISED:  
03-14  
STANDARD  
PLATE  
206



CONCRETE ADJUSTING RINGS AS REQUIRED. MORTAR BETWEEN CASTING, CONCRETE ADJUSTING RINGS, AND STRUCTURE (NON-SHRINKING GROUT REQ.). INSTALL MINIMUM NUMBER OF RINGS THROUGH USE OF 2", 6", AND 1' ADJUSTING RINGS (2' MAX. HEIGHT).



SECTION A-A

**NOTES:**

BULKHEAD STYLE CURB:  
CASTING SHALL BE A NEENAH R-3067-V OR NEENAH R-3067-VB.

BULKHEAD STYLE CURB, BIKE LANES:  
CASTING SHALL BE A NEENAH R-3067-L.

SURMOUNTABLE STYLE CURB:  
CASTING SHALL BE A NEENAH R-3501-TR OR TL. AT LOW POINTS, CASTING SHALL BE A NEENAH R-3501-TB.



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**RETROFIT DRAINAGE STRUCTURE**

*[Signature]*  
APPROVED: CITY ENGINEER

REVISED:  
01-16

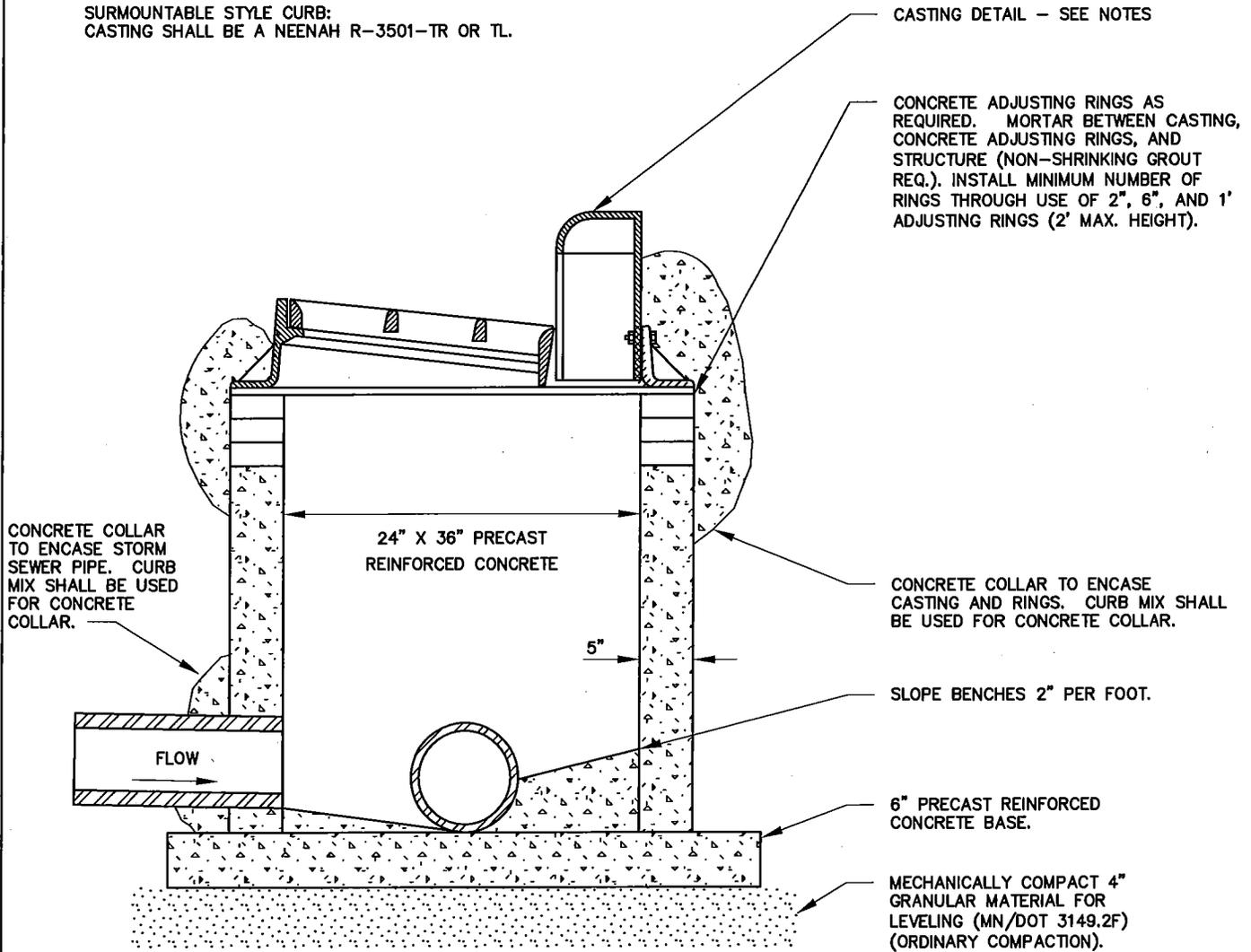
STANDARD  
PLATE  
210

**NOTES:**

**BULKHEAD STYLE CURB:**  
CASTING SHALL BE A NEENAH R-3067-V OR NEENAH R-3067-VB.

**BULKHEAD STYLE CURB, BIKE LANES:**  
CASTING SHALL BE A NEENAH R-3067-L.

**SURMOUNTABLE STYLE CURB:**  
CASTING SHALL BE A NEENAH R-3501-TR OR TL.



CASTING DETAIL - SEE NOTES

CONCRETE ADJUSTING RINGS AS REQUIRED. MORTAR BETWEEN CASTING, CONCRETE ADJUSTING RINGS, AND STRUCTURE (NON-SHRINKING GROUT REQ.). INSTALL MINIMUM NUMBER OF RINGS THROUGH USE OF 2", 6", AND 1' ADJUSTING RINGS (2' MAX. HEIGHT).

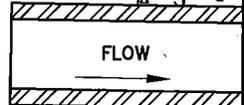
CONCRETE COLLAR TO ENCASE STORM SEWER PIPE. CURB MIX SHALL BE USED FOR CONCRETE COLLAR.

24" X 36" PRECAST REINFORCED CONCRETE

5"

CONCRETE COLLAR TO ENCASE CASTING AND RINGS. CURB MIX SHALL BE USED FOR CONCRETE COLLAR.

SLOPE BENCHES 2" PER FOOT.



6" PRECAST REINFORCED CONCRETE BASE.

MECHANICALLY COMPACT 4" GRANULAR MATERIAL FOR LEVELING (MN/DOT 3149.2F) (ORDINARY COMPACTION).



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**TYPE "BB" CATCH BASIN**

*[Signature]*

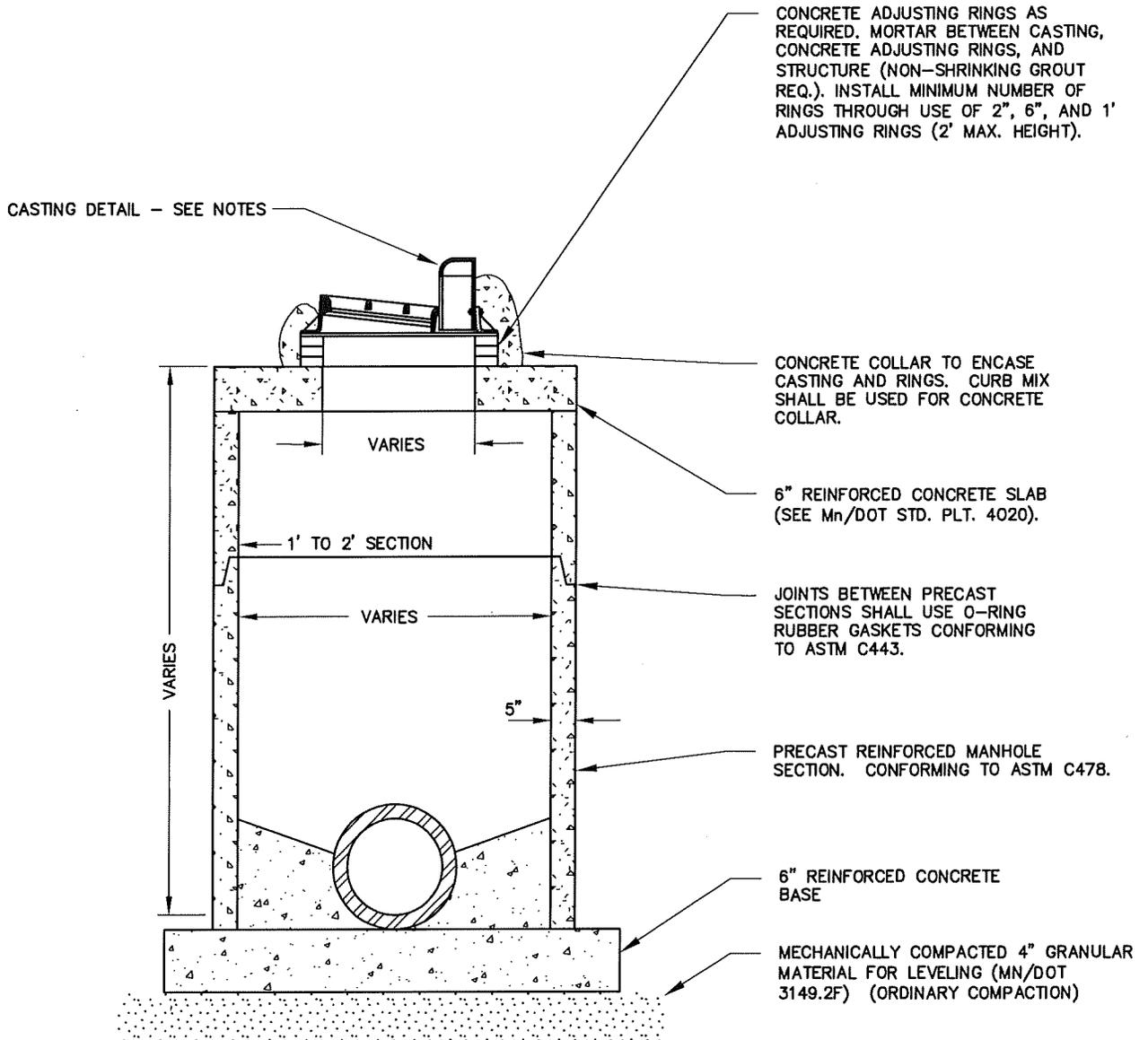
APPROVED: CITY ENGINEER

REVISED:  
01-16

STANDARD  
PLATE  
220

**NOTES:**

- BULKHEAD STYLE CURB:  
CASTING SHALL BE A NEENAH R-3067-V OR VB.
- BULKHEAD STYLE CURB, BIKE LANES:  
CASTING SHALL BE A NEENAH R-3067-L.
- SURMOUNTABLE STYLE CURB:  
CASTING SHALL BE A NEENAH R-3501-TR OR TL.
- CASTING IN PAVEMENT SHALL BE NEENAH R-2552



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DEPTS.

**TYPE "CC"  
CATCH BASIN MANHOLE**

*Chad A. Miller*

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REVISED:  
02-16

STANDARD  
PLATE

230

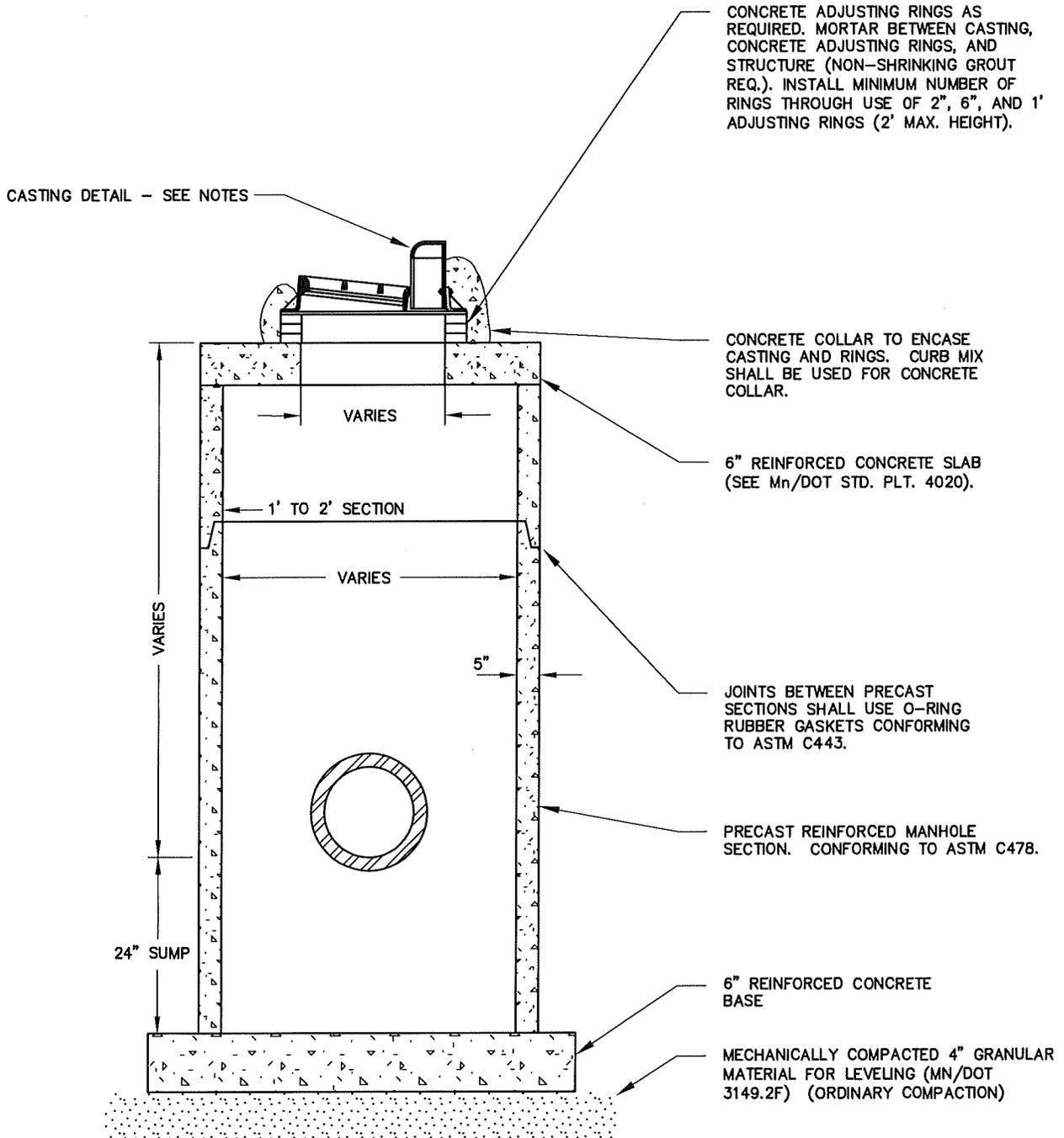
**NOTES:**

BULKHEAD STYLE CURB:  
CASTING SHALL BE A NEENAH R-3067-V OR VB.

BULKHEAD STYLE CURB, BIKE LANES:  
CASTING SHALL BE A NEENAH R-3067-L.

SURMOUNTABLE STYLE CURB:  
CASTING SHALL BE A NEENAH R-3501-TR OR TL.

CASTING IN PAVEMENT SHALL BE NEENAH R-2552.



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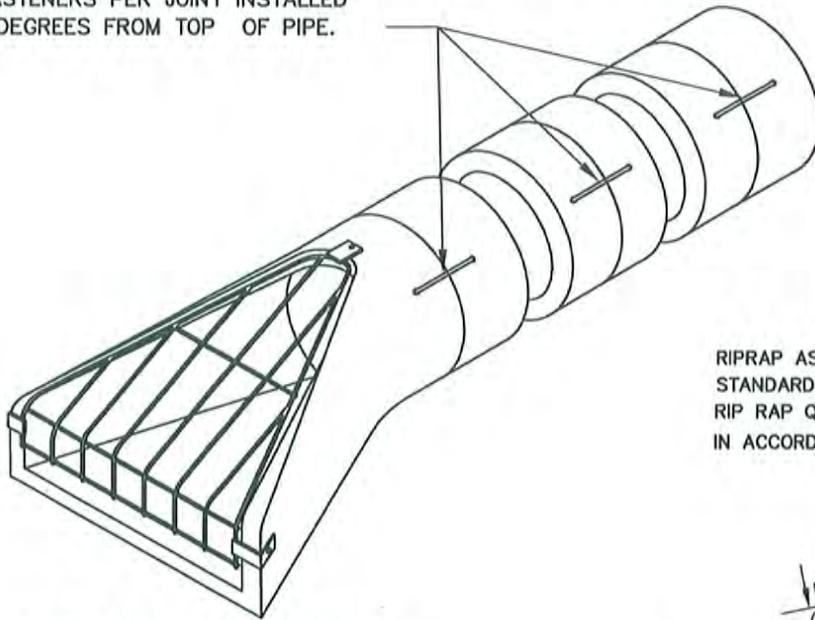
**TYPE "DD"**  
**CATCH BASIN MANHOLE WITH SUMP**

*Chad A. Miller*  
APPROVED: CITY ENGINEER

REVISED:  
02-16

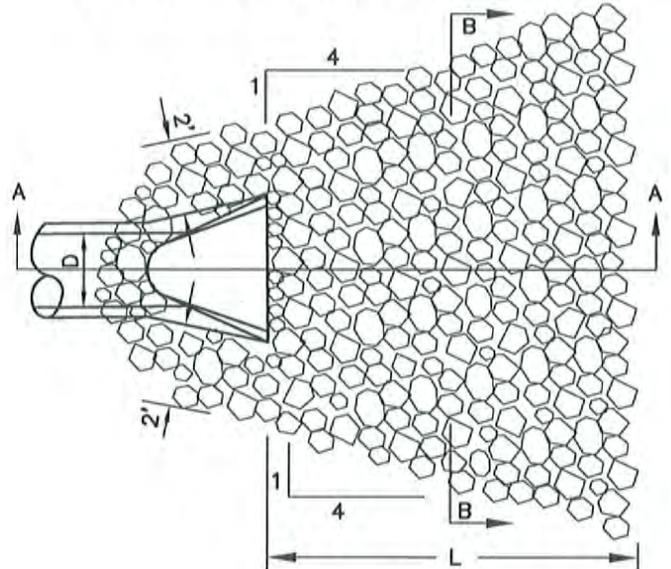
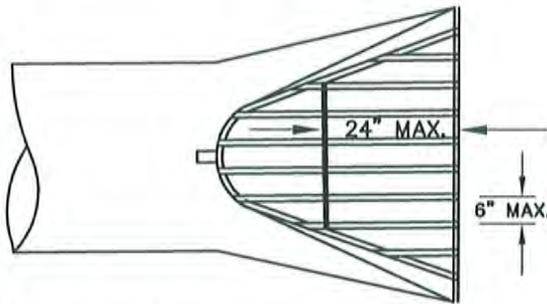
STANDARD  
PLATE  
235

TIE LAST 3 PIPE JOINTS. USE 2 TIE BOLT FASTENERS PER JOINT INSTALLED AT 60 DEGREES FROM TOP OF PIPE.



RIPRAP AS SPECIFIED IN MNDOT STANDARD SPECS. 2511.3 AND 3601.2. RIP RAP QUANTITY SHALL BE IN ACCORDANCE WITH MN/DOT STD. PLT. 3133

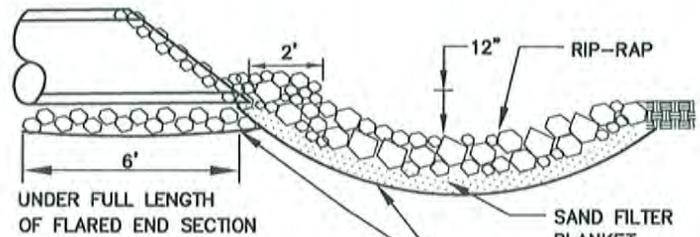
PROVIDE 3 CLIPS TO FASTEN TRASH GUARD TO FLARED END. HOT DIP GALVANIZE AFTER FABRICATION.



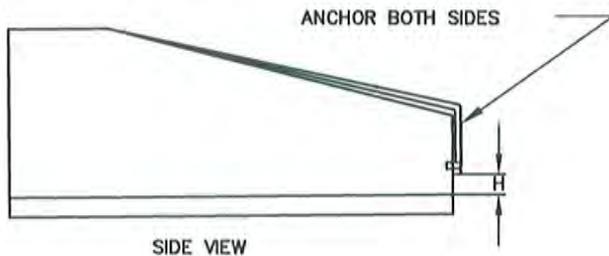
PLAN VIEW

NOTES: TRASH GAURDS TO BE INSTALLED ON 18" OR LARGER SIZED OUTLETS AT THE DISCRETION OF THE ENGINEER. TRASH GAURDS INSTALLED ON INLETS ONLY.

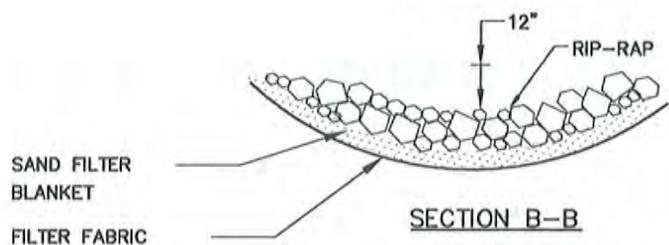
PIPE SIZE	BAR SIZE	"H"	BOLT SIZE
18"	3/4"	4"	5/8"
21" to 42"	1"	6"	3/4"
48" to 72"	1 1/4"	12"	1"



SECTION A-A



SIDE VIEW



SECTION B-B



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DEPTS.

## FLARED END SECTION

*Wayne A. Sault*  
APPROVED: CITY ENGINEER

REVISED:  
01-08  
STANDARD  
PLATE  
240

**NOTE:**

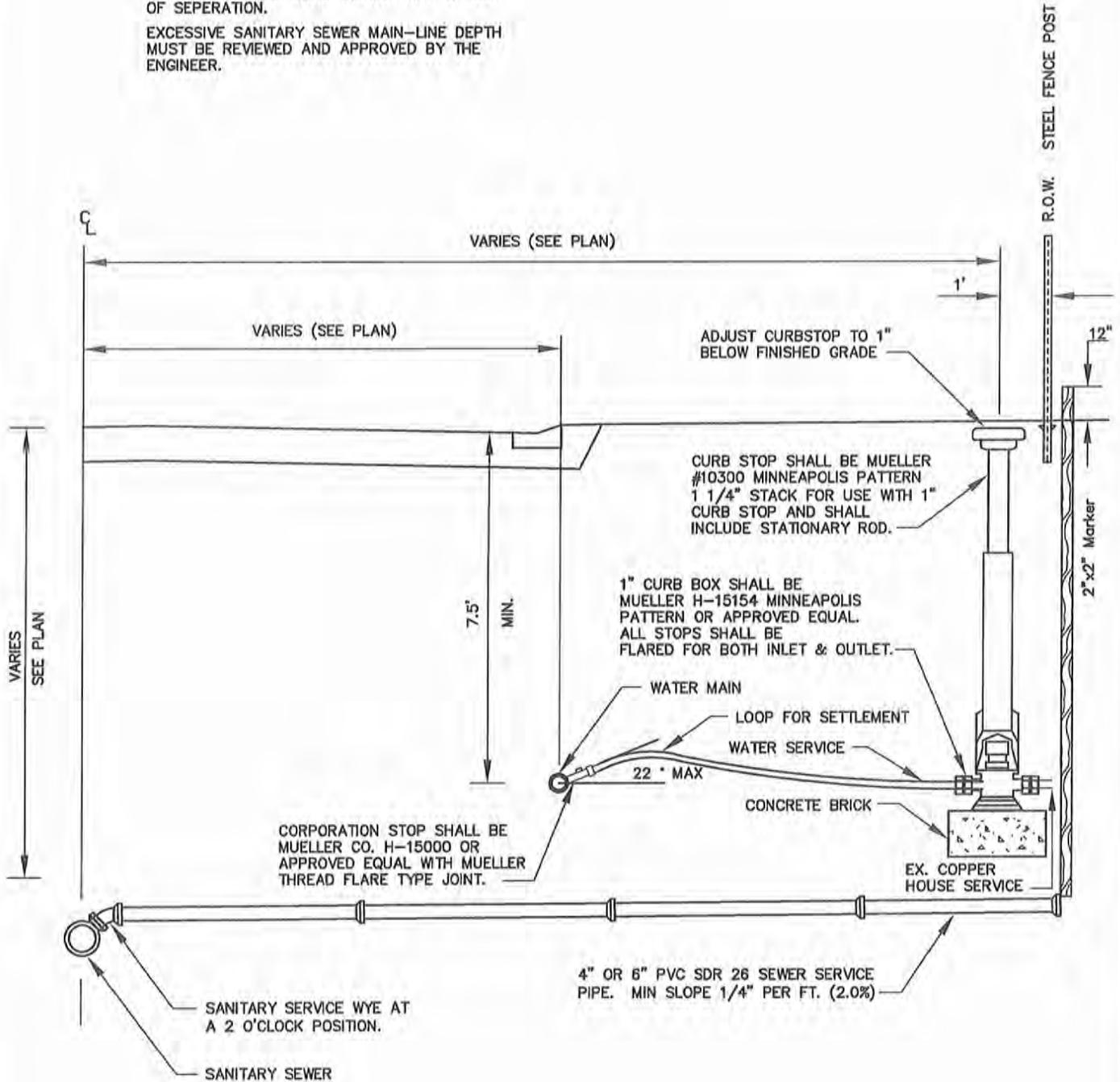
ANY CURB STOP LOCATED IN BLACKTOP OR CONCRETE DRIVEWAY OR SIDEWALK SHALL BE COVERED WITH METER BOX COVER (FORD A-1) OR APPROVED EQUAL.

ALL WATER SERVICES SHALL BE 1" MIN. - TYPE K COPPER AND SHALL USE A SMITH BLAIR STAINLESS STEEL SADDLE TYPE #317 OR #372 OR APPROVED EQUAL.

WATER SERVICE MUST BE CONTINUOUS WITH NO JOINTS UNLESS SERVICE IS OVER 100' LONG.

SANITARY AND WATER SERVICE LINES SHALL BE INSTALLED IN THE SAME TRENCH WITH 3 FEET OF SEPERATION.

EXCESSIVE SANITARY SEWER MAIN-LINE DEPTH MUST BE REVIEWED AND APPROVED BY THE ENGINEER.

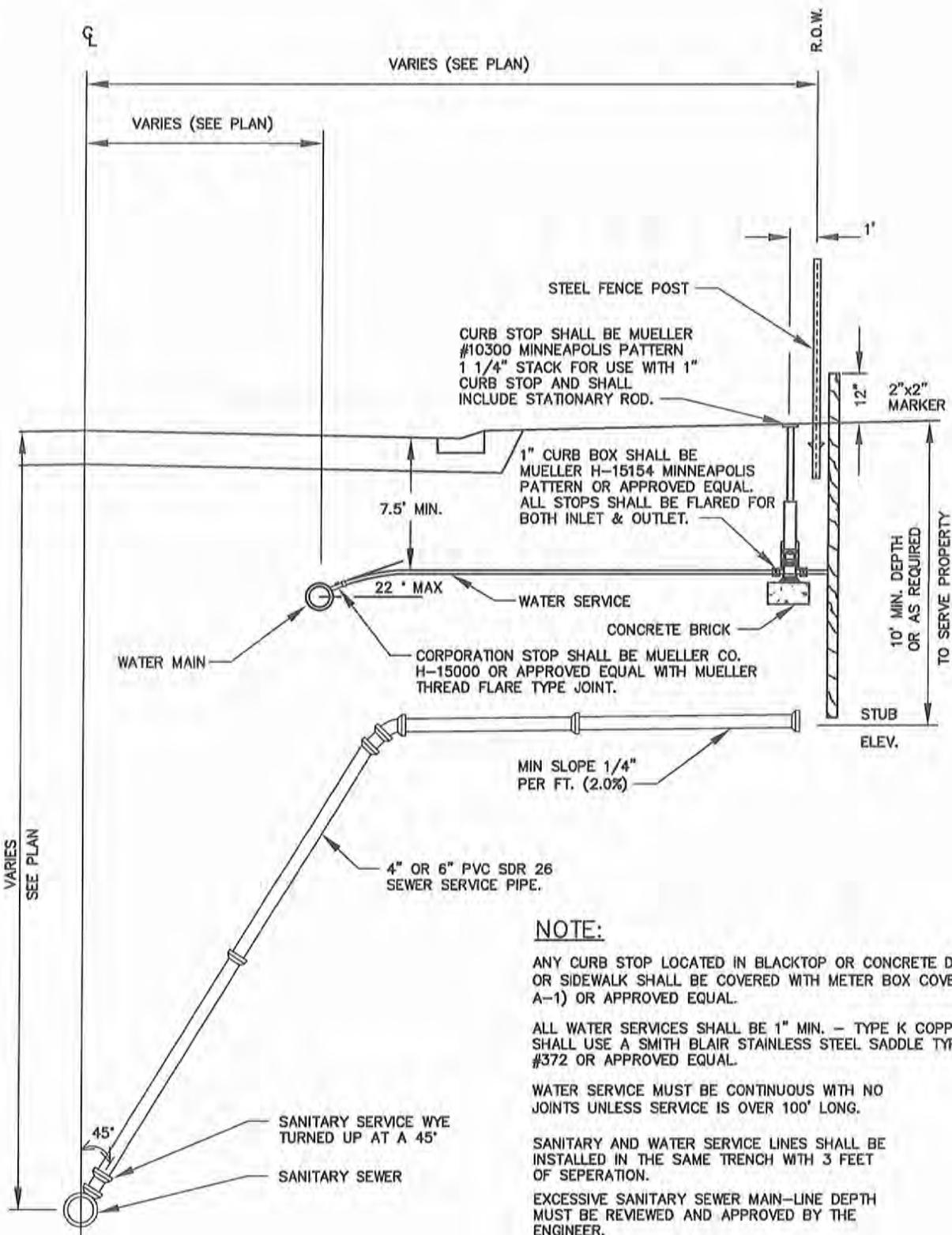


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DEPTS.

**SEWER AND WATER SERVICE  
CONNECTION**

*[Signature]*  
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01-16  
STANDARD  
PLATE  
300



CURB STOP SHALL BE MUELLER #10300 MINNEAPOLIS PATTERN 1 1/4" STACK FOR USE WITH 1" CURB STOP AND SHALL INCLUDE STATIONARY ROD.

1" CURB BOX SHALL BE MUELLER H-15154 MINNEAPOLIS PATTERN OR APPROVED EQUAL. ALL STOPS SHALL BE FLARED FOR BOTH INLET & OUTLET.

CORPORATION STOP SHALL BE MUELLER CO. H-15000 OR APPROVED EQUAL WITH MUELLER THREAD FLARE TYPE JOINT.

MIN SLOPE 1/4" PER FT. (2.0%)

4" OR 6" PVC SDR 26 SEWER SERVICE PIPE.

**NOTE:**

ANY CURB STOP LOCATED IN BLACKTOP OR CONCRETE DRIVEWAY OR SIDEWALK SHALL BE COVERED WITH METER BOX COVER (FORD A-1) OR APPROVED EQUAL.

ALL WATER SERVICES SHALL BE 1" MIN. - TYPE K COPPER AND SHALL USE A SMITH BLAIR STAINLESS STEEL SADDLE TYPE #317 OR #372 OR APPROVED EQUAL.

WATER SERVICE MUST BE CONTINUOUS WITH NO JOINTS UNLESS SERVICE IS OVER 100' LONG.

SANITARY AND WATER SERVICE LINES SHALL BE INSTALLED IN THE SAME TRENCH WITH 3 FEET OF SEPERATION.

EXCESSIVE SANITARY SEWER MAIN-LINE DEPTH MUST BE REVIEWED AND APPROVED BY THE ENGINEER.

SANITARY SEWER SERVICE RISER SHALL BE BACKFILLED AND COMPACTED WITH GRANULAR MATERIAL.

VARIES SEE PLAN

℄

VARIES (SEE PLAN)

VARIES (SEE PLAN)

R.O.W.

1"

12"

2"x2" MARKER

10' MIN. DEPTH OR AS REQUIRED TO SERVE PROPERTY

STUB ELEV.

7.5' MIN.

22' MAX

WATER MAIN

WATER SERVICE

CONCRETE BRICK

45°

SANITARY SERVICE WYE TURNED UP AT A 45°

SANITARY SEWER



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DEPTS.

SEWER AND WATER SERVICE  
CONNECTION W/ RISER

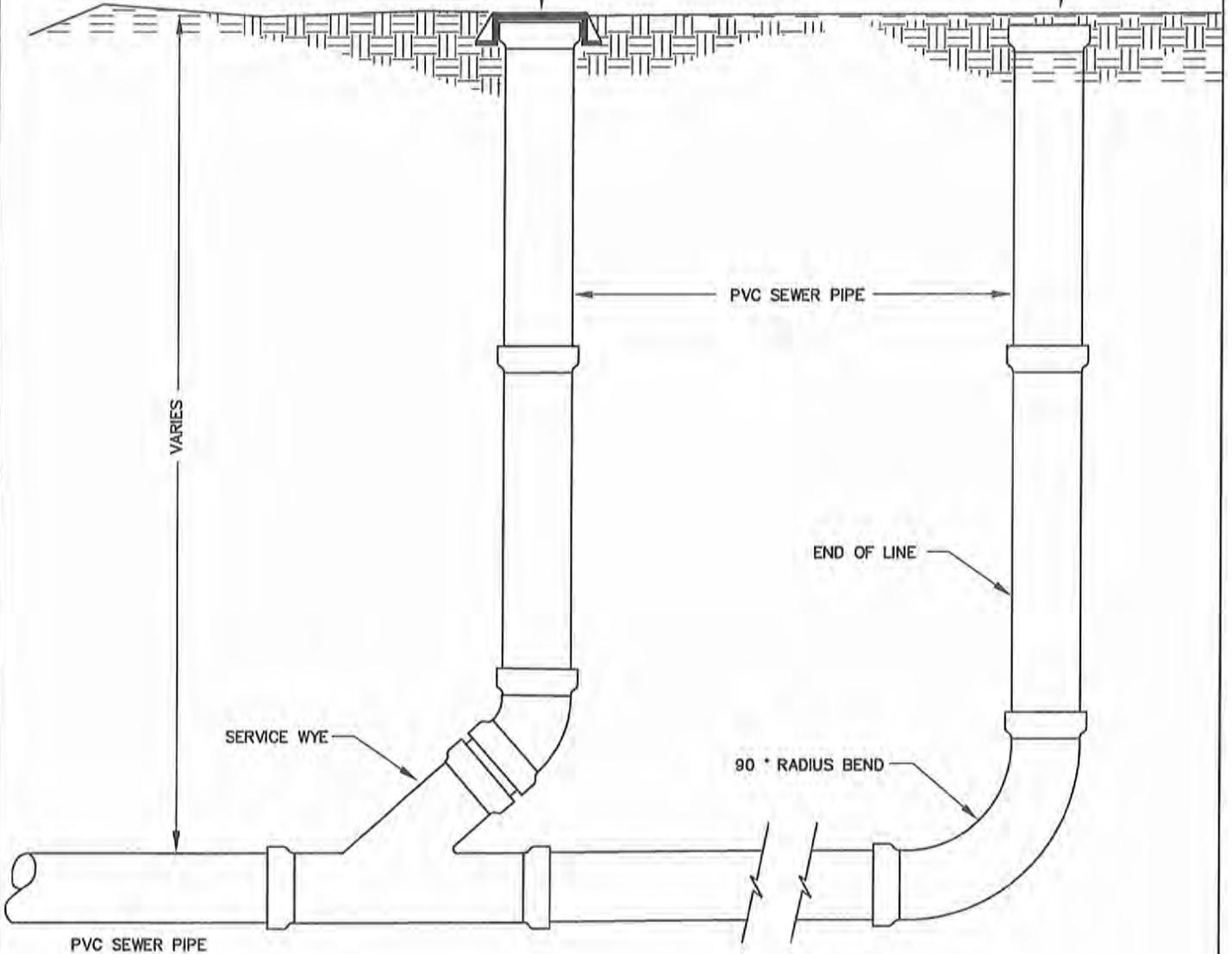
*Handwritten signature*  
APPROVED: CITY ENGINEER

REVISED:  
01-16  
STANDARD  
PLATE  
301

NOTE:  
 INSTALL CLEANOUTS EVERY 100 FEET INTERVALS. CLEAN  
 OUT SERVICE TIES SHALL BE RECORDED WITH CITY  
 PROPERTY RECORDS AND UTILITY AS BUILT RECORDS.

INSTALL CLEANOUT 3-4" BELOW FINISHED GRADE WHEN  
 INSTALLED IN A BOULEVARD.

INSTALL METER BOX AND COVER (FORD A-1) OR APPROVED  
 EQUAL OVER ALL PVC CLEANOUTS LOCATED IN PAVED  
 DRIVEWAYS AND/OR PARKING AREAS  $\frac{1}{2}$ " BELOW GRADE.




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## SEWER SERVICE CLEANOUT

*Chad A. Miller*  
 APPROVED: CITY ENGINEER

REVISED:  
 01-16  
 STANDARD  
 PLATE  
 305

**NOTES:**

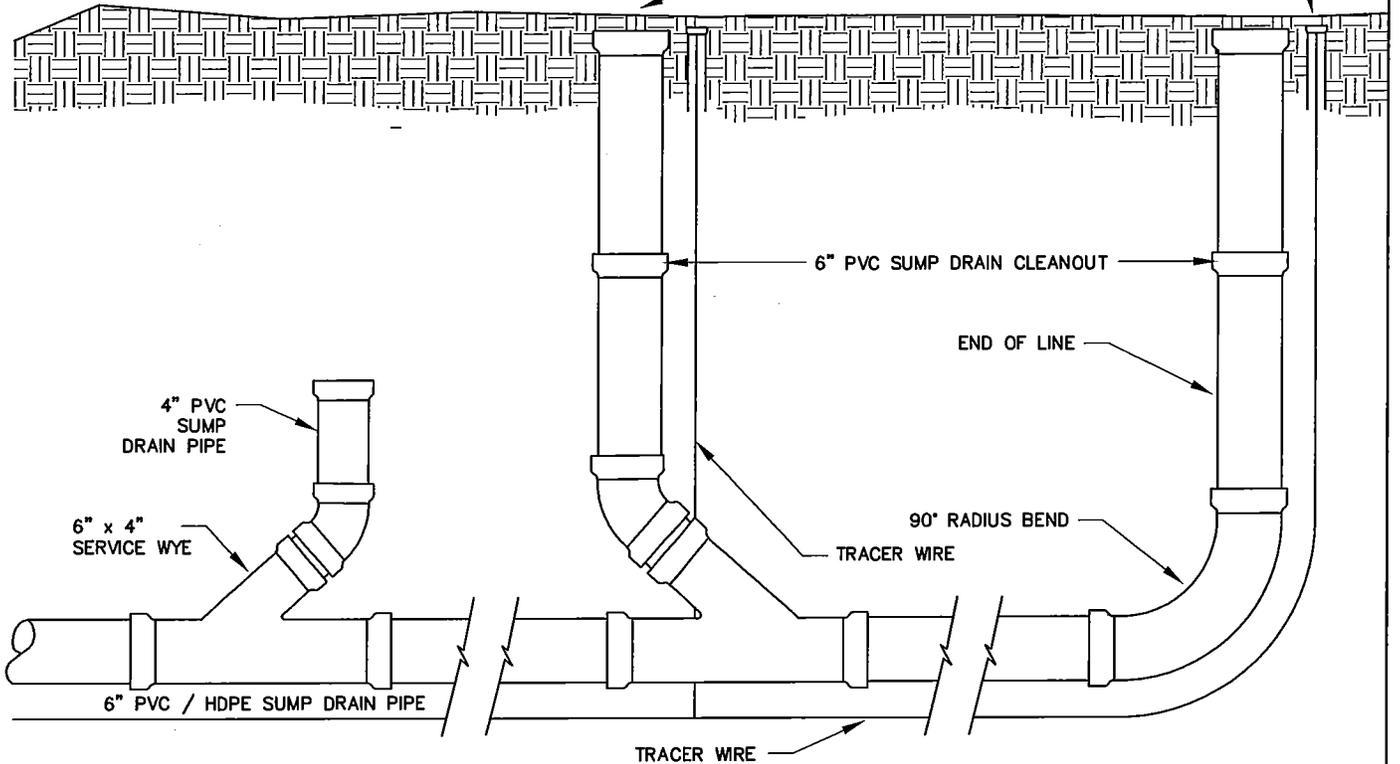
INSTALL CLEANOUTS AT 300 FOOT INTERVALS AND AT DEAD ENDS. CLEAN OUT SERVICE TIES SHALL BE RECORDED WITH CITY PROPERTY RECORDS AND UTILITY ASBUILT RECORDS.

WHEN INSTALLING A SERVICE ON EXISTING SUMP DRAIN PIPE, A FERNCO BRAND FLEXIBLE SADDLE TEE/WYE OR APPROVED EQUAL SHALL BE USED. WHEN PVC IS USED FOR INSTALLING SUMP DRAIN, A PVC WYE/TEE SHALL BE USED.

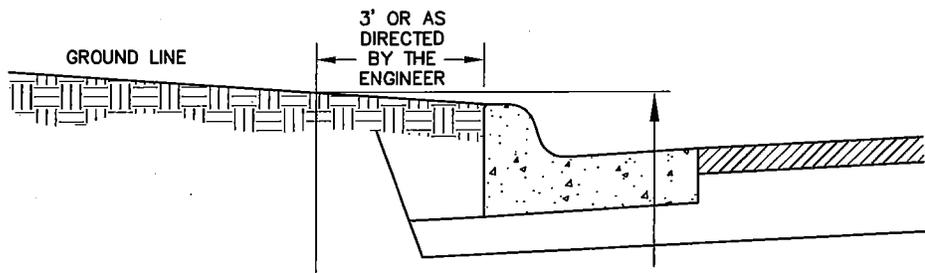
RODENT GUARDS SHALL BE INSTALLED IN ALL CATCH BASINS OR WHERE THE SUMP DRAIN TIES INTO A STRUCTURE.

TRACER WIRE SHALL RUN THE FULL LENGTH OF CLEANOUT AND BE INSTALLED IN A TRACER WIRE ACCESS BOX CONFORMING TO EDINA STANDARD PLATE 110. (TYP.)

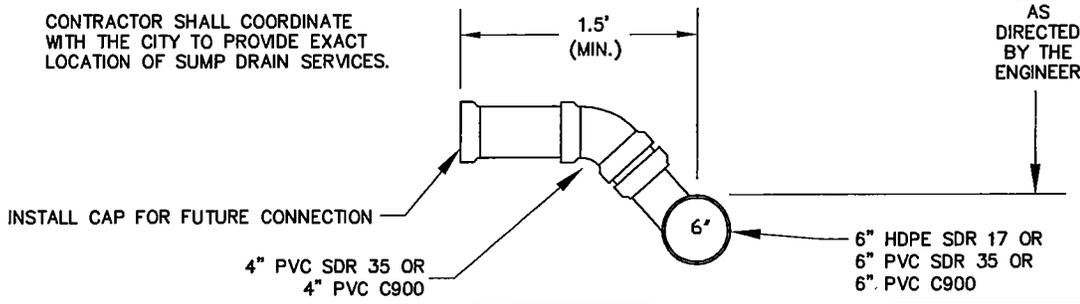
ALL PVC CLEANOUTS SHALL BE 3" - 6" BELOW FINISHED GRADE AND HAVE A THREADED PLUG FITTING (SCHEDULE 40). (TYP.)



**SUMP DRAIN SERVICE CONNECTION**



CONTRACTOR SHALL COORDINATE WITH THE CITY TO PROVIDE EXACT LOCATION OF SUMP DRAIN SERVICES.



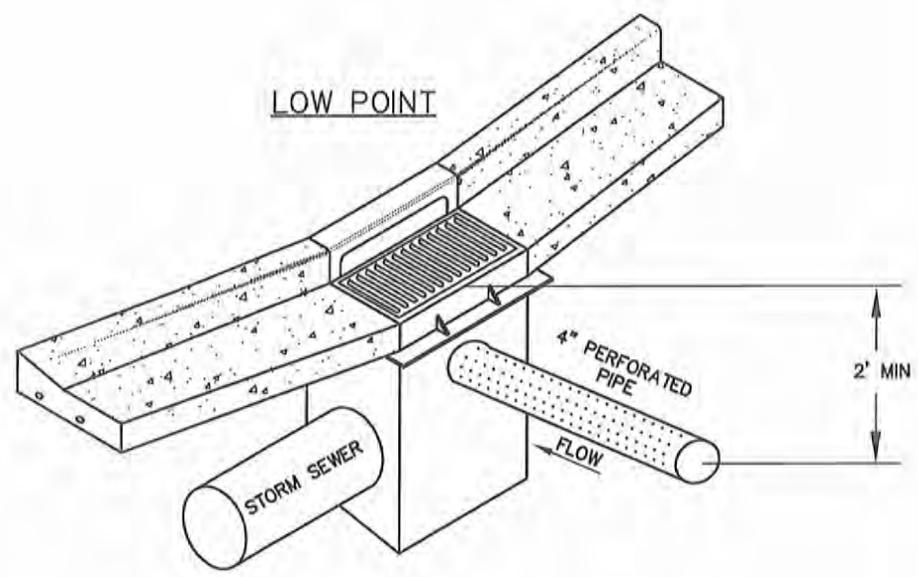
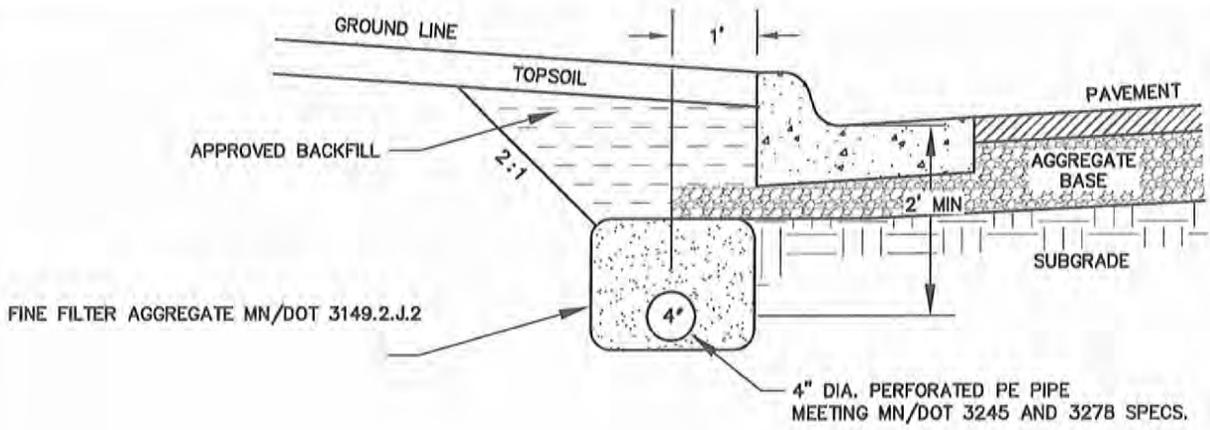
**CITY OF EDINA  
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**SUMP DRAIN**

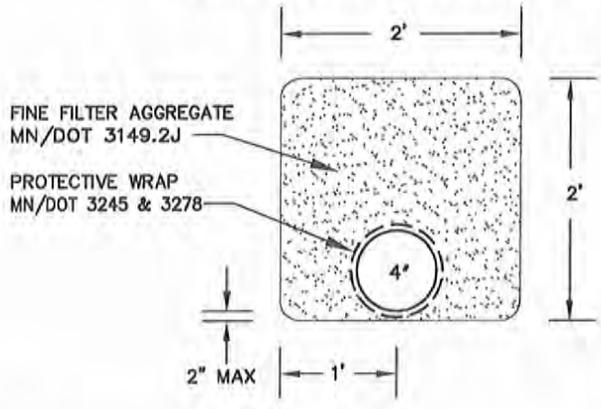
*David A. Muth*  
APPROVED: CITY ENGINEER

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01-16

STANDARD  
PLATE  
310



**FINE FILTER AGGREGATE DETAIL**



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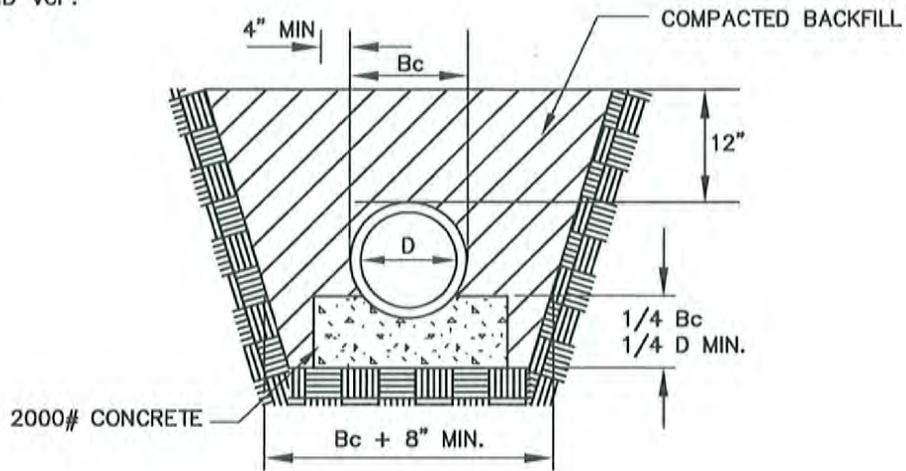
**SUBSURFACE DRAINS**

*[Signature]*  
APPROVED: CITY ENGINEER

REVISED:  
01-16  
STANDARD  
PLATE  
315

**NOTE:**

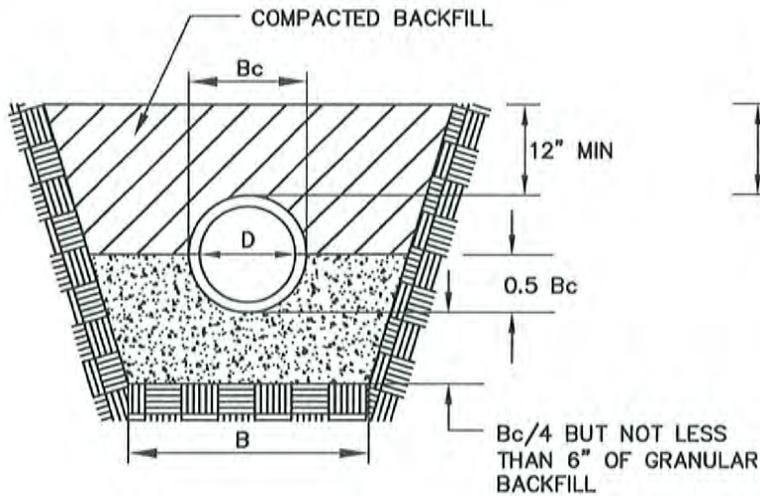
PIPE BEDDING DETAIL INTENDED FOR RCP, PVC, DIP, AND VCP.



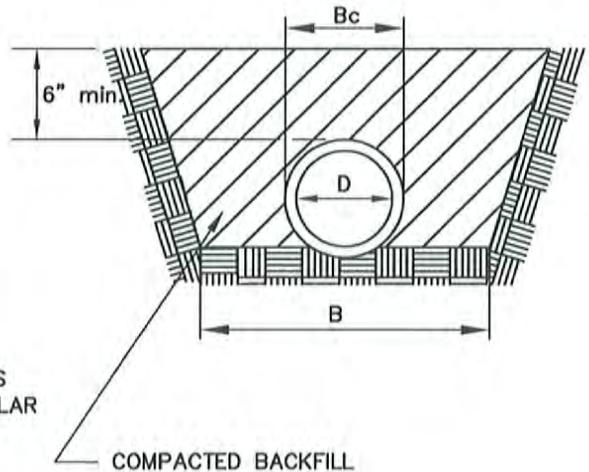
**CLASS A**

**NOTE**

"Bc" DENOTES OUTSIDE DIAMETER OF PIPE



**CLASS B**



**CLASS C**

PIPE DIAMETER(D)	B
36" OR LESS	Bc + 24"
42" TO 54"	1.5 X Bc
60" OR OVER	Bc + 36"

PIPE DIAMETER(D)	B
36" OR LESS	Bc + 24"
42" TO 54"	1.5 X Bc
60" OR OVER	Bc + 36"



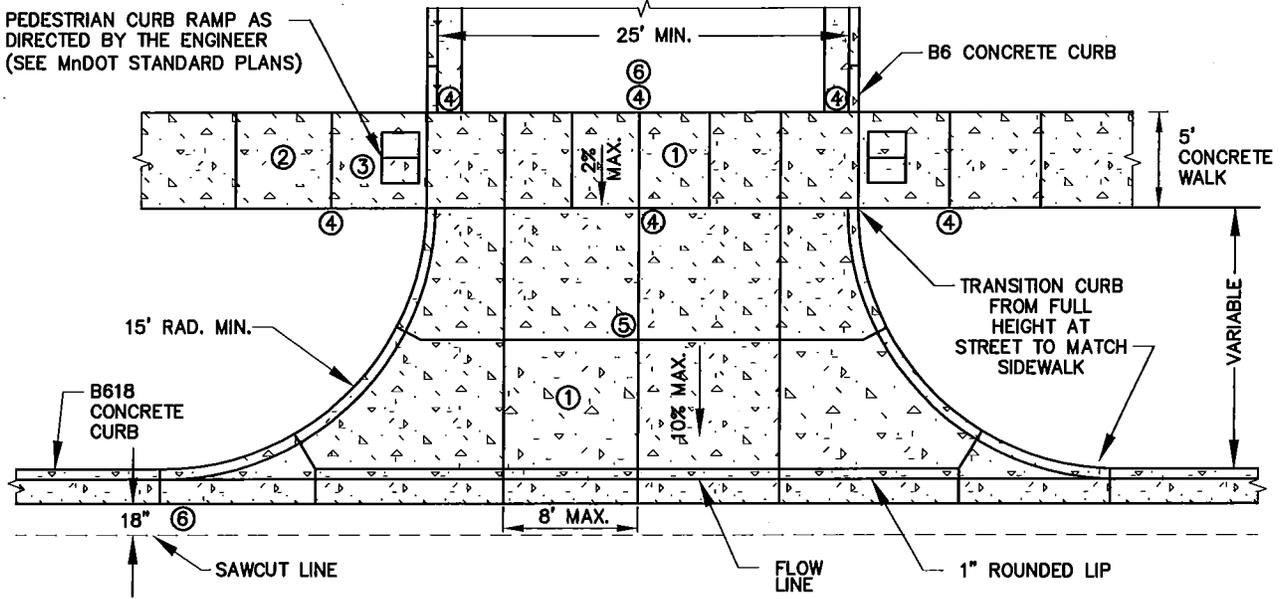
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**PIPE BEDDING DETAIL**

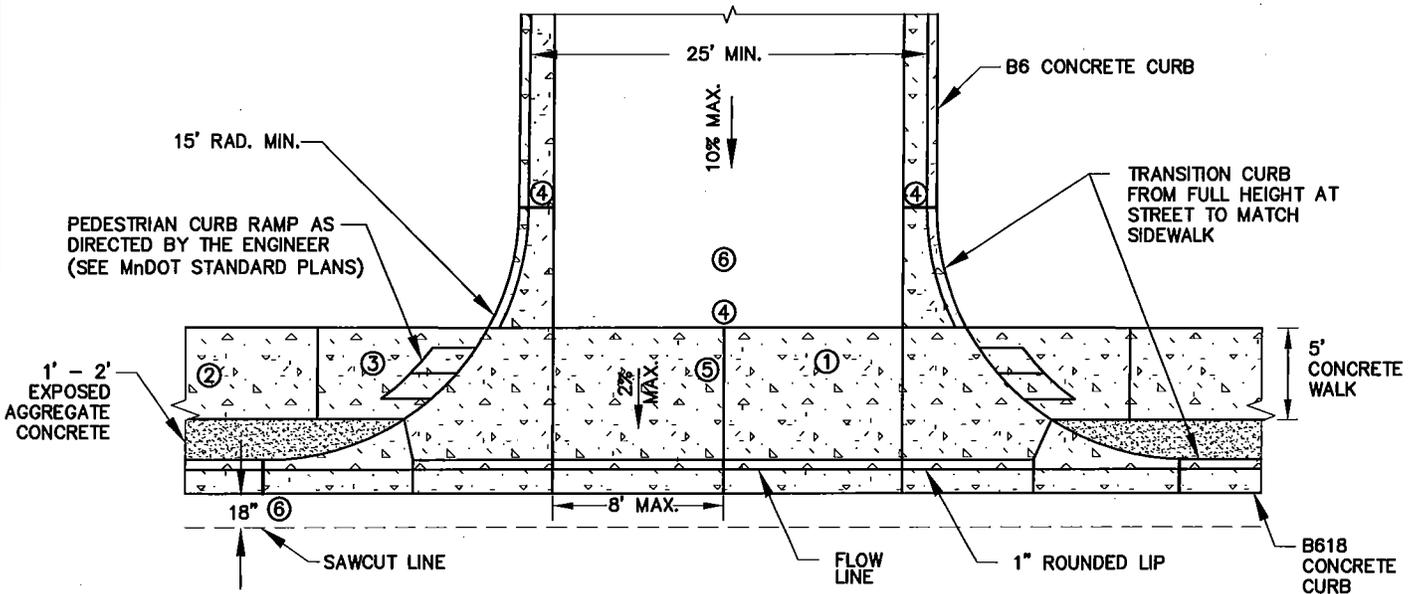
*Wayne H. ...*  
APPROVED: CITY ENGINEER

REVISED:  
01-08  
STANDARD  
PLATE  
380

## COMMERCIAL DRIVEWAY WITH VARIABLE BOULEVARD AND SIDEWALK



## COMMERCIAL DRIVEWAY WITH NARROW BOULEVARD AND SIDEWALK



**NOTES:**

- ① APRON AND SIDEWALK SHALL BE 8" CONCRETE WITH 8" AGGREGATE BASE CLASS 5.
- ② SIDEWALK SHALL BE 4" CONCRETE WITH 4" AGGREGATE BASE CLASS 5.
- ③ THE FIRST PANEL OF SIDEWALK ON EACH SIDE OF ANY APRON SHALL BE 8" CONCRETE WITH 8" AGGREGATE BASE CLASS 5.
- ④ 1/2" EXPANSION JOINT, PREFORMED JOINT FILLER MATERIALS, AASHTO M 213 (REQUIRED WHEN TWO CONCRETE AREAS ARE POURED SEPARATELY).
- ⑤ FORM CONTRACTION JOINT AS NEEDED TO PRODUCE APPROXIMATELY SQUARE PANELS (MAX. AREA OF 64 S.F.).
- ⑥ EXISTING BITUMINOUS PAVEMENT SHALL BE PATCHED IN TWO 2" LIFTS.

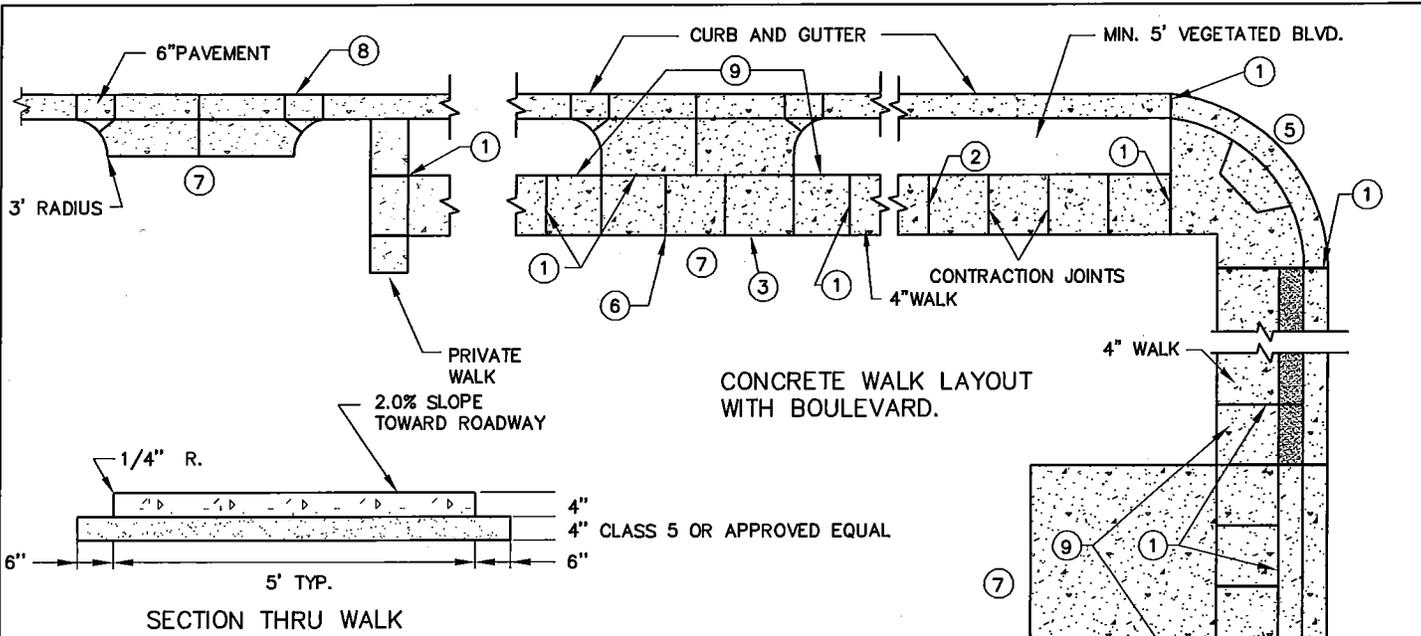


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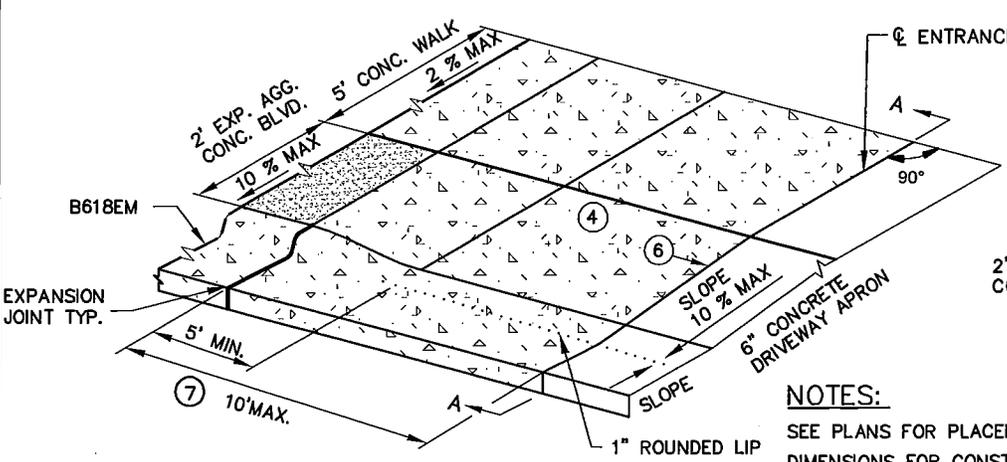
## COMMERCIAL DRIVEWAY ENTRANCES

*Charles A. Miller*  
APPROVED: CITY ENGINEER

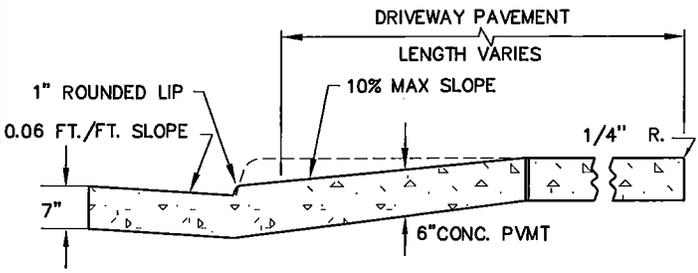
REVISED:  
1-16  
STANDARD  
PLATE  
400



SECTION THRU WALK

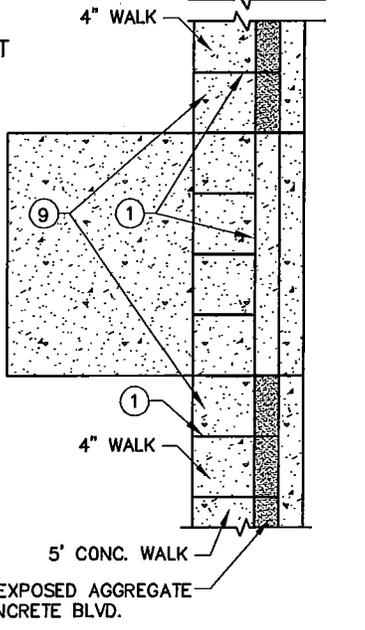


CURB RETURN, HALF PLAN PERSPECTIVE (2' EXPOSED AGGREGATE CONCRETE BLVD. WITH 5' WALK.)



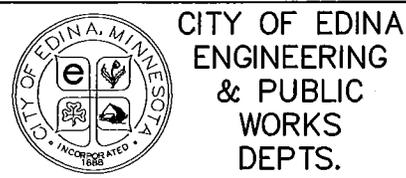
SECTION A-A

\*APRON CONSTRUCTION JOINTS SHALL BE TROWELED AND MATCH EXISTING DRIVEWAY PATTERN. OTHER CONCRETE CONSTRUCTION JOINTS SHALL MATCH THE EXISTING DRIVEWAY JOINT PATTERN AND STYLE.



**NOTES:**

- SEE PLANS FOR PLACEMENT OF WALK AND DIMENSIONS FOR CONSTRUCTION OF DRIVEWAYS.
- ① 1/2" EXPANSION JOINT. 1/2" PREFORMED JOINT FILLER MATERIAL, AASHTO M 213 (REQUIRED WHEN 2 CONCRETE AREAS ARE POURED SEPARATELY).
- ② 1/2" EXPANSION JOINTS AT 150 FT. TYP. (APPROX.) MAXIMUM INTERVALS.
- ③ MATCH INPLACE DRIVEWAY THICKNESS (6" MIN. ON CONCRETE) (4" MIN. ON BIT. DRIVEWAYS).
- ④ WITH SIDEWALK, 6" CONCRETE PAVED TO THE BACK OF SIDEWALK IS PAID FOR AS 6" CONCRETE DRIVEWAY PAVEMENT.
- ⑤ SEE MNDOT STANDARD PLATE 7036G FOR PED RAMP DETAILS SEE PLANS FOR PLACEMENT
- ⑥ FORM CONTRACTION JOINT AS NEEDED TO PRODUCE APPROXIMATELY SQUARE PANELS (MAX. AREA OF 64 S.F.).
- ⑦ SEE STD. PLATE 400 FOR COMMERCIAL DRIVEWAYS AND STANDARD PLATE 411 FOR RESIDENTIAL DRIVEWAYS
- ⑧ FOR RETROFITTED APRON, STREET MUST BE SAWED 18" MIN. OUT FROM NEW APRON AND PATCHED WITH A PLANT MIXED BITUMINOUS MIXTURE
- ⑨ THE FIRST PANEL OF SIDEWALK ON EACH SIDE OF ANY DRIVEWAY SHALL BE 6" CONCRETE PAVEMENT.
- ⑩ BIT DRIVEWAYS SHALL HAVE 6" OF CLASS 5 BASE AND BE PLACED IN TWO 2" LIFTS.

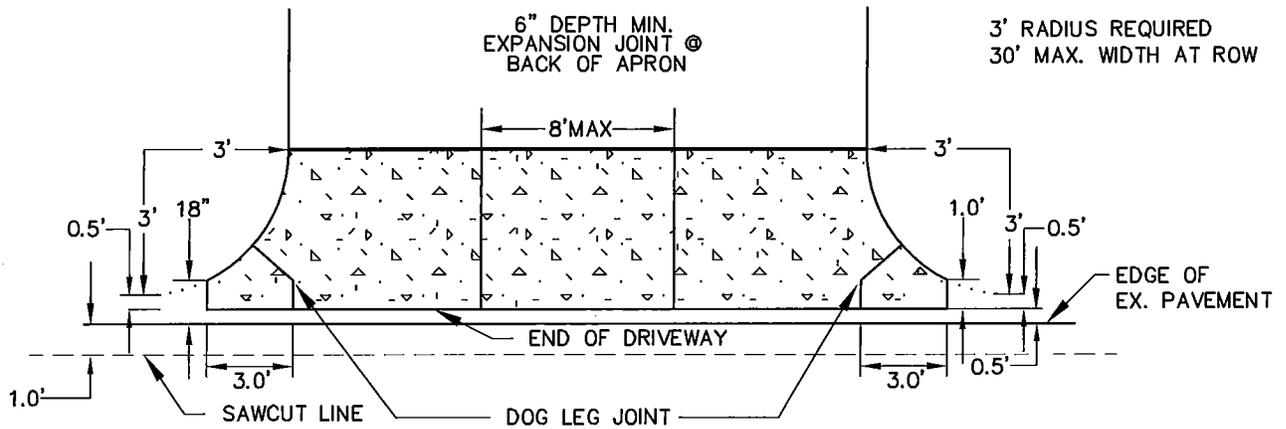


**CONCRETE DRIVEWAY APRON AND CONCRETE WALK**

*Chad A. Miller*  
APPROVED: CITY ENGINEER

REVISED: 1-15  
STANDARD PLATE 410

NO CURB & GUTTER



**NOTE:**

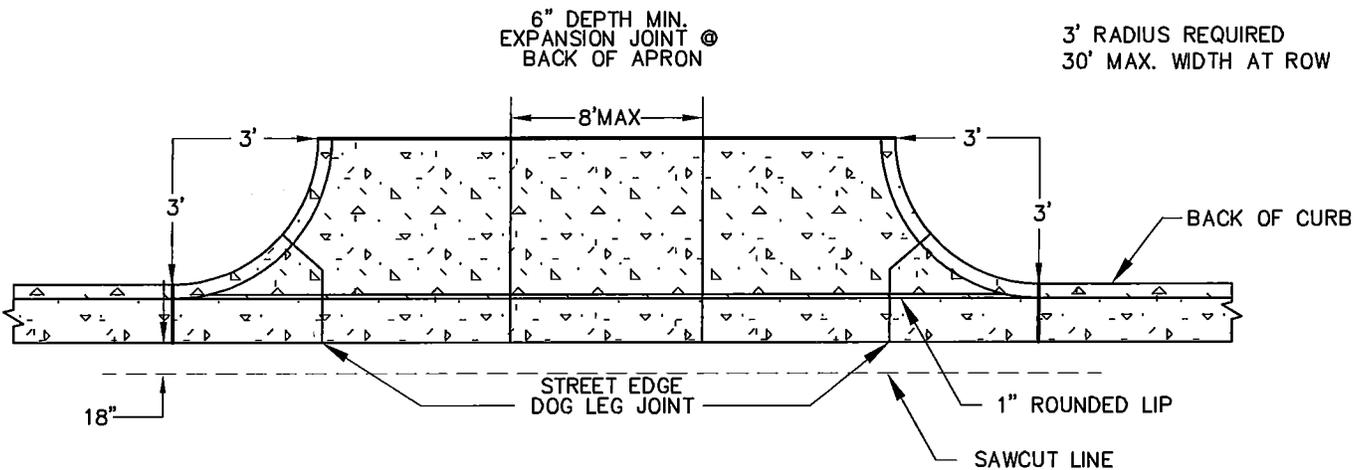
CONTRACTOR MUST SAWCUT AND REPLACE MIN 18" STRIP OF STREET SECTION WITH SAME PAVEMENT TYPE TO MATCH EXISTING STREET SECTION.

NEW CONCRETE DRIVEWAY SHALL BE OFFSET BACK 0.5' FROM EXISTING PAVEMENT.

WHEN EXISTING DRIVEWAY IS BITUMINOUS AND NEEDS TO BE RESTORED, THE CITY REQUIRES A MINIMUM OF TWO 2" LIFTS.

6" OF AGGREGATE BASE CLASS 5

CURB & GUTTER



**NOTE:**

CONTRACTOR MUST SAWCUT AND REPLACE MIN 18" STRIP OF STREET SECTION WITH SAME PAVEMENT TYPE TO MATCH EXISTING STREET SECTION.

WHEN EXISTING DRIVEWAY IS BITUMINOUS AND NEEDS TO BE RESTORED, THE CITY REQUIRES A MINIMUM OF TWO 2" LIFTS.

6" OF AGGREGATE BASE CLASS 5



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RESIDENTIAL DRIVEWAY  
ENTRANCES

*Handwritten signature of Chad A. Mink*

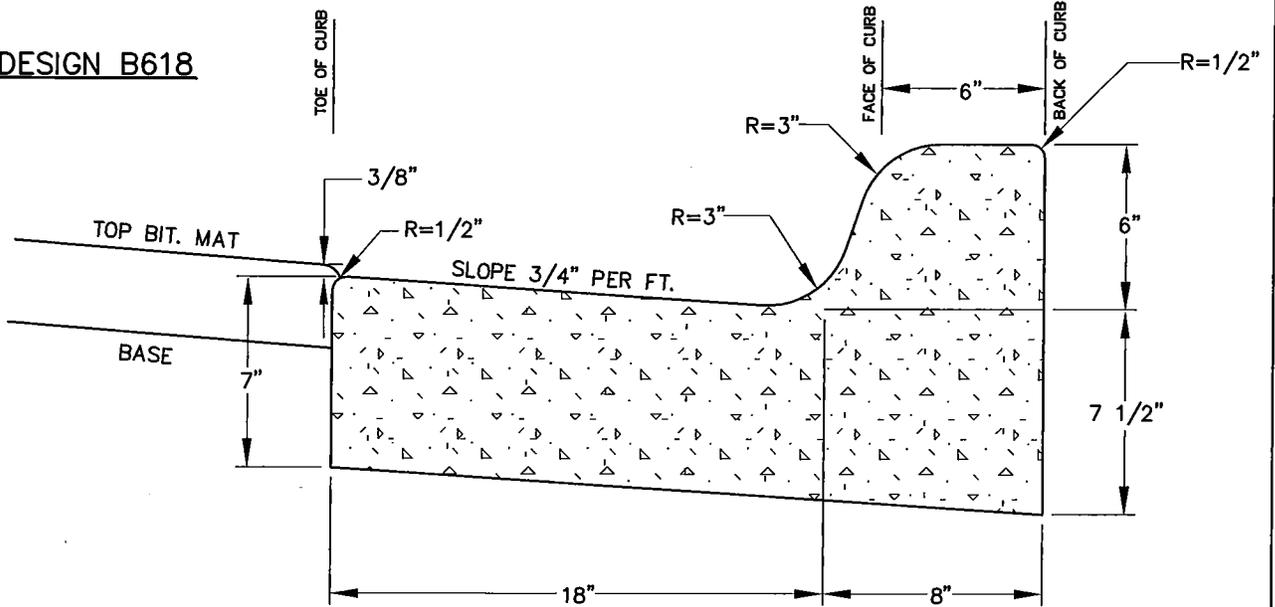
APPROVED: CITY ENGINEER

REVISED:  
1-16

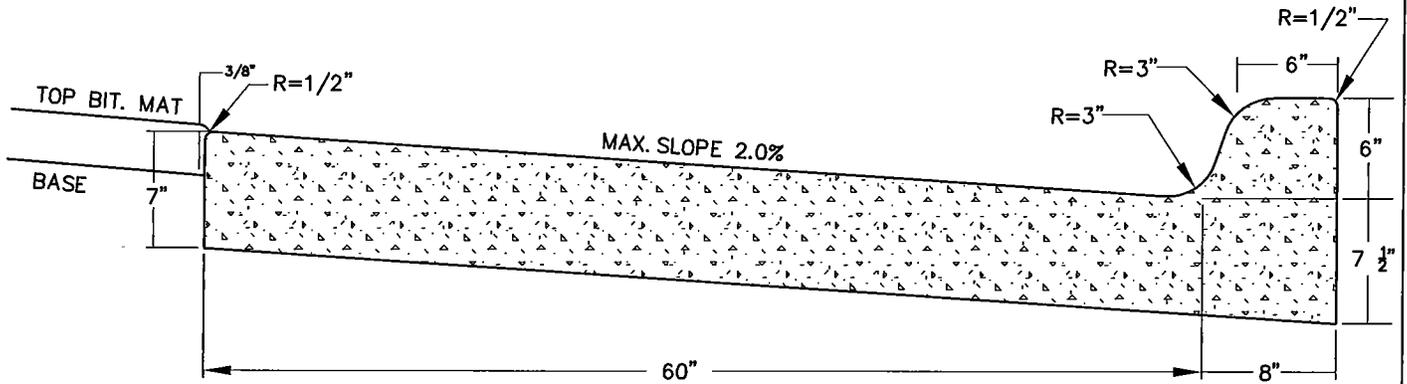
STANDARD  
PLATE

411

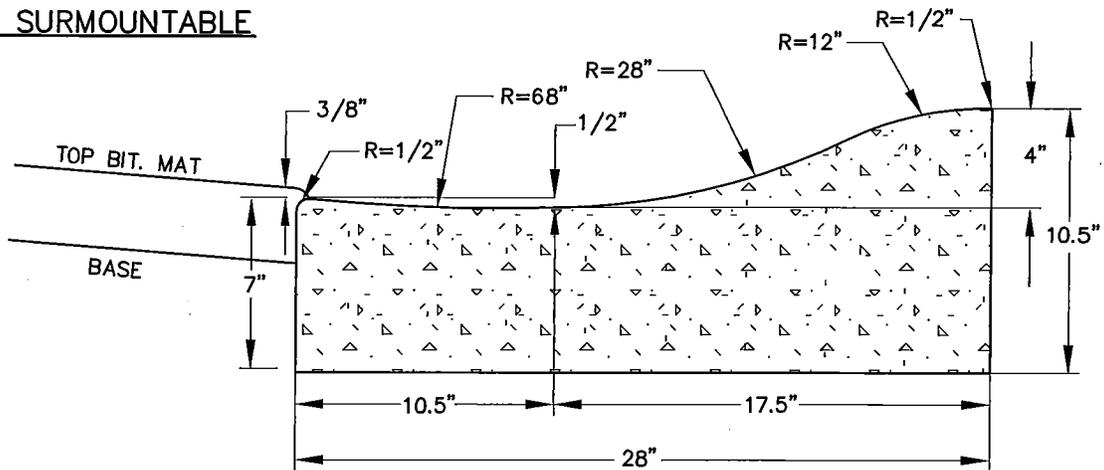
**DESIGN B618**



**DESIGN B660**



**DESIGN SURMOUNTABLE**



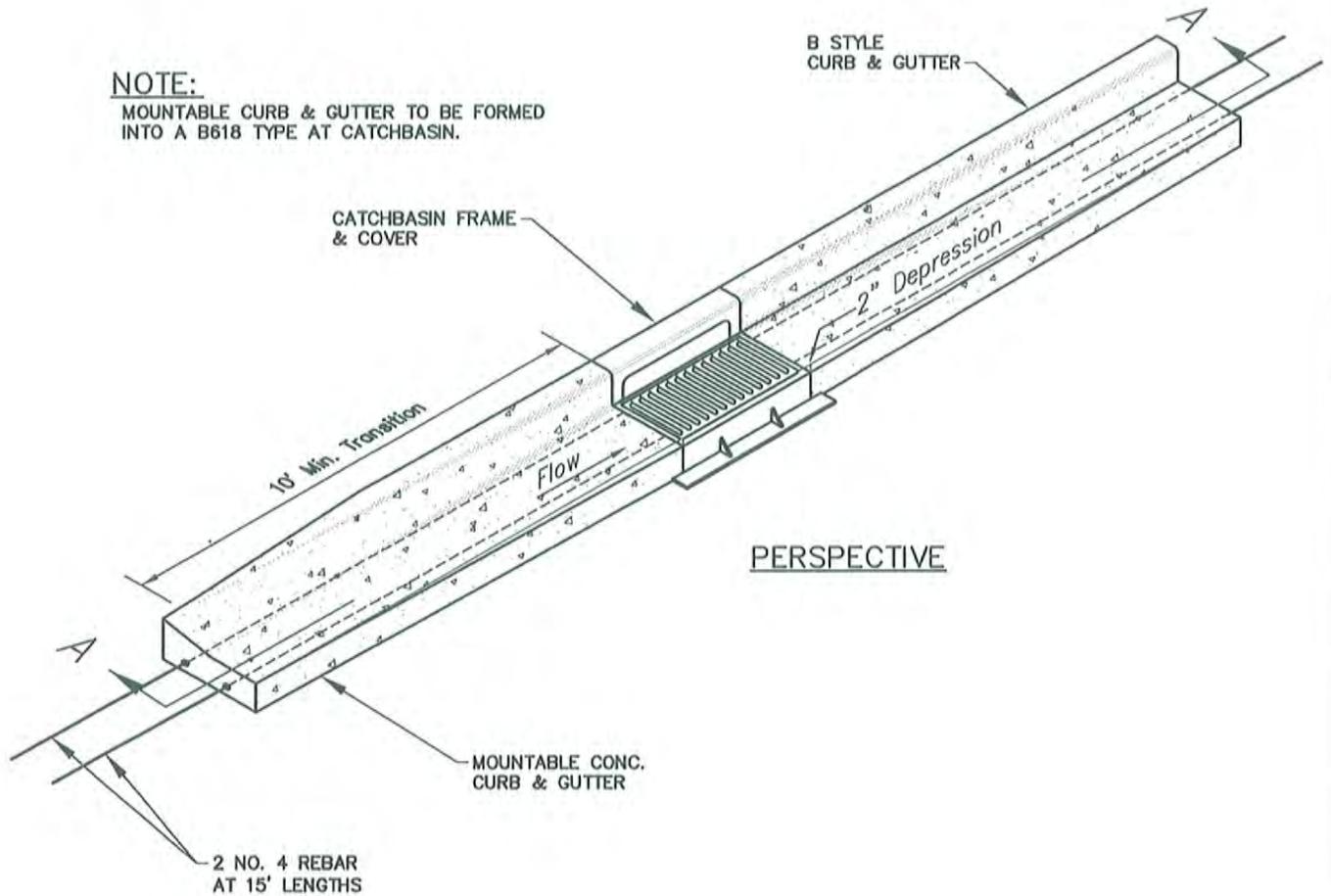
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WORKS  
DEPTS.

**CONCRETE CURB & GUTTER**

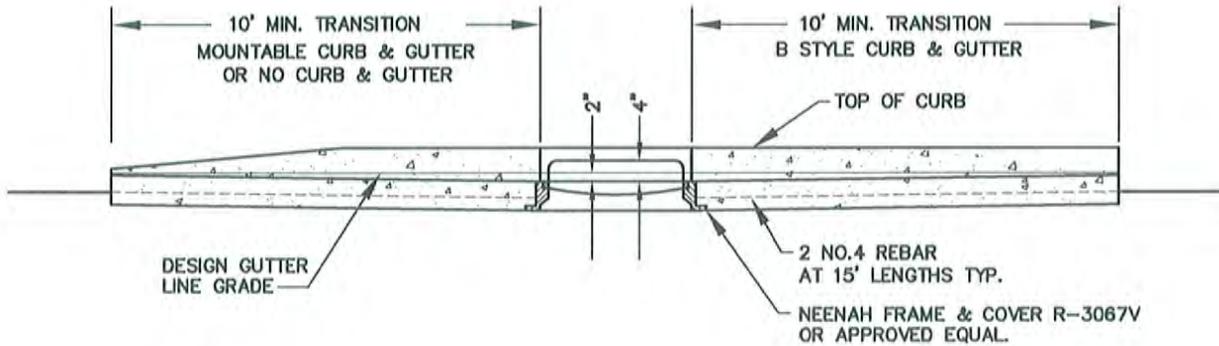
*Chad A. [Signature]*  
APPROVED: CITY ENGINEER

REVISED:  
01-16  
STANDARD  
PLATE  
500

**NOTE:**  
MOUNTABLE CURB & GUTTER TO BE FORMED INTO A B618 TYPE AT CATCHBASIN.



PERSPECTIVE



SECTION A-A

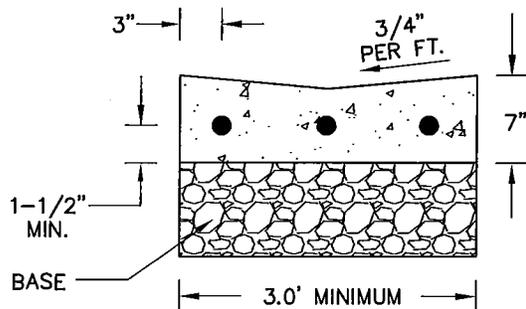
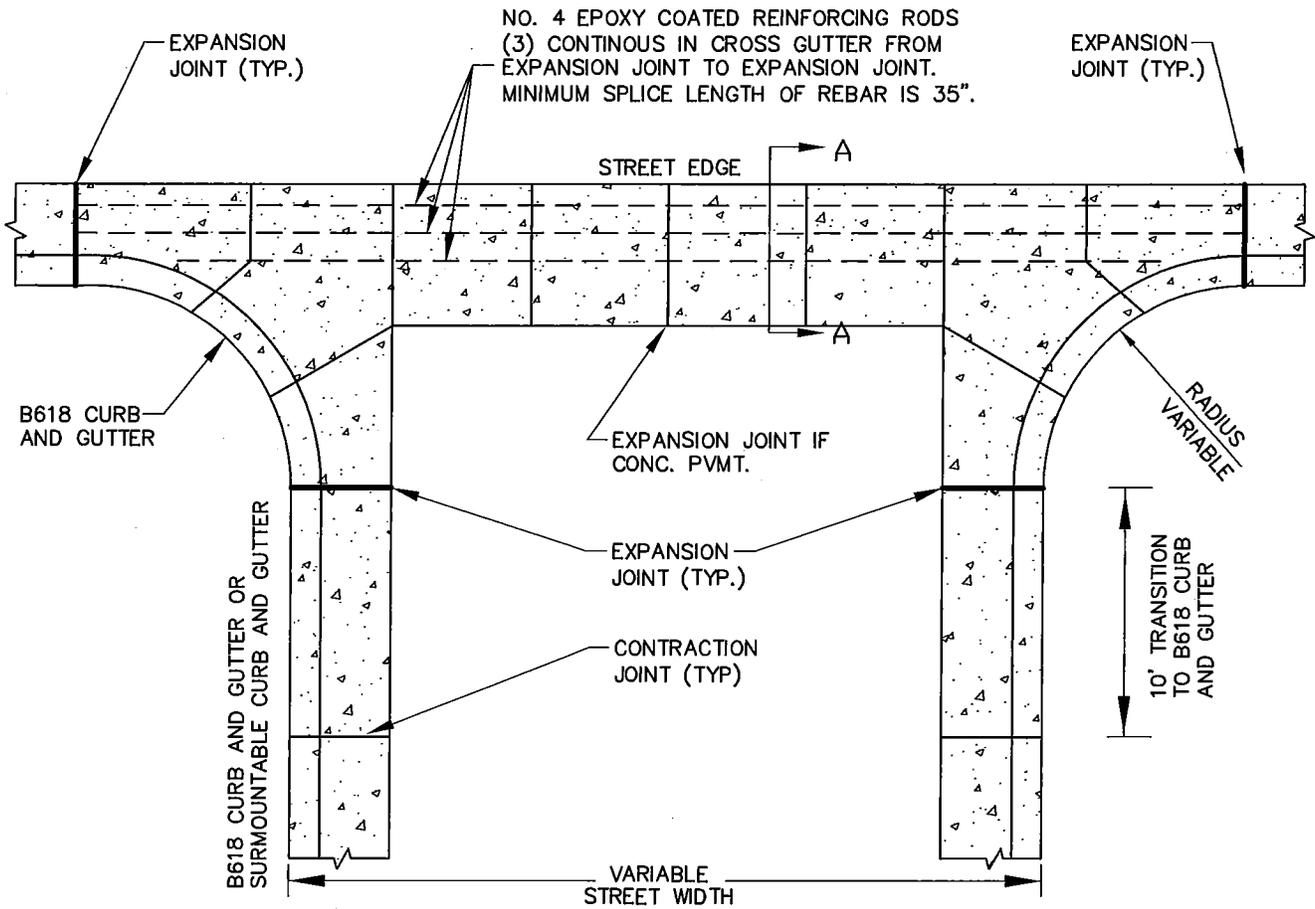


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B618 CURB & GUTTER TRANSITION

*Wayne Haul*  
APPROVED: CITY ENGINEER

REVISED:  
04-09  
STANDARD  
PLATE  
505



SECTION A-A

**NOTE:**  
 WHEN INSTALLING VALLEY GUTTER NEXT TO EXISTING BITUMINOUS ROADWAY, THE CONTRACTOR MUST SAWCUT AND REPLACE MIN 18" STRIP OF STREET SECTION WITH SAME PAVEMENT TYPE TO MATCH EXISTING STREET SECTION.

VALLEY GUTTER TO BE PAID BY THE SQUARE YARD FROM RADII TO RADII OF B618 CURB AND GUTTER.



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 WORKS  
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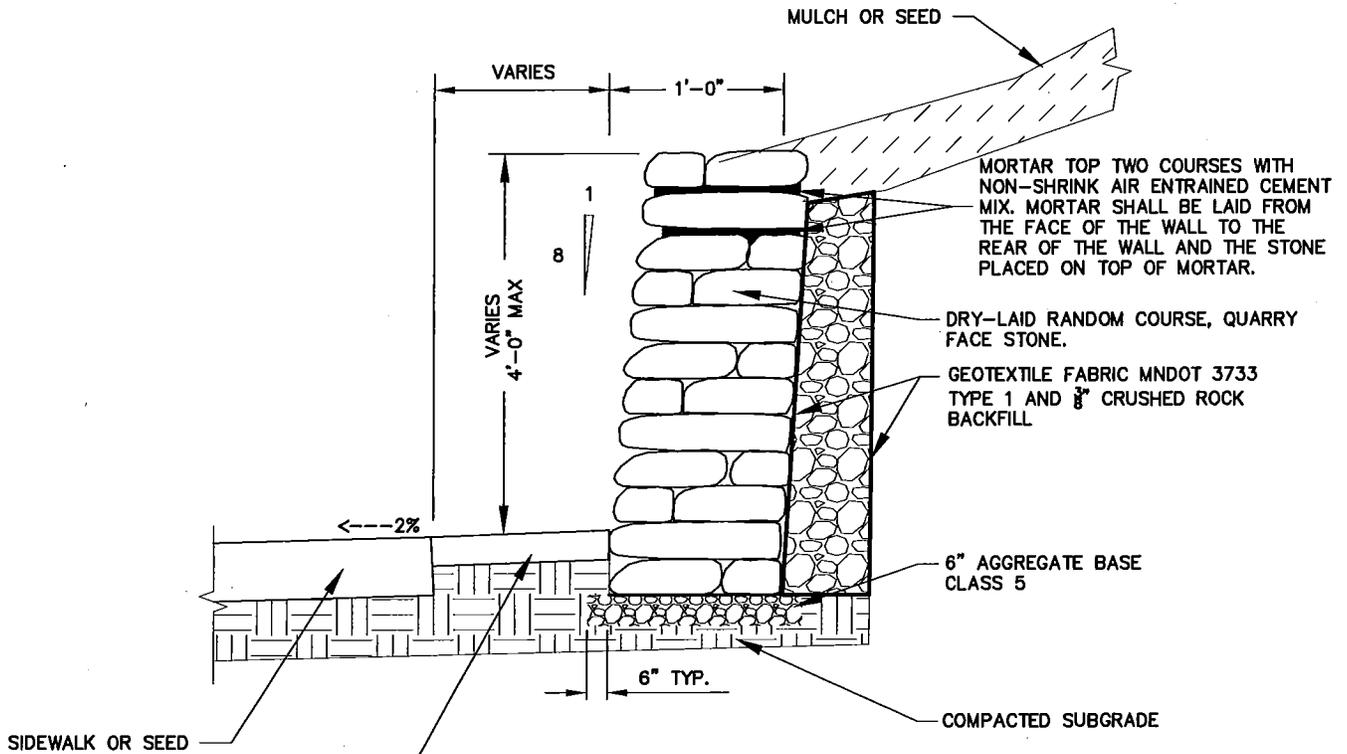
## 7" VALLEY GUTTER

*Chad A. M...*

APPROVED: CITY ENGINEER

REVISED:  
 1-15

STANDARD  
 PLATE  
 510



MINIMUM 1' BITUMINOUS WHEN ADJACENT TO WALK OR CONCRETE CURB AND GUTTER. SEED WHEN NO WALK IS PRESENT.

**NOTES:**

1. THE MINIMUM EXPOSED HEIGHT OF THE RETAINING WALL SHALL BE 18" INCHES.
2. THE NATURAL STONE RETAINING WALL SHALL BE LAID LEVEL.
3. THE NATURAL STONE PLACED BELOW FINISH GRADE IS INCIDENTAL TO WALL CONSTRUCTION. A MINIMUM OF 1/3 THE EXPOSED HEIGHT SHALL BE BURIED.

**SOURCES (IN ORDER OF PREFERENCE):**

1. CHILTON QUARRIED IN CHILTON, WISCONSIN
2. FOND DU LAC QUARRIED IN FOND DU LAC, WISCONSIN
3. LANNON STONE IN LANNON WISCONSIN



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**NATURAL STONE RETAINING WALL**

*Chad A. Mink*  
APPROVED: CITY ENGINEER

REVISED:  
01-16  
STANDARD  
PLATE  
520

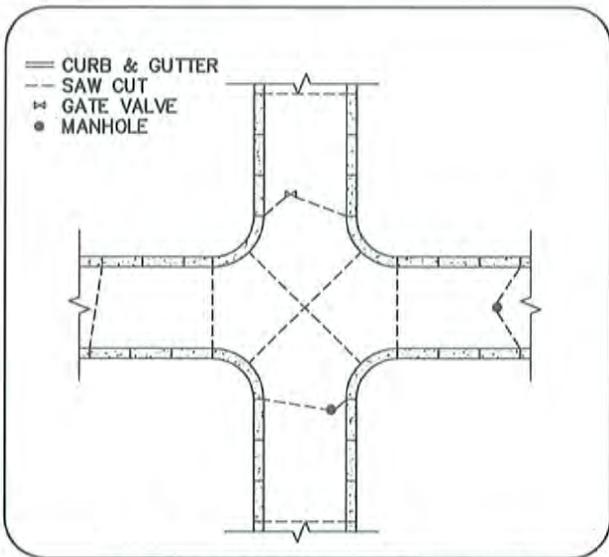


FIGURE 1. NO MANHOLES IN THE INTERSECTION

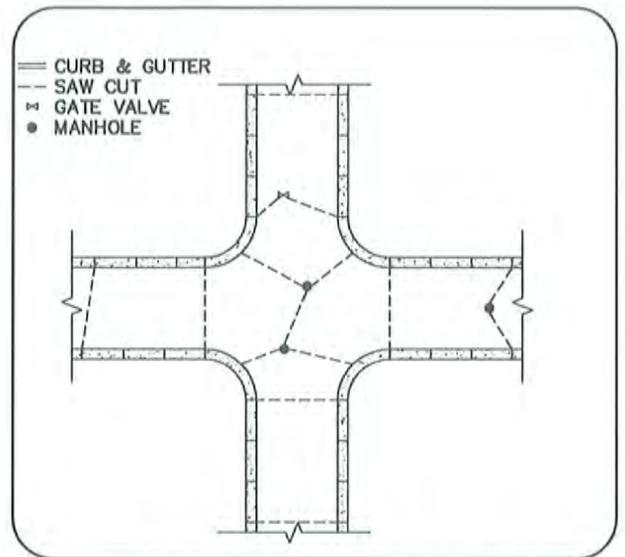
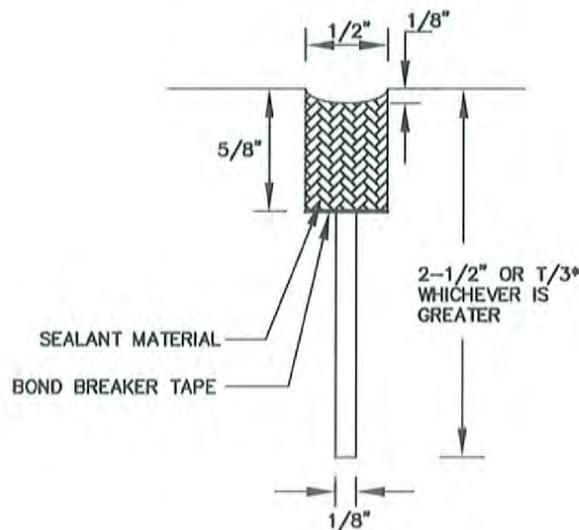


FIGURE 2. TWO MANHOLES IN THE INTERSECTION

**NOTE:**

1. WHEN USING SAW AND SEAL IN AN URBAN SETTING WHERE CURB AND GUTTER IS PRESENT THE SAW CUTS SHOULD LINE UP WITH THE CONTROL JOINTS IN THE GUTTER SECTIONS WHENEVER POSSIBLE AT 30' INTERVALS, EVEN IF THIS RESULTS IN A SLIGHTLY SKEWED JOINT AS SHOWN IN FIGURES 1 AND 2.
2. IN INTERSECTIONS, SAWING SHOULD BE SIMILAR TO FIGURES 1 OR 2 DEPENDING ON WHETHER MANHOLES ARE PRESENT.

TYPICAL JOINT SECTION



\* T/3 = ONE THIRD THE TOTAL OVERLAY THICKNESS (OVERLAY PROJECTS) OR ONE-THIRD THE TOTAL BITUMINOUS THICKNESS (NEW CONSTRUCTION PROJECTS).



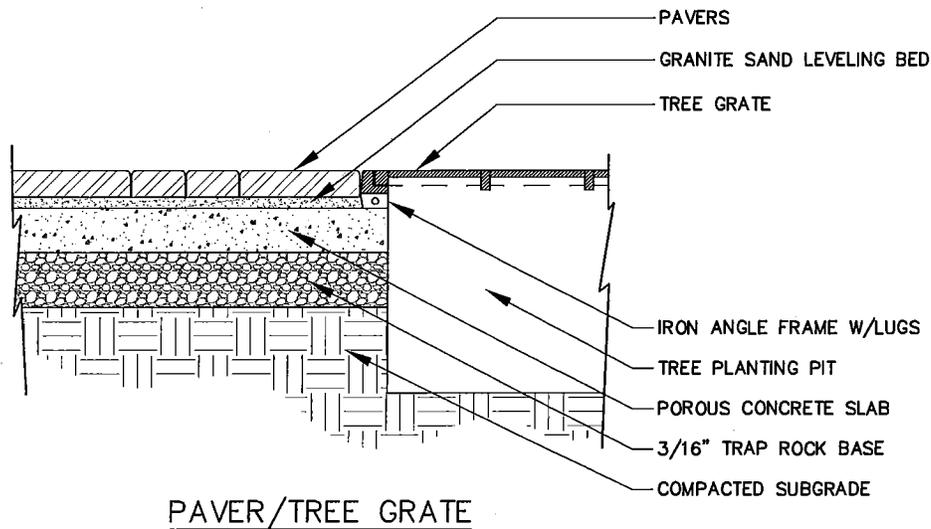
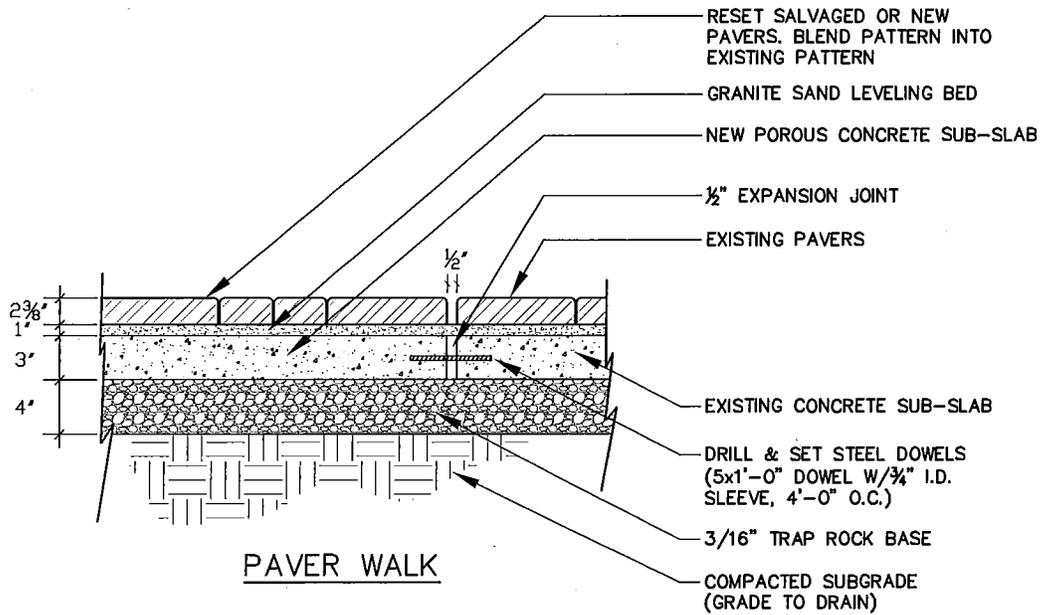
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DEPTS.

**SAW & SEAL BITUMINOUS STREET**

*Wayne D. Lewis*  
APPROVED: CITY ENGINEER

REVISED:  
04-09

STANDARD  
PLATE  
525



CROSS SLOPE OF THE PAVER WALK SHALL NOT EXCEED 2.0%.  
 CONSTRUCT 1" WEEP HOLES IN THE CONCRETE SUB-SLAB 2.0' O.C. ON DOWN GRADE SIDE OF WALK.  
 NEW CONSTRUCTION WILL REQUIRE A 4" DRAIN TILE LINE TO BE INSTALLED ON THE DOWN GRADE SIDE OF WALK BELOW THE CONCRETE SUB SLAB.

SUPPLIER TO BE USED  
 (TYP. FOR 50TH & FRANCE AREA)

INTERLOCK CONCRETE PRODUCTS INC.  
 3535 BLUFF DRIVE  
 JORDAN, MN 55352-8302  
 T 952-492-3636  
 F 952-492-3668  
 TF 1-800-780-7212

HOLLAND SERIES  
 (TYP. FOR 50TH & FRANCE AREA)

DIMENSIONS:  
 STANDARD 4.25"x 8.5"  
 HALF 4.25"x 4.25"

COLOR:  
 ANTIQUE COPPER



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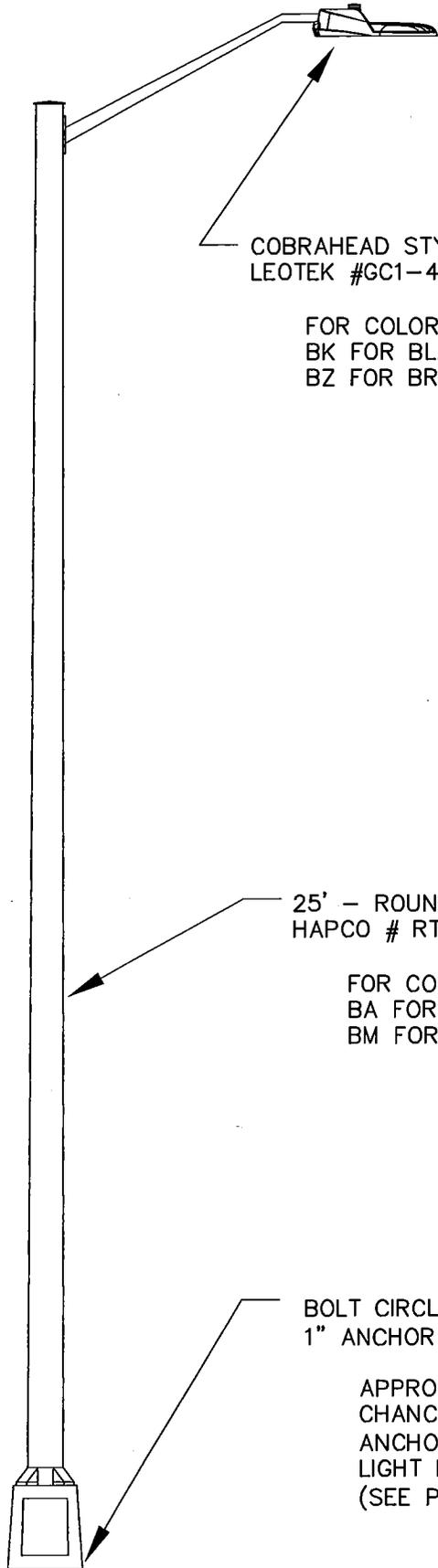
PAVER WALK/TREE GRATE

*Chad A. Miller*

APPROVED: CITY ENGINEER

REVISED:  
 1-15

STANDARD  
 PLATE  
 530



COBRAHEAD STYLE LED LUMINAIRE – 100 WATT EQUIVALENT  
LEOTEK #GC1-40F-MV-NW-3-XX-530-PCR7-SC

FOR COLOR, CHANGE "XX" TO:  
BK FOR BLACK  
BZ FOR BRONZE

25' – ROUND TAPERED ALUMINUM POLE  
HAPCO # RTA25D7BFM14-XX

FOR COLOR, CHANGE "XX" TO:  
BA FOR BLACK  
BM FOR BRONZE

BOLT CIRCLE 15"  
1" ANCHOR BOLTS

APPROVED LIGHT BASE FOUNDATION:  
CHANCE #C11242-QG4VP SCREW-IN  
ANCHOR BASE, OR MN/DOT CONCRETE  
LIGHT FOUNDATION DESIGN E MOD  
(SEE PLAN FOR DETAIL)



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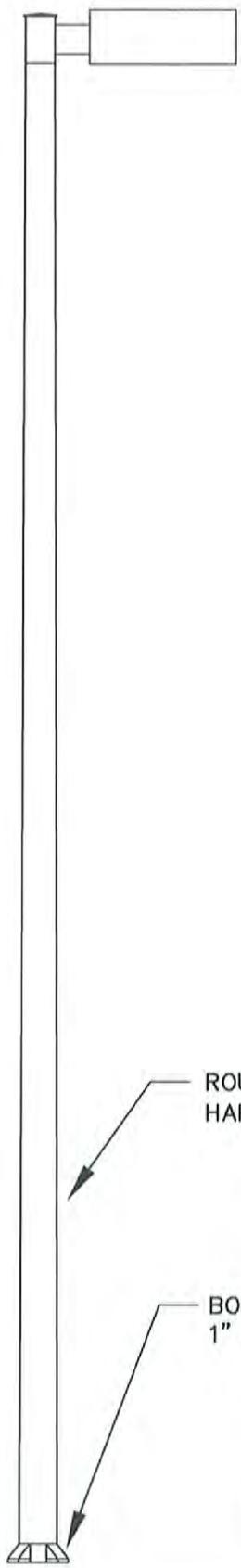
RESIDENTIAL 25' COBRAHEAD

*David A. M...*  
APPROVED: CITY ENGINEER

REVISED:  
01-16

STANDARD  
PLATE

600



SHOEBOX STYLE LUMINAIRE - 100 WATT  
 GARDCO  
 #NSP-H19-1-3-100HPS-QUAD-240-BRP\*-PTF2  
 \*BRP FOR BRONZE

ROUND TAPERED ALUMINUM POLE  
 HAPCO #RTA25D7B4-2 3/8" TENON-BM\*  
 \*BM FOR BRONZE

BOLT CIRCLE 10" TO 11"  
 1" ANCHOR BOLTS

APPROVED LIGHT BASE FOUNDATION:  
 CHANCE #C11242-QG4VP SCREW-IN  
 ANCHOR BASE, OR MN/DOT CONCRETE  
 LIGHT BASE DESIGN E MOD  
 (SEE PLAN FOR DETAIL)



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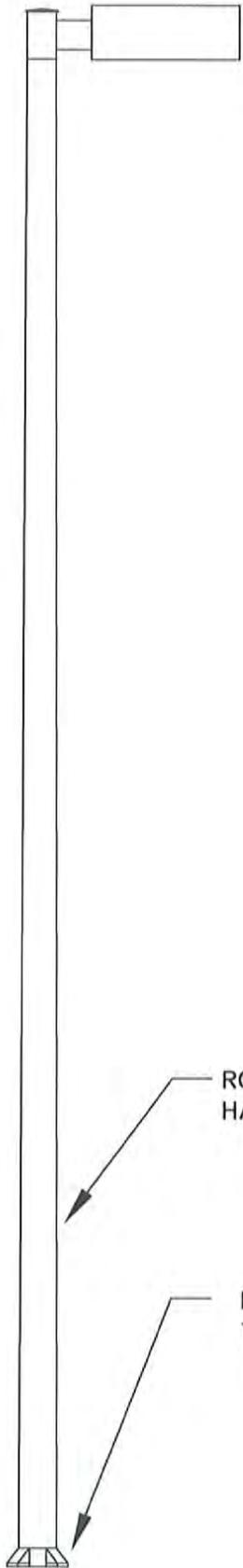
RESIDENTIAL 25' SHOEBOX

*Wayne Houl*  
 APPROVED: CITY ENGINEER

REVISED:  
 01-08

STANDARD  
 PLATE

605



SHOEBOX STYLE LUMINAIRE - 250 WATT  
 GARDCO  
 #NSP-H19-1-3-250HPS-QUAD-BRP\*-PTF2

\*BRP FOR BRONZE

ROUND TAPERED ALUMINUM POLE  
 HAPCO #RTA30D7B4-2 3/8" TENON-BM\*

\*BM FOR BRONZE

BOLT CIRCLE 10" TO 11"  
 1" ANCHOR BOLTS

APPROVED LIGHT BASE FOUNDATION:  
 CHANCE #C11242-QG4VP SCREW-IN  
 ANCHOR BASE, OR MN/DOT CONCRETE  
 LIGHT BASE DESIGN E MOD  
 (SEE PLAN FOR DETAIL)



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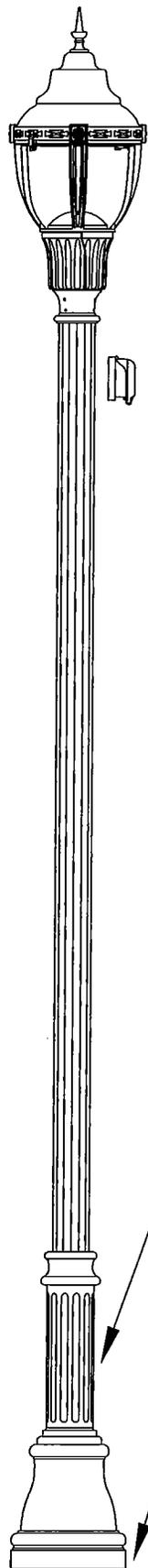
30' SHOEBOS

*Wayne Hulse*  
 APPROVED: CITY ENGINEER

REVISED:  
 01-08

STANDARD  
 PLATE

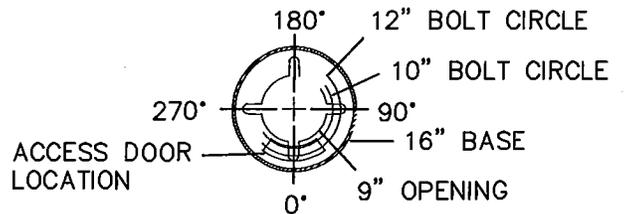
606



UTILITY WASHINGTON LED ACORN WITH FULL CUTOFF OPTICS  
HOLOPHANE #WFL-070-4K-AS-B-L3-S-DM

STANDARD COLOR IS BLACK (B). IF SPECIFIED ON  
DRAWINGS AND SPECIAL PROVISIONS, CHANGE "B" TO:  
RAL8019 FOR BRONZE  
RAL6005 FOR DARK GREEN

FOR 20A WR- RATED GFI RECEPTACLE  
ADD # FGIUS-20  
(OPTIONAL - SEE PLAN)



ANCHORAGE  
DETAIL

CHARLESTON FLUTED POLE  
HOLOPHANE #CH-A-14.5-F5J-16-P07-ABG-BK

STANDARD COLOR IS BLACK (BK). IF SPECIFIED  
ON DRAWINGS AND SPECIAL PROVISIONS,  
CHANGE "BK" TO:  
RAL8019 FOR BRONZE  
RAL6005 FOR DARK GREEN

BOLT CIRCLE 10" TO 12"  
3/4" ANCHOR BOLTS

APPROVED LIGHT BASE FOUNDATION:  
MILLERBERND # 490A111 SCREW-IN  
ANCHOR BASE, OR MN/DOT CONCRETE  
LIGHT FOUNDATION DESIGN E MOD  
(SEE PLAN FOR DETAIL)



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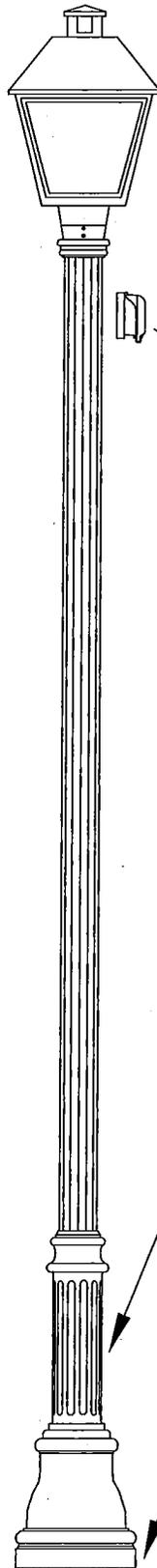
# WASHINGTON ACORN

APPROVED: CITY ENGINEER

REVISED:  
02-15

STANDARD  
PLATE

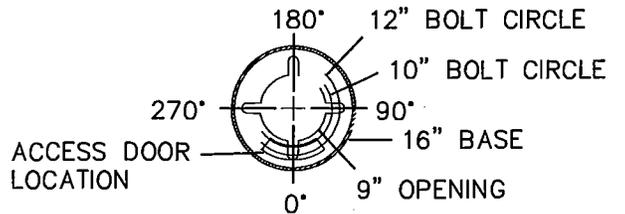
610



COACH STYLE LANTERN WITH CUTOFF OPTICS  
LUMEC #L40U-55W32LED4K-R-LE3-VOLT-BKTX

STANDARD COLOR IS BLACK (BKTX). IF  
SPECIFIED ON DRAWINGS AND SPECIAL  
PROVISIONS, CHANGE "BKTX" TO:  
RAL8019 FOR BRONZE  
RAL6005 FOR DARK GREEN

FOR 20A WR-RATED GFI RECEPTACLE  
ADD # FGIUS-20  
(OPTIONAL - SEE PLAN)



ANCHORAGE  
DETAIL

CHARLESTON FLUTED POLE  
HOLOPHANE #CH-A-14.5-F5J-16-P07-ABG-BK

STANDARD COLOR IS BLACK (BK). IF  
SPECIFIED ON DRAWINGS AND SPECIAL  
PROVISIONS, CHANGE "BK" TO:  
RAL8019 FOR BRONZE  
RAL6005 FOR DARK GREEN

BOLT CIRCLE 10" TO 12"  
3/4" ANCHOR BOLTS

APPROVED LIGHT BASE FOUNDATION:  
MILLERBERND # 490A111 SCREW-IN  
ANCHOR BASE, OR MN/DOT CONCRETE  
LIGHT FOUNDATION DESIGN E MOD  
(SEE PLAN FOR DETAIL)

COORDINATE COLORS BETWEEN POLE  
AND LUMINAIRE MANUFACTURER.



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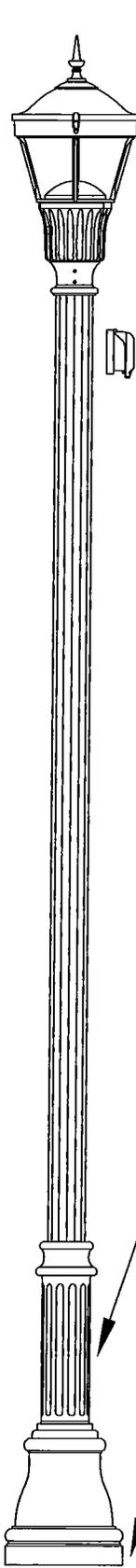
## COACH LANTERN

*Lead A. Mck*  
APPROVED: CITY ENGINEER

REVISED:  
02-15

STANDARD  
PLATE

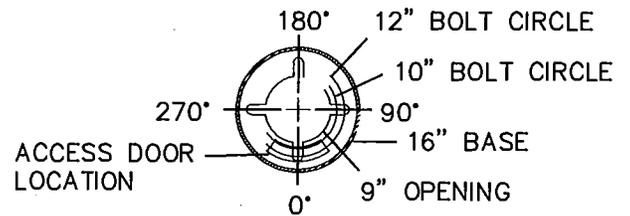
615



UTILITY POSTOP LED LATERN WITH FULL CUTOFF OPTICS  
HOLOPHANE #PUL-070-4K-AS-B-L3-S-DM

STANDARD COLOR IS BLACK (B). IF SPECIFIED ON  
DRAWINGS AND SPECIAL PROVISIONS,  
CHANGE "B" TO:  
RAL8019 FOR BRONZE  
RAL6005 FOR DARK GREEN

FOR 20A WR-RATED GFI RECEPTACLE  
ADD # FGIUS-20  
(OPTIONAL - SEE PLAN)



ANCHORAGE  
DETAIL

CHARLESTON FLUTED POLE  
HOLOPHANE #CH-A-14.5-F5J-16-P07-ABG-BK

STANDARD COLOR IS BLACK (BK). IF SPECIFIED ON  
DRAWINGS AND SPECIAL PROVISIONS,  
CHANGE "BK" TO:  
RAL8019 FOR BRONZE  
RAL6005 FOR DARK GREEN

BOLT CIRCLE 10" TO 12"  
3/4" ANCHOR BOLTS

APPROVED LIGHT BASE FOUNDATION:  
MILLERBERND # 490A111 SCREW-IN  
ANCHOR BASE, OR MN/DOT CONCRETE  
LIGHT FOUNDATION DESIGN E MOD  
(SEE PLAN FOR DETAIL)



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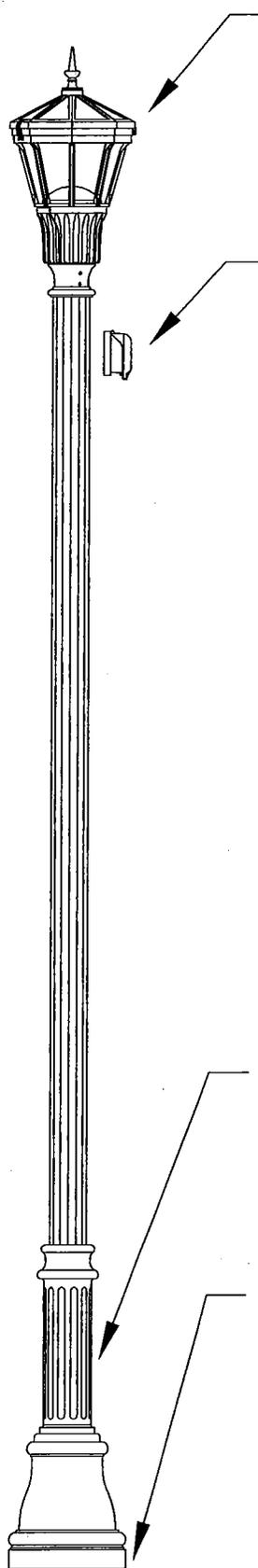
POSTOP LANTERN

*Lead A. Miller*  
APPROVED: CITY ENGINEER

REVISED:  
02-15

STANDARD  
PLATE

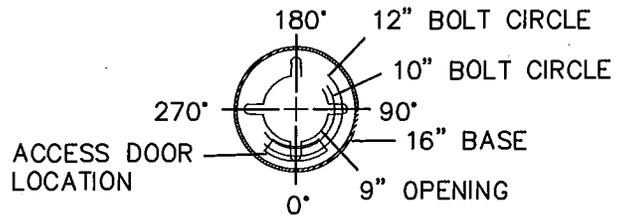
618



UTILITY ARLINGTON LED LATERN WITH FULL CUTOFF OPTICS  
HOLOPHANE #AUL-070-4K-AS-B-L3-S-DM

STANDARD COLOR IS BLACK (B). IF SPECIFIED  
ON DRAWINGS AND SPECIAL PROVISIONS,  
CHANGE "B" TO:  
RAL8019 FOR BRONZE  
RAL6005 FOR DARK GREEN

FOR 20A WR-RATED GFI RECEPTACLE  
ADD # FGIUS-20  
(OPTIONAL - SEE PLAN)



ANCHORAGE  
DETAIL

CHARLESTON FLUTED POLE  
HOLOPHANE #CH-A-14.5-F5J-16-P07-ABG-BK

STANDARD COLOR IS BLACK (BK). IF  
SPECIFIED ON DRAWINGS AND SPECIAL  
PROVISIONS, CHANGE "BK" TO:  
RAL8019 FOR BRONZE  
RAL6005 FOR DARK GREEN

BOLT CIRCLE 10" TO 12"  
3/4" ANCHOR BOLTS

APPROVED LIGHT BASE FOUNDATION:  
MILLERBERND # 490A111 SCREW-IN  
ANCHOR BASE, OR MN/DOT CONCRETE  
LIGHT FOUNDATION DESIGN E MOD  
(SEE PLAN FOR DETAIL)



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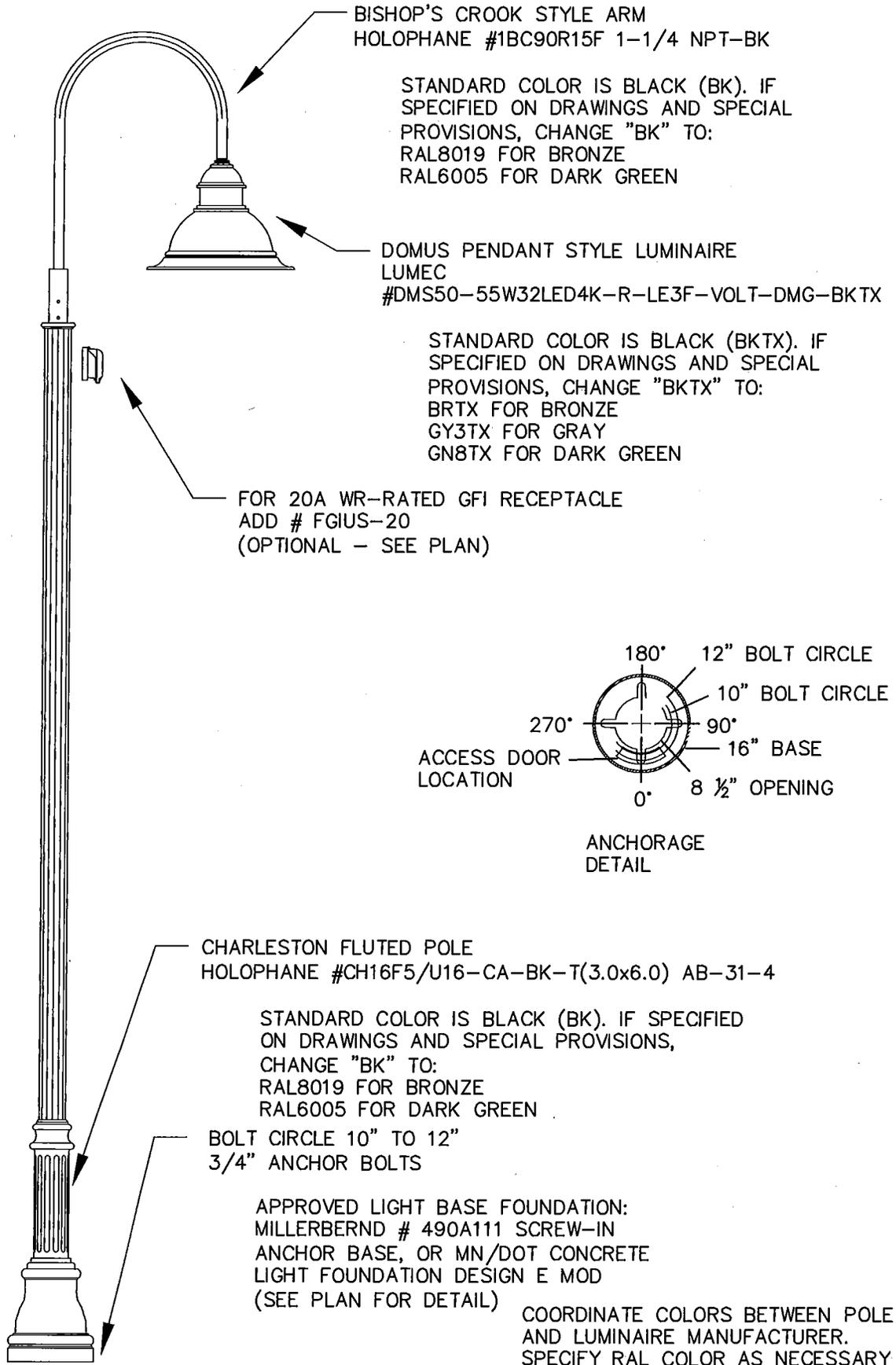
## ARLINGTON LANTERN

*Chad A. Miller*  
APPROVED: CITY ENGINEER

REVISED:  
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STANDARD  
PLATE

620



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PENDANT LUMINAIRE

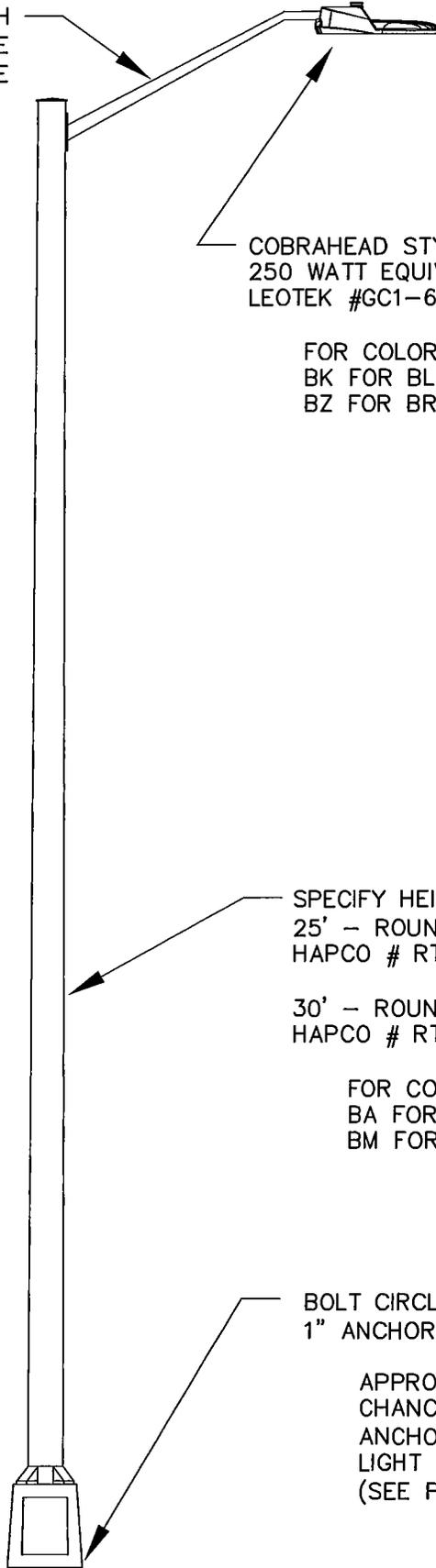
*Chad A. Miller*  
APPROVED: CITY ENGINEER

REVISED:  
02-15

STANDARD  
PLATE

625

SPECIFY ARM LENGTH  
4' ARM FOR 25' POLE  
6' ARM FOR 30' POLE



COBRAHEAD STYLE LED LUMINAIRE -  
250 WATT EQUIVALENT  
LEOTEK #GC1-60F-MV-NW-3-XX-700-PCR7-CR-SC

FOR COLOR, CHANGE "XX" TO:  
BK FOR BLACK  
BZ FOR BRONZE

SPECIFY HEIGHT OF POLE  
25' - ROUND TAPERED ALUMINUM POLE  
HAPCO # RTA25D7BFM14-XX

30' - ROUND TAPERED ALUMINUM POLE  
HAPCO # RTA30D8BFM16-XX

FOR COLOR, CHANGE "XX" TO:  
BA FOR BLACK  
BM FOR BRONZE

BOLT CIRCLE 15"  
1" ANCHOR BOLTS

APPROVED LIGHT BASE FOUNDATION:  
CHANGE #C11242-QG4VP SCREW-IN  
ANCHOR BASE, OR MN/DOT CONCRETE  
LIGHT FOUNDATION DESIGN E MOD  
(SEE PLAN FOR DETAIL)



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## COMMERCIAL COBRAHEAD

*Lead A. Mal*

APPROVED: CITY ENGINEER

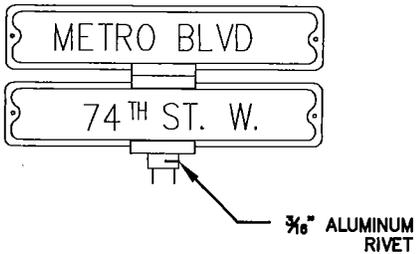
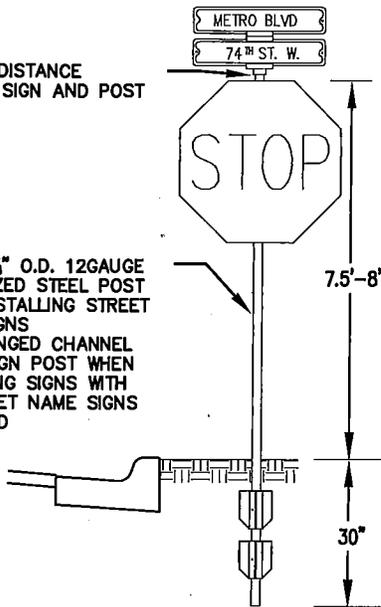
REVISED:  
1-16

STANDARD  
PLATE

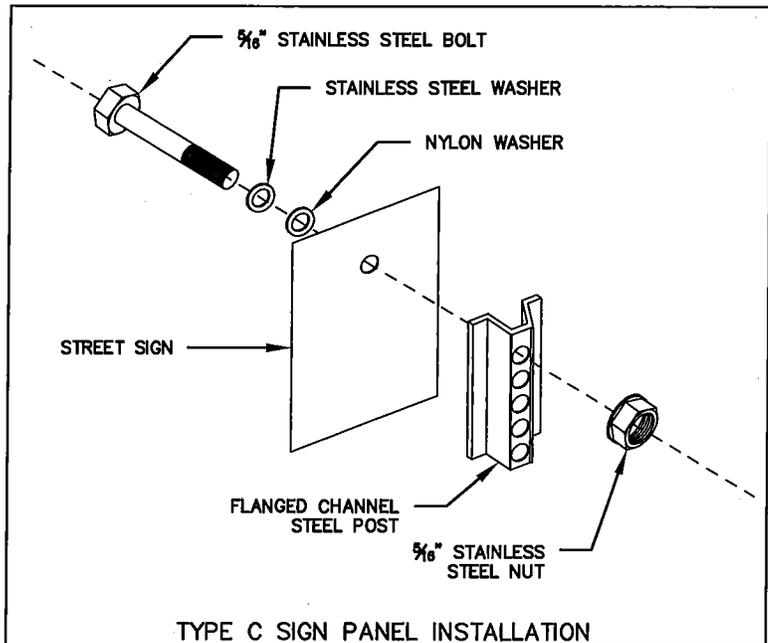
630

• MINIMIZE DISTANCE BETWEEN SIGN AND POST CAP

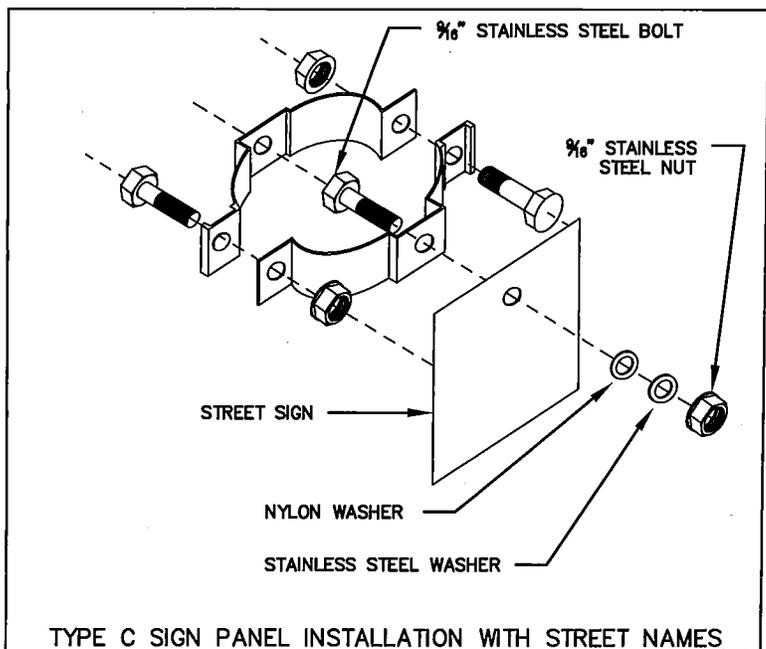
- USE 2 3/8" O.D. 12GAUGE GALVANIZED STEEL POST WHEN INSTALLING STREET NAME SIGNS
- USE FLANGED CHANNEL STEEL SIGN POST WHEN INSTALLING SIGNS WITH NO STREET NAME SIGNS ATTACHED



NOT TO SCALE



TYPE C SIGN PANEL INSTALLATION



TYPE C SIGN PANEL INSTALLATION WITH STREET NAMES

**GENERAL NOTES:**

1. ALL REGULATORY AND STREET SIGNS MUST BE MAINTAINED THROUGHOUT CONSTRUCTION. TEMPORARY SIGNAGE MAY BE REQUIRED AND IS CONSIDERED INCIDENTAL.
2. ALL IN-PLACE SIGNS NOT SHOWN IN PLANS SHALL BE MAINTAINED IN-PLACE THROUGHOUT CONSTRUCTION, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
3. LOCATION OF ALL PROPOSED SIGNS ARE APPROXIMATE AND SHALL BE LOCATED BY THE ENGINEER IN THE FIELD PRIOR TO INSTALLATION.
4. SIGN MATERIALS SHALL CONFORM TO STANDARDS SET FOURTH IN THE GRADING AND LANDSCAPING SPECIFICATIONS.
5. THE CONTRACTOR SHALL PROVIDE 10 1/2 FOOT SIGN POST, SIGN ALIGN, MOUNTING HARDWARE, 3/16" ALUMINUM RIVET, AND LABOR FOR THE INSTALLATION OF STREET NAME SIGNS. CITY SHALL PROVIDE TO THE CONTRACTOR FULLY FINISHED AND ASSEMBLED STREET NAME SIGN PANELS FOR INSTALLATION AS WELL AS "NEIGHBORHOOD HOME WATCH" SIGNS TO REPLACE OLD SIGNS AS NEEDED.
6. ALL TYPE C SIGN PANELS SHALL BE SUPPLIED AND INSTALLED BY THE CONTRACTOR. THE CONTRACTOR SHALL PROVIDE THE SIGN, 10 1/2 FOOT SIGN POST, MOUNTING HARDWARE, SIGN ALIGN, AND LABOR FOR THE INSTALLATION OF ALL TYPE C SIGNS.
7. WHEN CONTRACTOR IS INSTALLING TYPE C SIGNS THEY MUST USE A VC 242 DOUBLE-SIDED SIGN BRACKET FROM TAPCO (OR APPROVED EQUAL)



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**ROADWAY SIGNAGE**

*Leo A. M...*  
APPROVED: CITY ENGINEER

REVISED:  
1-16  
STANDARD  
PLATE  
700

PLAN SYMBOL	COLOR	MMUTCD CODE	SIZE (IN.)	PANEL LEGEND
	WHITE ON RED	R1-1	30"X30"	STOP
	WHITE ON RED	R1-2	30"X30"	YIELD
	WHITE ON RED	R1-3P	18"X6"	ALL WAY
	BLACK ON WHITE	R2-1	24"X30"	SPEED LIMIT
	BLACK ON WHITE	R3-7L R3-7R	30"X30"	LEFT LANE MUST TURN LEFT
	BLACK ON WHITE	R3-8	30"X30"	DIRECTIONAL ARROW
	BLACK ON WHITE	R3-8A R3-8B	48"X30"	DIRECTIONAL ARROW
	BLACK ON WHITE	R3-9B	24"X36"	CENTER LANE ARROW
	BLACK ON WHITE	R4-8 R4-7	24"X30"	DIRECTIONAL ARROW
	BLACK ON WHITE	R6-1L R6-1R	36"X12"	ONE WAY



**CITY OF EDINA  
ENGINEERING  
& PUBLIC  
WORKS  
DEPTS.**

## ROADWAY SIGNAGE

*Wayne Howle*  
APPROVED: CITY ENGINEER

REVISED:  
3-13

STANDARD  
PLATE  
705

PLAN SYMBOL	COLOR	MMUTCD CODE	SIZE (IN.)	PANEL LEGEND
	BLACK ON YELLOW	W14-2	30"X30"	NO OUTLET
	BLACK ON YELLOW GREEN	S1-1	30"X30"	PEDESTRIAN WALKING
	BLACK ON YELLOW GREEN	W16-7PL W16-7PR	24"X18"	DIRECTIONAL ARROW
	BLACK ON YELLOW	W1-3L W1-3R	30"X30"	DIRECTIONAL ARROW
	BLACK ON YELLOW	W1-4L W1-4R	30"X30"	DIRECTIONAL ARROW
	BLACK ON YELLOW	W1-1L W1-1R	30"X30"	DIRECTIONAL ARROW
	BLACK ON YELLOW	W1-2L W1-2R	30"X30"	DIRECTIONAL ARROW
	BLACK ON YELLOW	W1-5L W1-5R	30"X30"	DIRECTIONAL ARROW
	BLACK ON YELLOW	W1-7	48"X24"	DIRECTIONAL ARROW
	BLACK ON YELLOW	W1-6	48"X24"	DIRECTIONAL ARROW
	BLACK ON YELLOW	W7-1 W7-1A	30"X30"	TRUCK ON HILL



**CITY OF EDINA  
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WORKS  
DEPTS.**

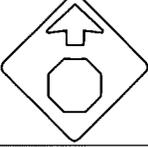
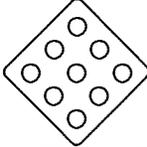
## ROADWAY SIGNAGE

*Wayne A. Havel*

APPROVED: CITY ENGINEER

REVISED:  
3-13

STANDARD  
PLATE  
710

PLAN SYMBOL	COLOR	MMUTCD CODE	SIZE (IN.)	PANEL LEGEND
	RED ON BLACK & WHITE	R8-3	18"x18"	NO PARKING
	RED ON WHITE	R7-2 R7-9A	12"x18"	NO PARKING INFORMATION
	RED ON WHITE	R7-31A R7-31AD	12"x18"	NO PARKING INFORMATION WILL BE PROVIDED BY THE CITY OF EDINA
	RED AND BLACK ON WHITE	R9-3	18"x18"	NO PEDESTRIAN
	RED AND BLACK ON YELLOW	W3-1	30"x30"	STOP AHEAD
	WHITE ON RED	R5-1A	36"x24"	WRONG WAY
	RED ON WHITE	R5-1	30"x30"	DO NOT ENTER
	BLACK ON WHITE	R4-7AR	24"x30"	KEEP RIGHT
	BLACK ON WHITE	R6-2L R6-2R	18"x24"	ONE WAY
	RED DOTS ON BLACK	X4-11	18"x18"	9 BUTTON DELINEATOR



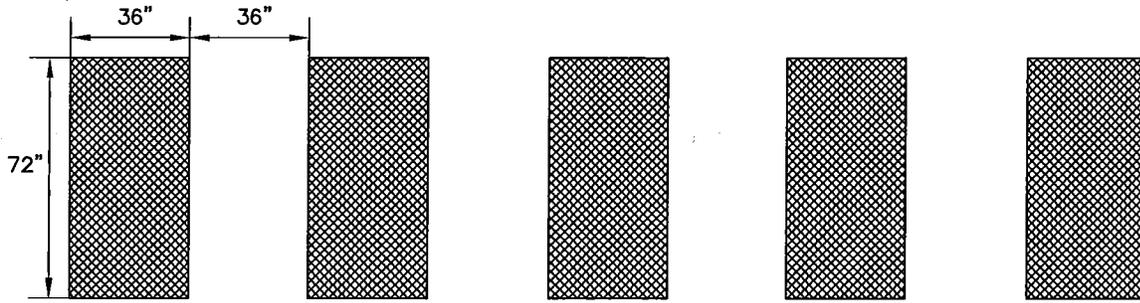
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WORKS  
DEPTS.**

## ROADWAY SIGNAGE

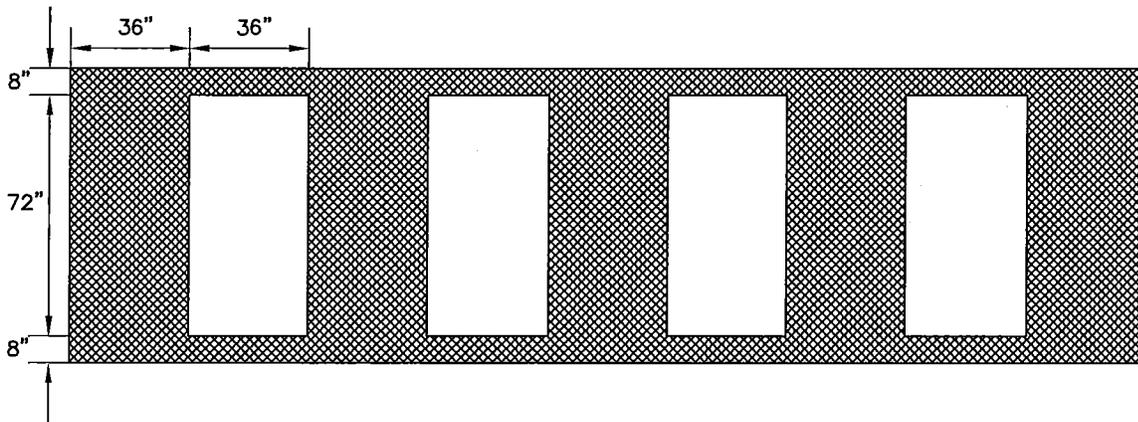
*Wayne A. Houck*  
APPROVED: CITY ENGINEER

REVISED:  
3-13

STANDARD  
PLATE  
715



CITY-WIDE STANDARD ("CONTINENTAL")



SCHOOL ZONE STANDARD ("LADDER")

**NOTE:**

ALL CROSSWALKS SHALL BE SOLID WHITE, GROUND-IN PREMARK PERFORMED THERMOPLASTIC BY ENNIS FLINT OR APPROVED EQUAL.

"LADDER"-STYLE CROSSWALK MARKINGS SHALL ONLY BE USED FOR CROSSINGS THAT ABUT SCHOOL PROPERTIES, OR AS DIRECTED BY THE ENGINEER.



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**CROSSWALK PAVEMENT MARKINGS**

*Chad A. Mink*  
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1-15  
STANDARD  
PLATE  
716



12" WHITE STOP BAR (EPOXY PAINT)

SHARE THE ROAD BICYCLE LANE SIGN, W11-1 AND W16-1P FOR SHARE THE ROAD BIKE LANES, SEE EDINA STANDARD PLATE 730



SHARE THE ROAD

SIGNALIZED OR UN-SIGNALIZED INTERSECTION



BICYCLE LANE SIGN, R3-17 FOR DESIGNATED BIKE LANES, SEE EDINA STANDARD PLATE 730



NOTES:

1. ALL PAVEMENT MARKINGS SHALL CONFORM TO MN MUTCD

BIKE LANE EDGE LINE WIDTH	
WIDTH	A.D.T.
4"	< 5,000
6"	5,000-10,000
8"	> 10,000

200' MIN  
250' MAX

100'

120' MIN

SEE EDINA STANDARD PLATE #725 FOR DETAILS

WHITE EDGE LINE (EPOXY PAINT)

5' MINIMUM FROM FACE OF CURB



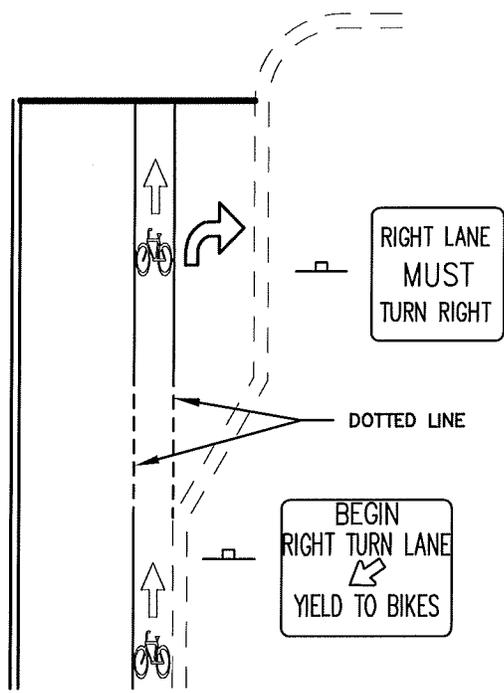
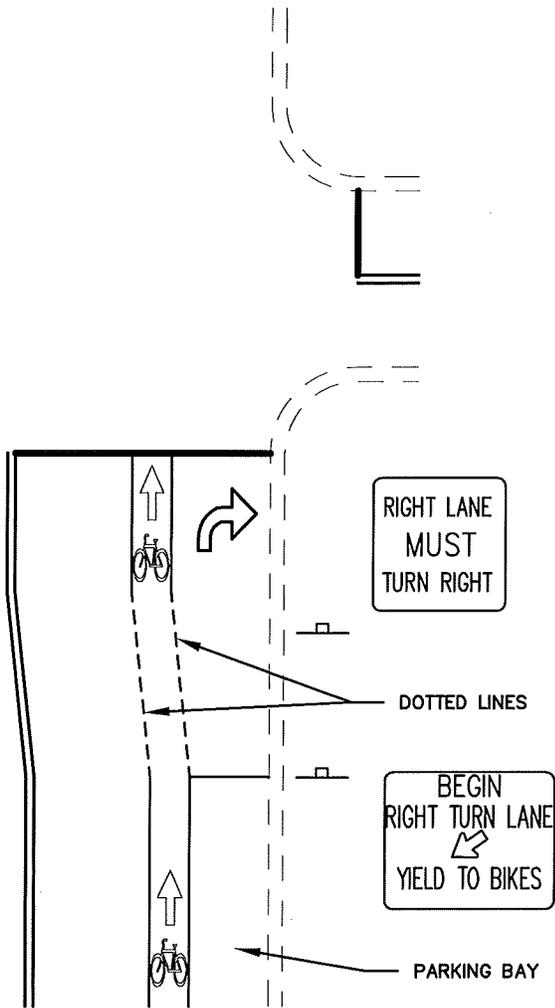
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# BIKE LANE SYMBOL & SIGN LOCATION

*Clad A. Miller*  
APPROVED: CITY ENGINEER

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1-15  
STANDARD  
PLATE  
720





**NOTES:**

- 1. ALL PAVEMENT MARKINGS SHALL CONFORM TO MN MUTCD



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**PAVEMENT MARKINGS FOR BICYCLE  
LANES AT & IN RIGHT TURN LANES**

*Wagner*  
APPROVED: CITY ENGINEER

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STANDARD  
PLATE  
722

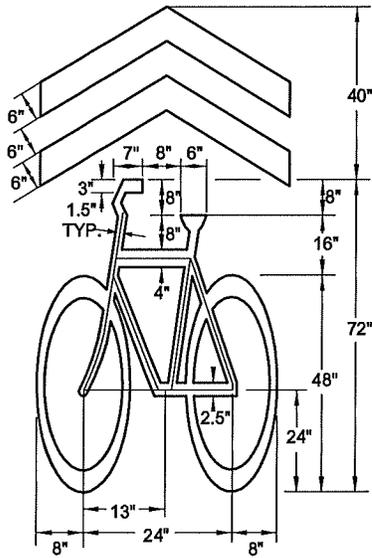


FIGURE 9C-9 SHARED LANE MARKING ON PAGE 9C-10 IN THE 2011 MN MUTCD

SHARED LANE PAVEMENT MARKING DETAIL

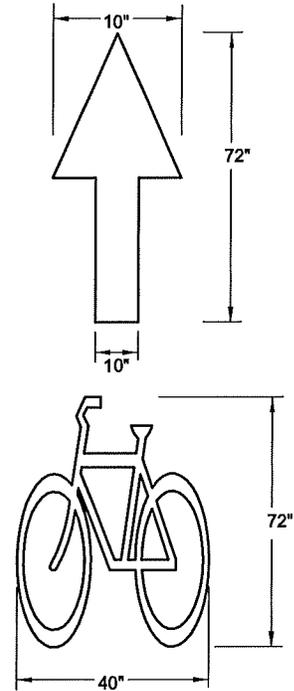


FIGURE 9C-3 A-BIKE SYMBOL ON PAGE 9C-4 IN THE 2011 MN MUTCD

BICYCLE LANE PAVEMENT MARKING DETAIL

NOTES:

1. PAVEMENT MESSAGES SHALL BE POSITIONED AS SHOWN IN THE EDINA STANDARD PLATES 720, 721 & 722
2. ALL BIKE LANE PAVEMENT MARKINGS SHALL BE EITHER WHITE POLYPREFORM GROUND-IN, WHITE EPOXY PAINT, LOW PROFILE PREFORMED THERMOPLASTIC (90 MIL.) OR APPROVED BY ENGINEER.
3. ALL PAVEMENT MARKINGS SHALL CONFORM TO MN MUTCD



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**BIKE LANE PAVEMENT MARKING  
DIMENSIONS**

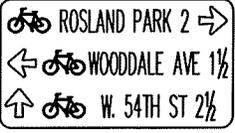
*Wayne Houlihan*

APPROVED: CITY ENGINEER

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STANDARD  
PLATE

725

PLAN SYMBOL	COLOR	MMUTCD CODE	SIZE (IN.)	PANEL LEGEND
	BLACK ON WHITE	R3-17	24"x18"	BIKE LANE
	BLACK ON WHITE	R3-17bP R3-17aP	24"x8"	END OR AHEAD
	BLACK ON YELLOW	W11-1	30"x30"	BICYCLE
	BLACK ON YELLOW	W16-1P	18"x24"	SHARE THE ROAD
	BLACK ON WHITE	R4-11	30"x30"	BICYCLE MAY USE FULL LANE
	BLACK ON WHITE	R4-4	30"x36"	BEGIN RIGHT TURN LANE YIELD TO BIKES
	WHITE ON GREEN	D1-1b D1-1c	CUSTOM	BICYCLE DESTINATION SIGN
	WHITE ON GREEN	D1-2b D1-2c	CUSTOM	BICYCLE DESTINATION SIGN
	WHITE ON GREEN	D1-3b D1-3c	CUSTOM	BICYCLE DESTINATION SIGN



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## BIKEWAY SIGNAGE

*Wayne Houlihan*  
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PLATE  
730