

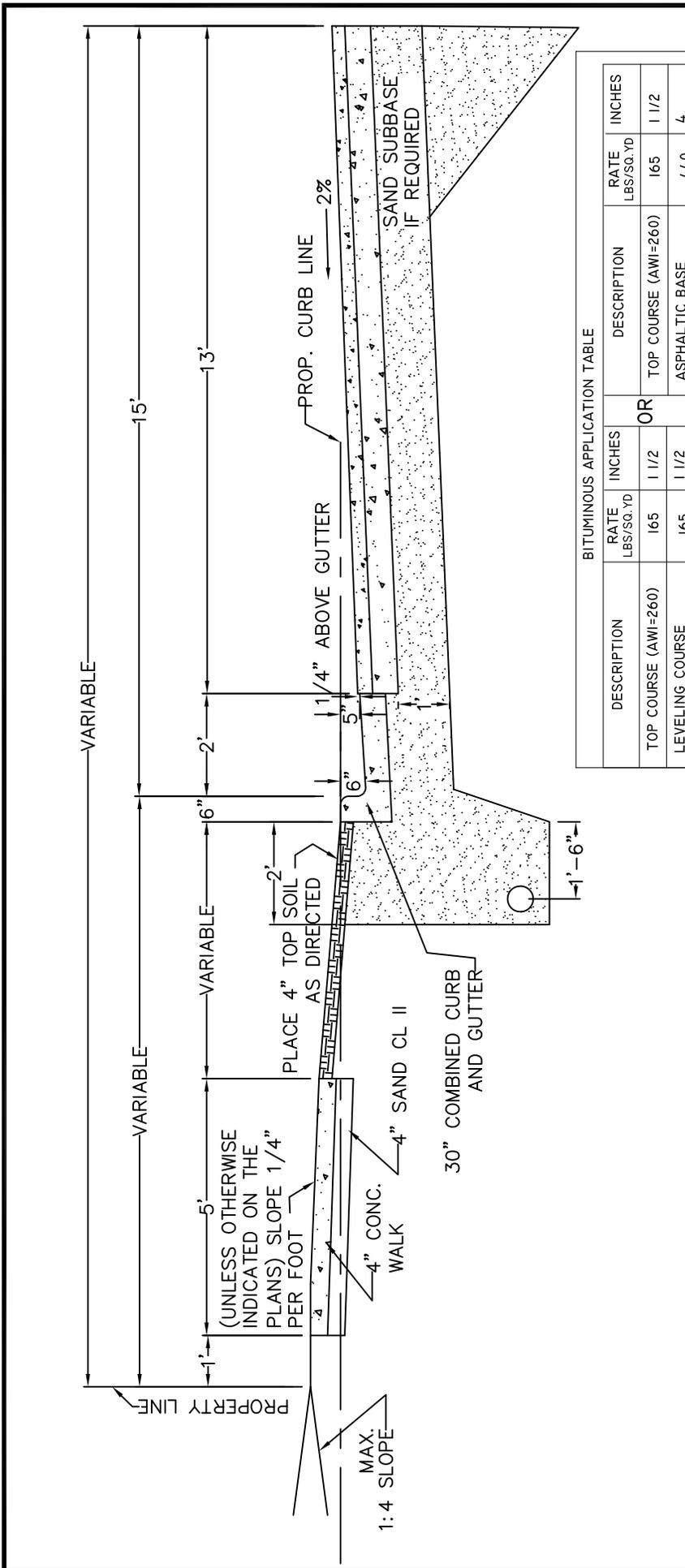
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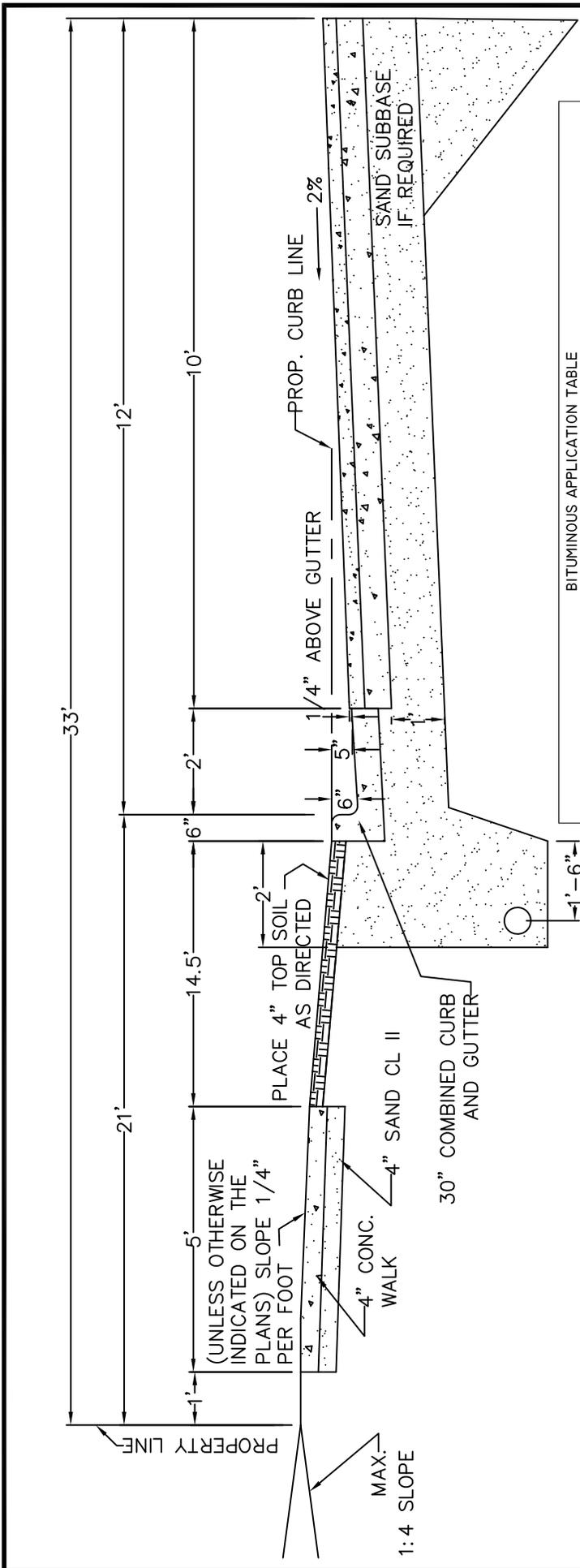
BITUMINOUS APPLICATION TABLE

DESCRIPTION	RATE LBS/SQ. YD	INCHES		DESCRIPTION	RATE LBS/SQ. YD	INCHES
		OR				
TOP COURSE (AWI=260)	165	1 1/2		TOP COURSE (AWI=260)	165	1 1/2
LEVELING COURSE	165	1 1/2		ASPHALTIC BASE	440	4
21AA MODIFIED LIMESTONE		6		CLASS II SAND		12
CLASS II SAND		12				

* ITEM NUMBER AS DIRECTED BY ENGINEER
 * BITUMINOUS BOND COAT SHALL BE APPLIED AT A RATE OF 0.00 TO 0.12 GAL/SQ. YD. AS DIRECTED BY THE ENGINEER.
 * BITUMINOUS BOND COAT NOT TO BE PAID FOR SEPARATELY. PAYMENT SHALL BE INCLUDED WITH THE PAY ITEMS FOR PLANT MIXED BITUMINOUS PAYMENTS.
 * ASPHALT CEMENT TO BE PENETRATION GRADE 85-100 FOR 4B / 120-140 FOR 3B

31' (27') STREET CURB CROSS SECTION

CITY OF WYOMING ENGINEERING DEPARTMENT	
31' STREET CROSS SECTION	
DRAWN BY- ML	I-23A
CHECKED BY- RH	
DATE DRAWN- 8-12-2003	
DATE REVISED-	



BITUMINOUS APPLICATION TABLE

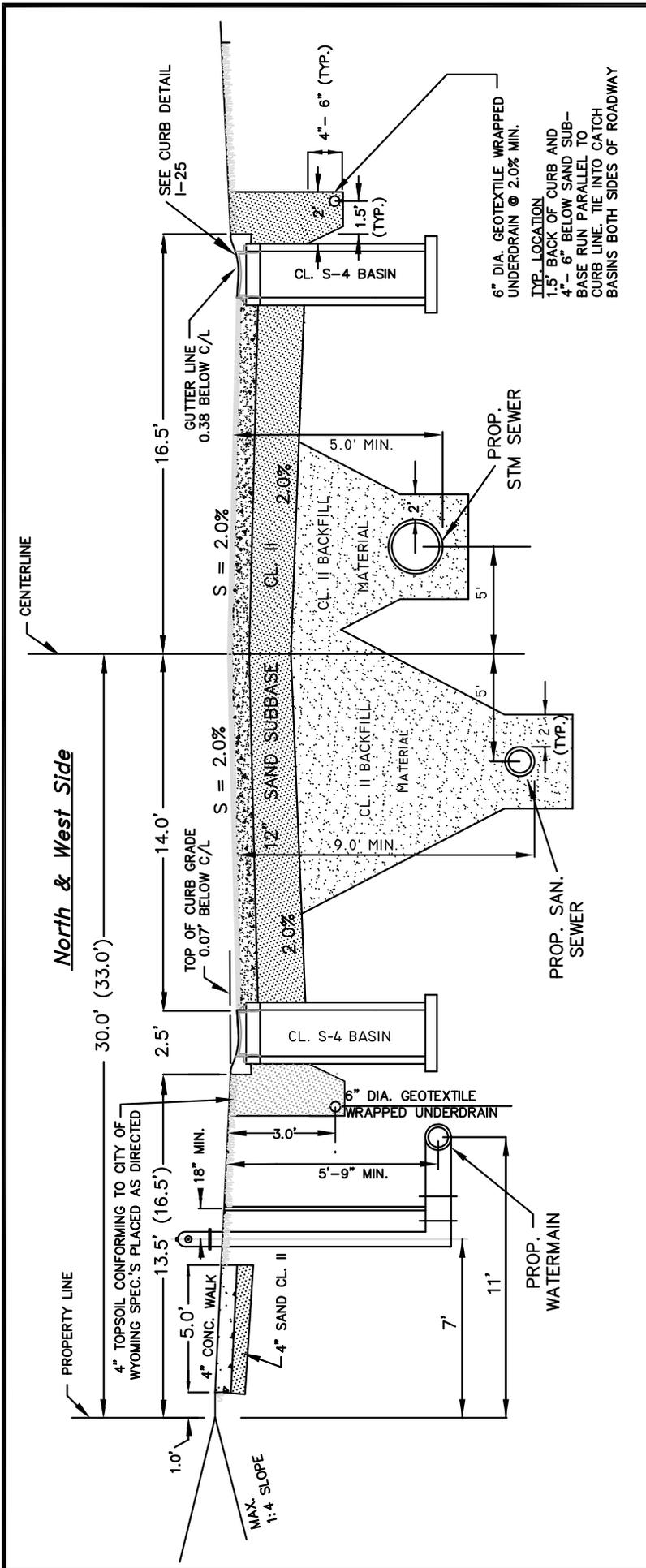
DESCRIPTION	RATE LBS/SQ. YD	INCHES	DESCRIPTION	RATE LBS/SQ. YD	INCHES
TOP COURSE (AWI=260)	165	1 1/2	TOP COURSE (AWI=260)	165	1 1/2
LEVELING COURSE	165	1 1/2	ASPHALTIC BASE	440	4
2/AA MODIFIED LIMESTONE		6	CLASS II SAND		12
CLASS II SAND		12			

* ITEM NUMBER AS DIRECTED BY ENGINEER
 * BITUMINOUS BOND COAT SHALL BE APPLIED AT A RATE OF 0.00 TO 0.12 GAL/SQ. YD. AS DIRECTED BY THE ENGINEER.
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 * ASPHALT CEMENT TO BE PENETRATION GRADE 85-100 FOR 4B / 120-140 FOR 3B

25' TRAFFIC CALMING CROSS SECTION

(BACK TO BACK)

CITY OF WYOMING ENGINEERING DEPARTMENT	
25' TRAFFIC CALMING CROSS SECTION	
DRAWN BY- ML	I-23B
CHECKED BY- RH	
DATE DRAWN- 8-12-2003	
DATE REVISED-	



BITUMINOUS APPLICATION TABLE

DESCRIPTION	RATE LBS/SQ.YD	INCHES
TOP COURSE (AWI=260)	165	1 1/2
LEVELING COURSE	165	1 1/2
Z1AA MODIFIED LIMESTONE		6
CLASS II SAND		12

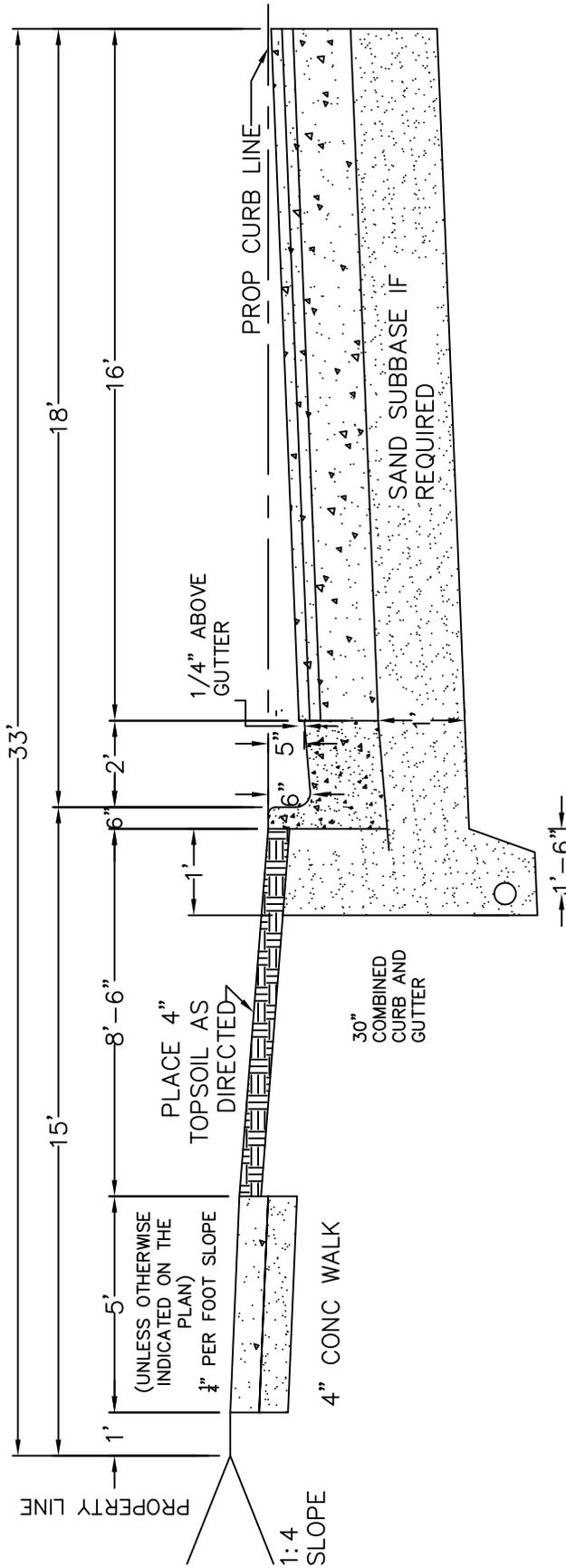
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 * ASPHALT CEMENT TO BE PENETRATION GRADE 85-100 FOR 4B / 120-140 FOR 3B

33' CROSS SECTION RESIDENTIAL PLAT

CITY OF WYOMING
ENGINEERING DEPARTMENT

33' STREET CROSS SECTION
RESIDENTIAL PLAT

DRAWN BY- ML	I-23C
CHECKED BY- RH	
DATE DRAWN- 8-13-2003	
DATE REVISED-	



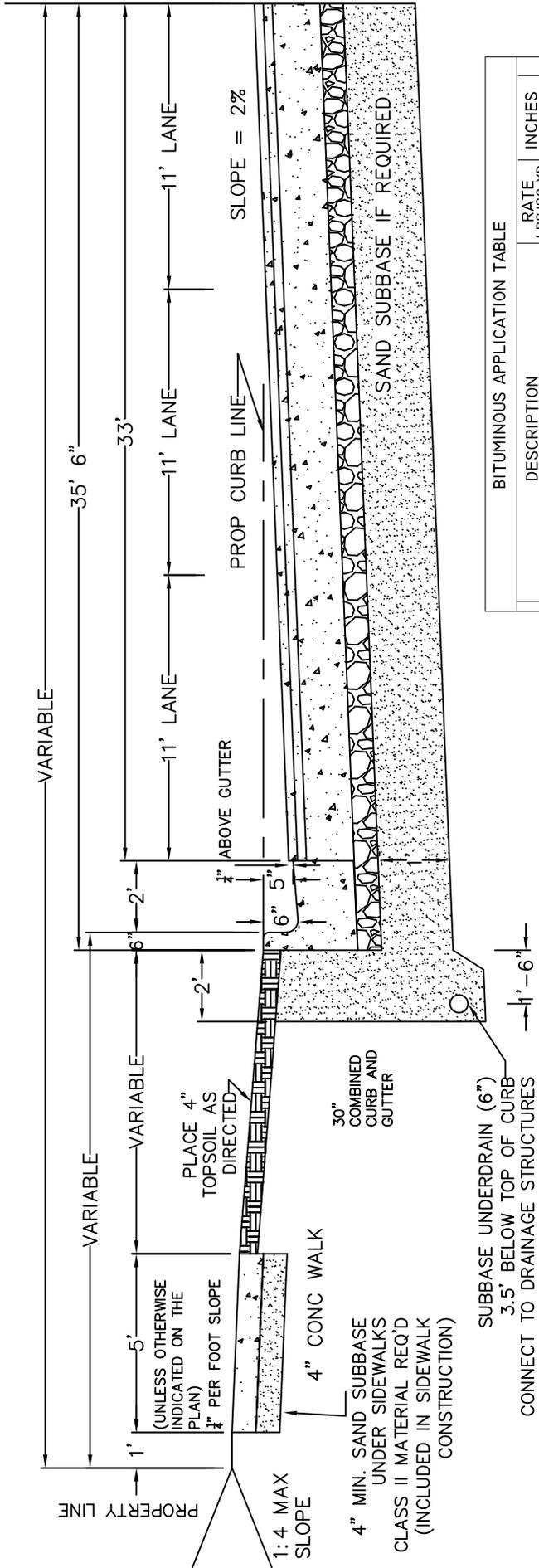
BITUMINOUS APPLICATION TABLE

DESCRIPTION	RATE LBS/SQ. YD	INCHES	DESCRIPTION	RATE LBS/SQ. YD	INCHES
TOP COURSE (AWI=260)	165	1 1/2	TOP COURSE (AWI=260)	165	1 1/2
LEVELING COURSE	165	1 1/2	ASPHALTIC BASE	550	5 1/2
21AA MODIFIED LIMESTONE		8	CLASS II SAND		12
CLASS II SAND		12			

* ITEM NUMBER AS DIRECTED BY ENGINEER
 * BITUMINOUS BOND COAT SHALL BE APPLIED AT A RATE OF 0.00 TO 0.12 GAL/SQ. YD. AS DIRECTED BY THE ENGINEER.
 * BITUMINOUS BOND COAT NOT TO BE PAID FOR SEPARATELY. PAYMENT SHALL BE INCLUDED WITH THE PAY ITEMS FOR PLANT MIXED BITUMINOUS PAYMENTS.
 * ASPHALT CEMENT TO BE PENETRATION GRADE 85-100 FOR 4B / 120-140 FOR 3B

**37' RESIDENTIAL COLLECTOR
(66' ROW W/ SIDEWALK)**

CITY OF WYOMING ENGINEERING DEPARTMENT	
37' RESIDENTIAL COLLECTOR -66' ROW	
DRAWN BY- ML	I-23D
CHECKED BY- RH	
DATE DRAWN- 8-12-2003	
DATE REVISED- 2-8-2007	



BITUMINOUS APPLICATION TABLE

DESCRIPTION	RATE LBS/SQ.YD	INCHES
TOP COURSE (AWI=260)	165	1 1/2
LEVELING COURSE	165	1 1/2
BASE COURSE	550	5
21 AA MODIFIED CRUSHED LIMESTONE		4
CLASS II SAND		12

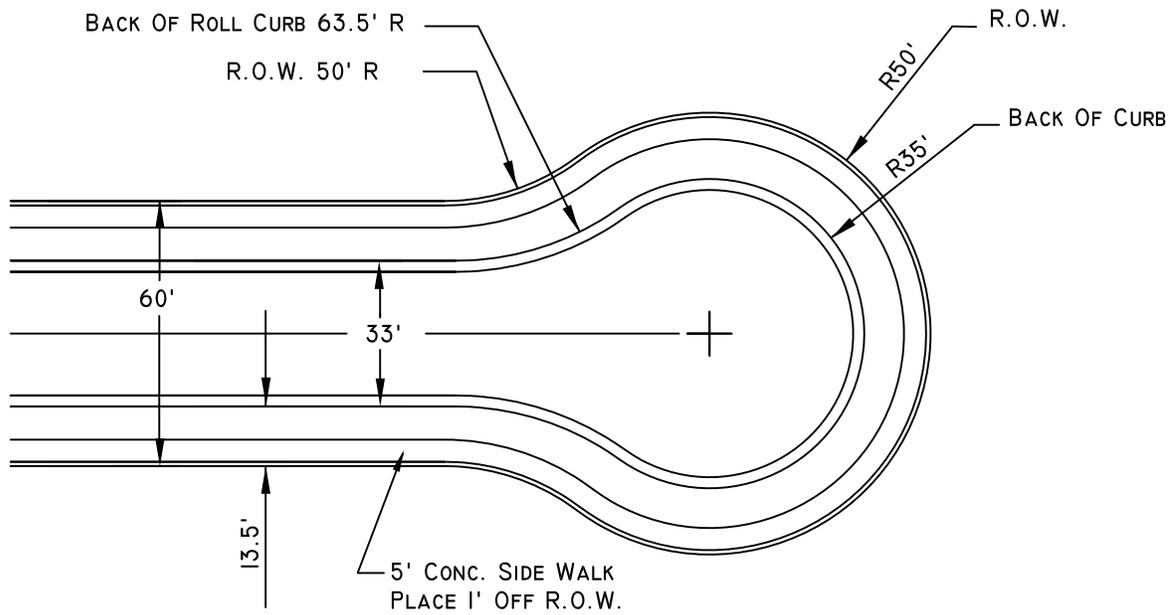
- * ITEM NUMBER AS DIRECTED BY ENGINEER
- * BITUMINOUS BOND COAT SHALL BE APPLIED AT A RATE OF 0.00 TO 0.12 GAL/SQ. YD. AS DIRECTED BY THE ENGINEER.
- * BITUMINOUS BOND COAT NOT TO BE PAID FOR SEPARATELY. PAYMENT SHALL BE INCLUDED WITH THE PAY ITEMS FOR PLANT MIXED BITUMINOUS PAYMENTS.
- * ASPHALT CEMENT TO BE PENETRATION GRADE 85-100 FOR 4B / 120-140 FOR 3B

71' SIX-LANE CROSS SECTION

CITY OF WYOMING
ENGINEERING DEPARTMENT

71' SIX LANE CROSS SECTION

DRAWN BY- ML	I-23G
CHECKED BY-RH	
DATE DRAWN- 8-12-2003	
DATE REVISED- 2-8-2007	



35' RAD. RESIDENTIAL CUL-DE-SAC

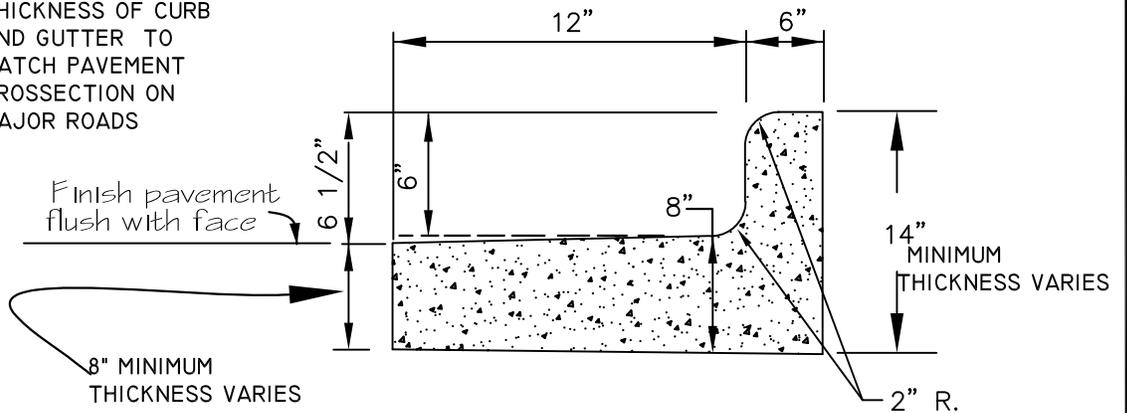
CITY OF WYOMING
ENGINEERING DEPARTMENT

35' RAD. CUL-DE-SAC

DRAWN BY- RH
CHECKED BY- CC
DATE DRAWN- 2-15-2002
DATE REVISED-

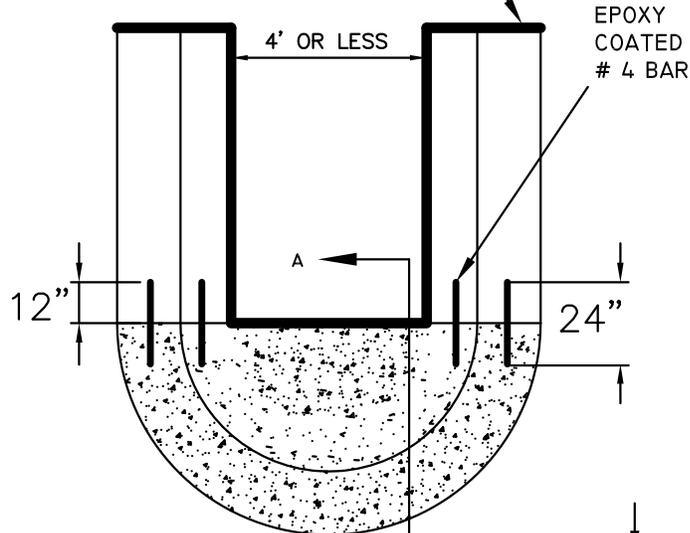
I-24

THICKNESS OF CURB
AND GUTTER TO
MATCH PAVEMENT
CROSSECTION ON
MAJOR ROADS



18" CONCRETE ISLAND CURB & GUTTER

NOT TO SCALE
EXPANSION JOINT MATERIAL

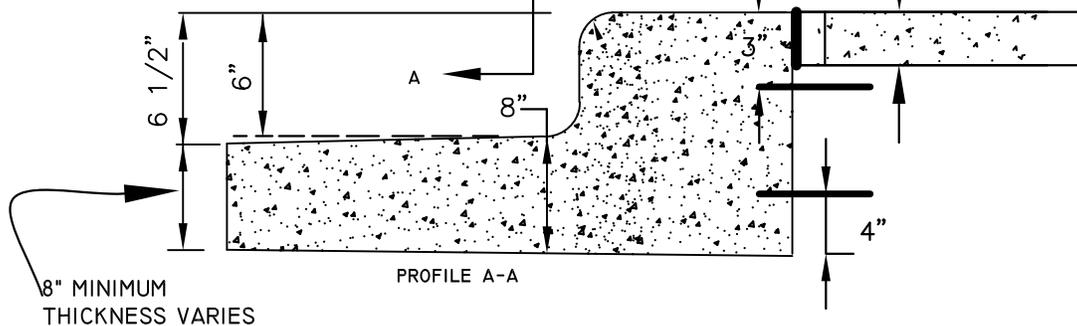


EPOXY COATED # 4 BAR IS
TO BE NO LESS THAN 24"
IN LENGTH AND EXTEND
12" INTO NOSE OF ISLAND
CURB & GUTTER AND 12"
INTO MAIN LINE CURB &
GUTTER

WHEN THE ISLAND IS 4' OR
LESS FROM BACK OF CURB
TO BACK OF CURB

THE NOSE OF THE ISLAND
SHALL BE Poured SOLID
FROM BEG INING OF RADIUS
TO END OF RADIUS.

EXPANSION MATERIAL
SHALL BE PLACED AT THE
CURB AND GUTTER JOINT
PRIOR TO THE # 4 BAR OR
AS DIRECTED BY THE
ENGINEER



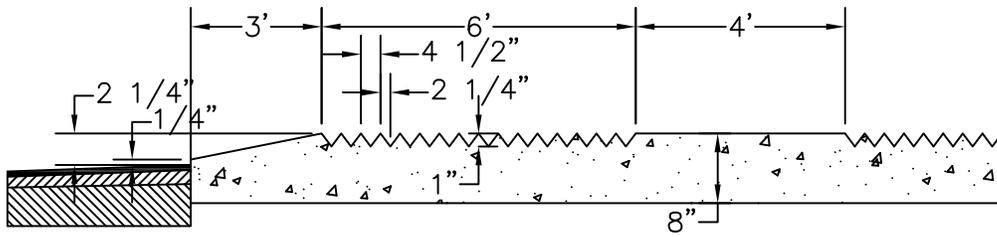
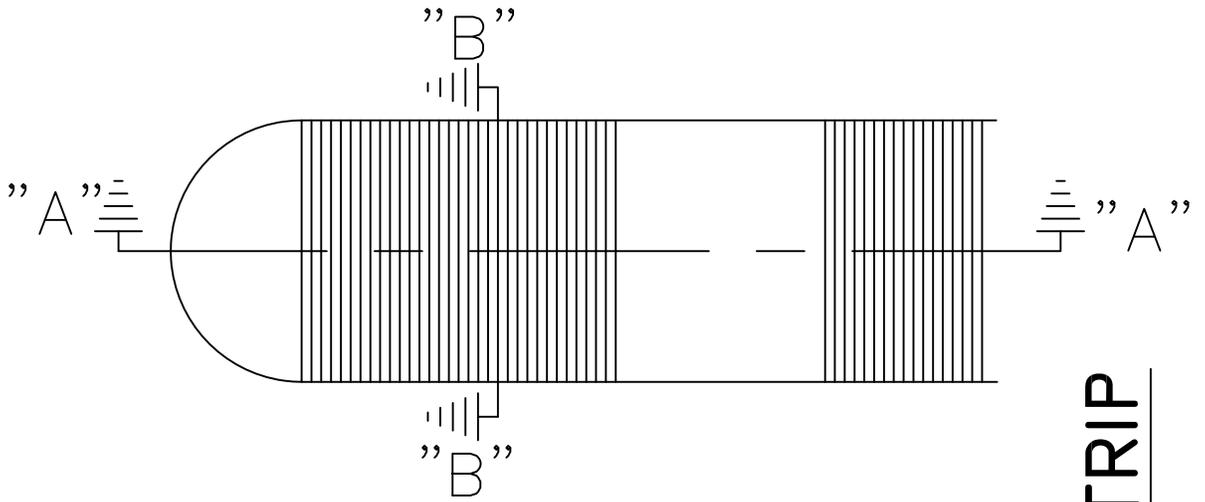
8" MINIMUM
THICKNESS VARIES

CITY OF WYOMING
ENGINEERING DEPARTMENT

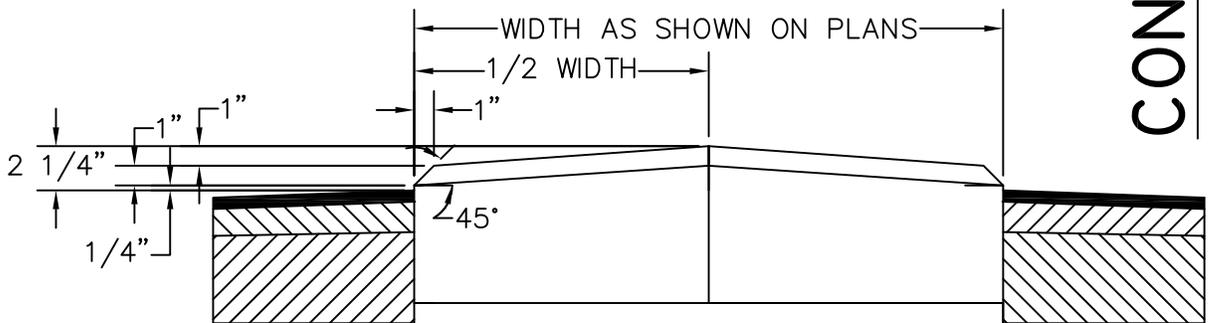
18" CONCRETE ISLAND CURB & GUTTER

DRAWN BY- MW
CHECKED BY- RH
DATE DRAWN- 2-9-2005
DATE REVISED- 2-8-2007

I-25B



SECTION "A-A"



SECTION "B-B"

CONCRETE RUMBLE STRIP

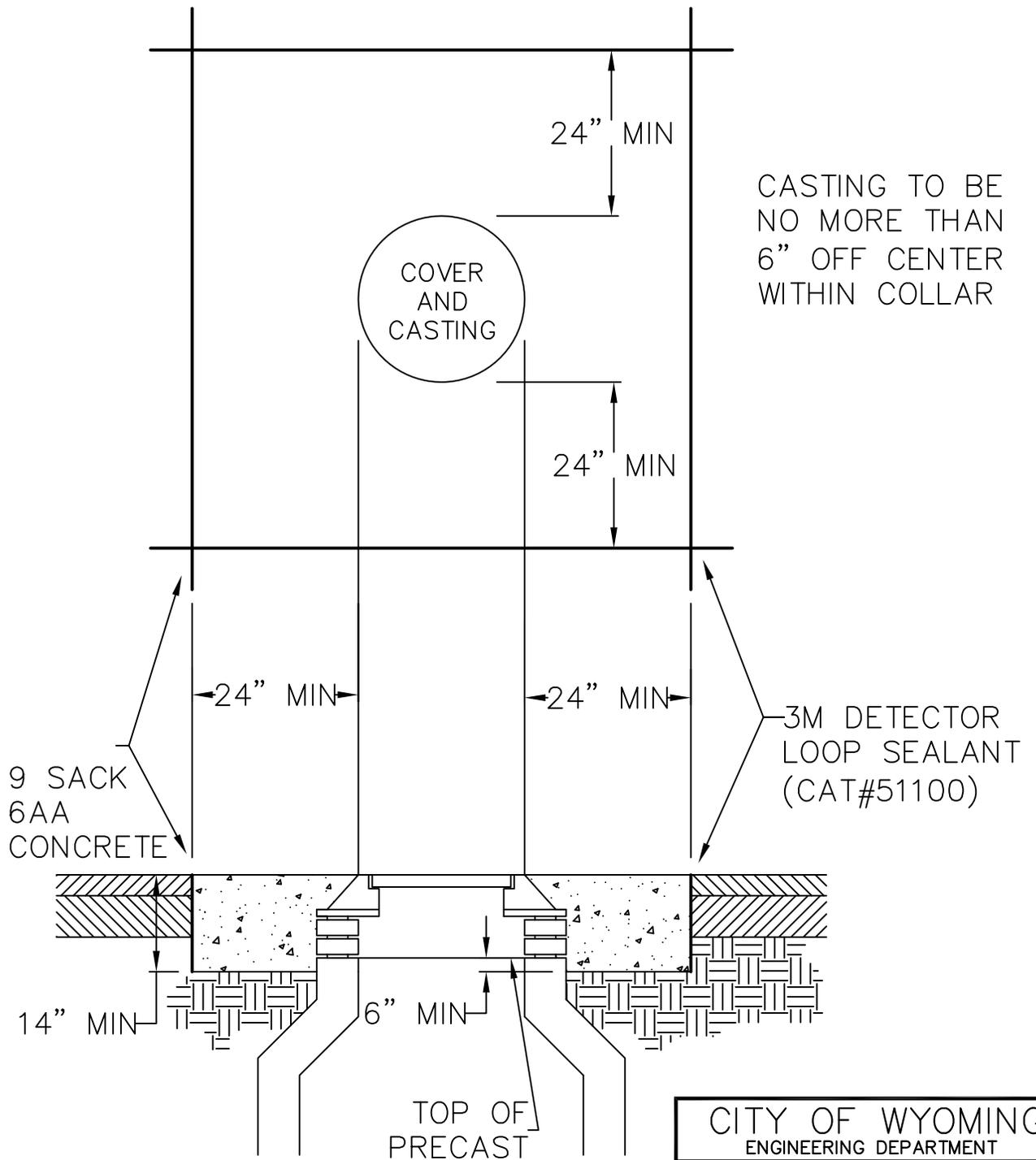
CITY OF WYOMING
ENGINEERING DEPARTMENT

**CONCRETE RUMBLE
STRIP**

DRAWN BY- ML
CHECKED BY- RH
DATE DRAWN- 8-07-2003
DATE REVISED-

I-25C

CONCRETE COLLAR



CASTING TO BE
NO MORE THAN
6" OFF CENTER
WITHIN COLLAR

9 SACK
6AA
CONCRETE

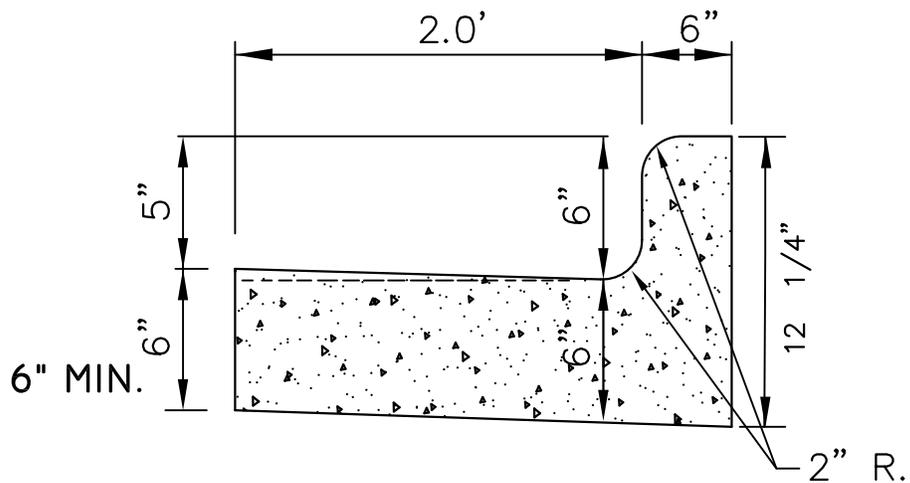
3M DETECTOR
LOOP SEALANT
(CAT#51100)

CITY OF WYOMING
ENGINEERING DEPARTMENT

CONCRETE COLLAR

DRAWN BY- ML
CHECKED BY- RH
DATE DRAWN- 8-07-2003
DATE REVISED-

I-25D



30" CONCRETE VERTICAL FACE CURB DETAIL

NOT TO SCALE

NOTE - THICKNESS OF GUTTER IS TO MATCH
THICKNESS OF PAVMENT ON MAJOR STREETS

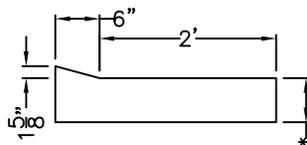
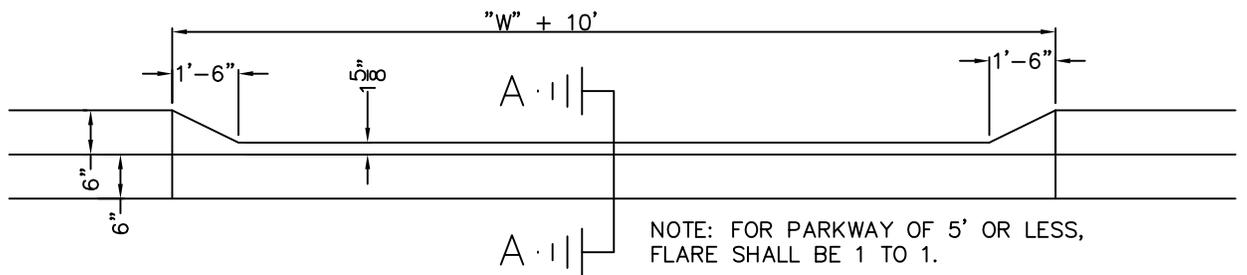
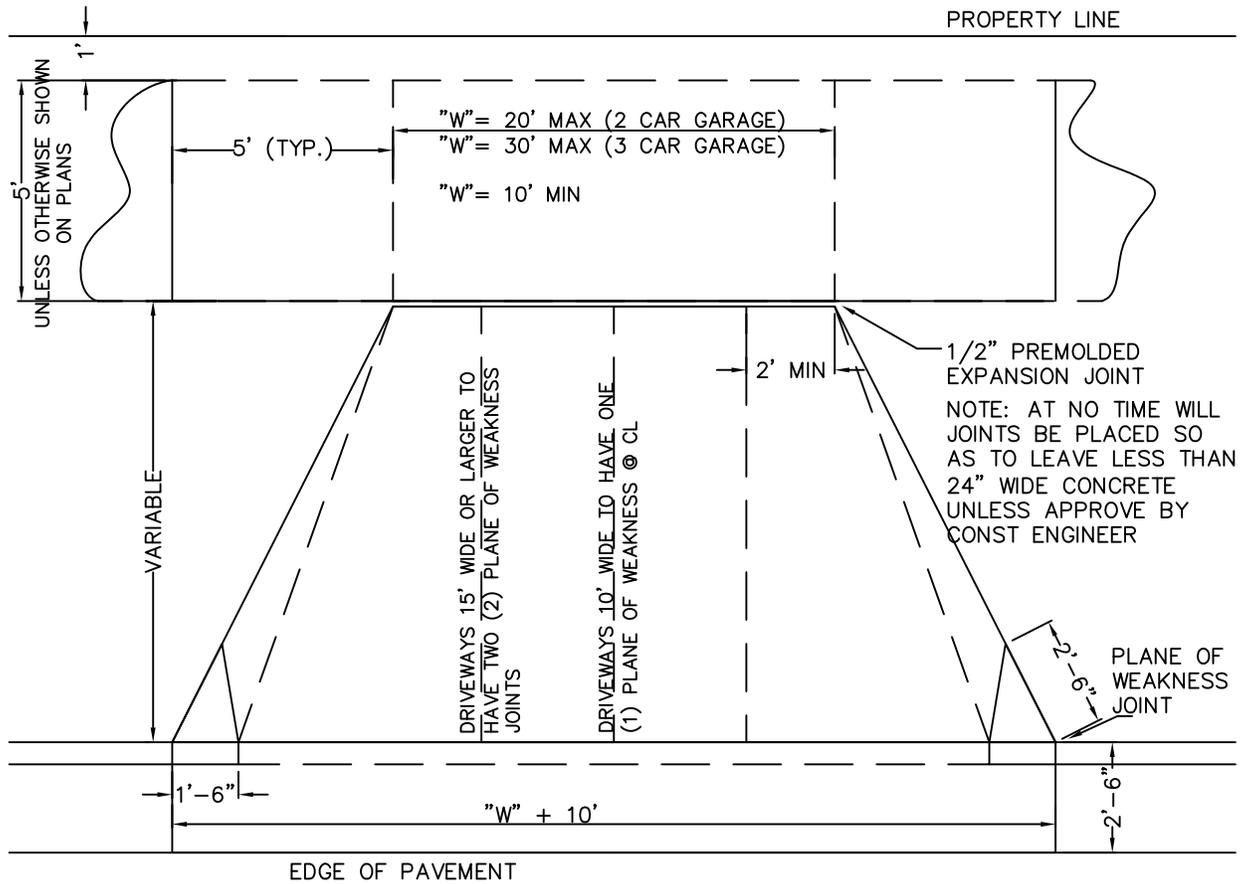
CITY OF WYOMING
ENGINEERING DEPARTMENT

**30" VERTICAL FACE
CURB**

DRAWN BY- ML
CHECKED BY- RH
DATE DRAWN- 2-02-2002
DATE REVISED- 2-08-2007

I-25E

RESIDENTIAL DRIVE APPROACH



SECTION A-A

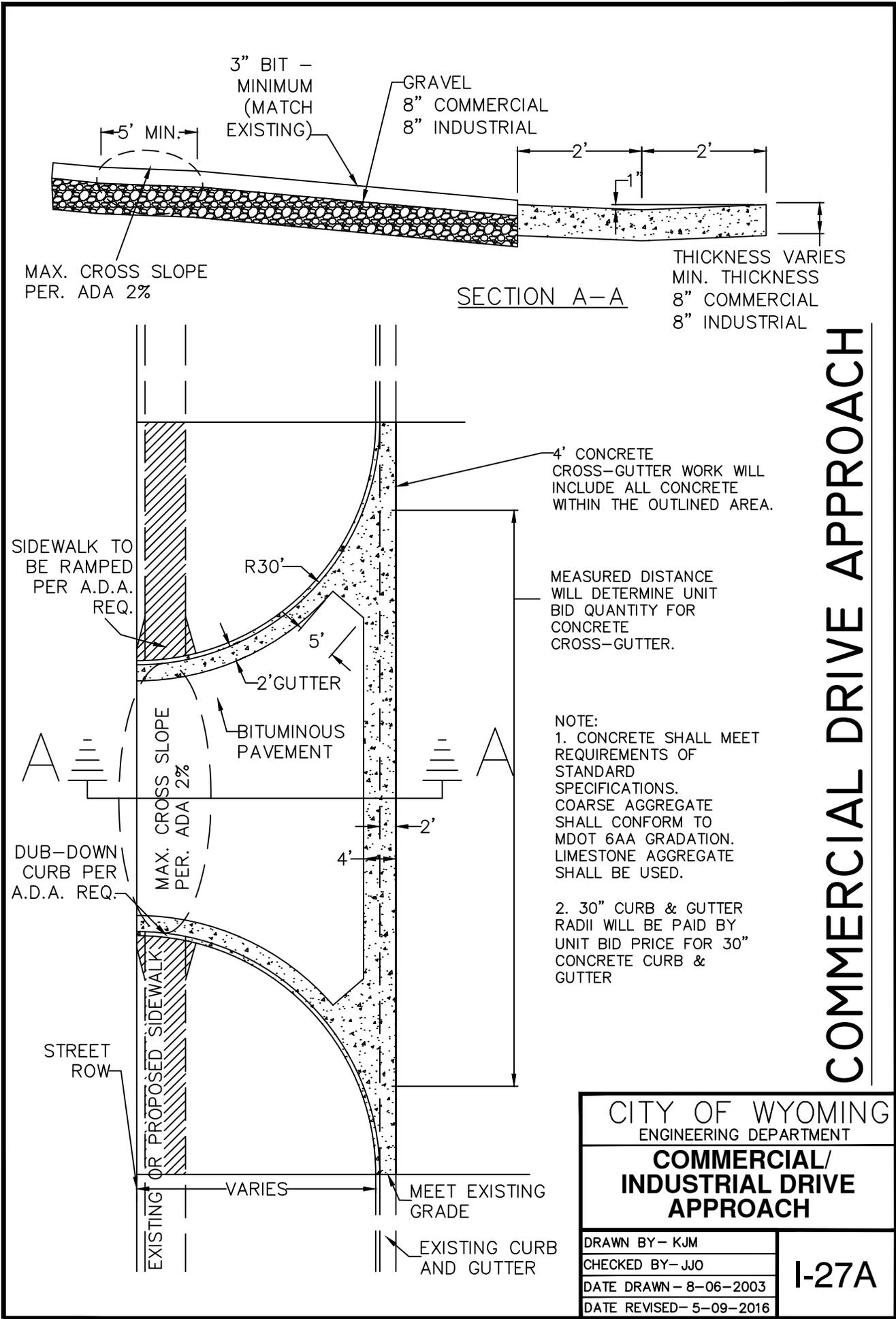
- * 4" THICKNESS FOR RESIDENTIAL
- 8" THICKNESS FOR INDUSTRIAL & COMMERCIAL
- TO BE USED ONLY WITH ENGR AUTHORIZATION

CITY OF WYOMING
ENGINEERING DEPARTMENT

RESIDENTIAL DRIVE APPROACH

DRAWN BY- ML
CHECKED BY- RH
DATE DRAWN- 8-07-2003
DATE REVISED- 6-01-2010

I-26



3" BIT - MINIMUM (MATCH EXISTING)

GRAVEL

8" COMMERCIAL

8" INDUSTRIAL

5' MIN.

2'

2'

1"

MAX. CROSS SLOPE PER. ADA 2%

SECTION A-A

THICKNESS VARIES MIN. THICKNESS 8" COMMERCIAL 8" INDUSTRIAL

SIDEWALK TO BE RAMPED PER A.D.A. REQ.

R30'

5'

2' GUTTER

BITUMINOUS PAVEMENT

MAX. CROSS SLOPE PER. ADA 2%

DUB-DOWN CURB PER A.D.A. REQ.

STREET ROW

EXISTING OR PROPOSED SIDEWALK

VARIES

MEET EXISTING GRADE

EXISTING CURB AND GUTTER

4' CONCRETE CROSS-GUTTER WORK WILL INCLUDE ALL CONCRETE WITHIN THE OUTLINED AREA.

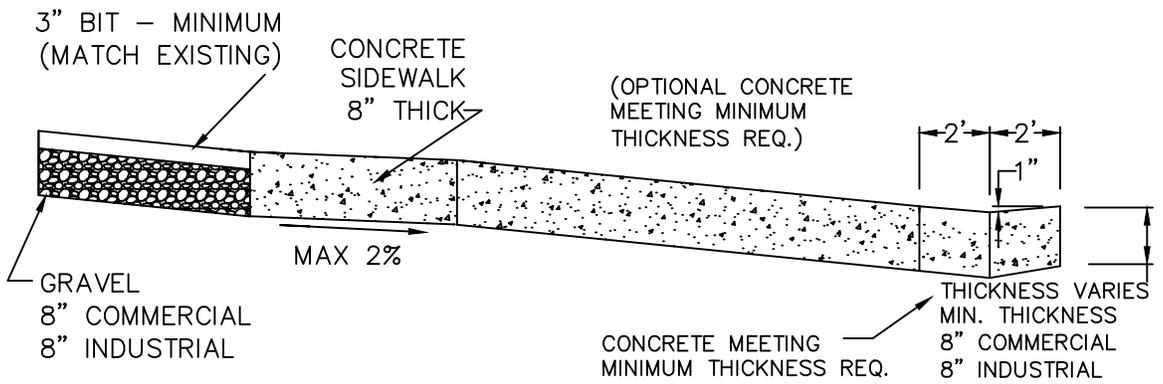
MEASURED DISTANCE WILL DETERMINE UNIT BID QUANTITY FOR CONCRETE CROSS-GUTTER.

NOTE:
 1. CONCRETE SHALL MEET REQUIREMENTS OF STANDARD SPECIFICATIONS. COARSE AGGREGATE SHALL CONFORM TO MDOT 6AA GRADATION. LIMESTONE AGGREGATE SHALL BE USED.

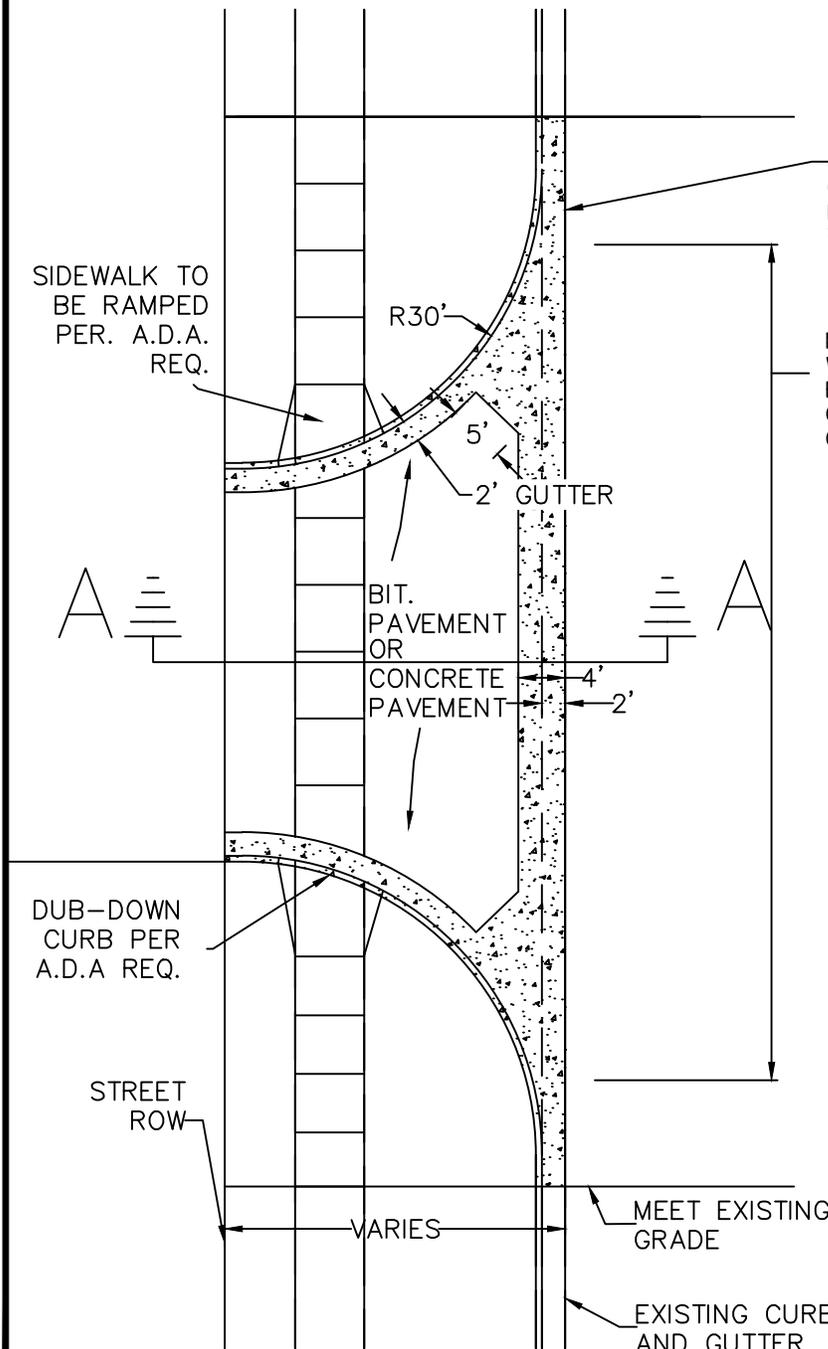
2. 30" CURB & GUTTER RADII WILL BE PAID BY UNIT BID PRICE FOR 30" CONCRETE CURB & GUTTER

COMMERCIAL DRIVE APPROACH

CITY OF WYOMING ENGINEERING DEPARTMENT	
COMMERCIAL/ INDUSTRIAL DRIVE APPROACH	
DRAWN BY - KJM	I-27A
CHECKED BY - JJO	
DATE DRAWN - 8-06-2003	
DATE REVISED - 5-09-2016	



SECTION A-A



4' CONCRETE CROSS-GUTTER WORK WILL INCLUDE ALL CONCRETE WITHIN THE OUTLINED AREA.

MEASURED DISTANCE WILL DETERMINE UNIT BID QUANTITY FOR CONCRETE CROSS-GUTTER.

NOTE:
 1. CONCRETE SHALL MEET REQUIREMENTS OF STANDARD SPECIFICATIONS. COARSE AGGREGATE SHALL CONFORM TO MDOT 6AA GRADATION. LIMESTONE AGGREGATE SHALL BE USED.

2. 30" CURB & GUTTER RADII WILL BE PAID BY UNIT BID PRICE FOR 30" CONCRETE CURB & GUTTER

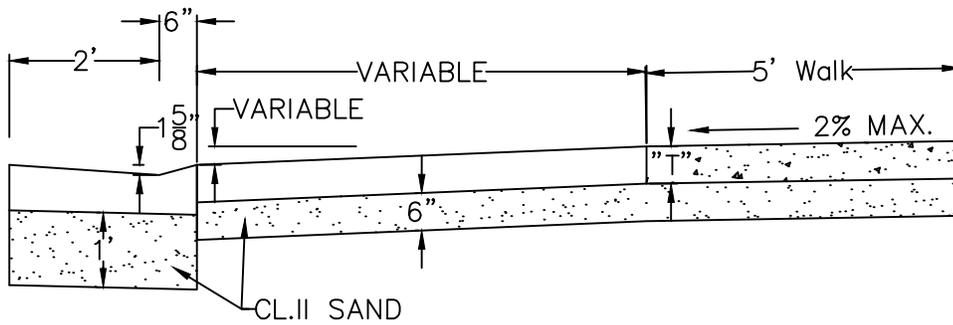
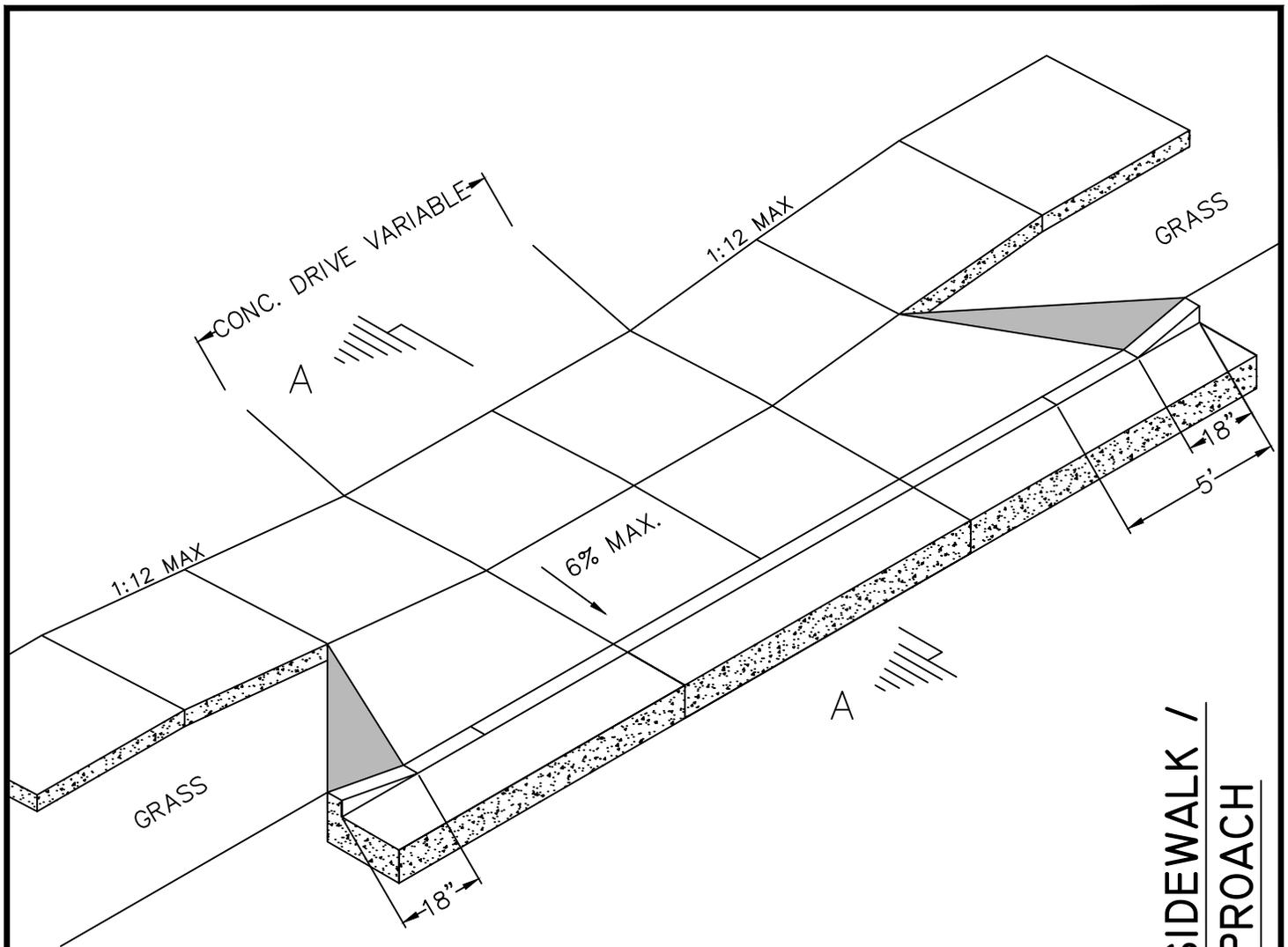
COMMERCIAL DRIVE APPROACH

CITY OF WYOMING
 ENGINEERING DEPARTMENT

**COMMERCIAL DRIVE
 APPROACH WITH
 SIDEWALK ACROSS**

DRAWN BY - KJM
 CHECKED BY - JJO
 DATE DRAWN - 8-06-2003
 DATE REVISED - 5-09-2016

I-27B

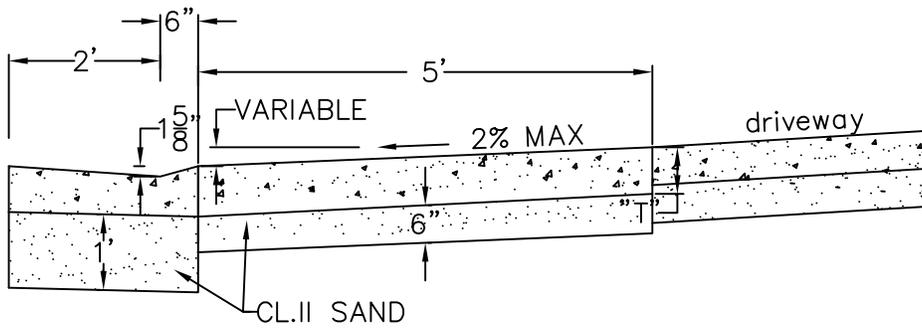
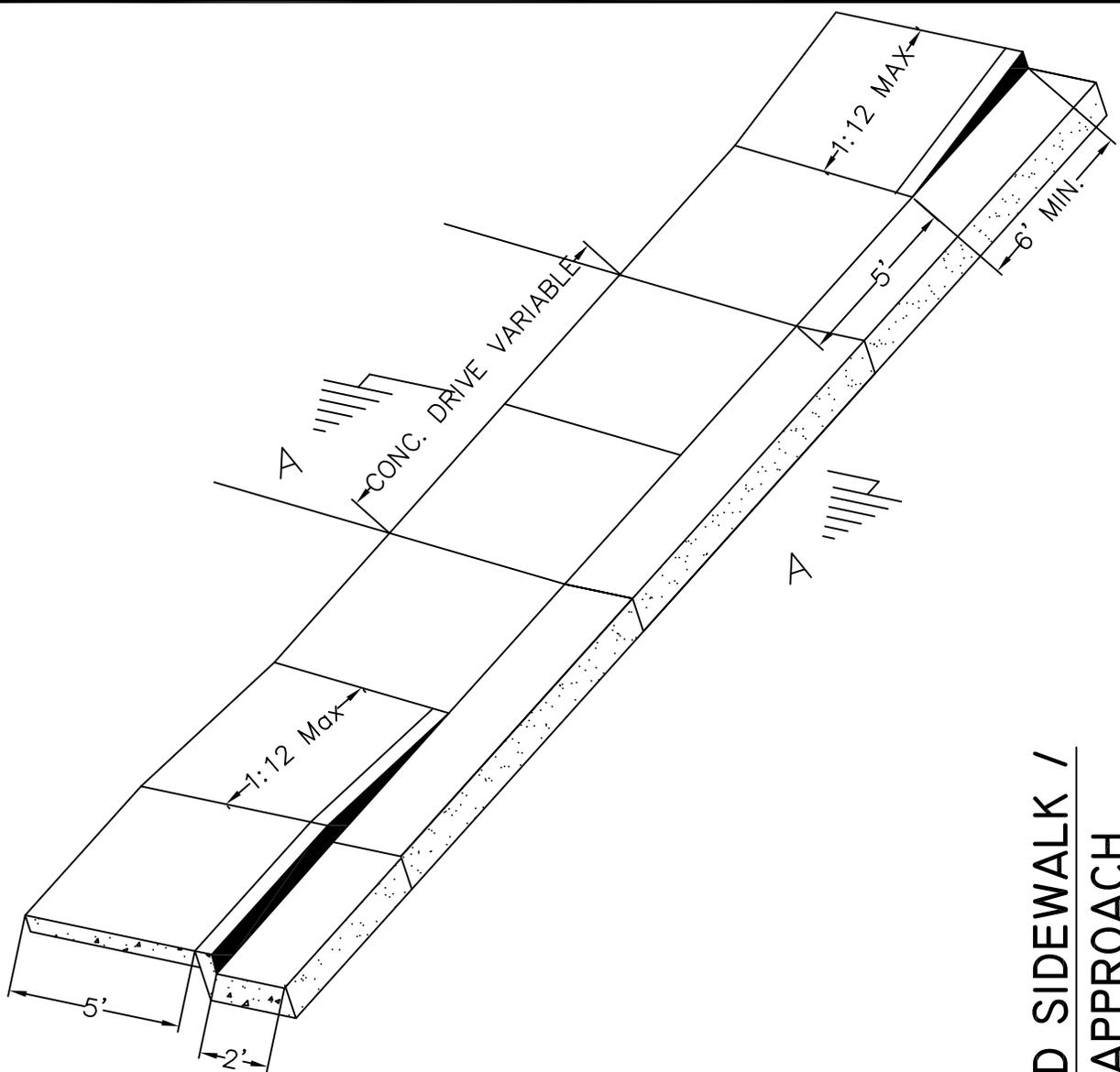


DEPRESSED SIDEWALK /
DRIVE APPROACH

T=4" MIN FOR RESIDENTIAL DRIVEWAY
 T=8" MIN FOR COMMERCIAL DRIVEWAY
 T=8" MIN FOR INDUSTRIAL DRIVEWAY

SECTION A-A

CITY OF WYOMING ENGINEERING DEPARTMENT	
DEPRESSED SIDEWALK / DRIVE APPROACH	
DRAWN BY - KJM	I-28A
CHECKED BY - JJO	
DATE DRAWN - 8-07-2003	
DATE REVISED - 5-09-2016	



T=4" MIN FOR RESIDENTIAL DRIVEWAY
 T=8" MIN FOR COMMERCIAL DRIVEWAY
 T=8" MIN FOR INDUSTRIAL DRIVEWAY

SECTION A-A

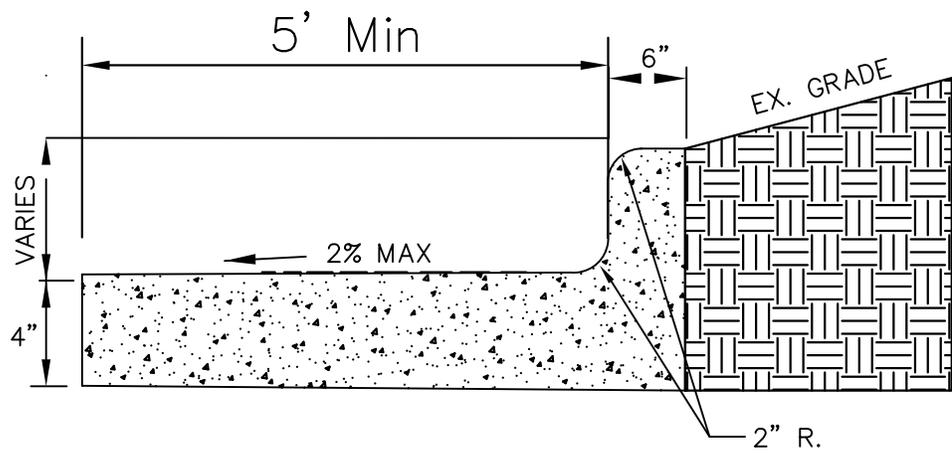
DEPRESSED SIDEWALK /
DRIVE APPROACH

CITY OF WYOMING
 ENGINEERING DEPARTMENT

DEPRESSED SIDEWALK /
DRIVE APPROACH

DRAWN BY- KJM
 CHECKED BY- JJO
 DATE DRAWN- 8-07-2003
 DATE REVISED- 5-09-2016

I-28B



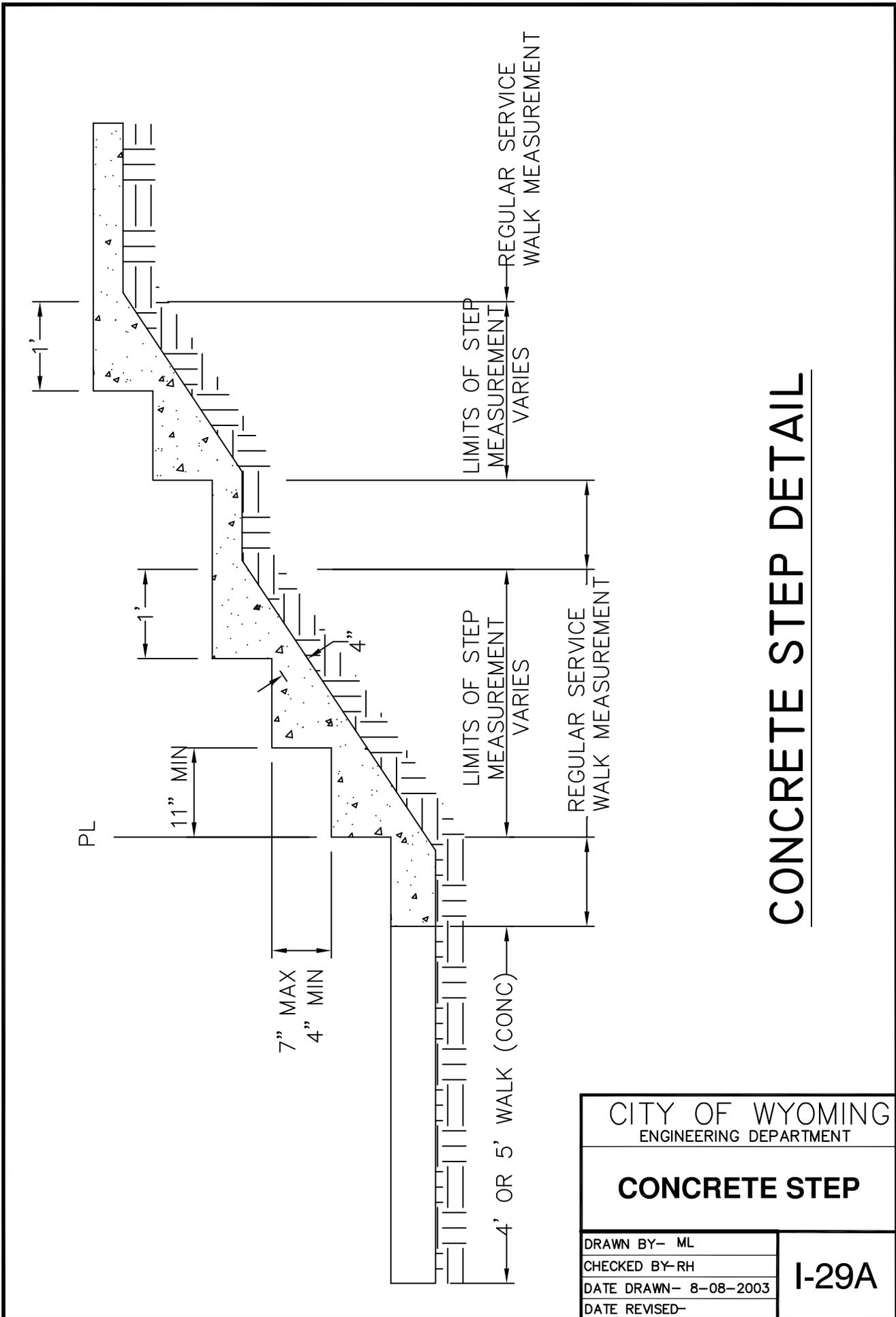
SIDEWALK WITH INTEGRAL CURB

CITY OF WYOMING
ENGINEERING DEPARTMENT

SIDEWALK WITH INTEGRAL CURB

DRAWN BY- ZEB
CHECKED BY- CC
DATE DRAWN- 3-26-2015
DATE REVISED-

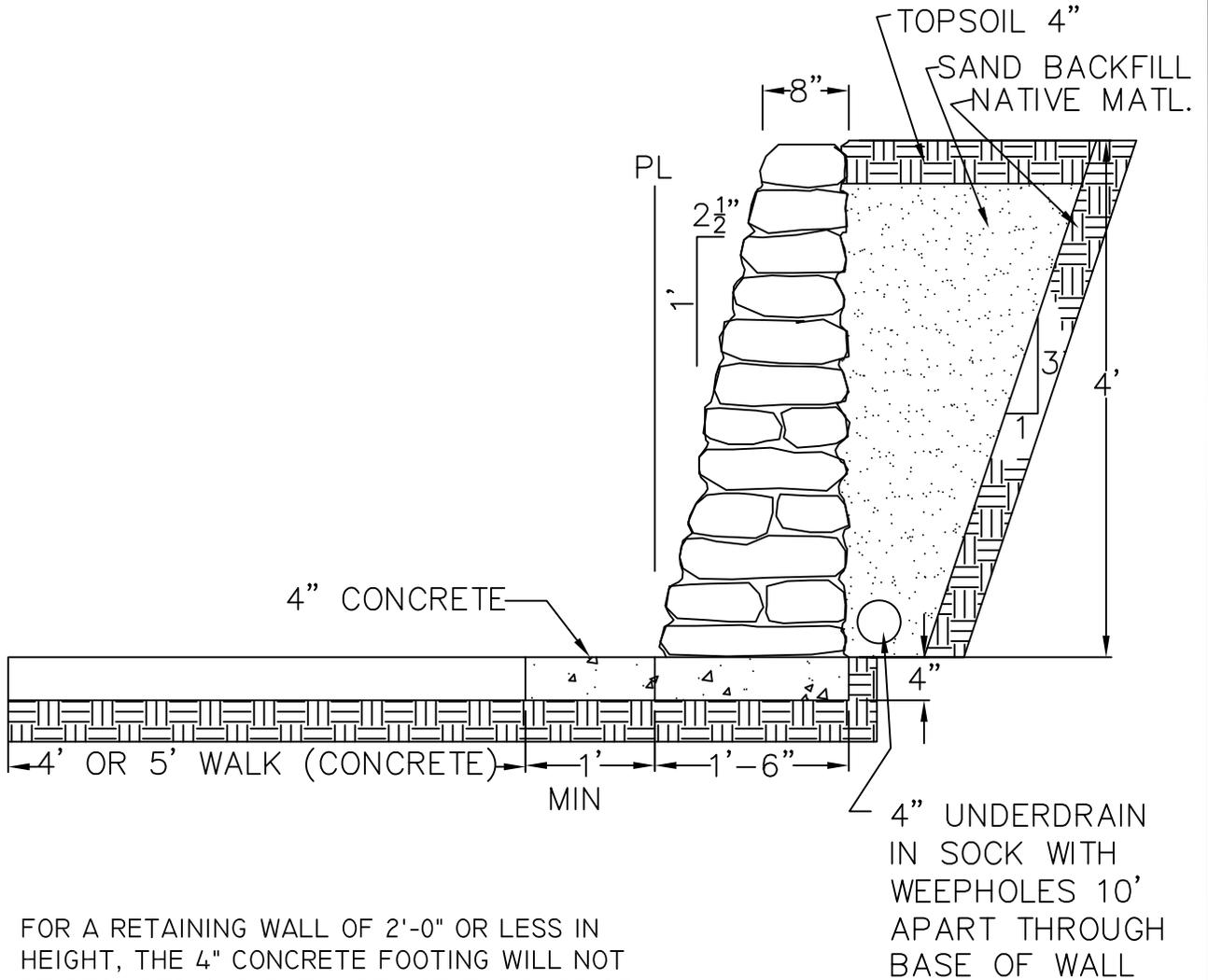
I-28C



CONCRETE STEP DETAIL

CITY OF WYOMING ENGINEERING DEPARTMENT	
CONCRETE STEP	
DRAWN BY- ML	I-29A
CHECKED BY- RH	
DATE DRAWN- 8-08-2003	
DATE REVISED-	

GROUTED BROKEN CONCRETE RETAINING WALL



FOR A RETAINING WALL OF 2'-0" OR LESS IN HEIGHT, THE 4" CONCRETE FOOTING WILL NOT BE REQUIRED AND THE WIDTH OF THE BASE OF THE WALL MAY BE REDUCED TO A MINIMUM OF 1'-0" WITH THE BASE EXTENDED TO A DEPTH OF 0'-6" BELOW THE TOP OF WALK.

WHERE THE HEIGHT OF THE RETAINING WALL IS GREATER THAN 4'-0", THE FOOTING AND BASE OF THE RETAINING WALL SHALL BE INCREASED 2 1/2" IN WIDTH FOR EVERY 1'-0" OF ADDITIONAL HEIGHT.

CITY OF WYOMING
ENGINEERING DEPARTMENT

GROUTED BROKEN CONCRETE RETAINING WALL

DRAWN BY- KJM

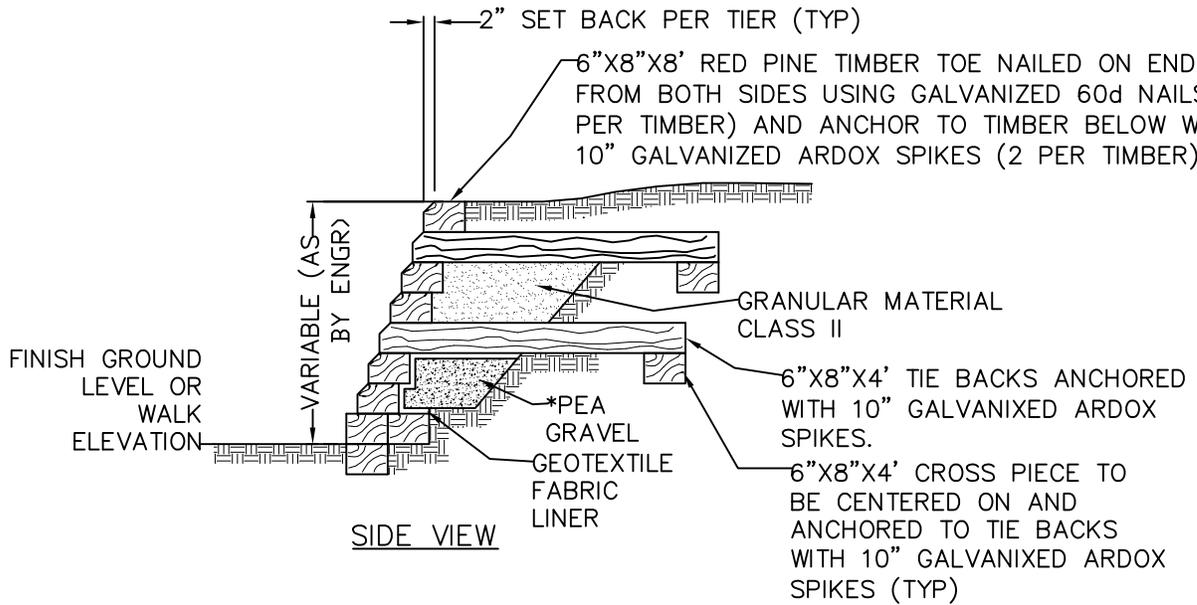
CHECKED BY- JOO

DATE DRAWN- 8-11-2003

DATE REVISED- 5-09-2016

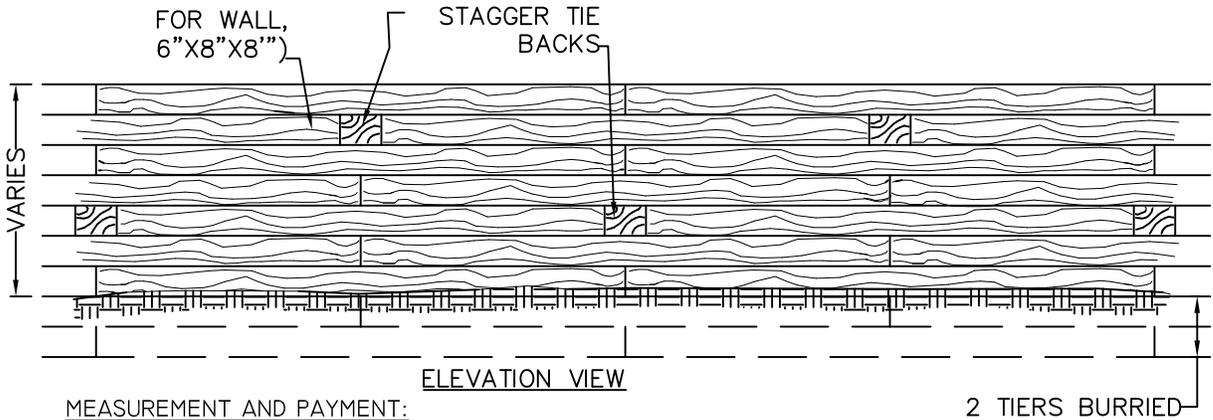
I-29B

** ALL TIMBERS TO MEET 0.6 PCF TREATMENT RETENTION



*PEA GRAVEL GRADING SIEVE ANALYSIS PERCENT PASSING
 1" = 100
 3/8" = 95-100
 NO. 4 = 30-60
 NO. 8 = 0-10
 LOSS BY WASHING = 0-.8

TIMBERS BETWEEN TIE BACKS TO BE CUT TO FIT. (INCLUDED IN ITEM "TREATED TIMBER FOR WALL, 6"X8"X8'")



MEASUREMENT AND PAYMENT:
 THE COMPLETED WORK AS MEASURED FOR TREATED TIMBER WALL WILL BE PAID FOR AT THE CONTRACT UNIT PRICE BASED ON 8 LFT. OF TIMBER = T EA. EXCAVATION FOR WALL, GEOTEXTILE FABRIC LINER, PEA GRACEL, CLASS II BACK FILL AND HARDWARE ARE INCLUDED IN ITEM "TREATED TIMBER FOR WALL (6"X8"X8')".

PAY ITEM	PAY UNIT
TREATED TIMBER FOR WALL (6"X8"X8')	EACH

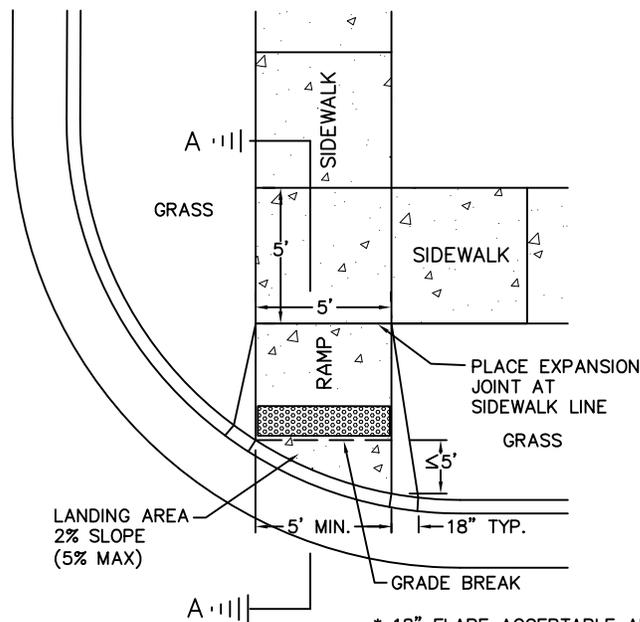
CITY OF WYOMING
 ENGINEERING DEPARTMENT

TREATED TIMBER WALL

DRAWN BY- ML
 CHECKED BY- RH
 DATE DRAWN- 8-11-2003
 DATE REVISED-

1-29C

TREATED TIMBER WALL



* 18" FLARE ACCEPTABLE ADJACENT TO GRASS - WIDEN TO 6' IF ADJACENT TO HARD SURFACE

NOTES:

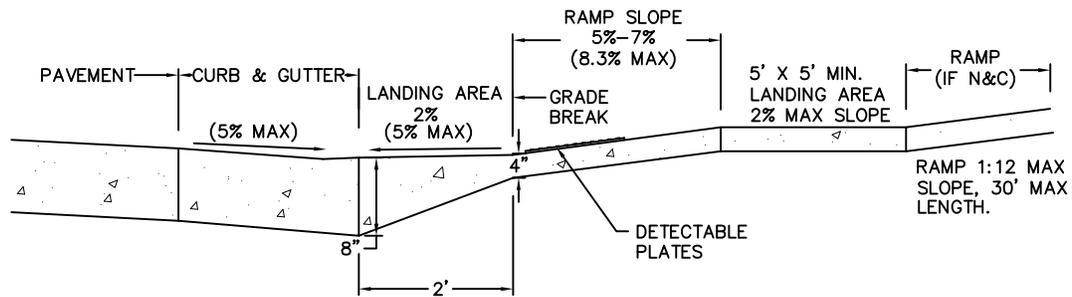
SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY A COARSE BROOMING, TRANSVERSE TO THE SLOPE OF THE RAMP.

CARE SHALL BE TAKEN TO ASSURE A UNIFORM GRADE ON THE RAMP, FREE OF SAGS AND SHORT GRADE CHANGES WHERE CONDITIONS PERMIT. IT IS DESIRABLE THAT THE SLOPE OF THE RAMP BE IN ONLY ONE DIRECTION, PARALLEL TO THE DIRECTION OF TRAVEL.

DRAINAGE STRUCTURES SHOULD NOT BE PLACED IN LINE WITH RAMPS, EXCEPT WHERE EXISTING DRAINAGE STRUCTURES ARE BEING UTILIZED IN THE NEW CONSTRUCTION, LOCATION OF THE RAMP SHOULD TAKE PRECEDENCE OVER LOCATION OF DRAINAGE STRUCTURES.

THE TOP OF THE EXPANSION JOINT SHALL BE FLUSH WITH ADJACENT CONCRETE.

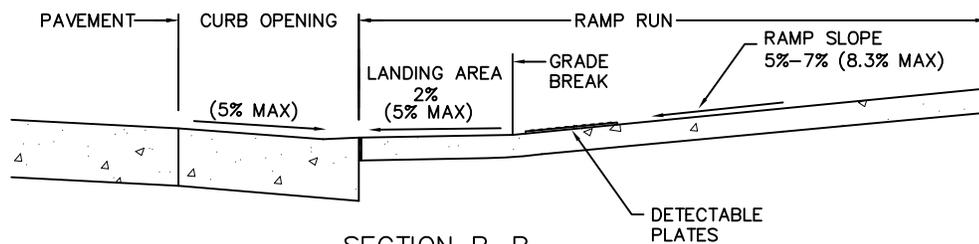
DETECTABLE WARNINGS SHALL BE CENTERED ALONG THE BOTTOM OF DUB-DOWN. THEY SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS 6" TO 8" FROM THE CURB.



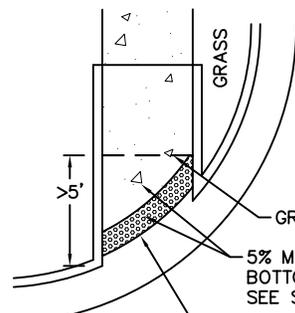
SECTION A-A

CAST IRON DETECTABLE WARNING PLATE SHALL BE:
 East Works Iron Works, Inc.
 Truncated Cover—Product No. 00700541
 OR TufTile FED 37038 OR APPROVED EQUAL

ALL RAMPS MUST MEET CURRENT STATE AND FEDERAL ADA REQUIREMENTS REFER TO M.D.O.T. SIDEWALK RAMP DETAIL R-28-J FOR DETECTABLE WARNING DETAILS



SECTION B-B

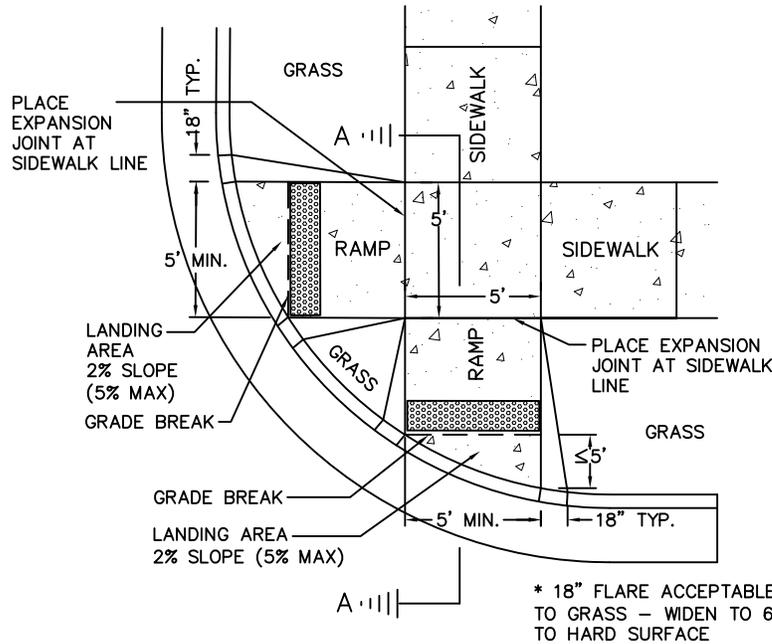


SIDEWALK RAMP LOCATED IN RADIUS (GRADE BREAK GREATER THAN 5')

GRADE BREAK
 5% MAX RUNNING SLOPE BEYOND BOTTOM GRADE BREAK SEE SECTION B-B

WHERE EITHER END OF THE BOTTOM GRADE BREAK IS MORE THAN 5' FROM THE BACK OF CURB, THE DETECTABLE WARNING SHALL BE LOCATED AT THE BACK OF CURB. (DOME ORIENTATION IS NOT SIGNIFICANT ON RADIUS)

USE WHEN RAMP INTERSECT CURB AT SKEWED ANGLE	
CITY OF WYOMING ENGINEERING DEPARTMENT	
SIDEWALK RAMP TYPE I	
DRAWN BY - KJM	I-30A
CHECKED BY - JJO	
DATE DRAWN - 4-20-2005	
DATE REVISED - 5-09-2016	



NOTES:

SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY A COARSE BROOMING, TRANSVERSE TO THE SLOPE OF THE RAMP.

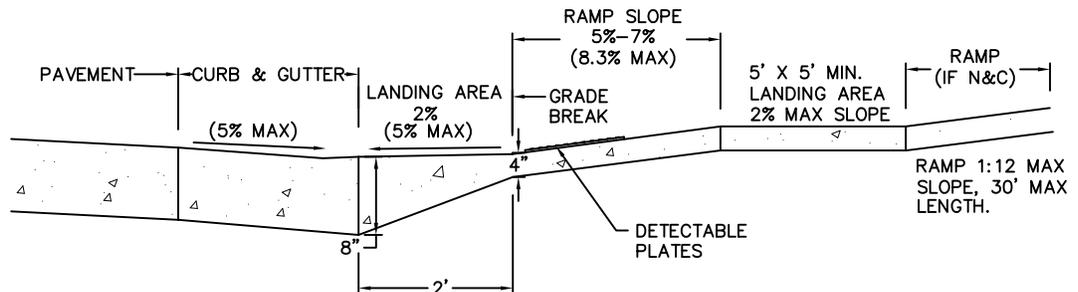
CARE SHALL BE TAKEN TO ASSURE A UNIFORM GRADE ON THE RAMP, FREE OF SAGS AND SHORT GRADE CHANGES WHERE CONDITIONS PERMIT. IT IS DESIRABLE THAT THE SLOPE OF THE RAMP BE IN ONLY ONE DIRECTION, PARALLEL TO THE DIRECTION OF TRAVEL.

DRAINAGE STRUCTURES SHOULD NOT BE PLACED IN LINE WITH RAMPS, EXCEPT WHERE EXISTING DRAINAGE STRUCTURES ARE BEING UTILIZED IN THE NEW CONSTRUCTION, LOCATION OF THE RAMP SHOULD TAKE PRECEDENCE OVER LOCATION OF DRAINAGE STRUCTURES.

THE TOP OF THE EXPANSION JOINT SHALL BE FLUSH WITH ADJACENT CONCRETE.

DETECTABLE WARNINGS SHALL BE CENTERED ALONG THE BOTTOM OF DUB-DOWN. THEY SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS 6" TO 8" FROM THE CURB.

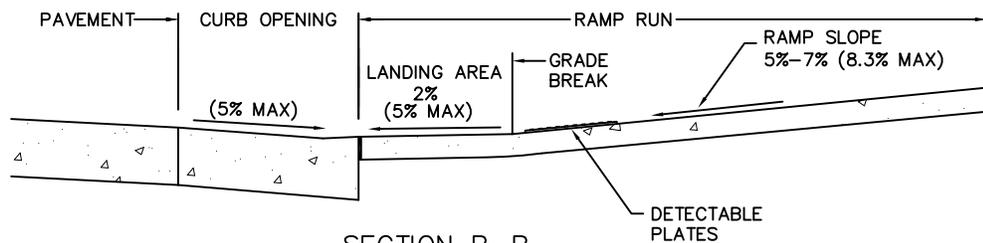
* 18" FLARE ACCEPTABLE ADJACENT TO GRASS - WIDEN TO 6' IF ADJACENT TO HARD SURFACE



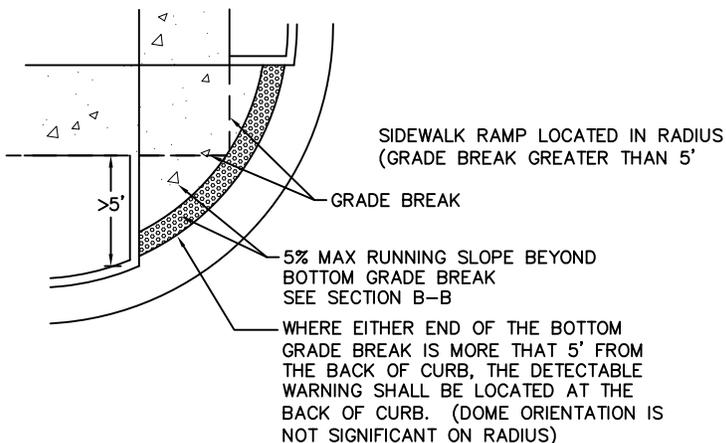
SECTION A-A

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 East Works Iron Works, Inc.
 Truncated Cover-Product No. 00700541
 OR TufTile FED 37038 OR APPROVED EQUAL

ALL RAMPS MUST MEET CURRENT STATE AND FEDERAL ADA REQUIREMENTS
 REFER TO M.D.O.T. SIDEWALK RAMP
 DETAIL R-28-J
 FOR DETECTABLE WARNING DETAILS



SECTION B-B



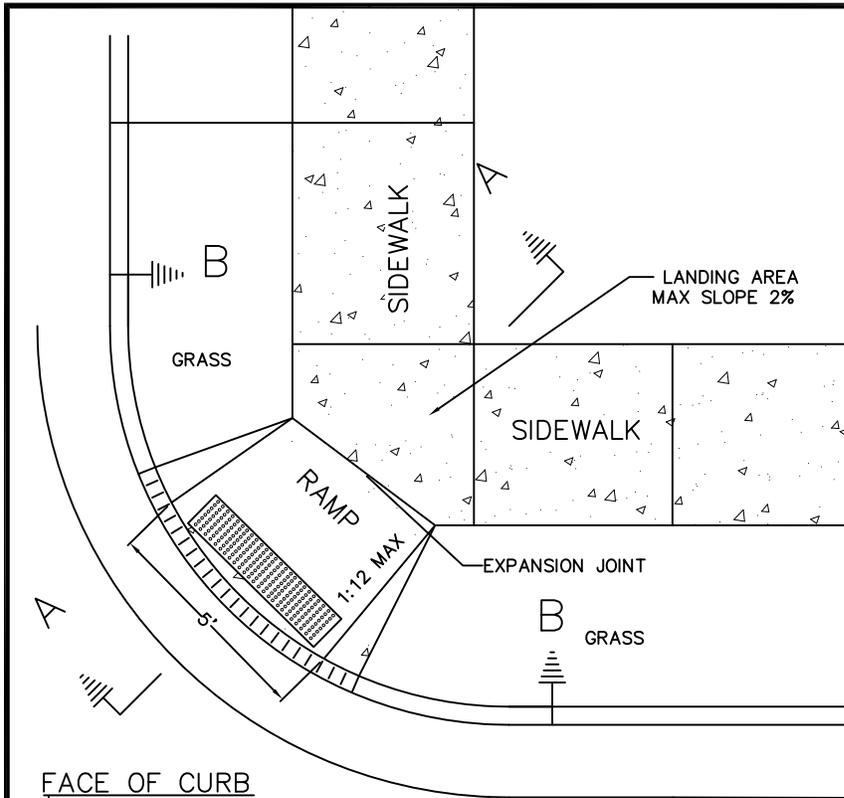
USE WHEN TWO WALKS INTERSECT CURB AT SKEWED ANGLE

CITY OF WYOMING
 ENGINEERING DEPARTMENT

**SIDEWALK
 RAMP TYPE I**

DRAWN BY - KJM
 CHECKED BY - JJO
 DATE DRAWN - 4-20-2005
 DATE REVISED - 5-09-2016

I-30B



NOTES:

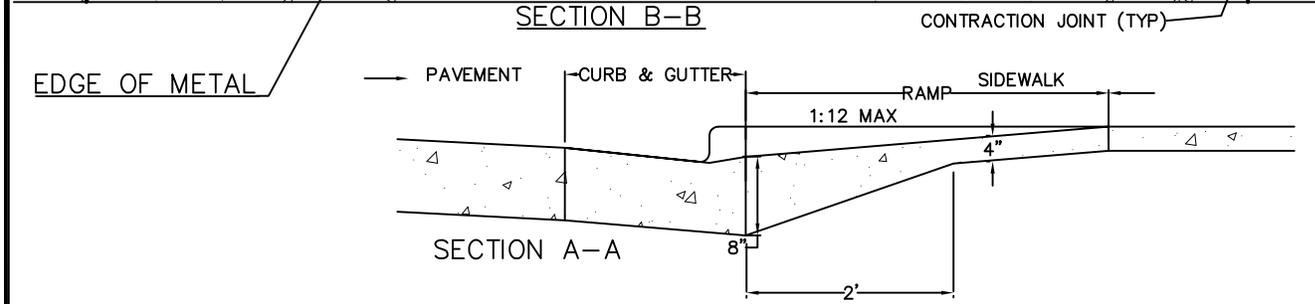
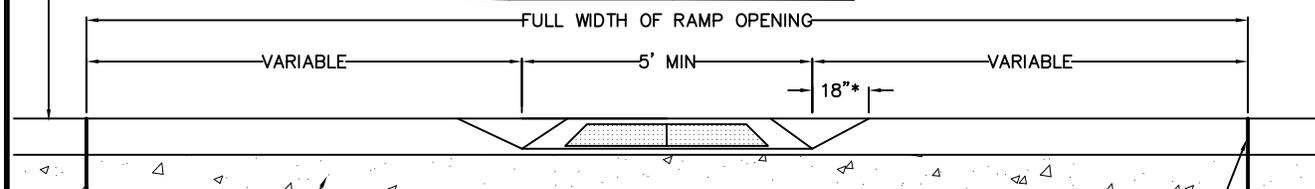
SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY A COARSE BROOMING, TRANSVERSE TO THE SLOPE OF THE RAMP.

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THE TOP OF THE EXPANSION JOINT SHALL BE FLUSH WITH ADJACENT CONCRETE.

DETECTABLE WARNINGS SHALL BE CENTERED ALONG THE BOTTOM OF DUB-DOWN. THEY SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS 6" TO 8" FROM THE CURB.

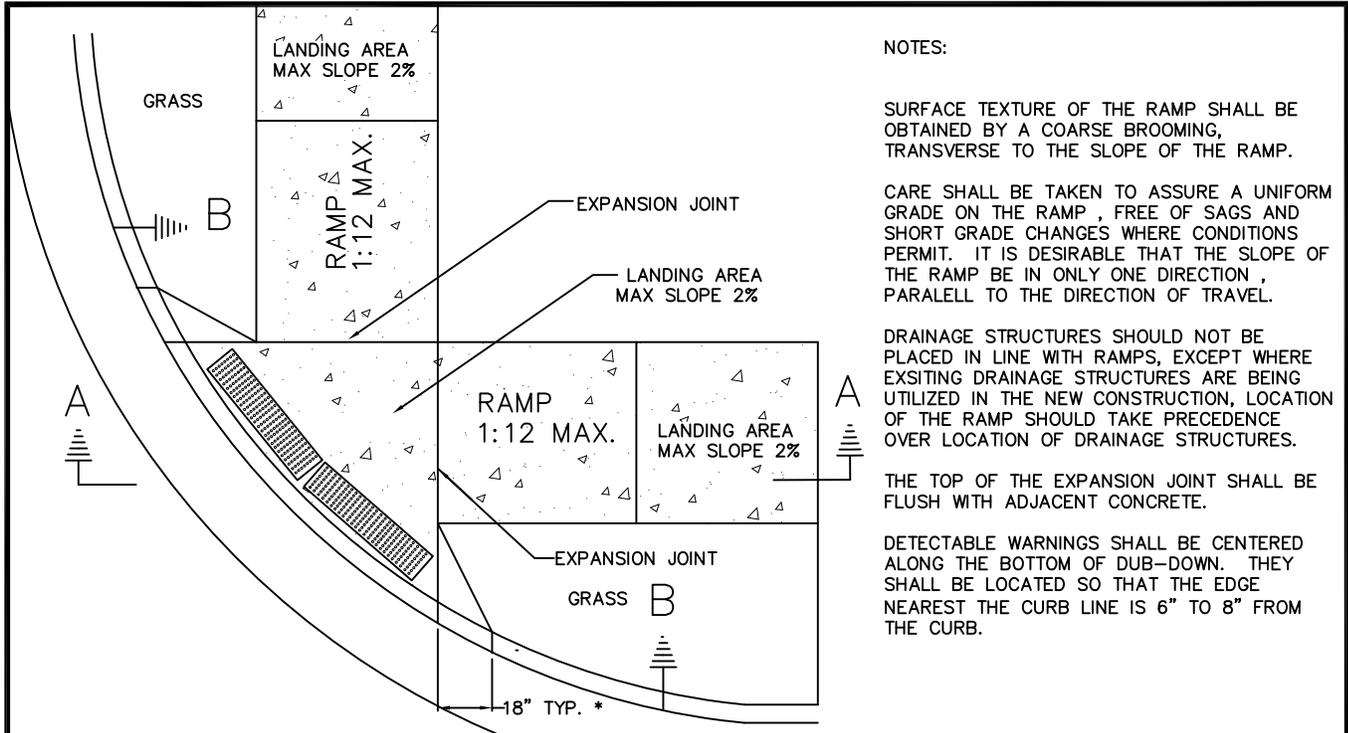


ALL RAMPS MUST MEET CURRENT STATE AND FEDERAL ADA REQUIREMENTS
 REFER TO M.D.O.T. SIDEWALK RAMP
 DETAIL R-28-J
 FOR DETECTABLE WARNING DETAILS

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CAST IRON DETECTABLE WARNING PLATE SHALL BE:
 East Works Iron Works, Inc.
 Truncated Cover—Product No. 00700541
 OR TuTile FED 37038 OR APPROVED EQUAL

CITY OF WYOMING ENGINEERING DEPARTMENT	
SIDEWALK RAMP TYPE II	
DRAWN BY - KJM	I-30C
CHECKED BY - JJO	
DATE DRAWN - 4-20-2005	
DATE REVISED - 5-09-2016	



NOTES:

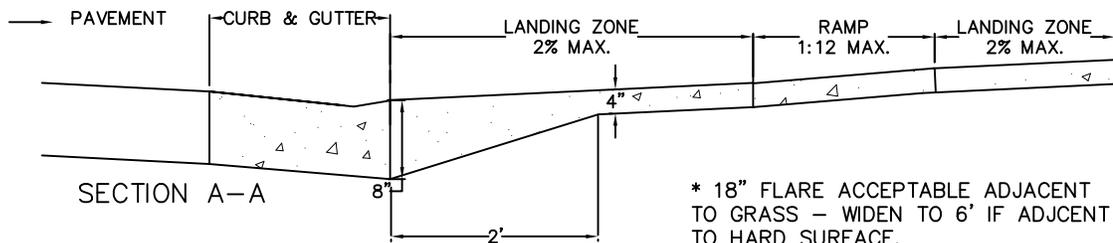
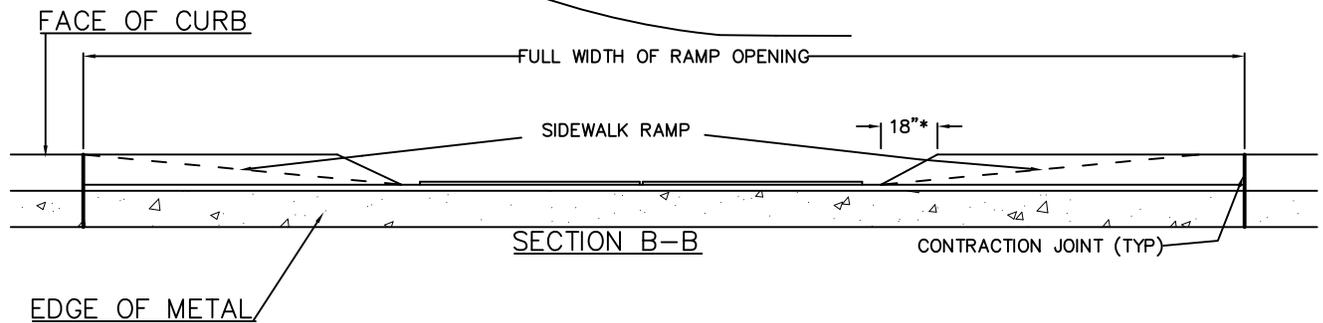
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 East Works Iron Works, Inc.
 Truncated Cover-Product No. 00700541
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ALL RAMPS MUST MEET CURRENT STATE AND FEDERAL ADA REQUIREMENTS
 REFER TO M.D.O.T. SIDEWALK RAMP
 DETAIL R-28-J
 FOR DETECTABLE WARNING DETAILS

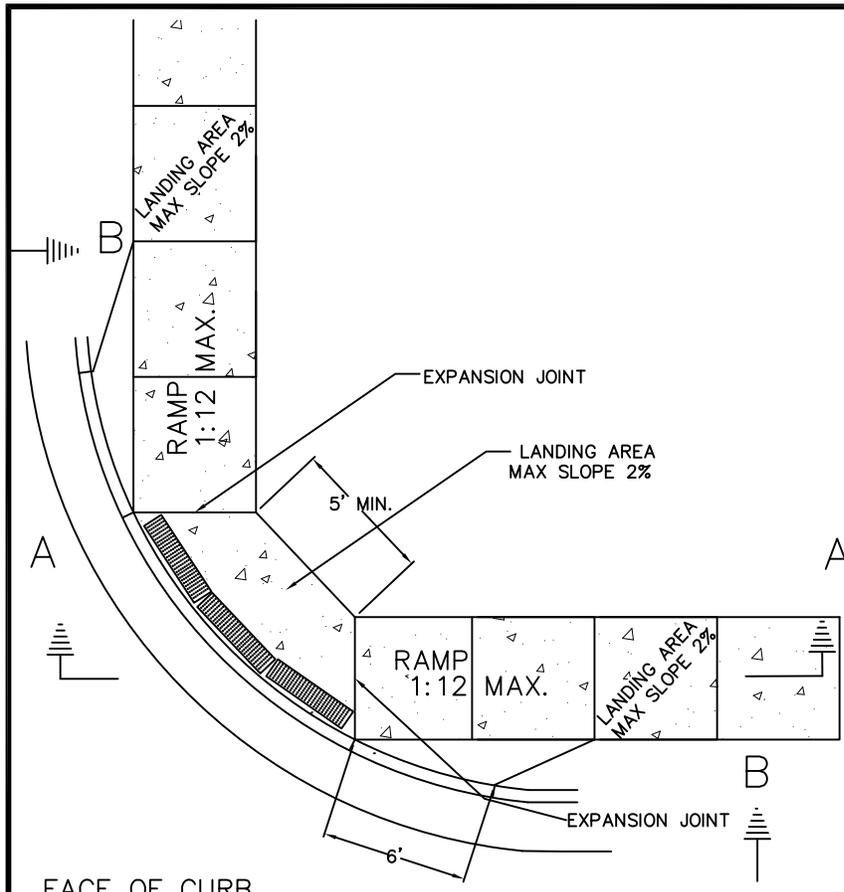
CASE I

CITY OF WYOMING
 ENGINEERING DEPARTMENT

**SIDEWALK
 RAMP TYPE II**

DRAWN BY - KJM
 CHECKED BY - JJO
 DATE DRAWN - 4-20-2005
 DATE REVISED - 5-09-2016

I-30D



NOTES:

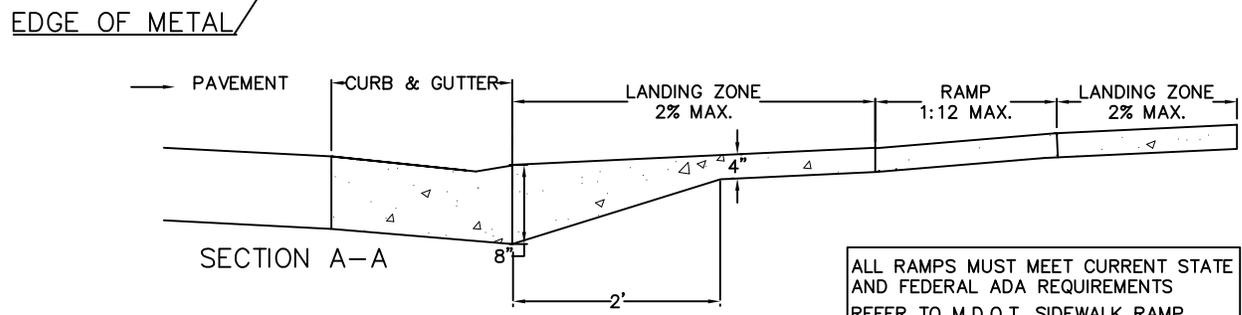
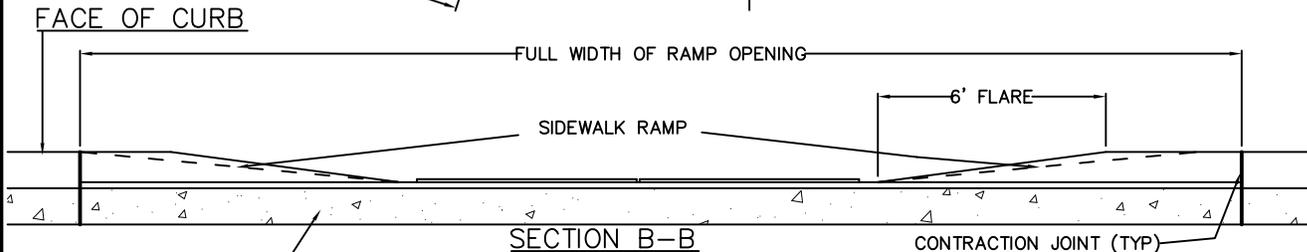
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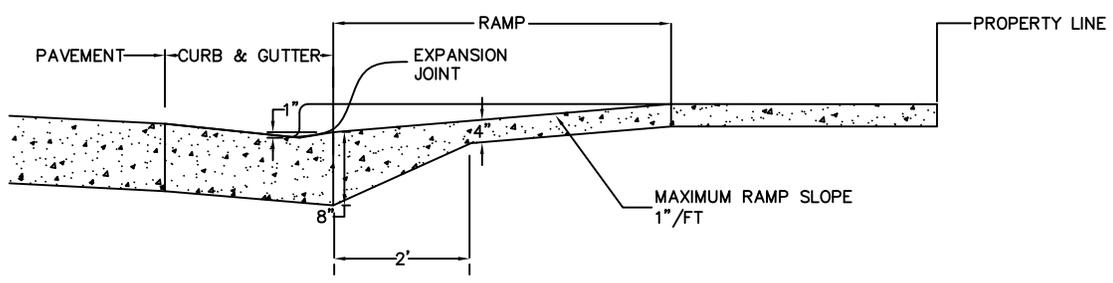
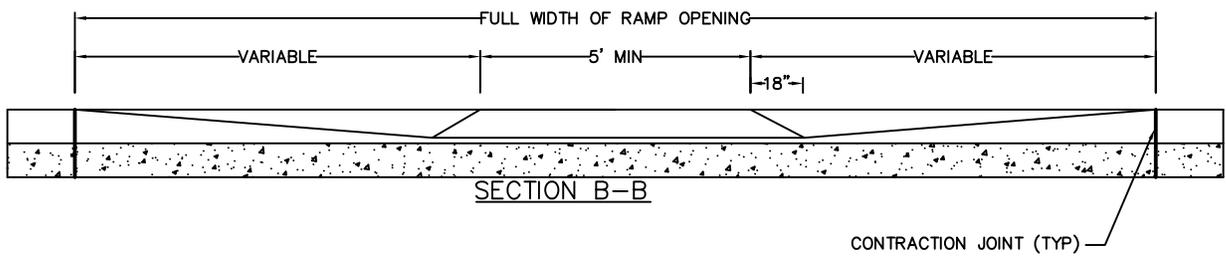
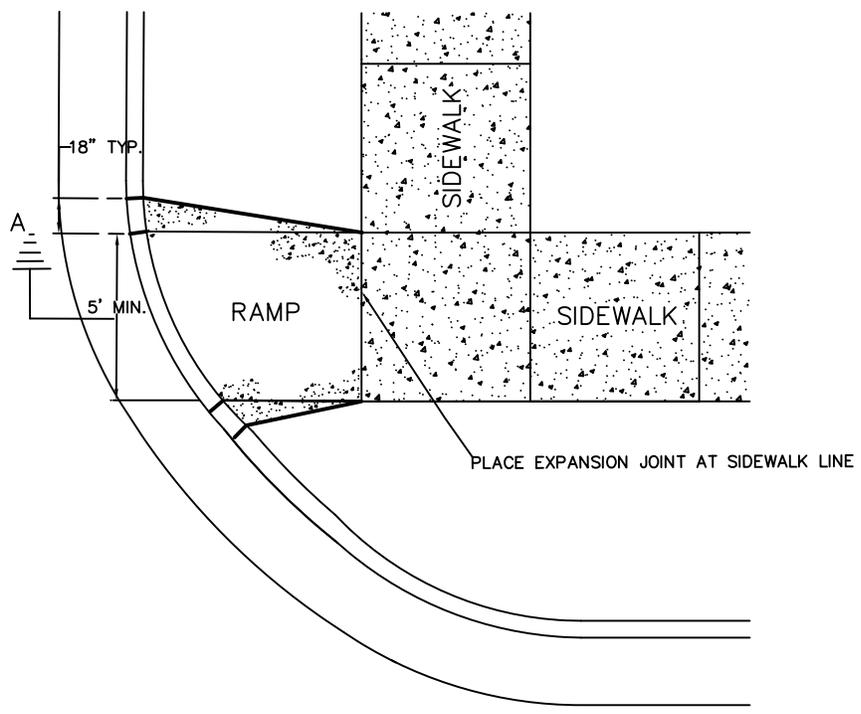
ALL RAMPS MUST MEET CURRENT STATE AND FEDERAL ADA REQUIREMENTS REFER TO M.D.O.T. SIDEWALK RAMP DETAIL R-28-J FOR DETECTABLE WARNING DETAILS

CAST IRON DETECTABLE WARNING PLATE SHALL BE:
 East Works Iron Works, Inc.
 Truncated Cover—Product No. 00700541
 OR TufTile FED 37038 OR APPROVED EQUAL

CASE II

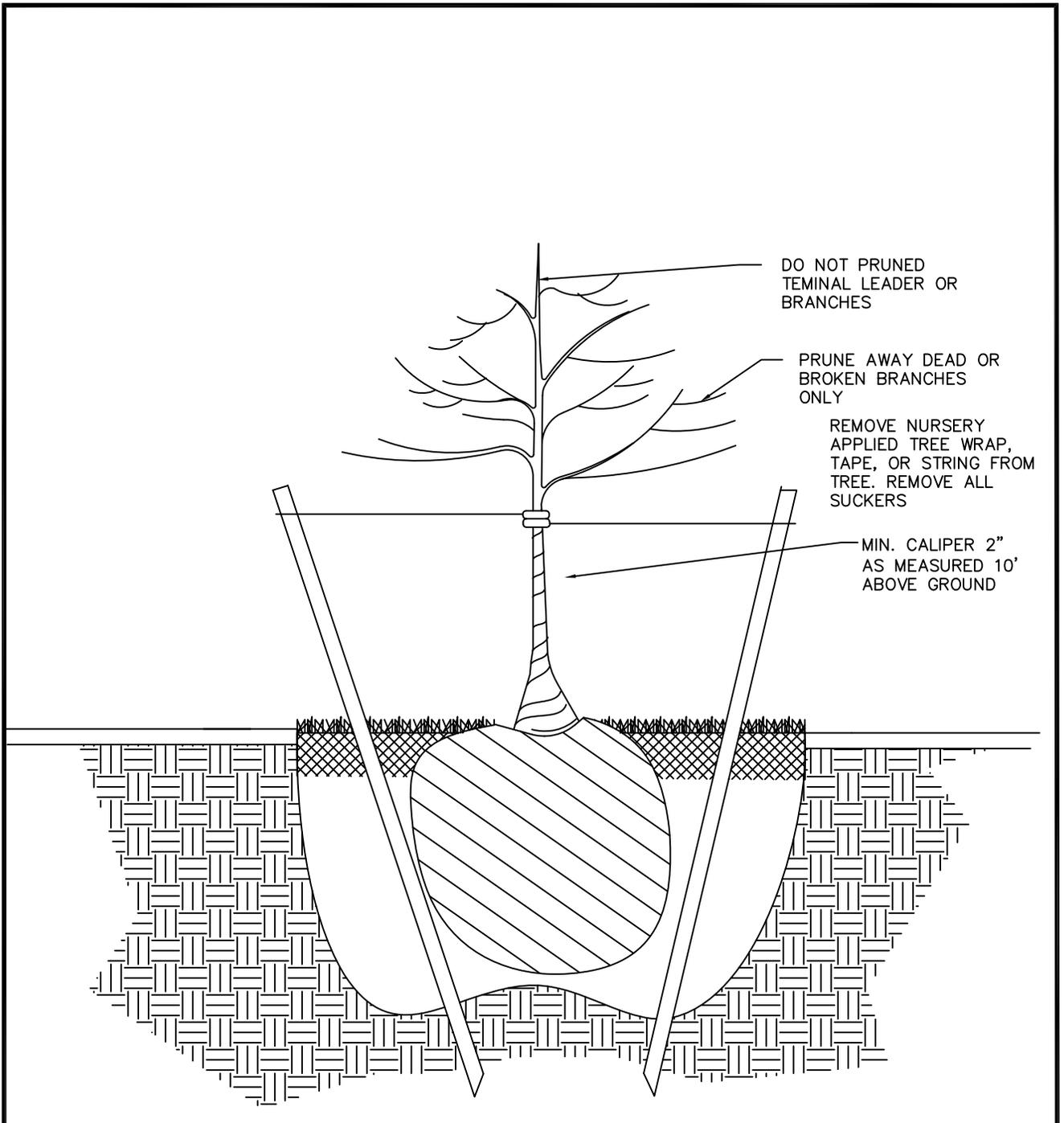
CITY OF WYOMING ENGINEERING DEPARTMENT	
SIDEWALK RAMP TYPE II	
DRAWN BY - KJM	I-30E
CHECKED BY - JJ0	
DATE DRAWN - 4-20-2005	
DATE REVISED - 5-09-2016	

SIDEWALK RAMP TYPE I



SECTION A-A

CITY OF WYOMING ENGINEERING DEPARTMENT	
SIDEWALK RAMP TYPE I	
DRAWN BY- MW	I-31
CHECKED BY- RH	
DATE DRAWN- 4-20-2005	
DATE REVISED- 6-16-2005	



NOTE: GET ROOTBALL LEVEL TO GRADE. UNTIE TWINE FROM TRUNK. REMOVE ALL NON-BIODEGRADEABLE MATERIAL. FOLD DOWN TOP $\frac{1}{3}$ OF BURLAP. CUT AND REMOVE BASKET.

TREE PLANTING DETAIL

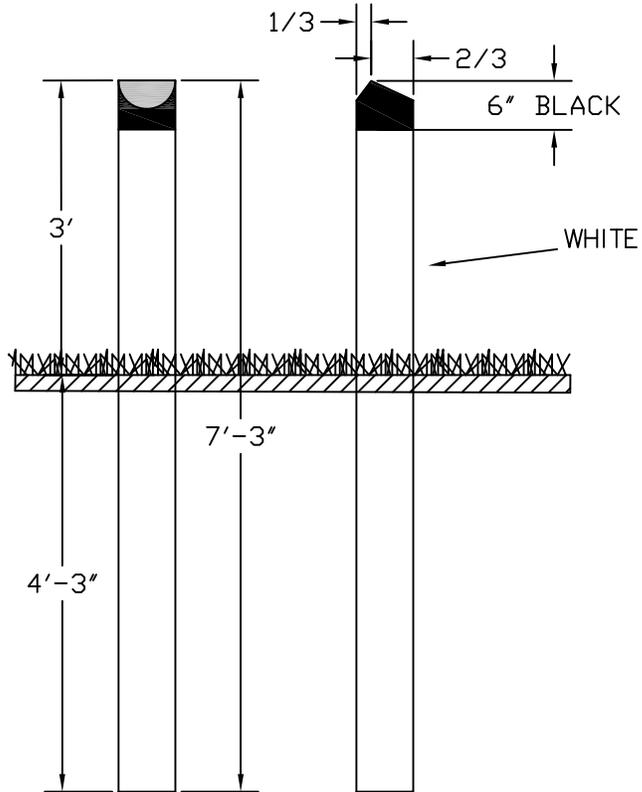
CITY OF WYOMING
ENGINEERING DEPARTMENT

TREE PLANTING DETAIL

DRAWN BY- ML
CHECKED BY-RH
DATE DRAWN- 8-04-2003
DATE REVISED-

1-32A

7 TREATED WOOD GUARD POSTS, EQUALLY SPACED, SHALL BE PLACED AT THE ENDS OF ALL TEMPORARY STREETS

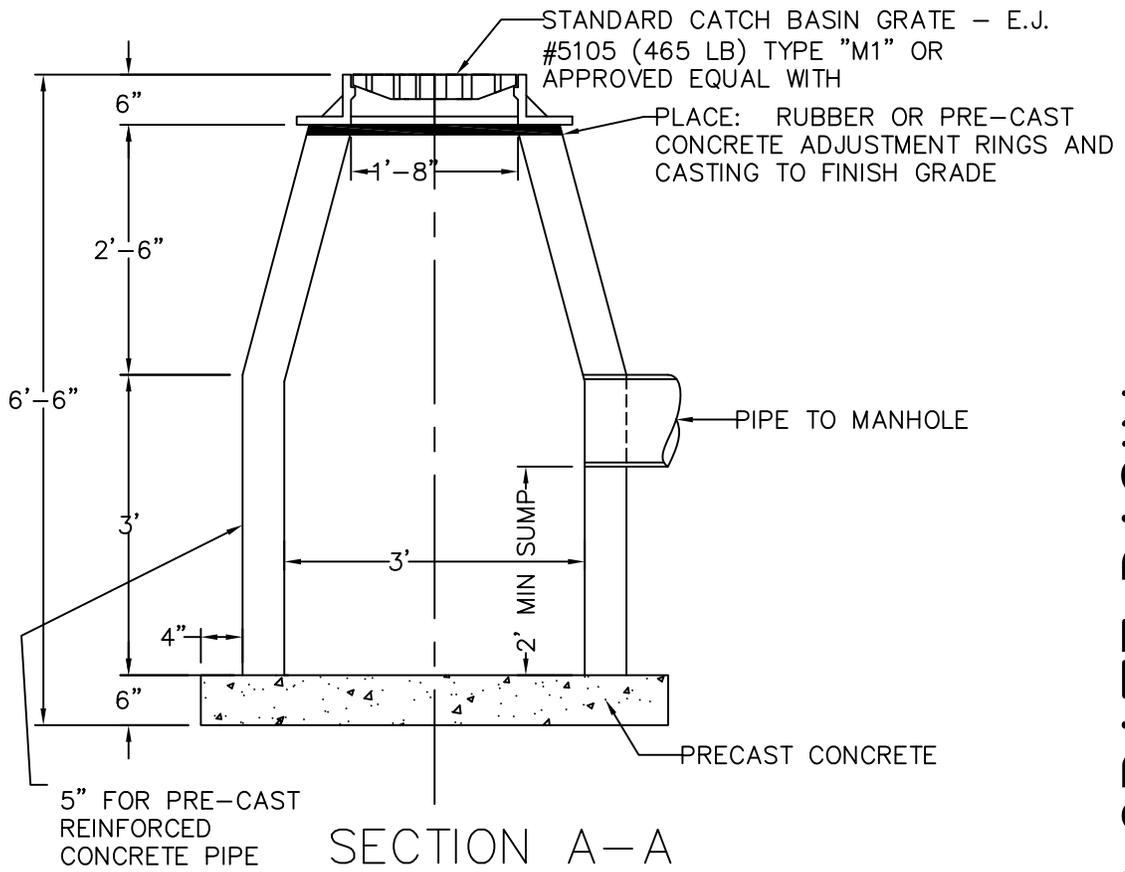


ALL POSTS SHALL BE A MINIMUM OF 7 1/2" IN DIMENSION

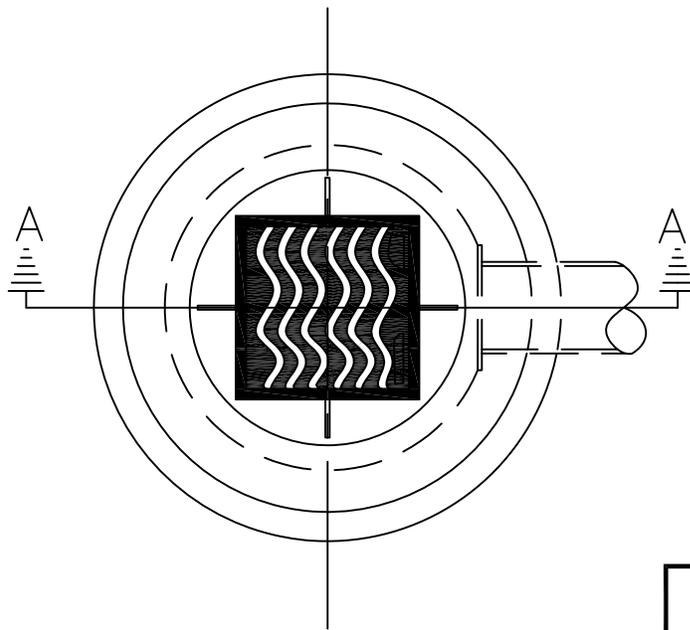
ALL POSTS SHALL BE TREATED IN ACCORDANCE WITH THE CURRENT M.D.O.T. STD. SPECIFICATIONS

WOOD GUARD POST

CITY OF WYOMING ENGINEERING DEPARTMENT	
GUARD POST DETAIL FOR TEMPORARY STREETS	
DRAWN BY- AR	1-33
CHECKED BY- RH	
DATE DRAWN- 2-06-2007	
DATE REVISED-	



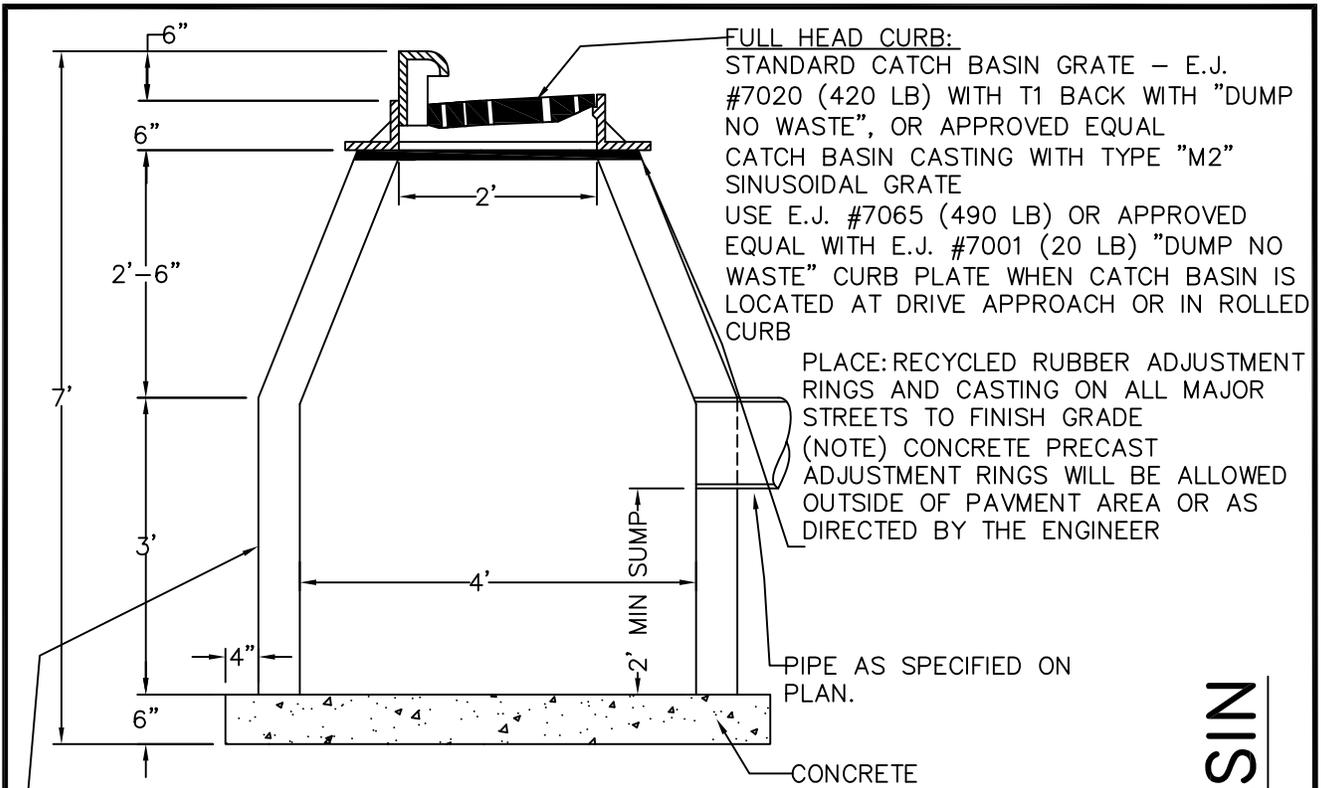
STANDARD ALLEY GRATE BASIN



NOTE:
 STRUCTURE SHALL BE
 PRE-CAST REINFORCED
 CONCRETE UNLESS
 OTHERWISE APPROVED BY
 THE ENGINEER

TOP VIEW

CITY OF WYOMING ENGINEERING DEPARTMENT	
STANDARD ALLEY GRATE BASIN	
DRAWN BY - ML, NM	S-1
CHECKED BY - RH	
DATE DRAWN - 8-13-2003	
DATE REVISED - 2-6-2009	

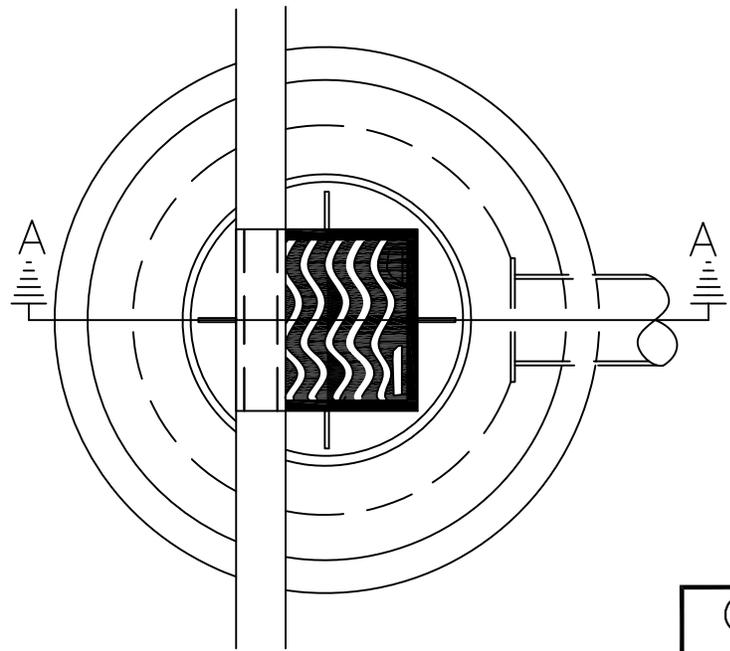


FULL HEAD CURB:
 STANDARD CATCH BASIN GRATE – E.J. #7020 (420 LB) WITH T1 BACK WITH "DUMP NO WASTE", OR APPROVED EQUAL CATCH BASIN CASTING WITH TYPE "M2" SINUSOIDAL GRATE
 USE E.J. #7065 (490 LB) OR APPROVED EQUAL WITH E.J. #7001 (20 LB) "DUMP NO WASTE" CURB PLATE WHEN CATCH BASIN IS LOCATED AT DRIVE APPROACH OR IN ROLLED CURB

PLACE: RECYCLED RUBBER ADJUSTMENT RINGS AND CASTING ON ALL MAJOR STREETS TO FINISH GRADE
 (NOTE) CONCRETE PRECAST ADJUSTMENT RINGS WILL BE ALLOWED OUTSIDE OF PAYMENT AREA OR AS DIRECTED BY THE ENGINEER

5" FOR PRE-CAST REINFORCED CONCRETE PIPE

SECTION A-A

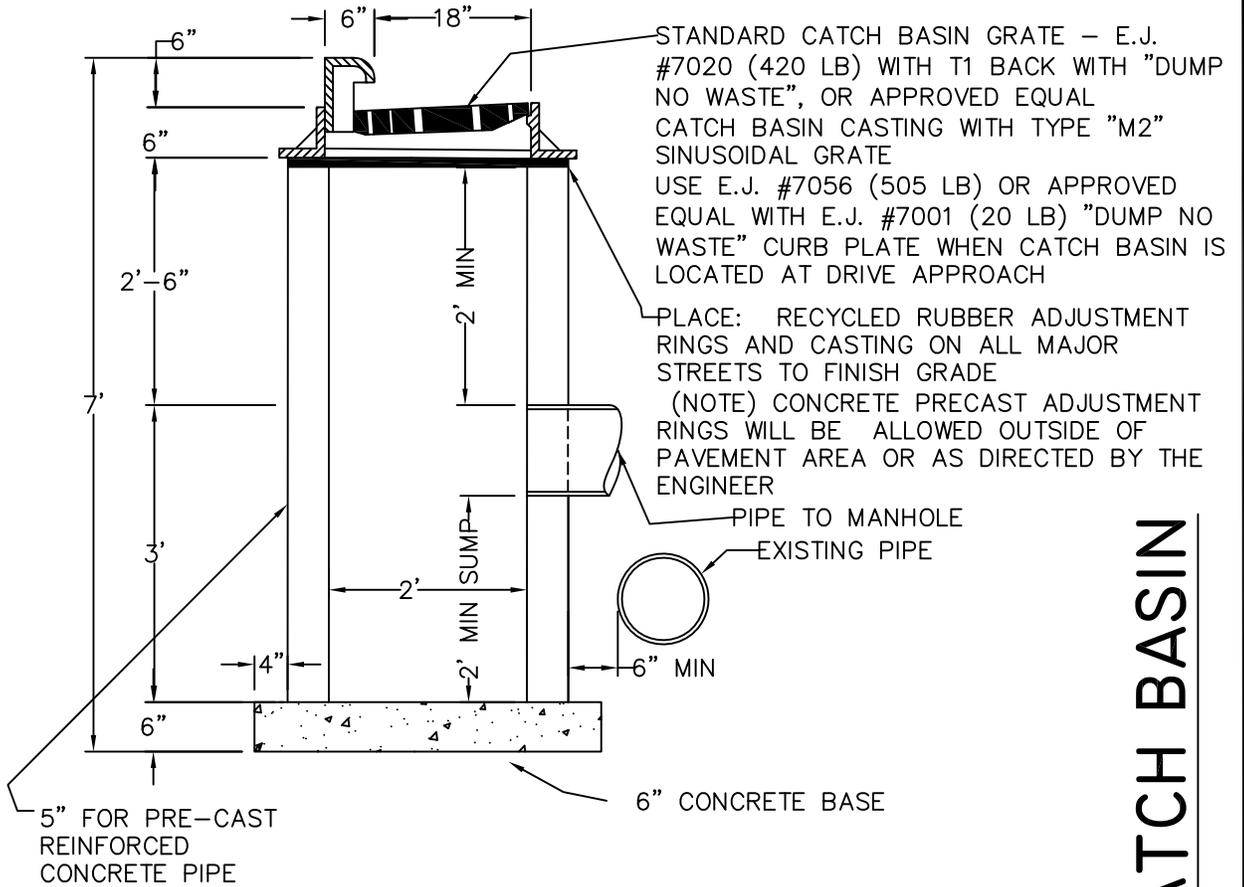


TOP VIEW

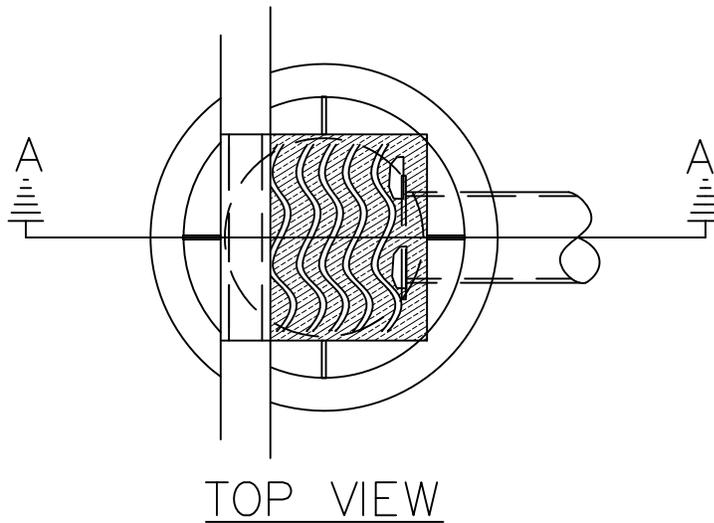
NOTE:
 STRUCTURE SHALL BE PRE-CAST REINFORCED CONCRETE UNLESS OTHERWISE APPROVED BY THE ENGINEER

STANDARD CATCH BASIN

CITY OF WYOMING ENGINEERING DEPARTMENT	
STANDARD CATCH BASIN	
DRAWN BY- ML, NM	S-2
CHECKED BY-RH	
DATE DRAWN - 8-13-2003	
DATE REVISED - 3-2-2009	



SECTION A-A



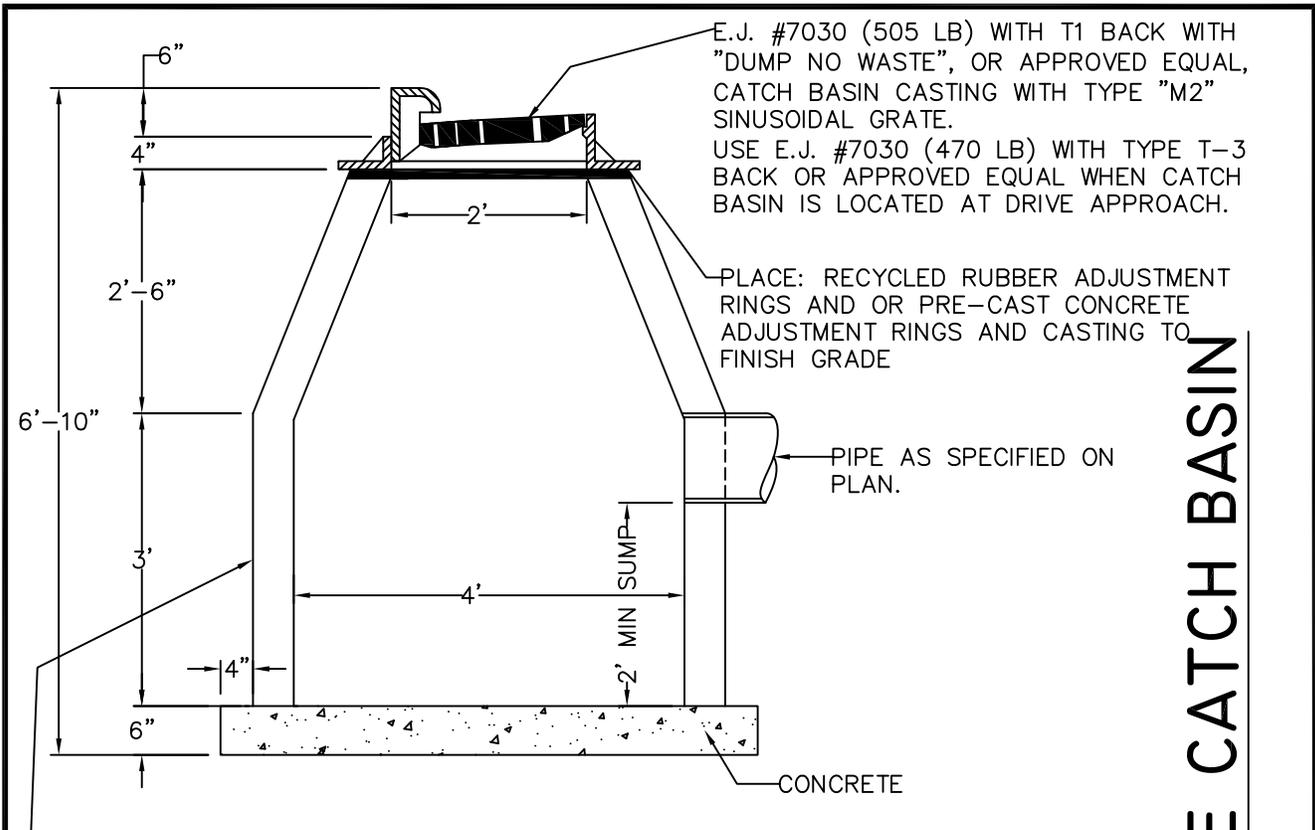
STANDARD MINI CATCH BASIN

NOTE:

FOR USE WHERE AN EXISTING UTILITY WHICH CANNOT BE RELOCATED INTERFERES WITH STANDARD 4' DIAMETER CATCH BASIN

STRUCTURE SHALL BE PRE-CAST REINFORCED CONCRETE UNLESS OTHERWISE APPROVED BY THE ENGINEER

CITY OF WYOMING ENGINEERING DEPARTMENT	
STANDARD MINI CATCH BASIN	
DRAWN BY – ML, NM	S-3
CHECKED BY – RH	
DATE DRAWN – 8-13-2003	
DATE REVISED – 2-6-2009	



E.J. #7030 (505 LB) WITH T1 BACK WITH "DUMP NO WASTE", OR APPROVED EQUAL, CATCH BASIN CASTING WITH TYPE "M2" SINUSOIDAL GRATE.
 USE E.J. #7030 (470 LB) WITH TYPE T-3 BACK OR APPROVED EQUAL WHEN CATCH BASIN IS LOCATED AT DRIVE APPROACH.

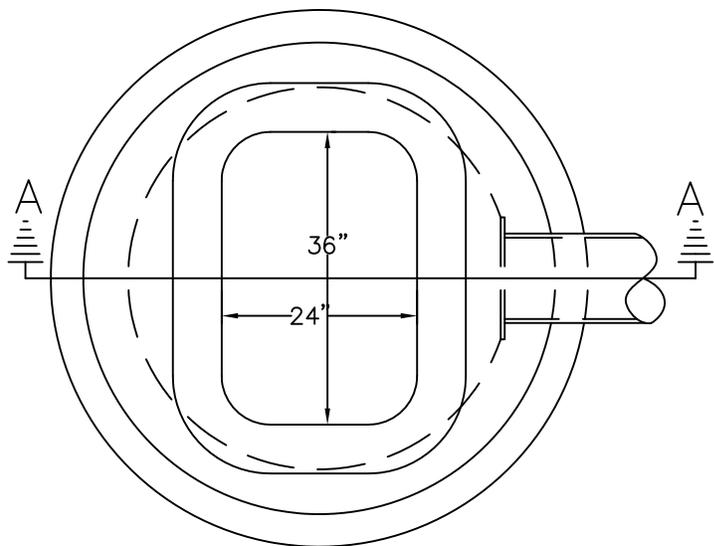
PLACE: RECYCLED RUBBER ADJUSTMENT RINGS AND OR PRE-CAST CONCRETE ADJUSTMENT RINGS AND CASTING TO FINISH GRADE

PIPE AS SPECIFIED ON PLAN.

CONCRETE

5" FOR PRE-CAST REINFORCED CONCRETE PIPE

SECTION A-A



TOP VIEW

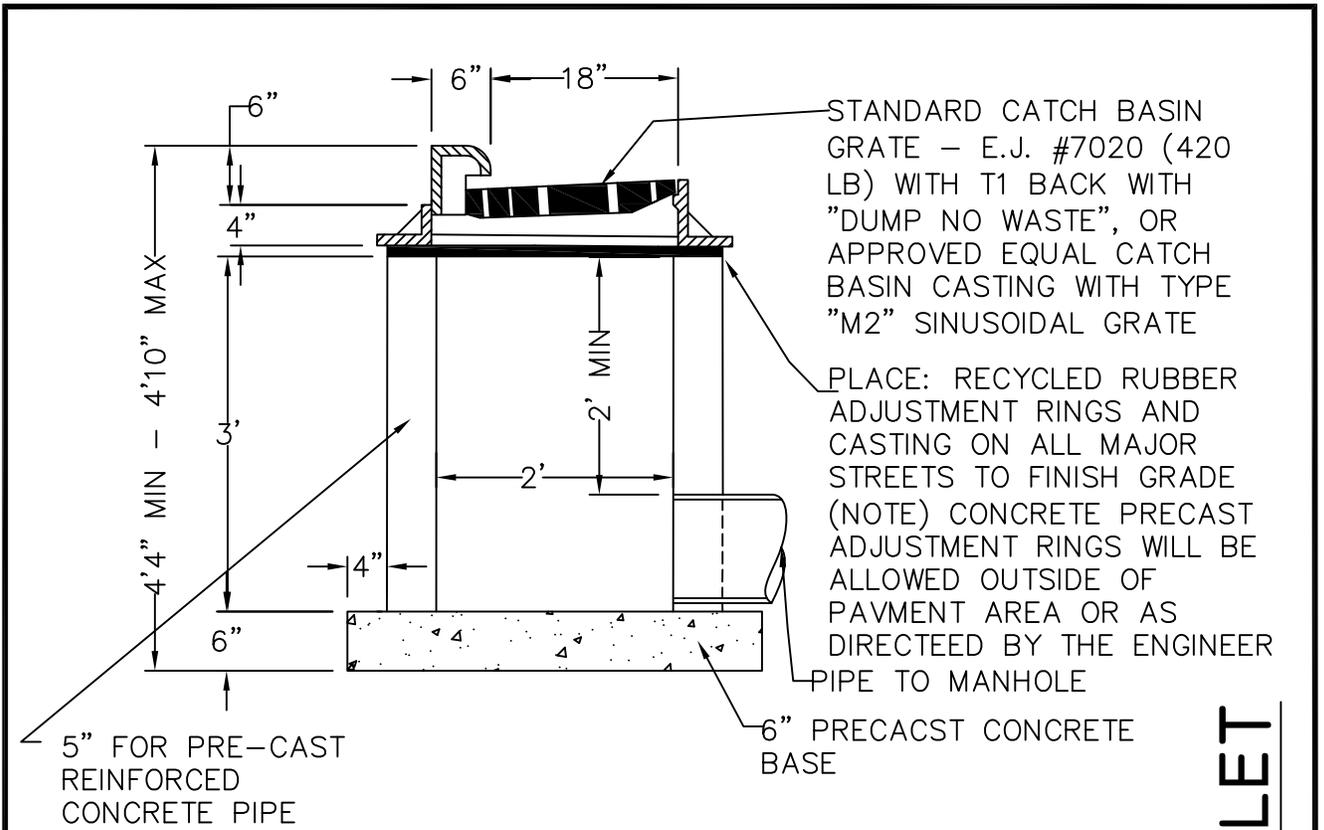
NOTE:

STRUCTURE SHALL BE PRE-CAST REINFORCED CONCRETE UNLESS OTHERWISE APPROVED BY THE ENGINEER

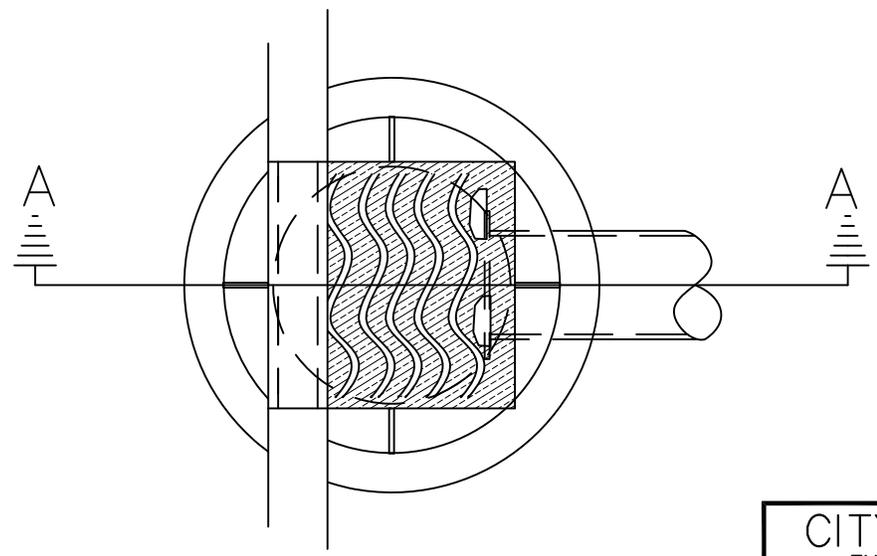
USE E.J. #7030 TYPE M6 WHEN STREET GRADE IS GREATER THAN 1.0%

STANDARD DOUBLE CATCH BASIN

CITY OF WYOMING ENGINEERING DEPARTMENT	
STANDARD DOUBLE CATCH BASIN	
DRAWN BY - ML, NM	S-4
CHECKED BY - RH	
DATE DRAWN - 8-13-2003	
DATE REVISED - 3-2-2009	



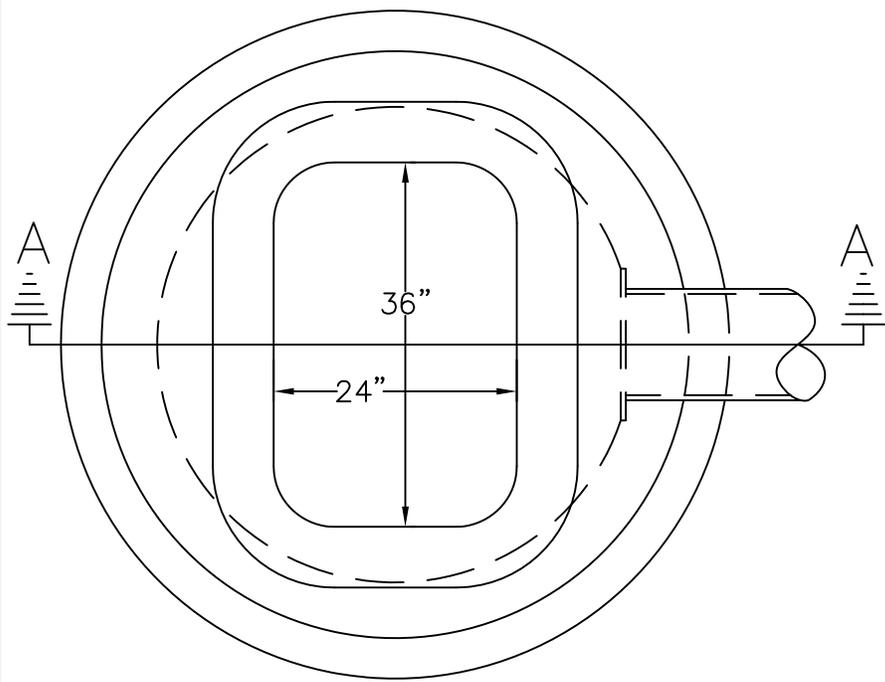
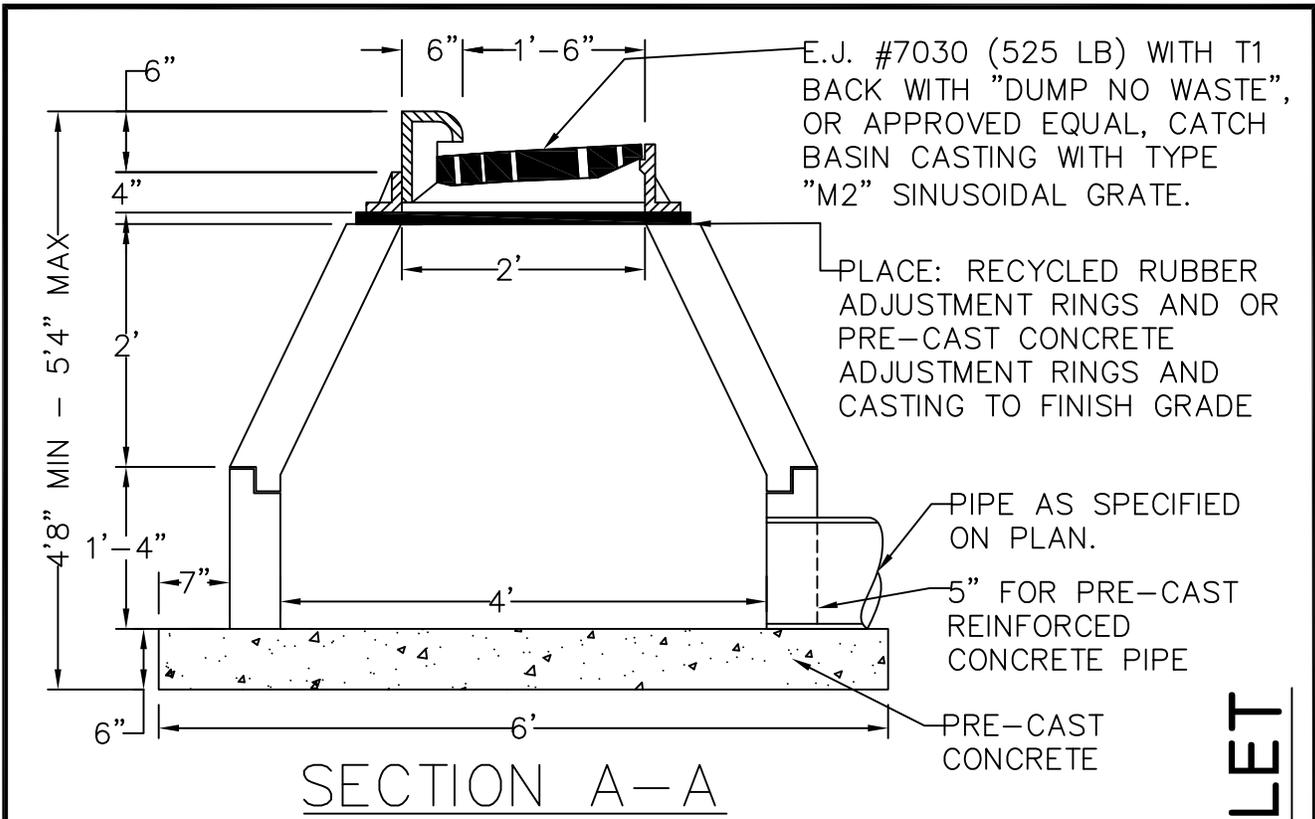
SECTION A-A



TOP VIEW

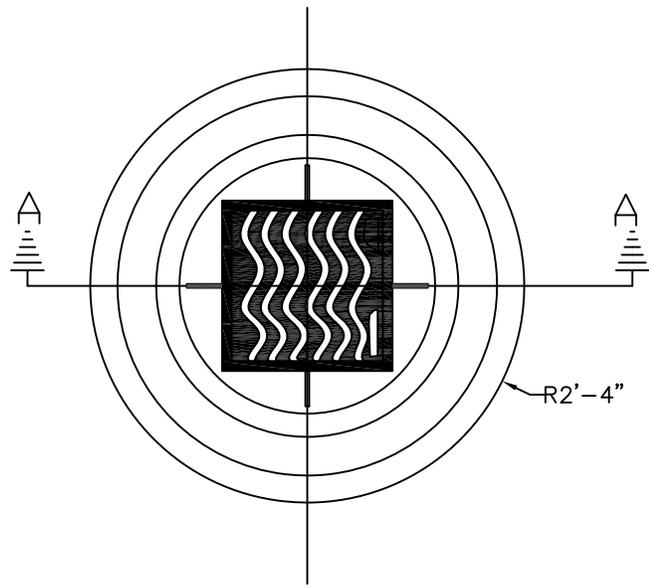
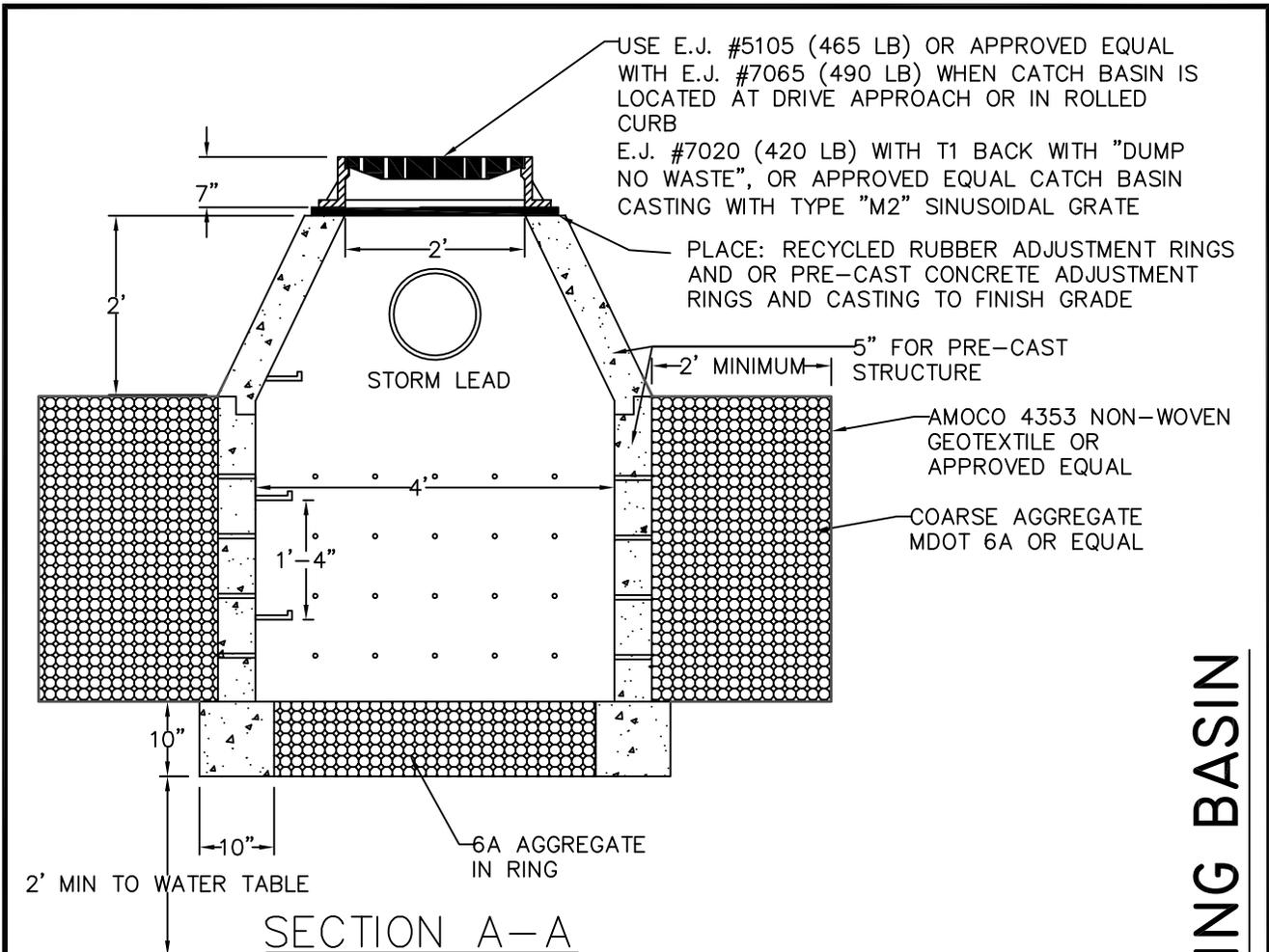
2' STANDARD DROP INLET

CITY OF WYOMING ENGINEERING DEPARTMENT	
2' STANDARD DROP INLET	
DRAWN BY — ML, NM	S-5A
CHECKED BY — RH	
DATE DRAWN — 8-13-2003	
DATE REVISED — 3-2-2009	



4' STANDARD DROP INLET

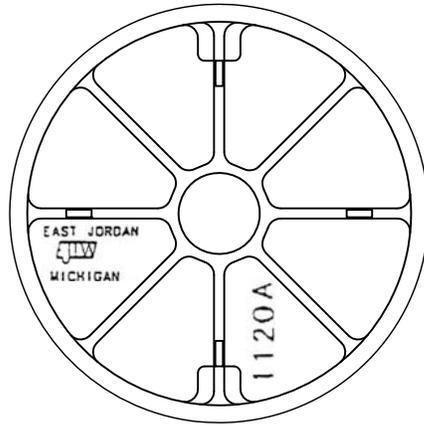
CITY OF WYOMING ENGINEERING DEPARTMENT	
4' STANDARD DROP INLET	
DRAWN BY - ML, NM	S-5B
CHECKED BY - RH	
DATE DRAWN - 8-13-2003	
DATE REVISED - 3-2-2009	



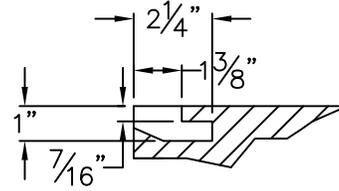
NOTE:
 STRUCTURE SHALL BE PRE-CAST REINFORCED CONCRETE UNLESS OTHERWISE APPROVED BY THE ENGINEER

STANDARD LEECHING BASIN

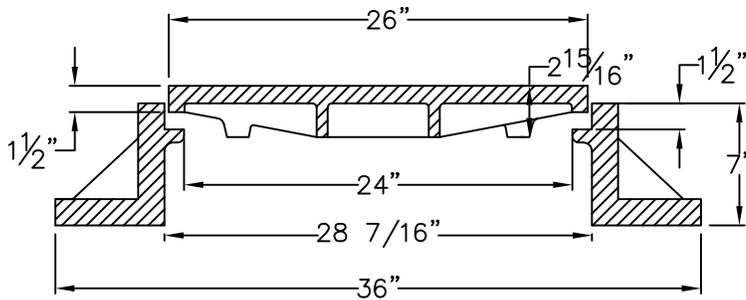
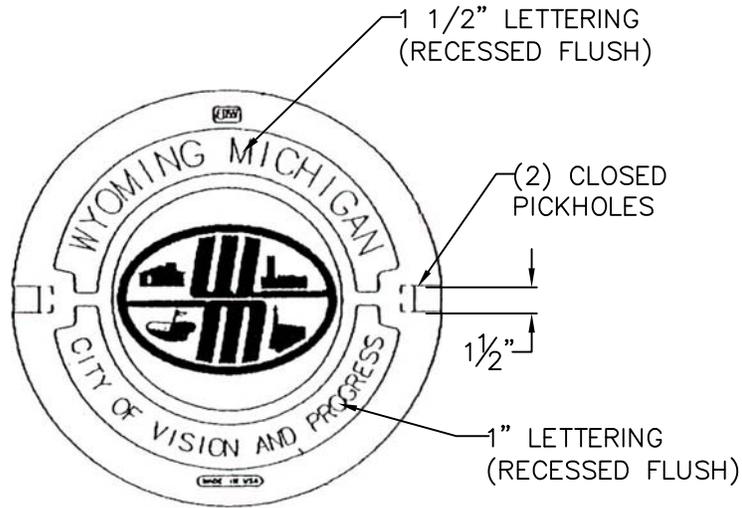
CITY OF WYOMING ENGINEERING DEPARTMENT	
STANDARD LEECHING BASIN	
DRAWN BY - NM	S-5C
CHECKED BY - JJO	
DATE DRAWN - 9-14-2006	
DATE REVISED - 3-2-2009	



BOTTOM VIEW



PICKHOLE DETAIL



CASTING AND COVER SECTION

EAST JORDAN 1040 OR APPROVED
EQUAL HEAVY DUTY

TYPE "C" 2 HOLE VENT COVER
TOTAL WEIGHT 375#

**WYOMING STANDARD MANHOLE COVER AND
FLANGE BASE**

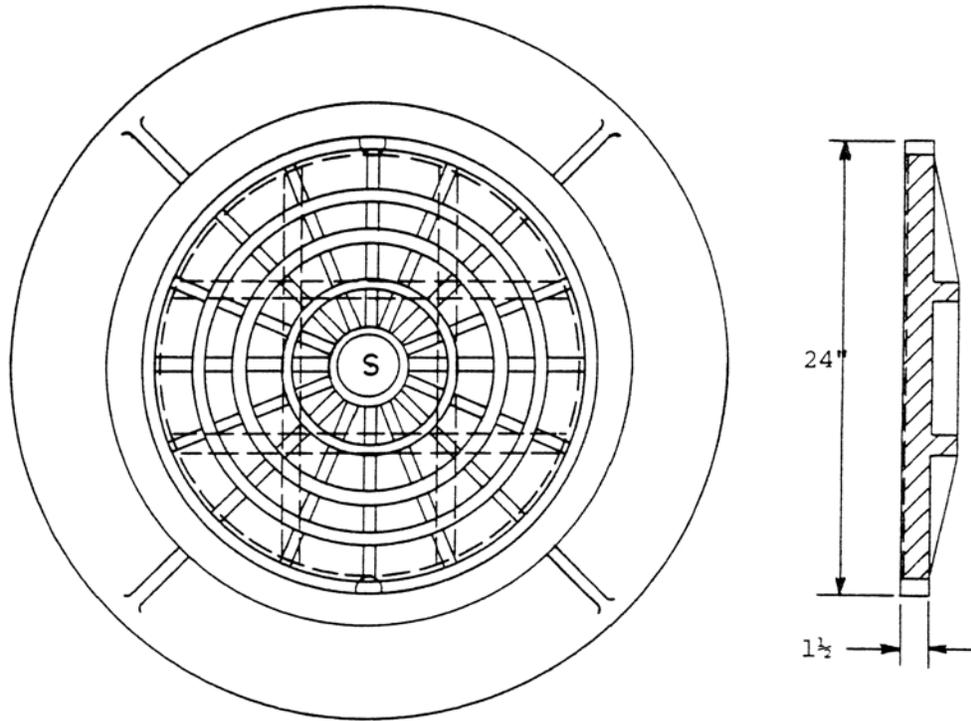
CITY OF WYOMING
ENGINEERING DEPARTMENT

**WYOMING STD. MANHOLE
COVER AND FLANGE**

DRAWN BY- ML
CHECKED BY-RH
DATE DRAWN- 8-22-2003
DATE REVISED- 2-9-2009

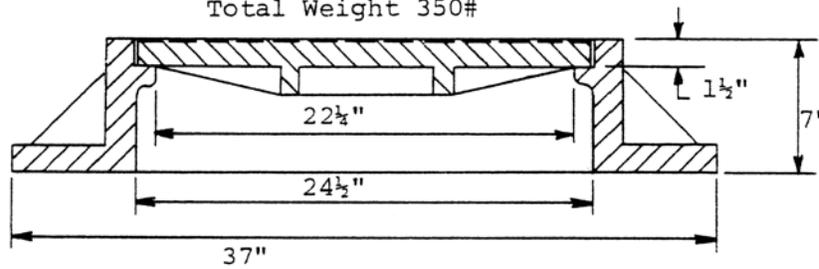
S-6

WYOMING STANDARD MANHOLE COVER AND FLANGE BASE



East Jordan 1120 or Approved Equal
HEAVY DUTY

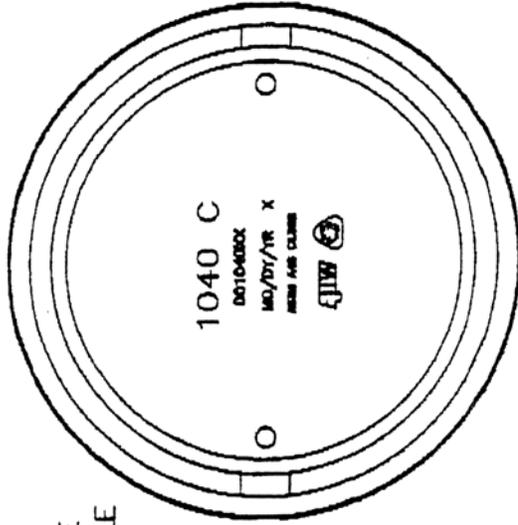
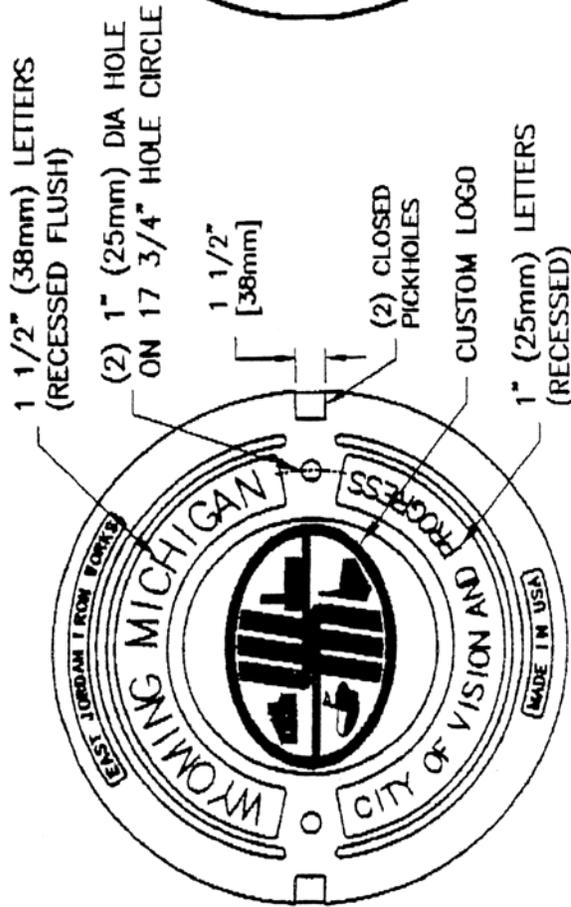
Type "C", 2 Hole Vent Cover
Total Weight 350#



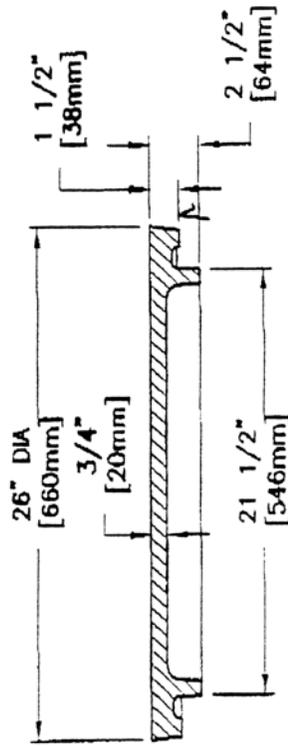
NOTE: Specify when ordering whether letters
"S" or "W" are to be cast on covers.

CITY OF WYOMING DEPARTMENT OF ENGINEERING	
WYOMING STD. MANHOLE COVER AND BASE FLANGE	
DRAWN BY	JZ.
CHECKED BY	<i>UB</i>
APPROVED BY	<i>S. Mink</i> S-6A
DATE	DEC. 29TH. 1976
Rev:	March, 1990

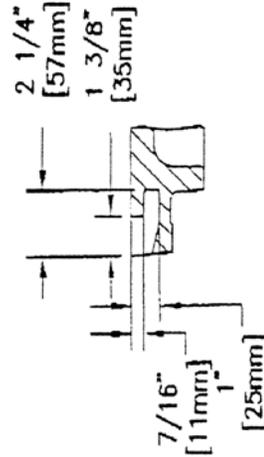
NOTE: 1040 LOGO COPE TO ACCEPT 1120 LOGOS & LETTERING TAGS



BOTTOM VIEW



CROSS SECTION



PICKHOLE DETAIL

**EAST JORDAN
 IRON WORKS, INC.**
 P.O. BOX 439
 EAST JORDAN, MI 49727
 1-800-874-4100
 FAX 231-536-4458

DRAWN	DATE
SMH	02/22/05
APPROVED	DATE

**SPECIAL
 LETTERED
 COVER**

PRODUCT NO.
NCR05-291

CATALOG NO.
1040C

REF. LOGO DRAWING
 001040XX

EST. WT.

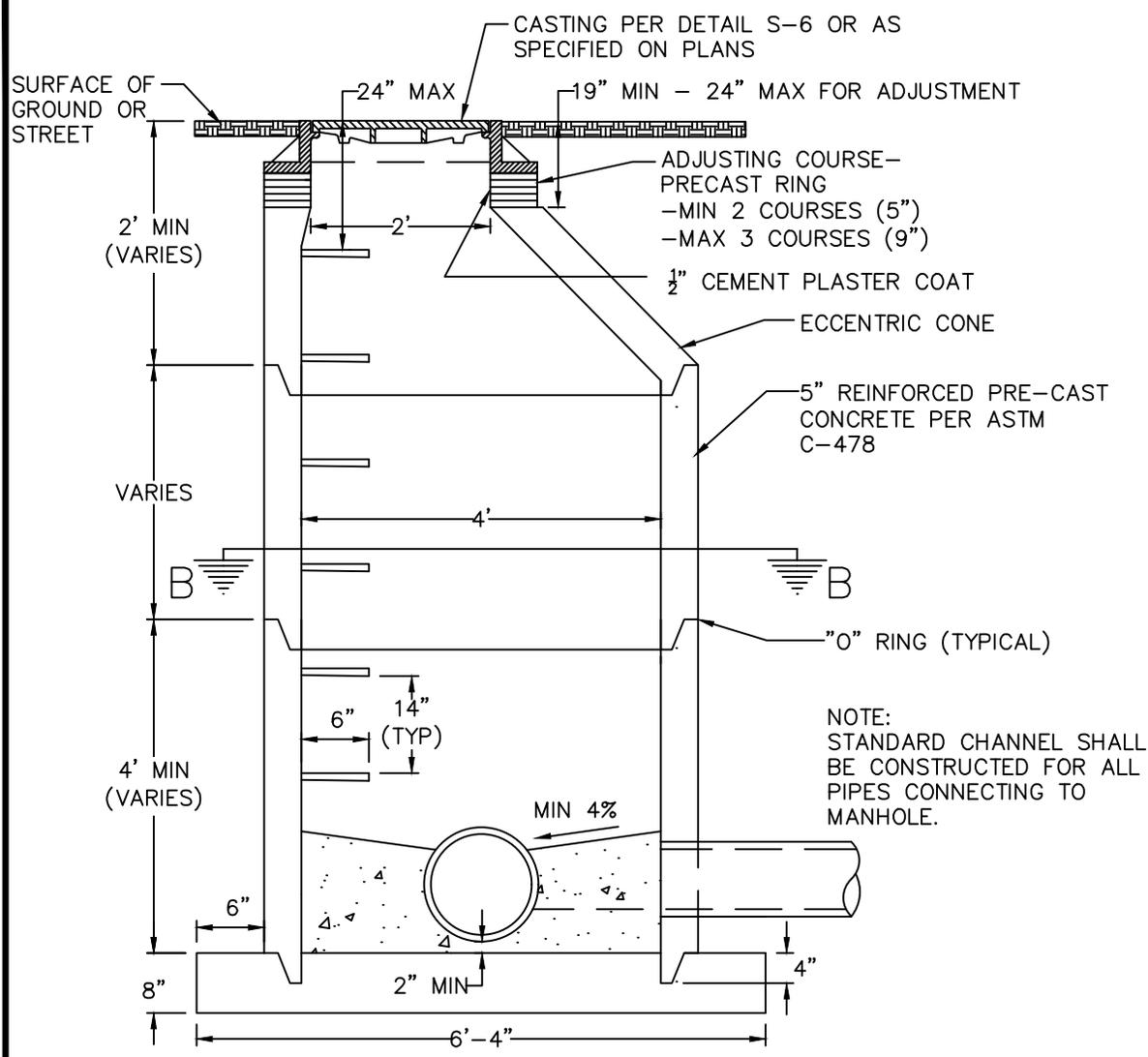
COVER: 150 LBS 68kg

CITY OF WYOMING
 DEPARTMENT OF ENGINEERING
 WYOMING STD. MANHOLE
 COVER AND BASE FLANGE

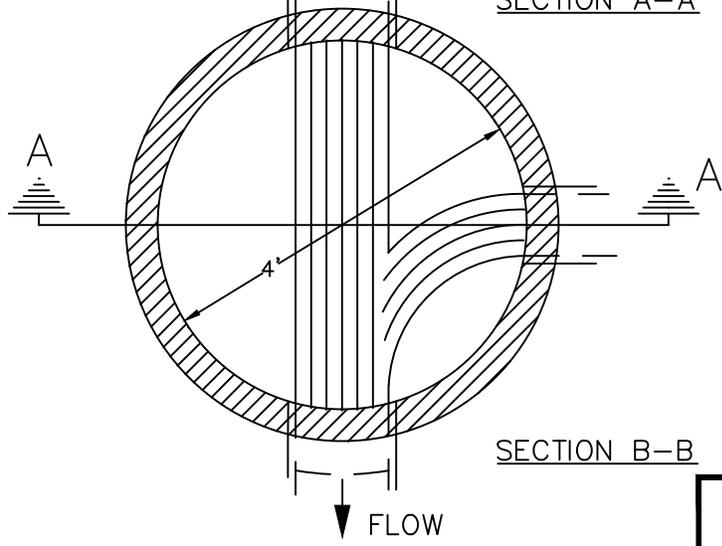
DRAWN BY _____
 CHECKED BY _____
 APPROVED BY _____
 DATE _____

S-6B

PRECAST SANITARY SEWER MANHOLE



SECTION A-A



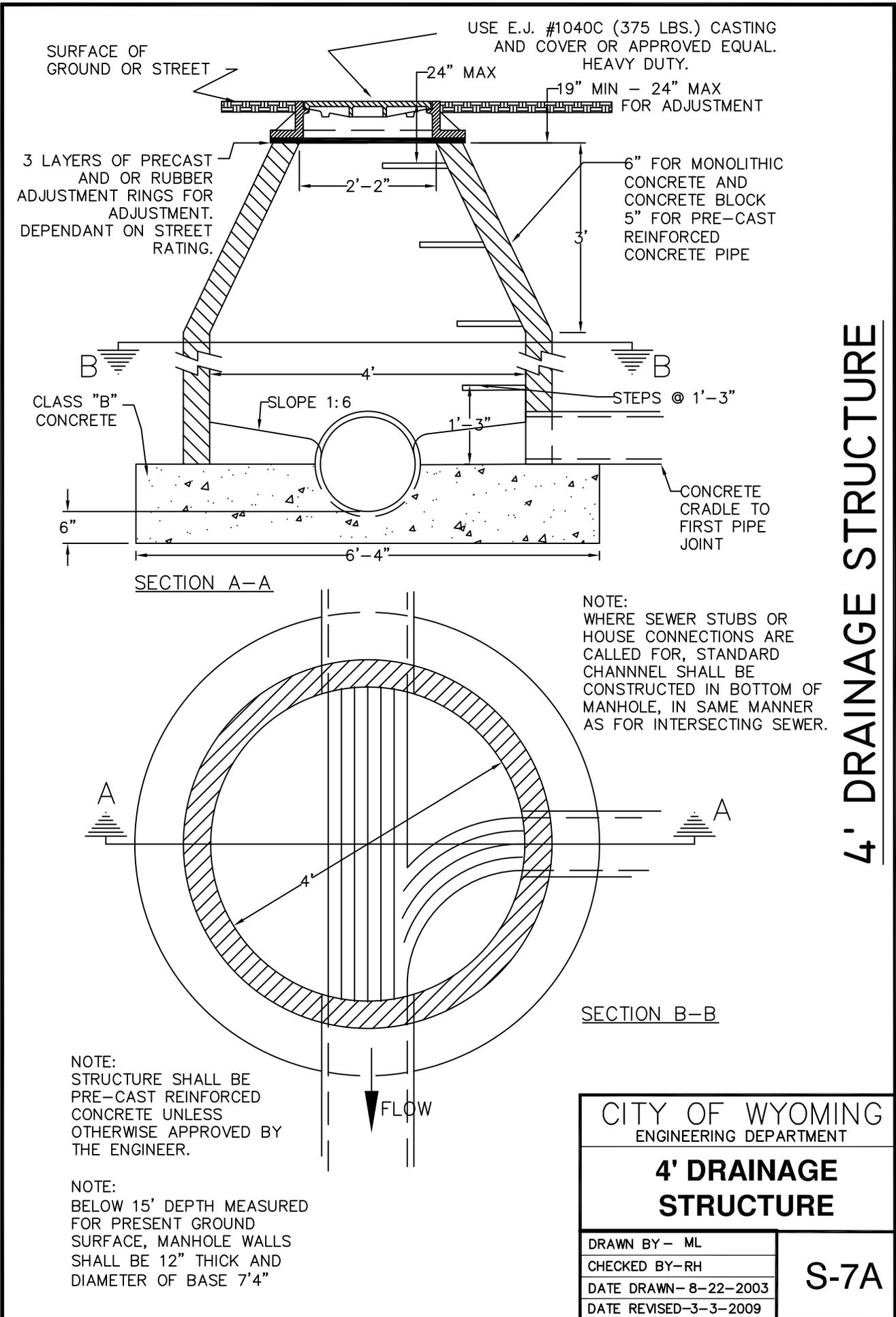
SECTION B-B

(IN HIGH WATER TABLE AREAS AN APPROVED WATERPROOFING SHALL BE APPLIED TO THE OUTSIDE OF THE MANHOLE)

NOTE:

- WHERE SEWER PIPE IS JOINED INTO MH, USE FLEXIBLE WATER TIGHT CONNECTION SUCH AS A-LOK, KORNSEAL OR APPROVED EQUAL
- BELOW 15' DEPTH MEASURED FROM PRESENT GROUND SURFACE, MANHOLE WALLS SHALL BE 12" THICK AND DIAMETER OF BASE 7'4"

CITY OF WYOMING ENGINEERING DEPARTMENT	
PRE-CAST SANITARY SEWER MANHOLE	
DRAWN BY- KJM	S-7
CHECKED BY- JO	
DATE DRAWN- 5-2016	
DATE REVISED- 5-2016	



4' DRAINAGE STRUCTURE

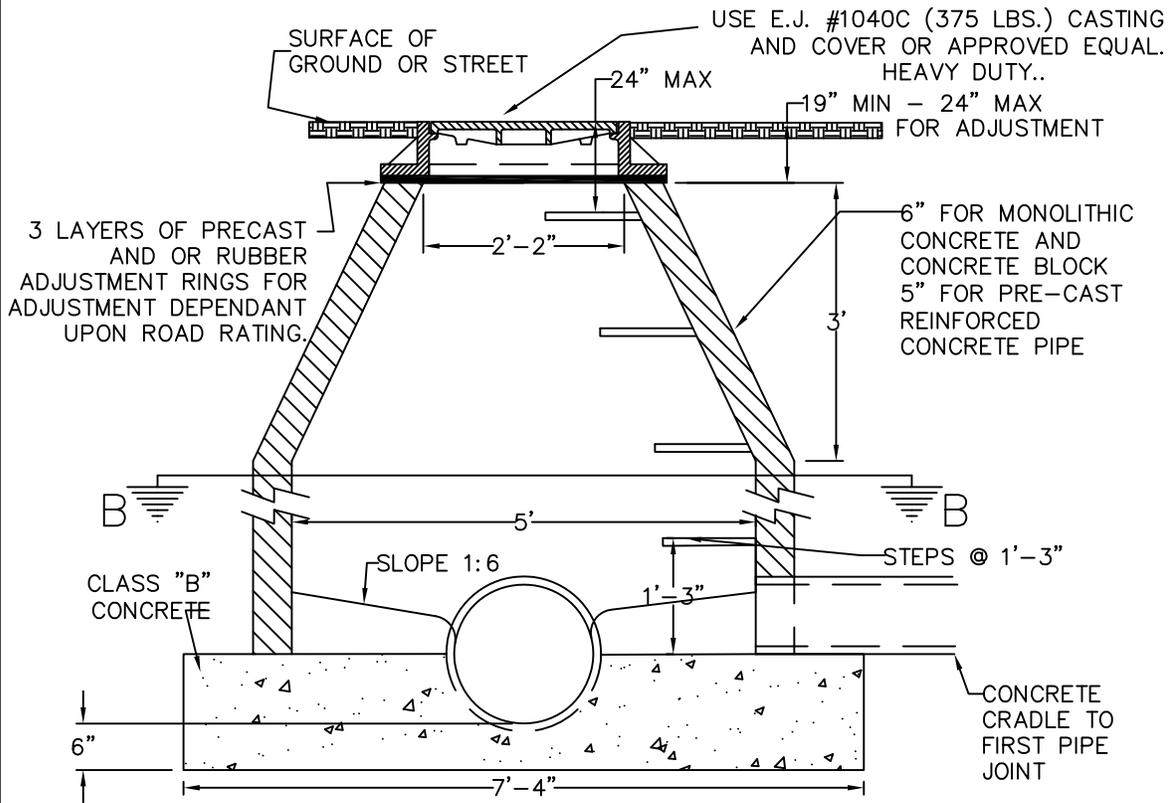
NOTE:
WHERE SEWER STUBS OR HOUSE CONNECTIONS ARE CALLED FOR, STANDARD CHANNNEL SHALL BE CONSTRUCTED IN BOTTOM OF MANHOLE, IN SAME MANNER AS FOR INTERSECTING SEWER.

NOTE:
STRUCTURE SHALL BE PRE-CAST REINFORCED CONCRETE UNLESS OTHERWISE APPROVED BY THE ENGINEER.

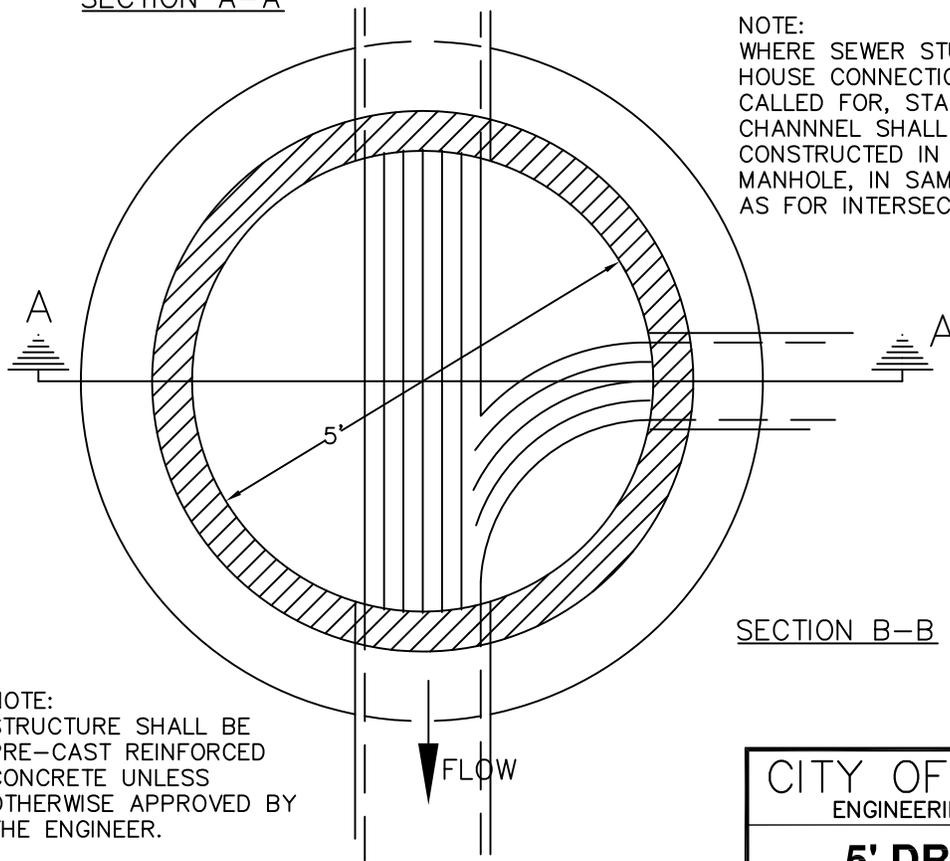
NOTE:
BELOW 15' DEPTH MEASURED FOR PRESENT GROUND SURFACE, MANHOLE WALLS SHALL BE 12" THICK AND DIAMETER OF BASE 7'4"

SECTION B-B

CITY OF WYOMING ENGINEERING DEPARTMENT	
4' DRAINAGE STRUCTURE	
DRAWN BY - ML	S-7A
CHECKED BY - RH	
DATE DRAWN - 8-22-2003	
DATE REVISED - 3-3-2009	



SECTION A-A



NOTE:
WHERE SEWER STUBS OR
HOUSE CONNECTIONS ARE
CALLED FOR, STANDARD
CHANNEL SHALL BE
CONSTRUCTED IN BOTTOM OF
MANHOLE, IN SAME MANNER
AS FOR INTERSECTING SEWER.

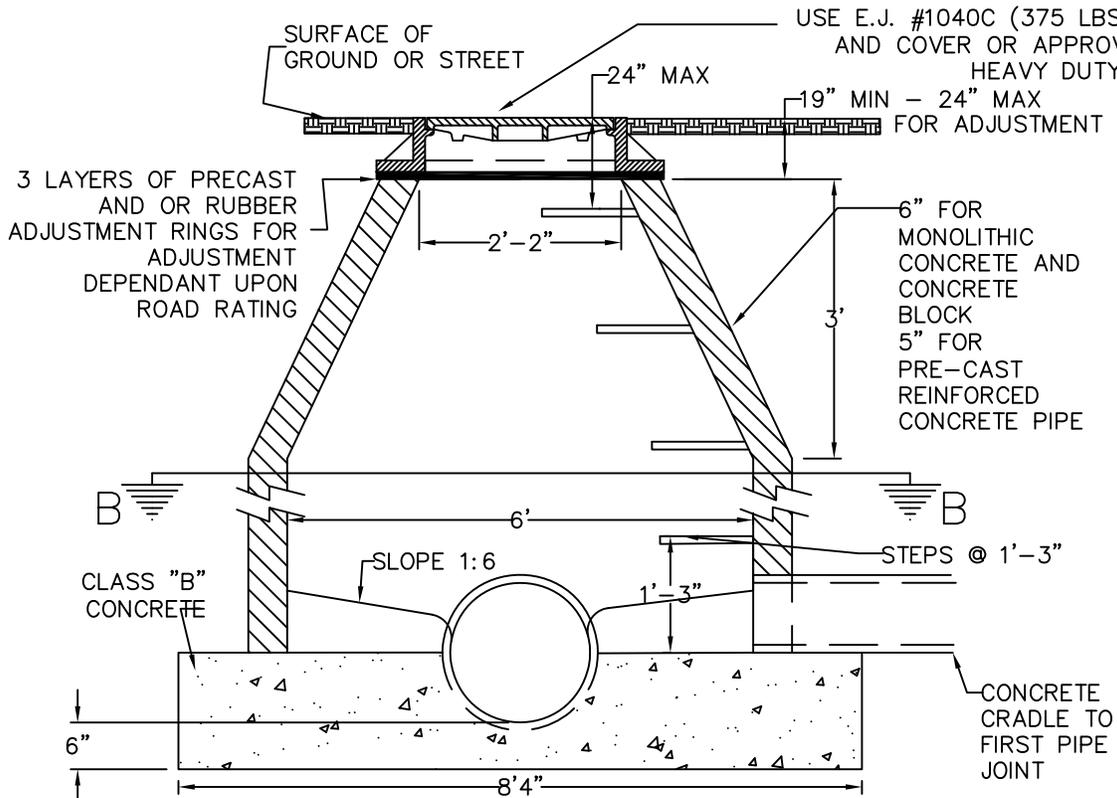
SECTION B-B

NOTE:
STRUCTURE SHALL BE
PRE-CAST REINFORCED
CONCRETE UNLESS
OTHERWISE APPROVED BY
THE ENGINEER.

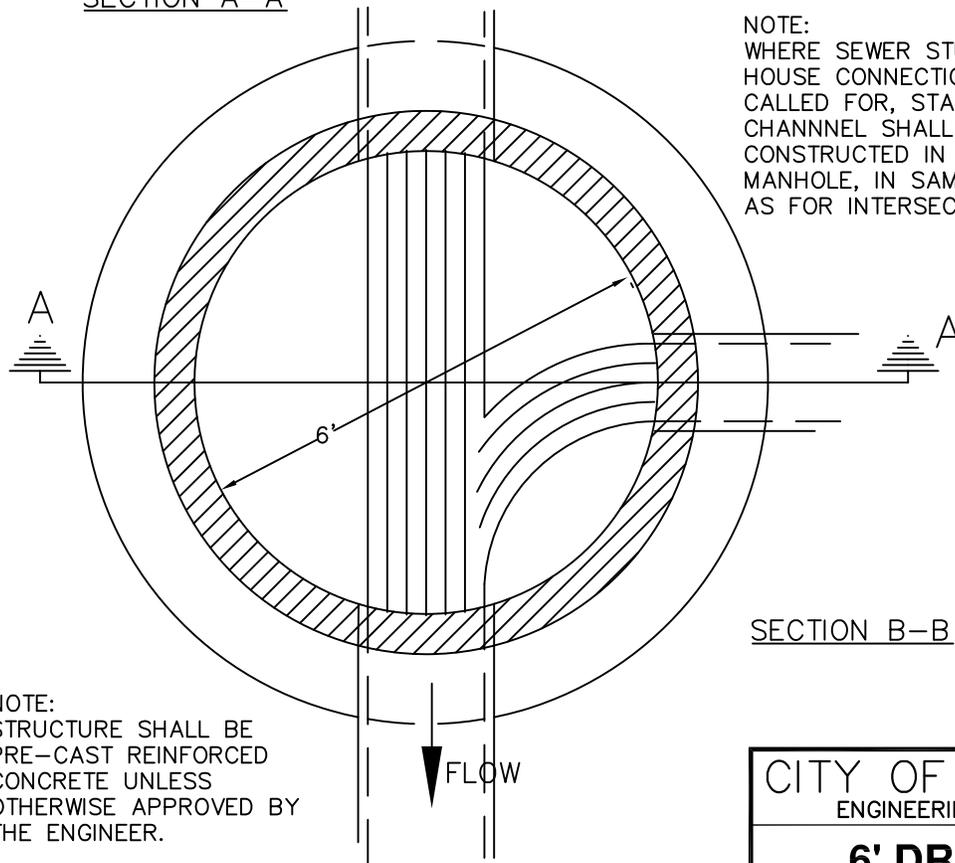
NOTE:
BELOW 15' DEPTH MEASURED
FOR PRESENT GROUND
SURFACE, MANHOLE WALLS
SHALL BE 12" THICK AND
DIAMETER OF BASE 8'4"

5' DRAINAGE STRUCTURE

CITY OF WYOMING ENGINEERING DEPARTMENT	
5' DRAINAGE STRUCTURE	
DRAWN BY- ML	S-7B
CHECKED BY- RH	
DATE DRAWN- 8-22-2003	
DATE REVISED 3-3-2009	



SECTION A-A



NOTE:
WHERE SEWER STUBS OR HOUSE CONNECTIONS ARE CALLED FOR, STANDARD CHANNEL SHALL BE CONSTRUCTED IN BOTTOM OF MANHOLE, IN SAME MANNER AS FOR INTERSECTING SEWER.

NOTE:
STRUCTURE SHALL BE PRE-CAST REINFORCED CONCRETE UNLESS OTHERWISE APPROVED BY THE ENGINEER.

NOTE:
BELOW 15' DEPTH MEASURED FOR PRESENT GROUND SURFACE, MANHOLE WALLS SHALL BE 12" THICK AND DIAMETER OF BASE 9'4"

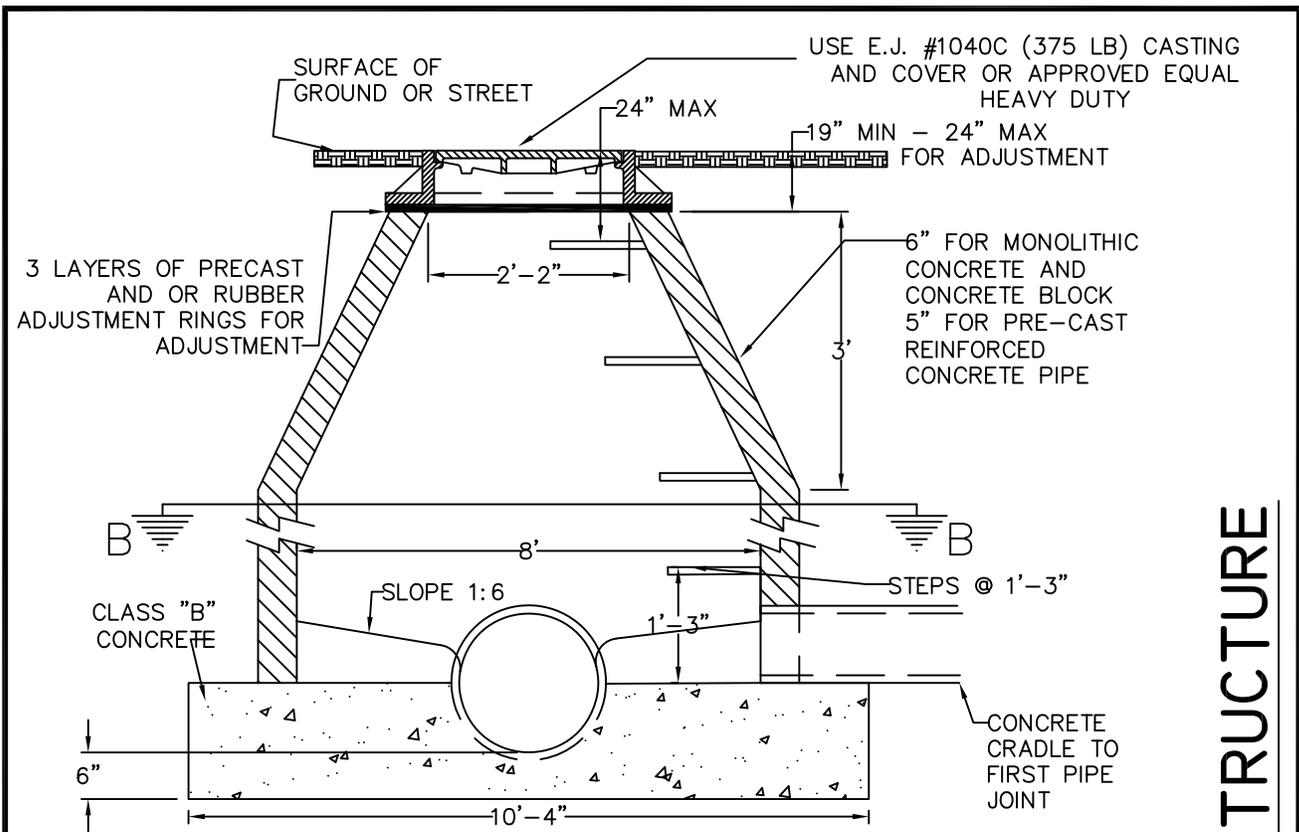
6' DRAINAGE STRUCTURE

CITY OF WYOMING
ENGINEERING DEPARTMENT

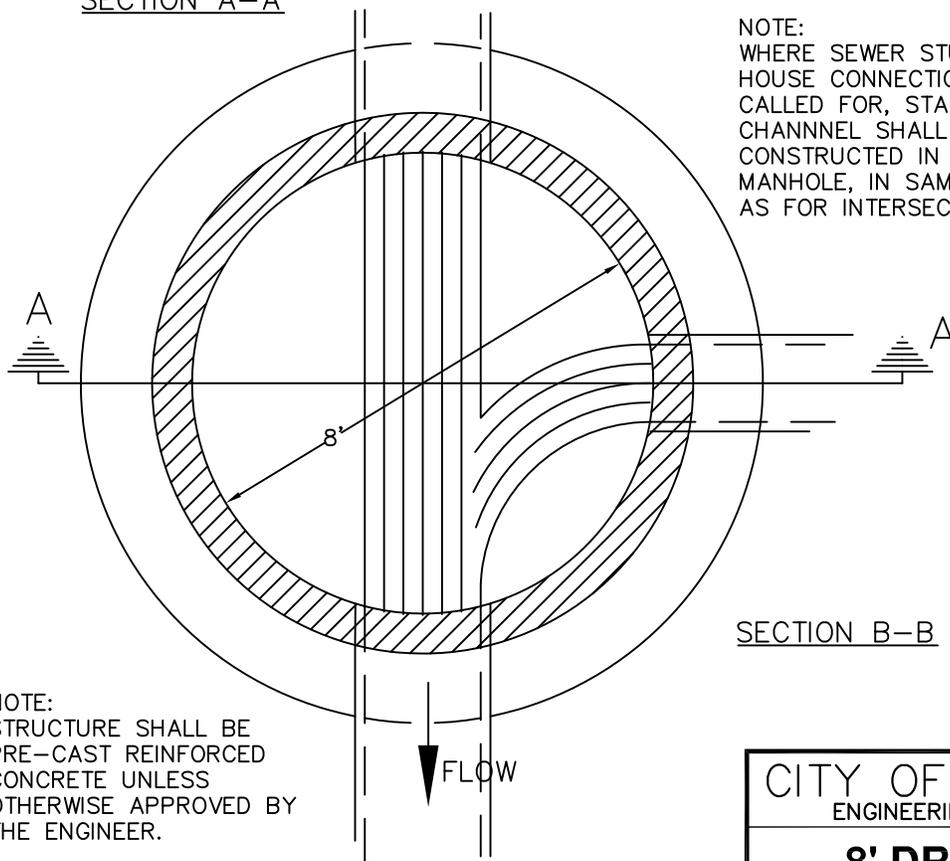
6' DRAINAGE STRUCTURE

DRAWN BY-ML
CHECKED BY-RH
DATE DRAWN- 8-22-2003
DATE REVISED-3-3-2009

S-7C



SECTION A-A



NOTE:
WHERE SEWER STUBS OR HOUSE CONNECTIONS ARE CALLED FOR, STANDARD CHANNEL SHALL BE CONSTRUCTED IN BOTTOM OF MANHOLE, IN SAME MANNER AS FOR INTERSECTING SEWER.

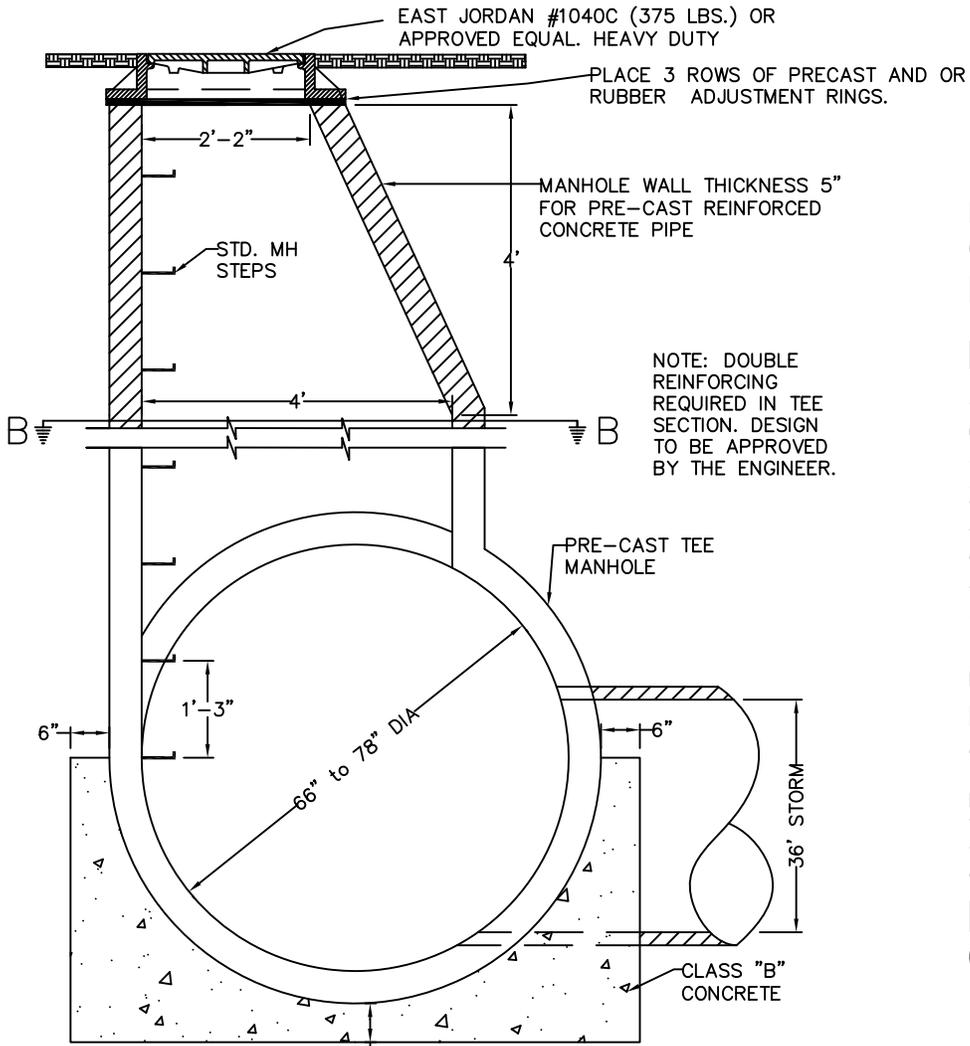
SECTION B-B

NOTE:
STRUCTURE SHALL BE PRE-CAST REINFORCED CONCRETE UNLESS OTHERWISE APPROVED BY THE ENGINEER.

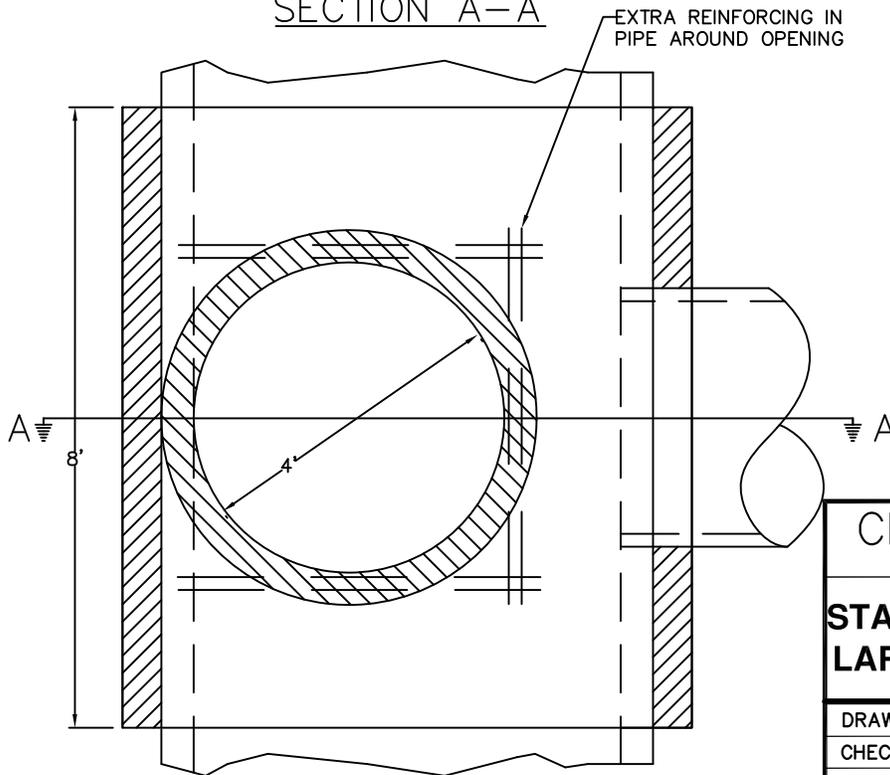
NOTE:
BELOW 15' DEPTH MEASURED FOR PRESENT GROUND SURFACE, MANHOLE WALLS SHALL BE 12" THICK AND DIAMETER OF BASE 11'4"

8' DRAINAGE STRUCTURE

CITY OF WYOMING ENGINEERING DEPARTMENT	
8' DRAINAGE STRUCTURE	
DRAWN BY- ML	S-7E
CHECKED BY -RH	
DATE DRAWN - 8-22-2003	
DATE REVISED - 2-9-2009	



SECTION A-A



SECTION B-B

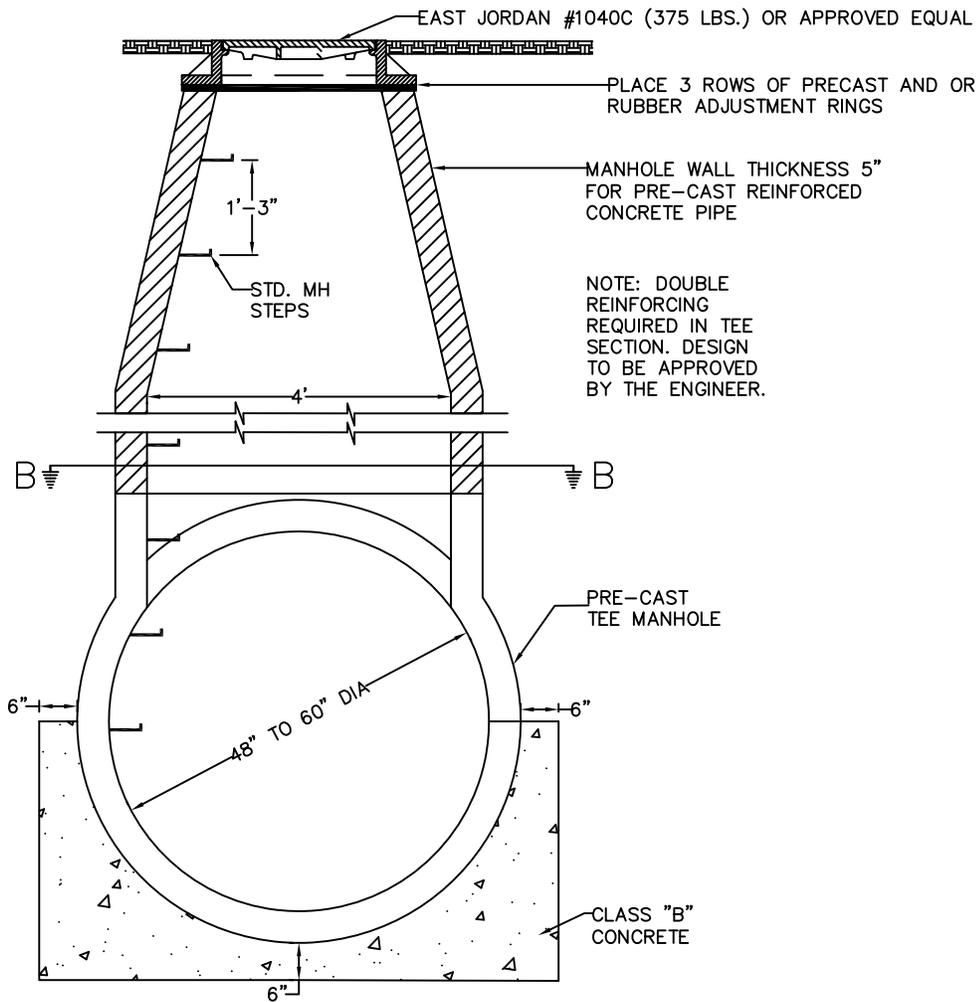
STANDARD MANHOLE FOR LARGE DIAMETER SEWER

CITY OF WYOMING
ENGINEERING DEPARTMENT

STANDARD MANHOLE FOR LARGE DIAMETER SEWER

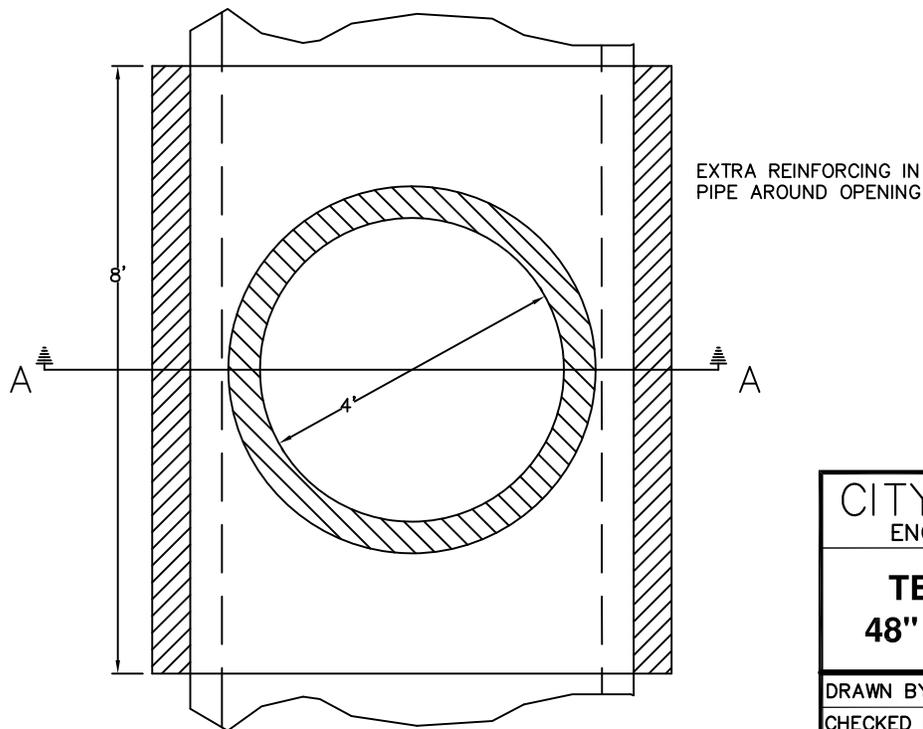
DRAWN BY - ML
CHECKED BY - RH
DATE DRAWN - 9-3-2003
DATE REVISED - 3-9-2009

S-8



NOTE: DOUBLE REINFORCING REQUIRED IN TEE SECTION. DESIGN TO BE APPROVED BY THE ENGINEER.

SECTION A-A



SECTION B-B

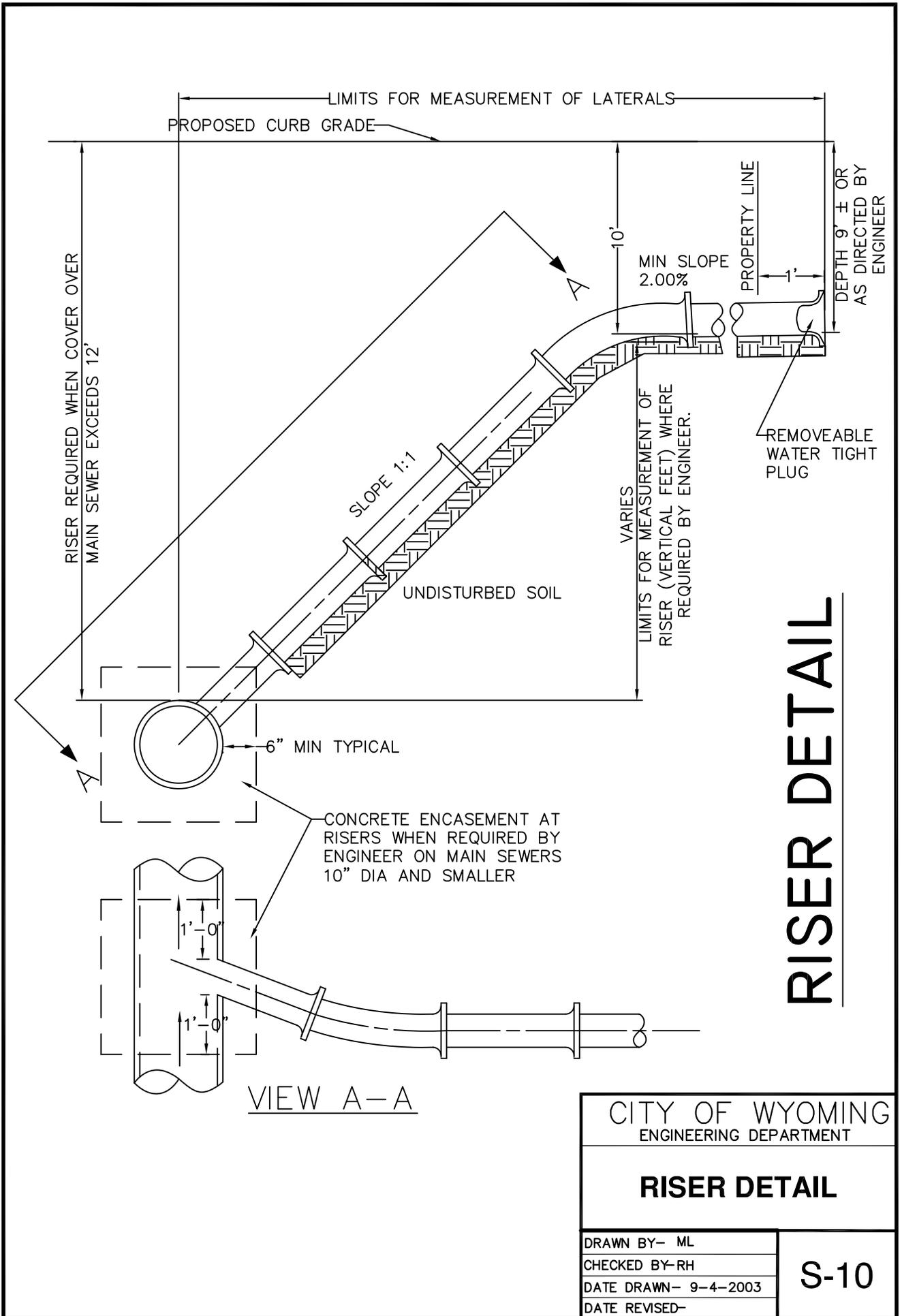
TEE MANHOLE FOR 48" TO 60" DIA SEWER

CITY OF WYOMING
ENGINEERING DEPARTMENT

**TEE MANHOLE FOR
48" TO 60" DIA SEWER**

DRAWN BY - ML
CHECKED BY - RH
DATE DRAWN - 9-3-2003
DATE REVISED - 3-9-2009

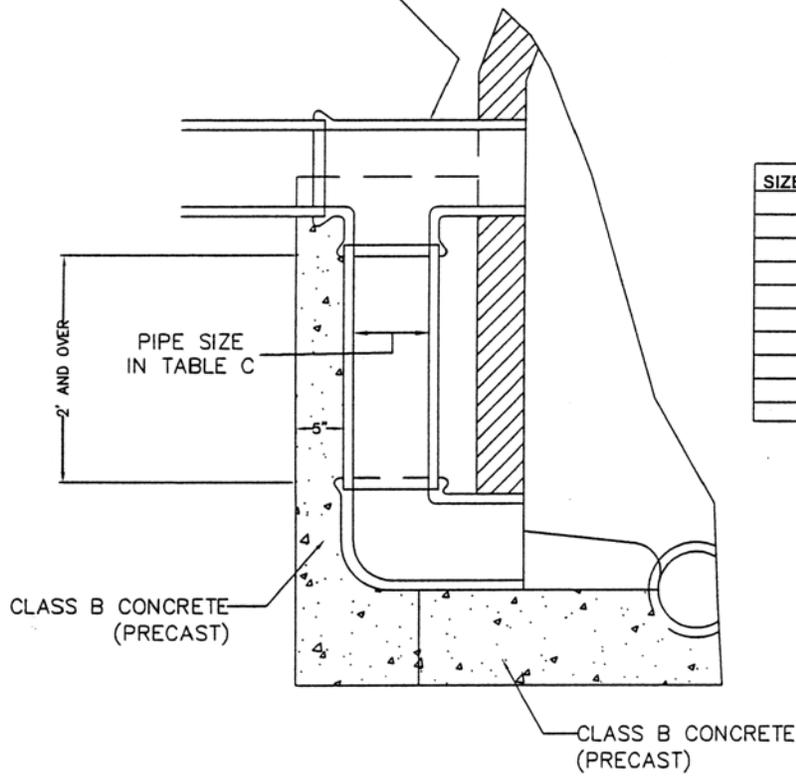
S-9



RISER DETAIL

CITY OF WYOMING ENGINEERING DEPARTMENT	
RISER DETAIL	
DRAWN BY- ML	S-10
CHECKED BY- RH	
DATE DRAWN- 9-4-2003	
DATE REVISED-	

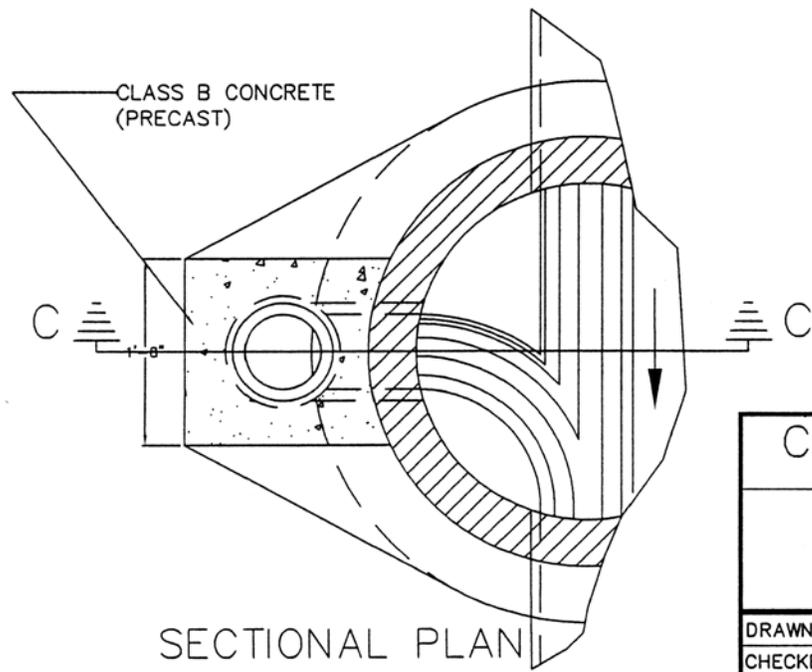
PIPE SIZE IN TABLE C
TEE IN LATERAL SEWER
ENCASED IN PRECAST
CONCRETE BELOW
SPRING LINE.



SECTION C-C

TABLE C

SIZE OF SEWER	DROP CONNECTION
8"	8"
10"	8"
12"	8"
15"	10"
18"	10"
21"	12"
24"	12"
27"	12"
30"	15"
36"	15"

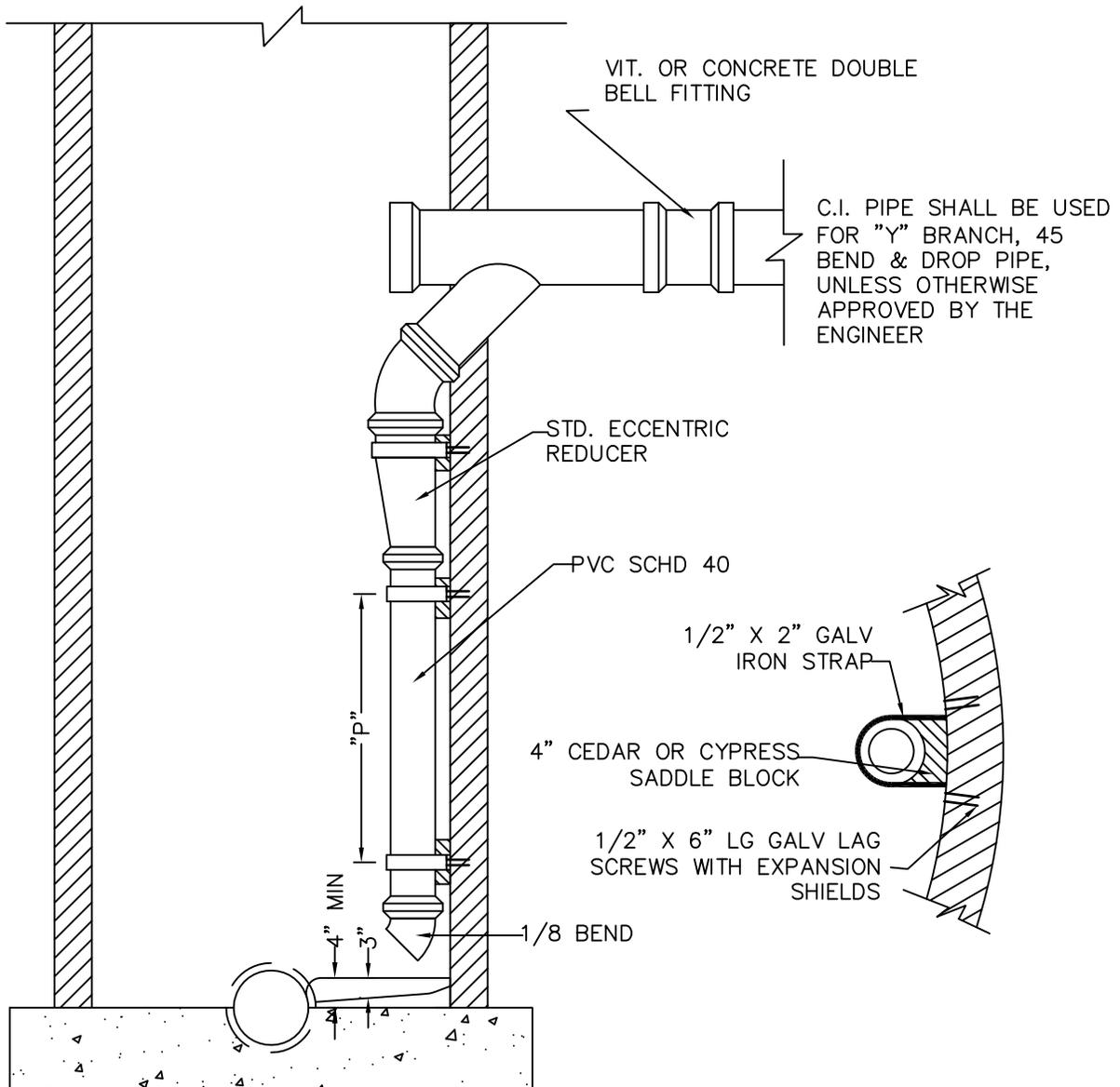


SECTIONAL PLAN

STANDARD DROP CONNECTION

CITY OF WYOMING ENGINEERING DEPARTMENT	
STANDARD DROP CONNECTION	
DRAWN BY- ML/NC	S-11
CHECKED BY- RH/CC	
DATE DRAWN- 9-4-2003	
DATE REVISED- 2-10-2006	

DIAMETER OF SEWER	SIZE OF Y BRANCH	SIZE OF REDUCER	DIAMETER OF DROP PIPE
8"	8" X 6"	6" X 4"	4"
6"	6" X 4"	NONE	4"



INSIDE DROP CONNECTION

SEWERS MINIMUM DROP = 3'-6"

P=5' MAX. SPACING WITH AT LEAST 3 STRAPS USED FOR EACH INSTALLATION.

THE FORMING OF A CHANNEL IN THE BENCH OF AN EXISTING MANHOLE WILL BE REQUIRED UNLESS APPROVED BY THE ENGINEER.

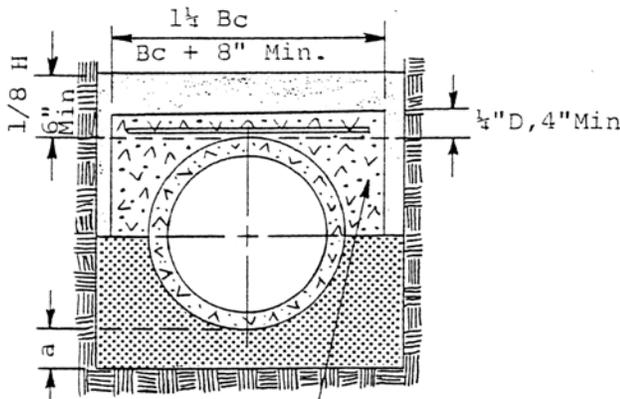
THE FORMING OF ANY CHANNEL MUST BE MADE AS DIRECTED BY THE ENGINEER.

CITY OF WYOMING
ENGINEERING DEPARTMENT

INSIDE DROP CONNECTION

DRAWN BY- ML
CHECKED BY-RH
DATE DRAWN- 9-5-2003
DATE REVISED-

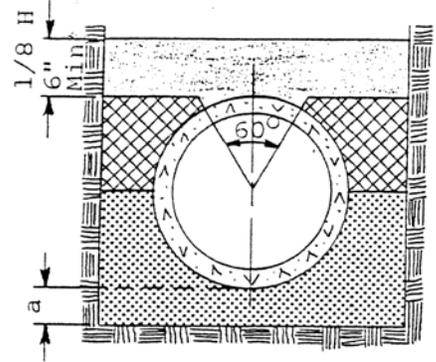
S-12



Load Factor
 Reinf., P 0.40%-3.5
 Reinf., P 1.00%-4.8
 Plain 2.8

Encasement may be poured to fill trench width.

CLASS A
ARCH ENCASEMENT



CLASS B-1
FIRST CLASS BEDDING
 Load Factor 1.9

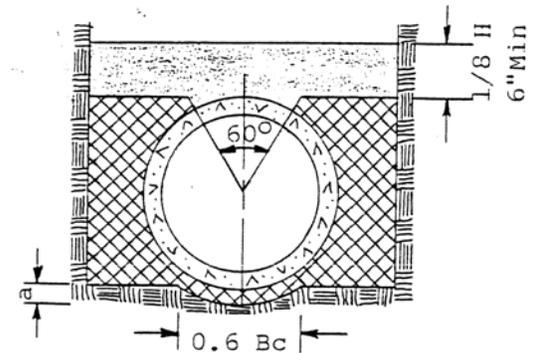
NOTES:

Granular fill to be crushed stone or pea gravel with not less than 95% passing $\frac{1}{2}$ " and not less than 95% to be retained on a #4; to be placed in not more than 6" layers and compacted by slicing with a shovel.

Tamped backfill shall be finely divided job excavated material free from debris, organic material, and stone, compacted to 95% maximum density in accordance with MDSH & T specifications for determination of maximum unit weights.

Granular fill may be substituted for all or part of tamped backfill.

Hand placed backfill shall be finely divided material free from debris and stone.



CLASS B
ORDINARY BEDDING
 Load Factor 1.9

LEGEND

- Bc Outside diameter of pipe
- H Backfill cover above top of pipe
- D Nominal pipe size
- a Fill below pipe (see table)
- p Ratio of the area of Steel to area of concrete at the Crown

- Hand placed backfill
- Tamped backfill
- Granular fill
- Concrete

TABLE OF FILL DEPTHS BELOW PIPE

D	a	a
	Min Soil	Min Rock
27" & smaller	3"	6"
30" to 60"	4"	9"
66" & larger	6"	12"

CITY OF WYOMING
 DEPARTMENT OF ENGINEERING

EMBEDMENTS FOR CONDUITS

DRAWN BY JZ.

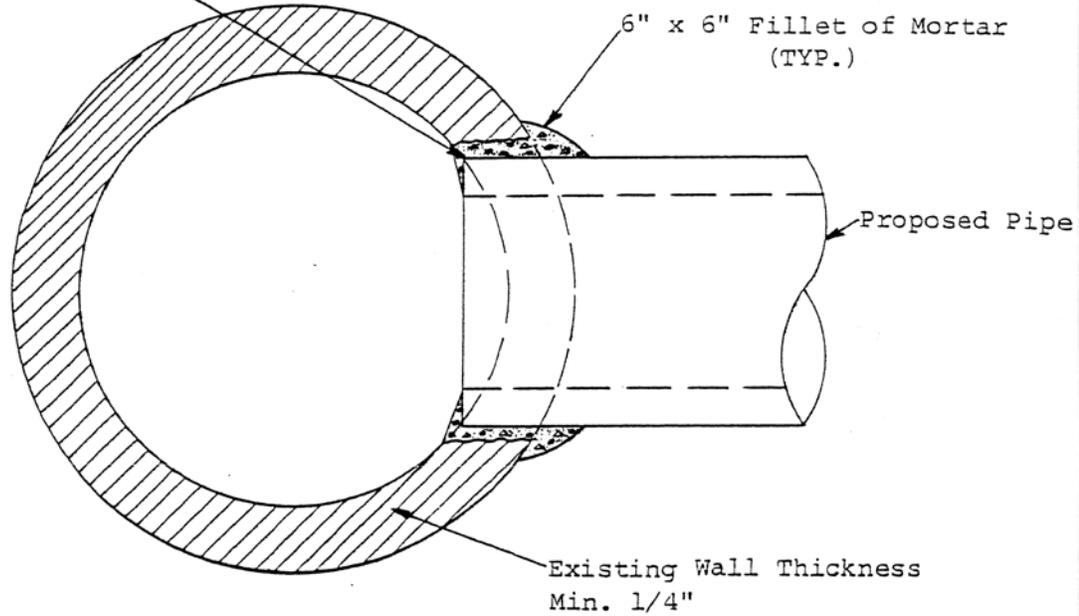
CHECKED BY MB

APPROVED BY S. Mink

DATE DEC. 29TH. 1976

Rev: March, 1990

NOTE:
Proposed pipe shall not extend
beyond existing pipe
inside wall.

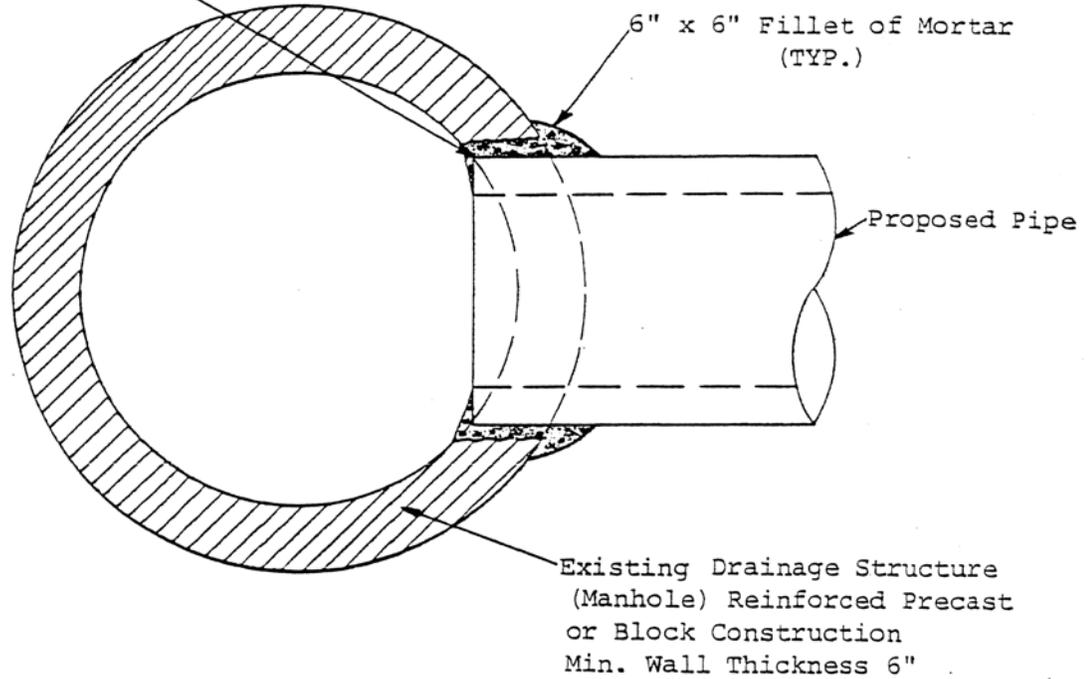


SECTION

Note: Size of Tap Equals
Proposed Pipe Size

CITY OF WYOMING DEPARTMENT OF ENGINEERING	
SEWER LINES (SEWER TAP)	
DRAWN BY	JZ.
CHECKED BY	<i>MA</i>
APPROVED BY	<i>D. Minko</i> S-14A
DATE	FEB. 3RD. 1977
Rev:	March, 1990

NOTE:
Proposed pipe shall not extend
beyond existing inside wall of manhole

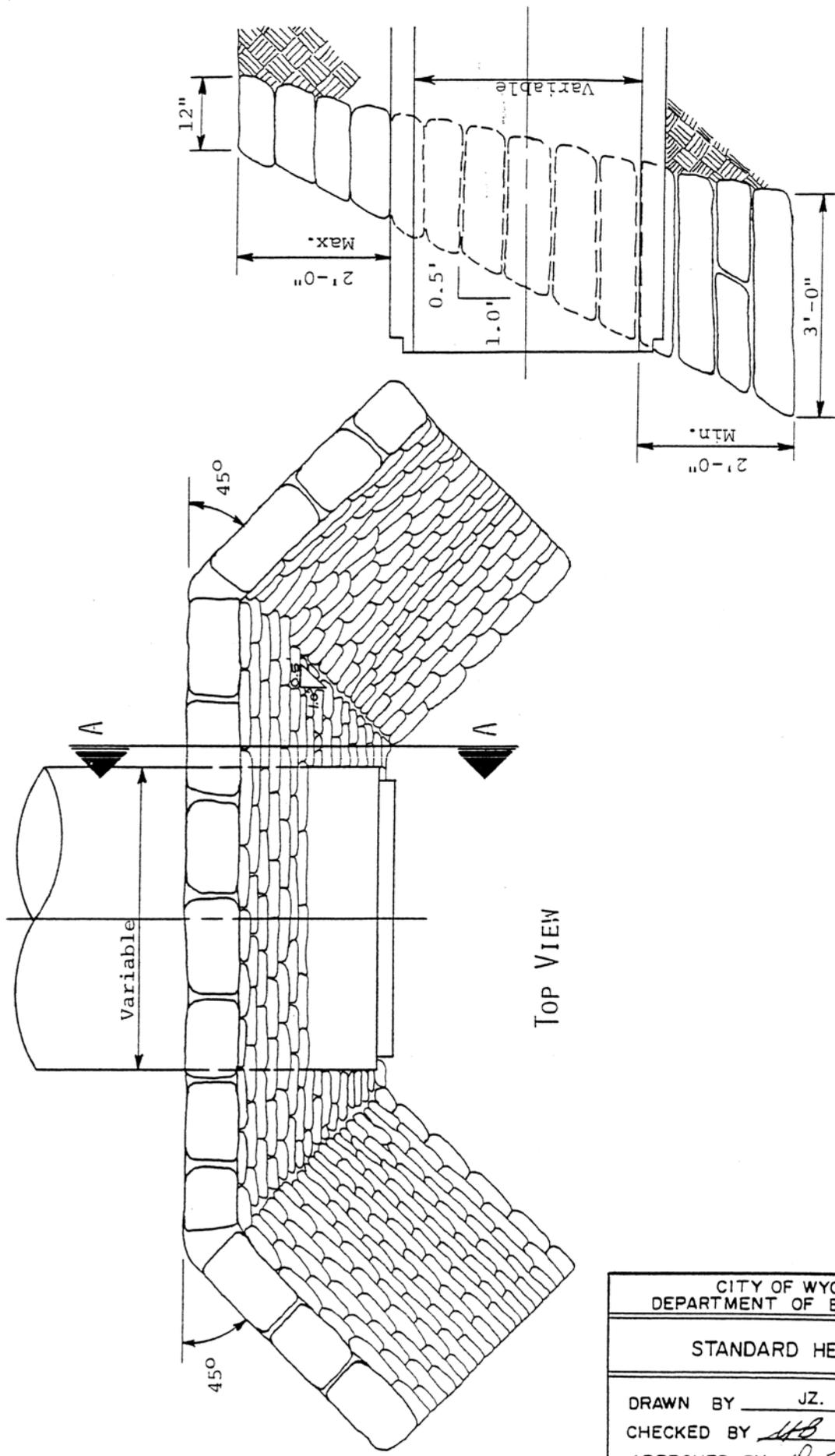


PLAN

Note: All Rechanneling required inside of Manhole will be included in Unit Price Bid for Sewer Cut-ins.

CITY OF WYOMING DEPARTMENT OF ENGINEERING	
MANHOLE(SEWER CUT-IN)	
DRAWN BY	JZ.
CHECKED BY	<i>MB</i>
APPROVED BY	<i>S. Minko</i>
DATE	FEB. 3RD. 1977
Rev:	March, 1990

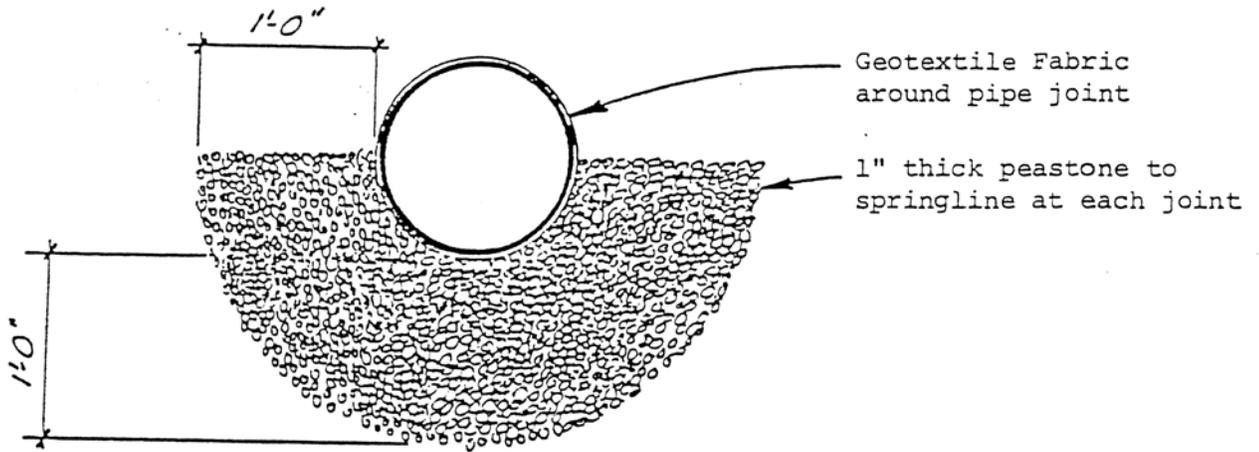
S-14B



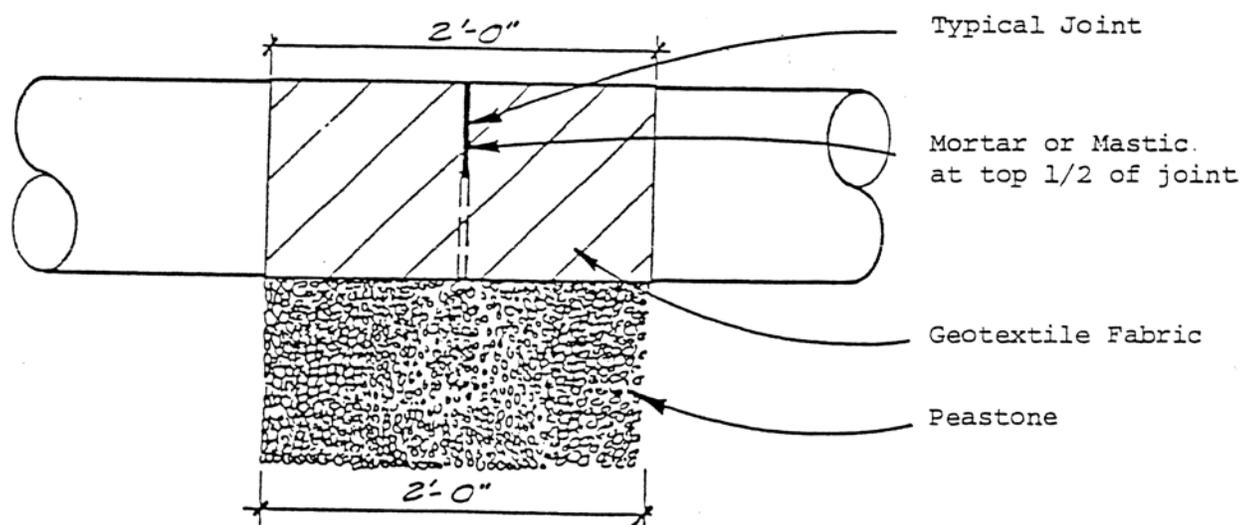
SECTION A-A

TOP VIEW

CITY OF WYOMING DEPARTMENT OF ENGINEERING	
STANDARD HEADWALL	
DRAWN BY	JZ.
CHECKED BY	<i>HB</i>
APPROVED BY	<i>S. Mink</i> S-15
DATE	JAN. 18TH. 1977
Rev:	March, 1990



END VIEW



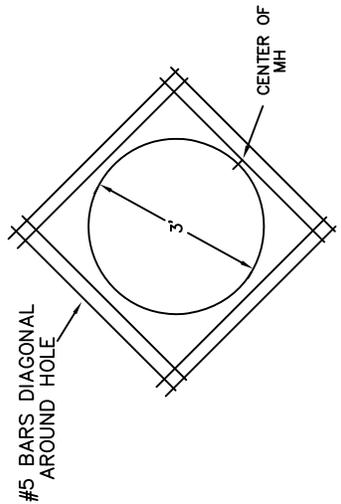
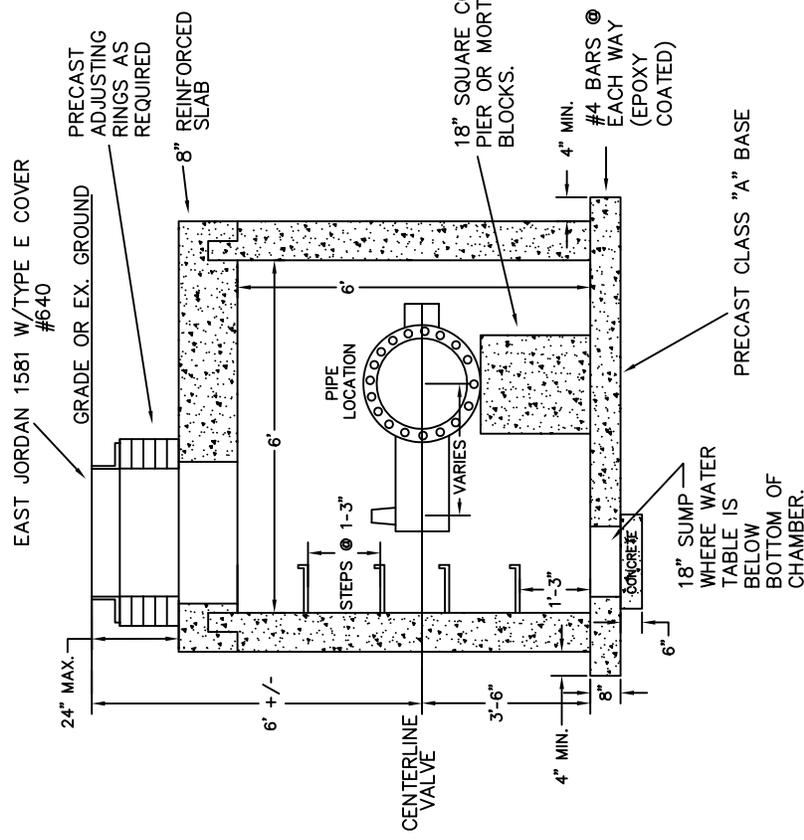
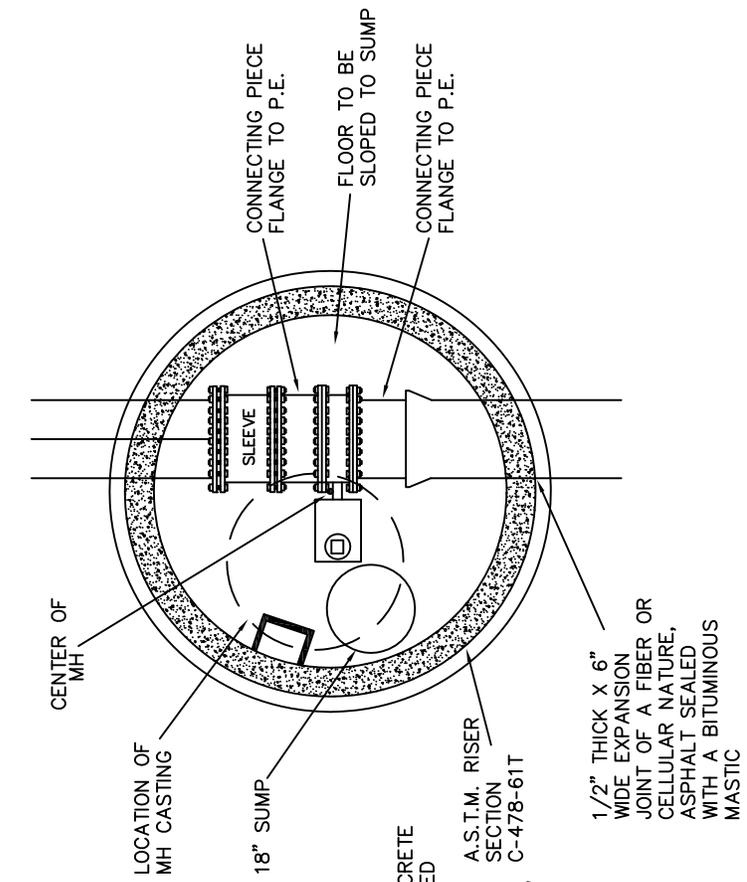
SIDE VIEW

OPEN JOINT DETAIL

NO SCALE

CITY OF WYOMING DEPARTMENT OF ENGINEERING	
OPEN JOINT DETAIL	
DRAWN BY. <u>J.Z.</u>	
CHECKED BY. _____	
APPROVED BY. <u>W.D.D.</u>	S-16
DATE <u>3-2-90</u>	

TOP VIEW



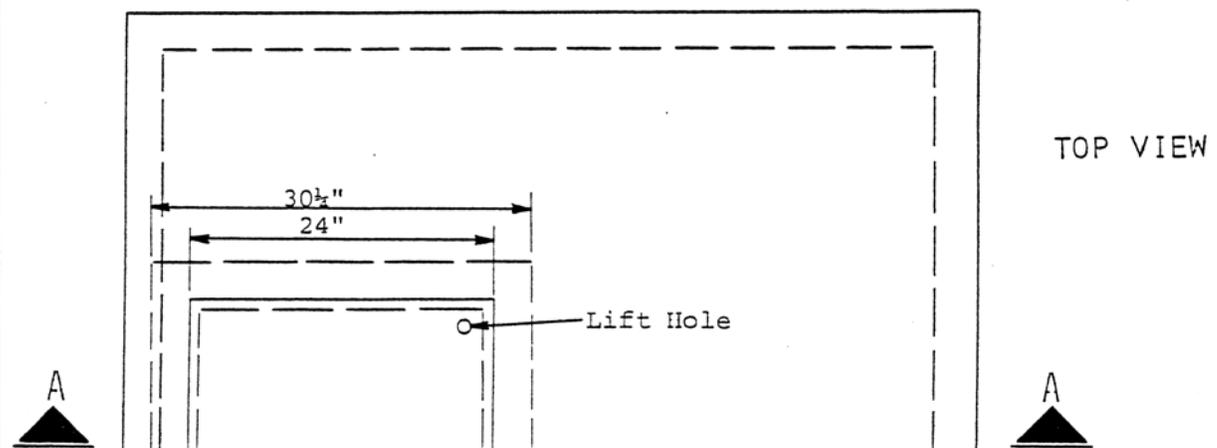
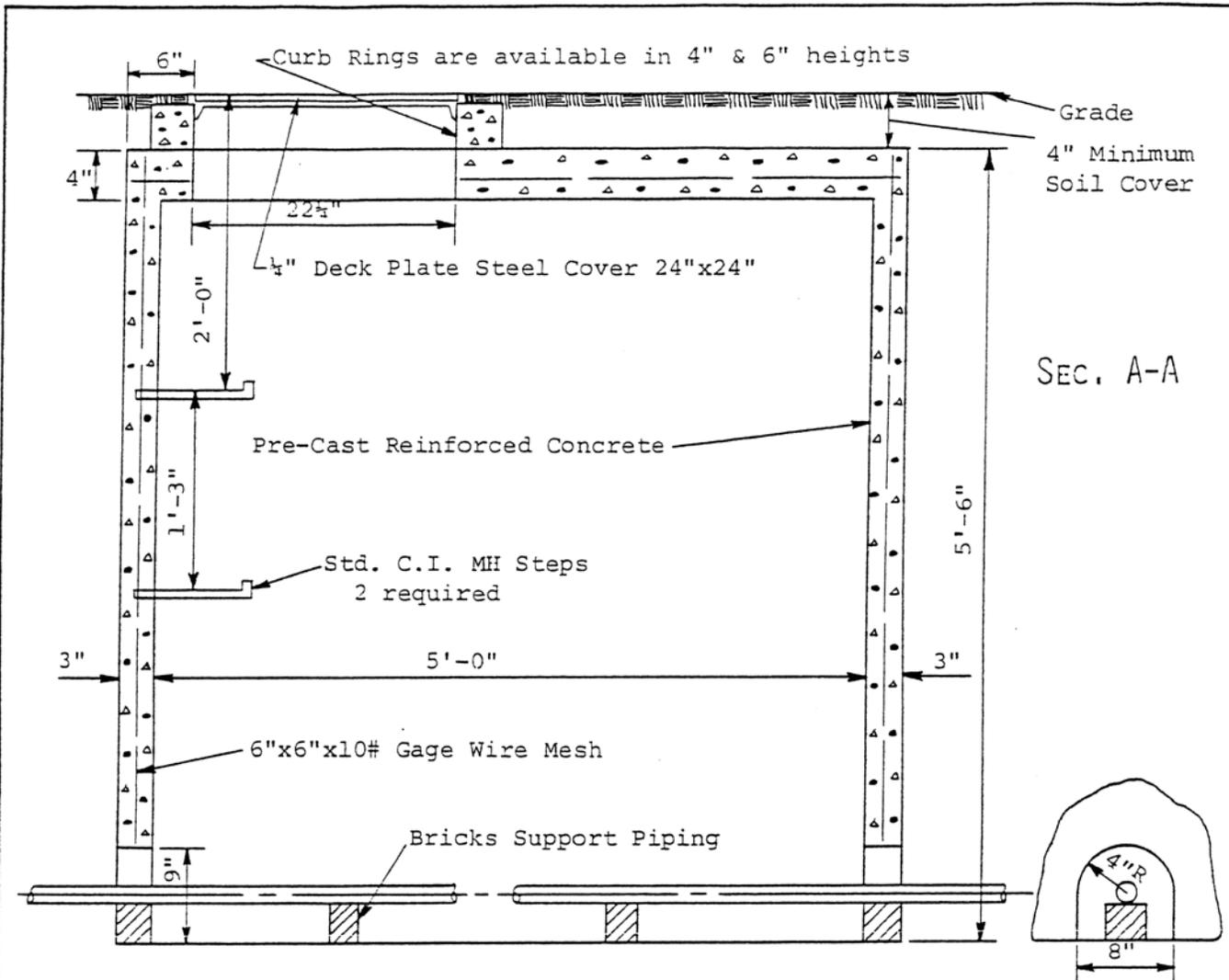
REINFORCING DETAIL AROUND HOLE IN TOP SLAB

CITY OF WYOMING
ENGINEERING DEPARTMENT

PRE-CAST VALVE CHAMBER FOR BUTTERFLY VALVES

DRAWN BY - TDK
CHECKED BY - RH
DATE DRAWN - 1-18-2006
REVISED DATE -

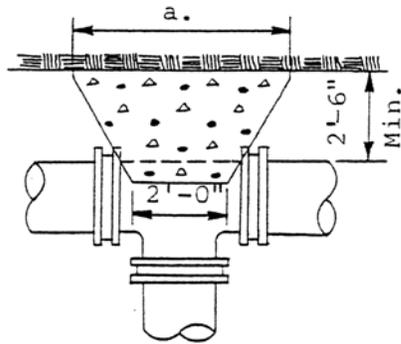
W-17



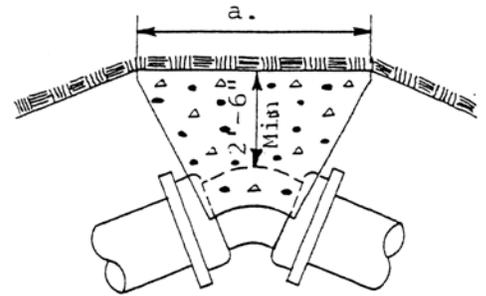
NOTE: Concrete Reinforced with
6"x6"x10# Gage Wire Mesh.

Not to be constructed
below driveways or
parking areas.

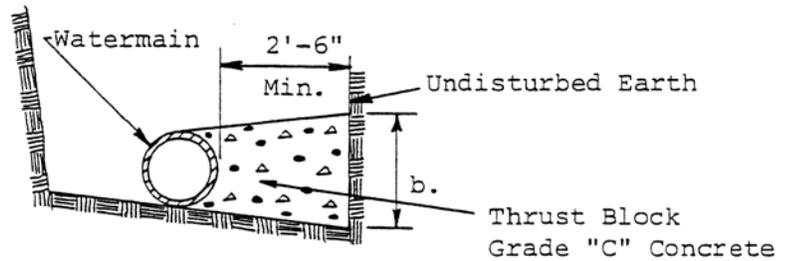
CITY OF WYOMING DEPARTMENT OF ENGINEERING	
STANDARD METER PIT	
DRAWN BY	JZ.
CHECKED BY	<i>MS</i>
APPROVED BY	<i>D. Mink</i> W-18
DATE	JAN. 17TH. 1977
Rev. March 1990	



TYPICAL TEE CONNECTION



TYPICAL BEND CONNECTION



TYPICAL SECTION THRU THRUST BLOCK

		a.	b.			a.	b.
4"	Tee	1'	1'	12"	Tee	3'	2'
	90°	1'	1'		90°	4'	2'
	45°	1'	1'		45°	3'	2'
	22½°	1'	1'		22½°	3'	1'
6"	Tee	2'	1'	16"	Tee	4'	2'
	90°	2'	1'		90°	5'	3'
	45°	2'	1'		45°	4'	2'
	22½°	2'	1'		22½°	3'	2'
8"	Tee	3'	1'	20"	Tee	5'	3'
	90°	3'	1'		90°	5'	4'
	45°	3'	1'		45°	5'	3'
	22½°	2'	1'		22½°	4'	2'
10"	Tee	3'	2'	24"	Tee	5'	4'
	90°	3'	2'		90°	6'	4'
	45°	3'	2'		45°	5'	3'
	22½°	3'	1'		22½°	4'	2'

CITY OF WYOMING
DEPARTMENT OF ENGINEERING

THRUST BLOCK DETAILS

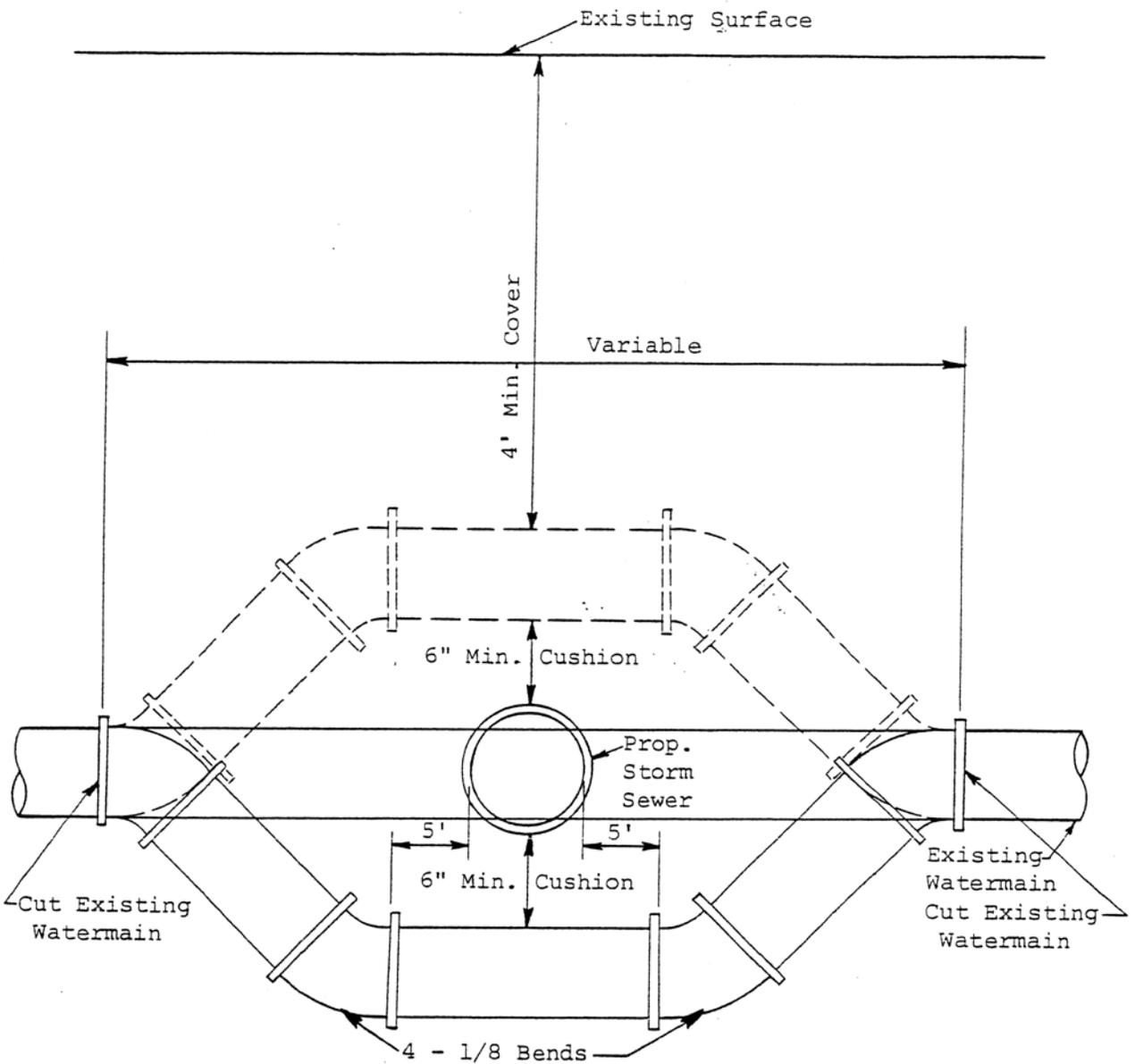
DRAWN BY JZ.

CHECKED BY MS

APPROVED BY S. Mink W-19

DATE MARCH 1ST 1977

Rev. March 1990

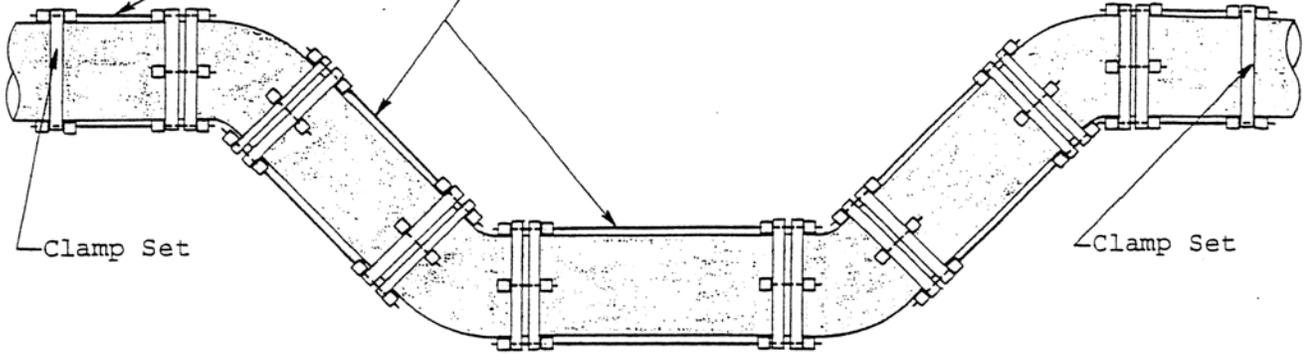


Note:

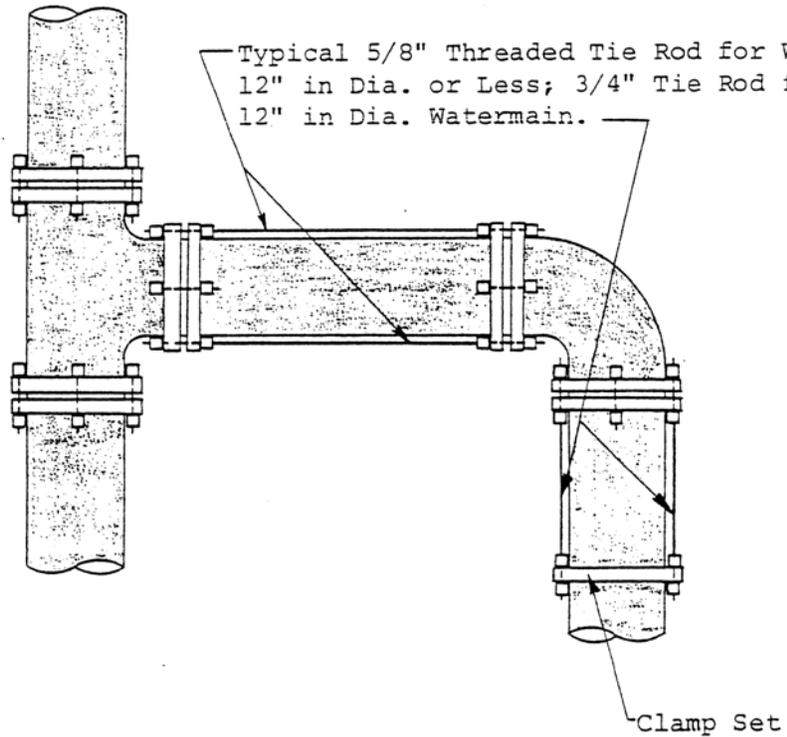
Watermain must be rodded for thrust restraint.
 (See W-21 for Detail)

CITY OF WYOMING DEPARTMENT OF ENGINEERING	
WM. RELOCATION DETAIL	
DRAWN BY	JZ.
CHECKED BY	<i>HB</i>
APPROVED BY	<i>D. Mink</i> W-20
DATE	JAN. 17TH. 1977
Rev:	March, 1990

Typical 5/8" Threaded Tie Rod for Watermain
12" in Dia. or Less; 3/4" Tie Rod for over
12" in Dia. Watermain.



Typical 5/8" Threaded Tie Rod for Watermain
12" in Dia. or Less; 3/4" Tie Rod for over
12" in Dia. Watermain.



CITY OF WYOMING
DEPARTMENT OF ENGINEERING

WATERMAIN TIE RODS
FOR THRUST RESTRAINT

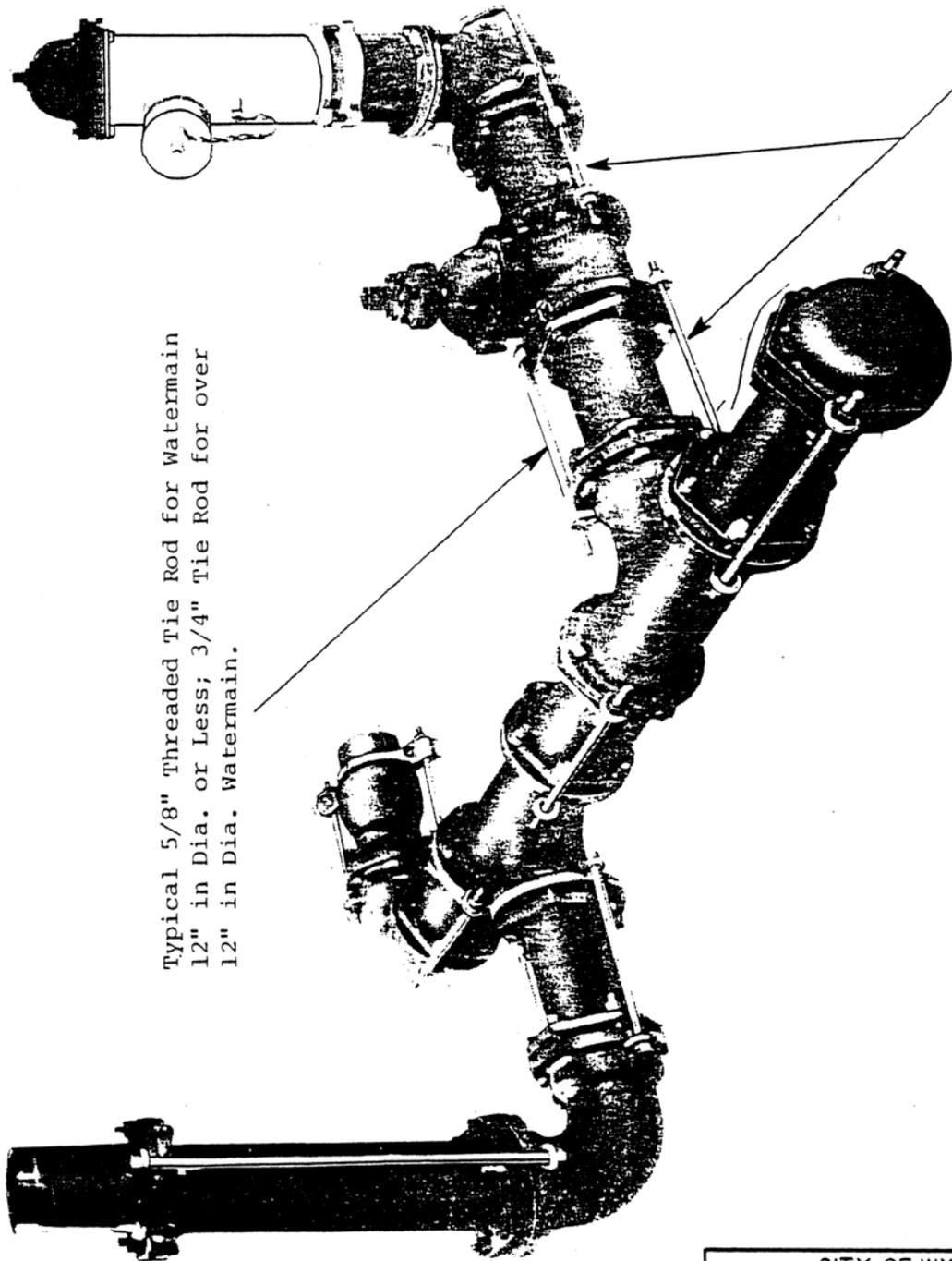
DRAWN BY JZ.

CHECKED BY HB

APPROVED BY D. Mink W-21A

DATE FEB. 15TH. 1977

Rev. March 1990

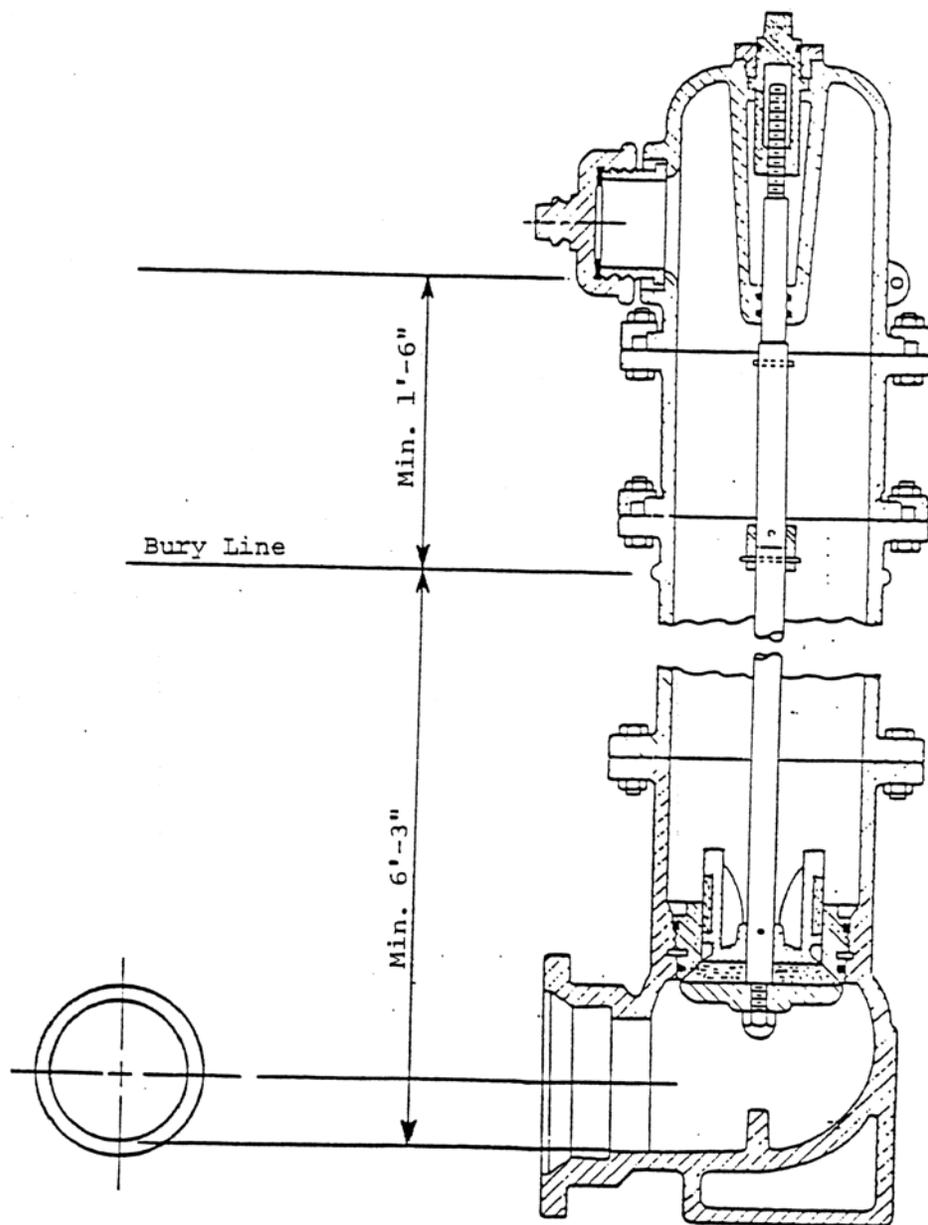


Typical 5/8" Threaded Tie Rod for Watermain
 12" in Dia. or Less; 3/4" Tie Rod for over
 12" in Dia. Watermain.

Typical 5/8" Threaded Tie Rod for Watermain
 12" in Dia. or Less; 3/4" Tie Rod for over
 12" in Dia. Watermain.

CITY OF WYOMING DEPARTMENT OF ENGINEERING	
TYP, HYD, TIE RODS FOR THRUST RESTRAINT	
DRAWN BY.	<u>JZ.</u>
CHECKED BY.	<u>MHB</u>
APPROVED BY.	<u>WDD</u>
DATE	<u>March, 1990</u>

W-21B



CITY OF WYOMING
DEPARTMENT OF ENGINEERING

FIRE HYDRANT BURY DETAIL

DRAWN BY. J.Z.

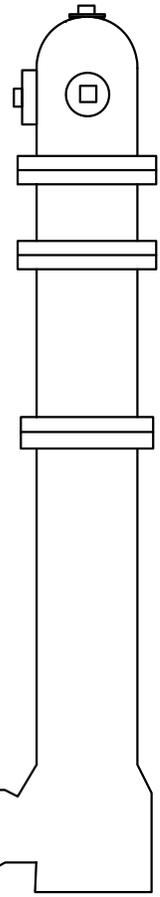
CHECKED BY. _____

APPROVED BY. WDO

DATE 3-7-90

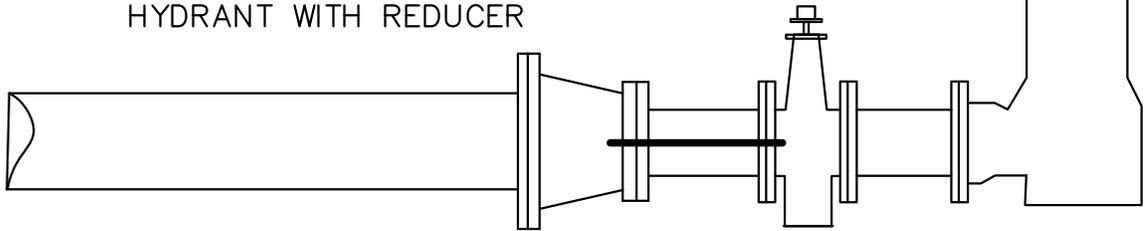
W-22

DEAD END WATERMAINS SHALL TERMINATE WITH ONE OF THE FOLLOWING METHODS ADEQUATE RESTRAINT SHALL BE USED PRIOR TO THE REDUCER OR TEE RESTRAINT SHALL BE M.J. PIPE OR OTHER METHODS APPROVED BY THE ENGINEER. VALVES SHALL BE RODDED TO THE REDUCER OR TEE.



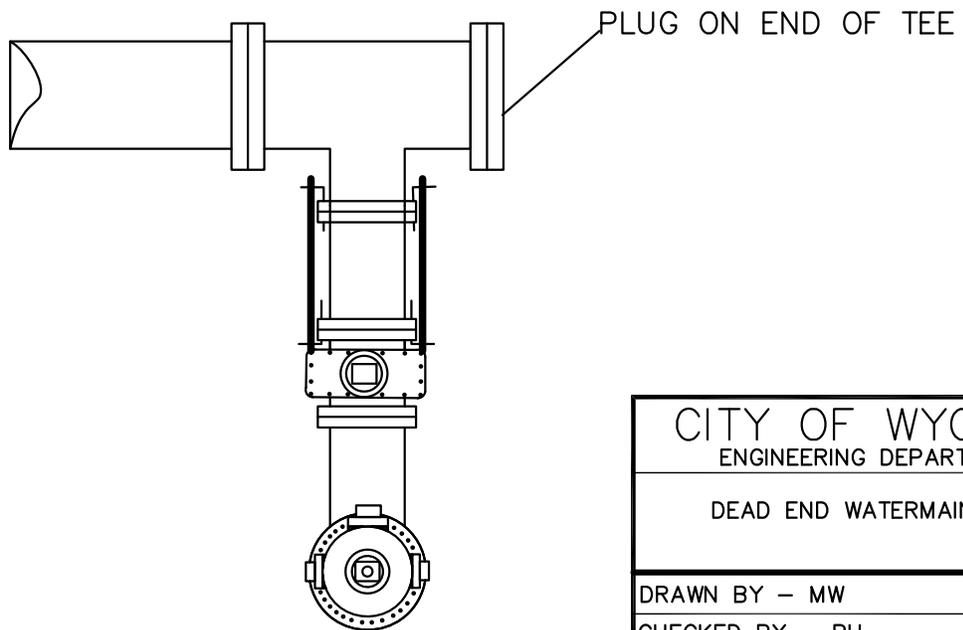
OPTION 1:

HYDRANT WITH REDUCER



OPTION 2:

HYDRANT WITH TEE & PLUG

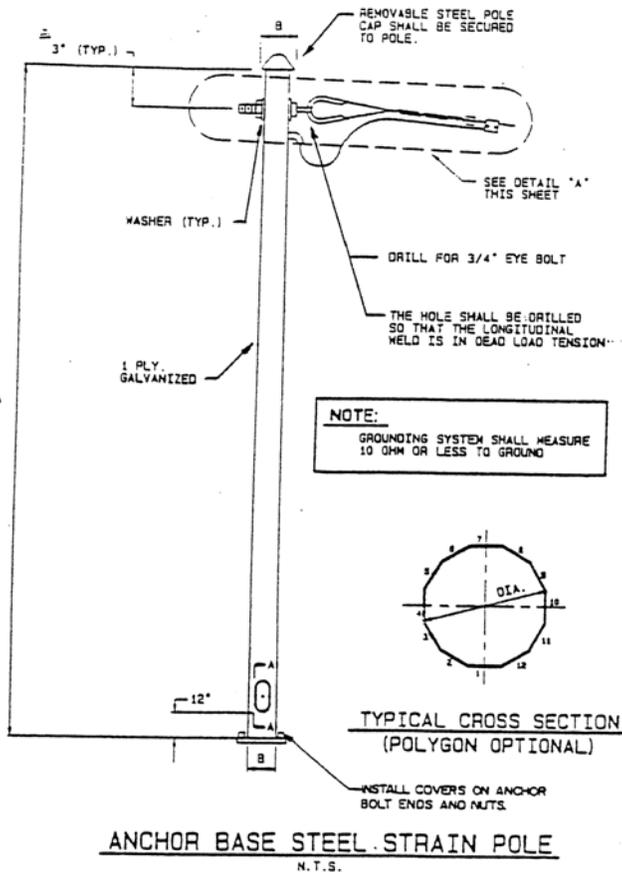


CITY OF WYOMING
ENGINEERING DEPARTMENT

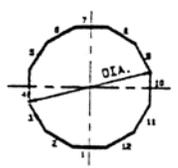
DEAD END WATERMAIN DETAIL

DRAWN BY - MW
CHECKED BY - RH
DATE DRAWN - 2-07-2005
DATE REVISED -

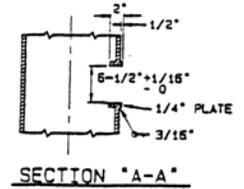
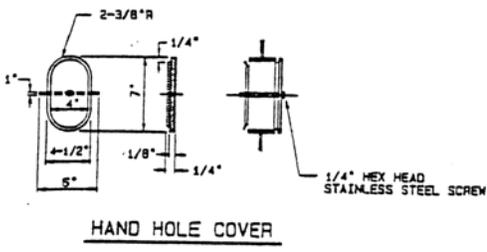
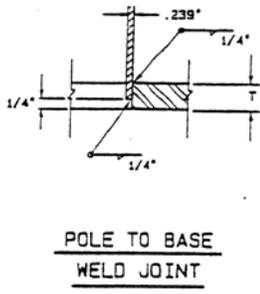
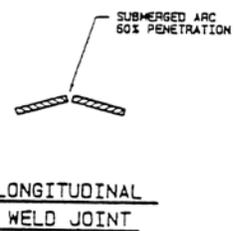
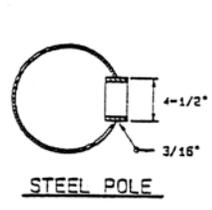
W-24



POLE REQUIREMENTS				
LENGTH	A	30FT.	30FT. (ALTERNATE)	36FT.
GAUGE		#3-1 PLY (MIN.)	#3-1 PLY (MIN.)	#0-1 PLY (MIN.)
POLE DIA. AT TOP	B	8" MIN ±1/2"	7-3/4" MIN ±1/4"	8" MIN ±1/2"
POLE DIA. AT BOTTOM	B	13" ±1/2"	11-3/4" ±1/4"	13" ±1/2"
MAX. DEFLECTION LOAD 18" FROM TOP FOR UNGUYED POLE		3700 LBS.	3700 LBS.	3700 LBS.
DEFLECTION 18" FROM TOP		NOT GREATER THAN 0.40"/100LBS.	NOT GREATER THAN 0.40"/100LBS.	NOT GREATER THAN 0.40"/100LBS.
FULL LENGTH TAPER		+ .002IN/FT. 0.14IN/FT. - .000IN/FT.	+ .002IN/FT. 0.14IN/FT. - .000IN/FT.	+ .002IN/FT. 0.14IN/FT. - .000IN/FT.
ANCHOR BOLT CORD	C	12-3/4 IN.	11-3/8 IN.	12-3/4 IN.
BASE PLATE	D	18 IN.	16 IN.	18 IN.
BASE PLATE THICKNESS	T	2 IN.	2 IN.	2 IN.
ANCHOR BOLT CIRCLE	8C	18 IN.	16 IN.	18 IN.
ANCHOR BASE BOLT HOLE DIA.		2 IN.	2 IN.	2 IN.
ANCHOR BOLT DIA.	d	1-3/4" IN.	1-3/4" IN.	1-3/4" IN.
ANCHOR BOLT LENGTH (INCLUDES 6" "L" BEND)		120 IN.	120 IN.	120 IN.



- NOTES:
- ACCEPTABLE MILL TOLERANCES TO APPLY TO ALL NOMINAL DIMENSIONS.
 - HANDHOLE SHALL BE PROVIDED & BE PERPENDICULAR TO EYE BOLT HOLE.
 - MATERIAL () GALVANIZED FINISH.
 - SHAFT STEEL SHALL BE ASTM A572, Fy=50KSI.
 - BASE PLATE ASTM A36.
 - ALL GALVANIZING SHALL MEET ASTM A123.
 - ANCHOR BOLTS SHALL BE ASTM A307, Fy=50KSI, IN ACCORDANCE WITH (ART. 8.07.14) OF MOST SPECIFICATIONS.
 - WELDING
 - WELDING SHALL CONFORM TO AWS D1.1
 - ULTRASONIC INSPECTION FOR ALL 100% WELDS AND VISUAL AND/OR MAGNETIC PARTICLE FOR ALL OTHERS.
 - TOLERANCES OVERALL HEIGHT ± 1%.
 - SWEEP AND CHAMFER 1/8" PER FOOT.
 - TWIST 10" MAX. OVERALL.
 - DESIGN CONFORMING TO CURRENT AASHTO
 - SPECIFICATIONS FOR DESIGN OF STRUCTURAL SUPPORTS FOR TRAFFIC SIGNALS ASSUMING 1 SAG OF 10% OF SPAN WITH MAXIMUM OF 5 SIGNALS WITH PLASTIC HEADS NOT TETHERED.



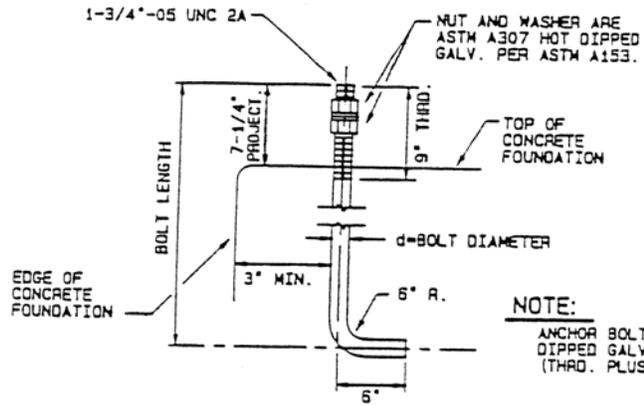
REQUIRED
VALMONT 3700# LOAD
30' GALVANIZED POLE WITH ANCHOR BOLTS
OR EQUAL

CITY OF WYOMING
DEPARTMENT OF ENGINEERING

TRAFFIC SIGNAL POLE

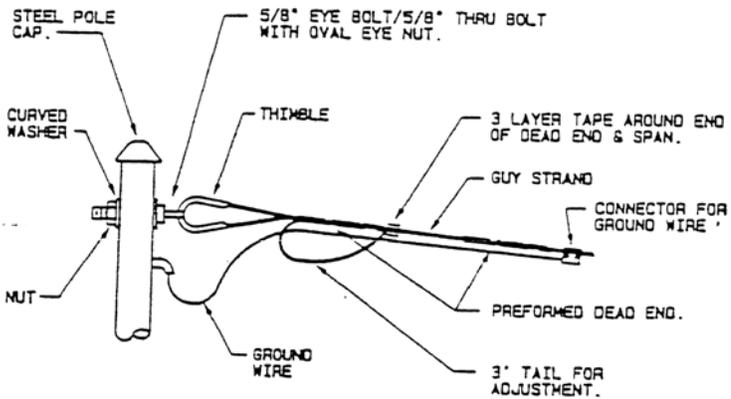
DRAWN BY. JZ.
CHECKED BY. MB
APPROVED BY. WAO
DATE MARCH 1990

T-1A

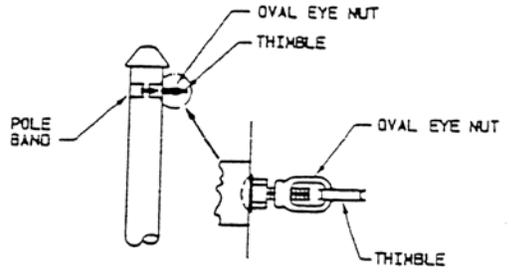


NOTE:
ANCHOR BOLTS ARE HOT
DIPPED GALV. PER ASTM A153
(THRO. PLUS 3").

ANCHOR BOLT



DETAIL "A"



DETAIL "A" (ALTERNATE)

REQUIRED
VALMONT 3700# LOAD
30' GALVANIZED POLE WITH ANCHOR BOLTS
OR EQUAL

CITY OF WYOMING DEPARTMENT OF ENGINEERING	
TRAFFIC SIGNAL POLE (DETAILS)	
DRAWN BY.	JZ.
CHECKED BY.	<i>MB</i>
APPROVED BY.	<i>WDO</i>
DATE	MARCH 1990

T-1B

STEEL POLE

4 1/2" O.D. x .237 Wall Schedule 40-10.79 lb/ft
Galvanized Per ASTM-A-123 if required

ALUMINUM POLE

6063-T6 Alloy
4 1/2" O.D. x .237 Wall Schedule 40-3.73 lb/ft
Spun Finish (Unless specified otherwise)



POST CAP
PB5401

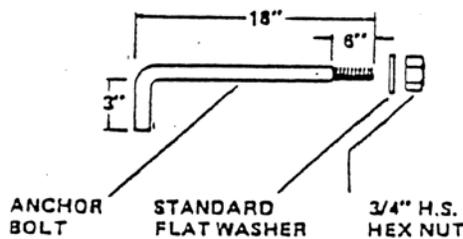


POLE LENGTH—VARIABLE
(Mounting Height Less 12")

MOUNTING HEIGHT—VARIABLE

Catalog No.	Description	Weight
*PB5100-2	2' Spun Aluminum Pole	7.50 lbs.
*PB5100-7	7' Spun Aluminum Pole	26.00 lbs.
*PB5100-9	9' Spun Aluminum Pole	33.50 lbs.
*PB5100-10.5	10' 6" Spun Aluminum Pole	39.50 lbs.
*PB5200-7	7' Steel Pole (Galvanized)	75.00 lbs.
*PB5200-9	9' Steel Pole (Galvanized)	97.00 lbs.
*PB5200-10.5	10' 6" Steel Pole (Galvanized)	114.00 lbs.
PB5300	Square Aluminum Base	23.75 lbs.
PB5301	Octagonal Aluminum Base	25.50 lbs.
PB5306	Anchor Bolt (Set of 4 with 1 nut and washer per bolt)	9.25 lbs.
PB5307	Square Cast Iron Base (Painted-specify green or yellow)	74.00 lbs.
PB5308	Square Cast Iron Base (Galvanized)	74.00 lbs.
PB5309	Octagonal Cast Iron Base (Painted-specify green or yellow)	76.00 lbs.
PB5310	Octagonal Cast Iron Base (Galvanized)	76.00 lbs.
PB5311	Square Aluminum Base (Heat treated 356-T6)	23.75 lbs.
PB5401	Post Cap (Acorn Type)	1.50 lbs.
PB5402	Post Cap (Dome Type)	1.25 lbs.

*Other lengths available on request.



Pelco's Signal Bases and Poles are manufactured to exacting specifications from the highest quality materials. These products provide ease of installation, durability and the very minimum in maintenance.

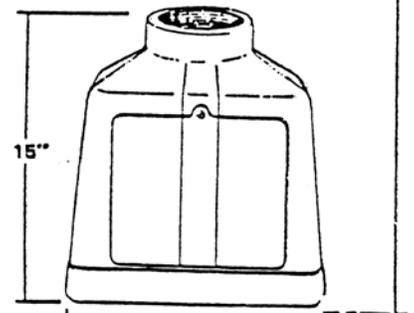
REQUIRED

PELCO #PB5100-9

9' SPUN ALUMINUM POLE AND

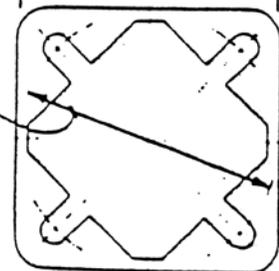
PELCO #PB5300

SQUARE ALUMINUM BASE WITH ANCHOR BOLTS OR EQUAL



13 5/8"

BOLT CIRCLE
12" Minimum
14" Maximum



CITY OF WYOMING
DEPARTMENT OF ENGINEERING

WALK WAIT PEDESTAL

DRAWN BY: JZ

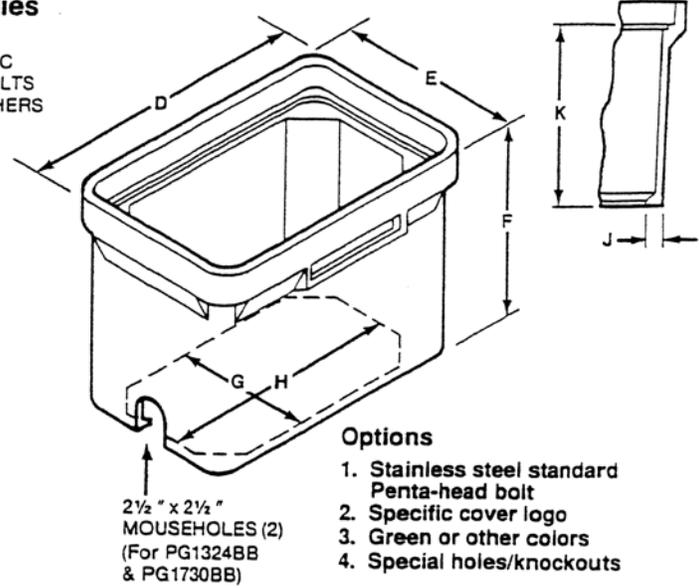
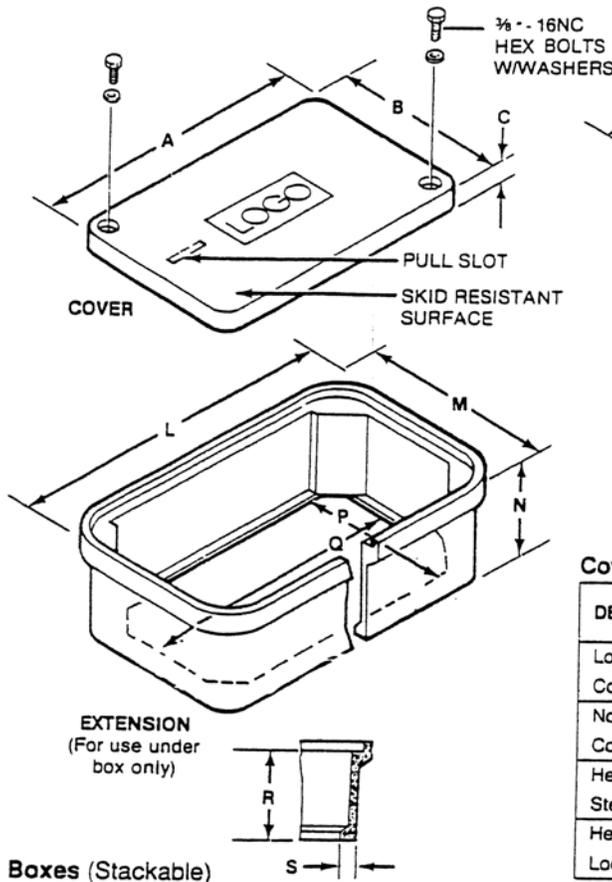
CHECKED BY: MB

APPROVED BY: WJK

DATE: MARCH 1990

SPECIFICATIONS/DATA

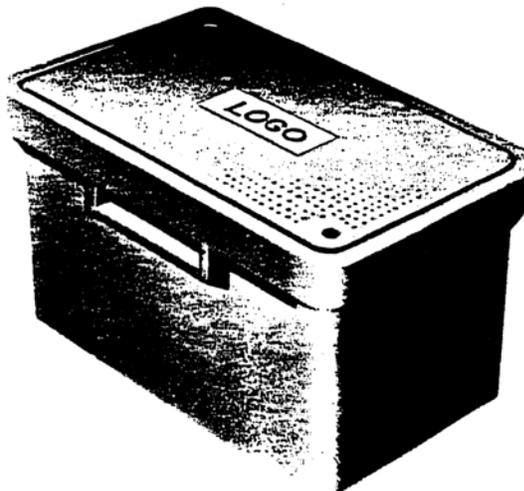
13" x 24" & 17" x 30" PG Style Assemblies



Covers (Blank unless logo is specified)

DESCRIPTION	PART NO.	DIMENSIONS (IN.)			WT. LBS.
		A	B	C	
Locking Cover	PG1324CA00	23 1/4	13 3/4	2	32
Non-Locking Cover	PG1730CA00	30 1/2	17 1/2	2	47
Heavy Duty Steel Locking Cover	PG1324SA00	25	15 1/2	2	65
Heavy Duty Locking Cover	PG1730SA00	32 1/2	19 1/4	2	90
Non-Locking Cover	PG1324WA00	23 1/4	13 3/4	2	33
Heavy Duty Locking Cover	PG1730WA00	30 1/2	17 1/2	2	48
Heavy Duty Locking Cover	PG1324HA00	23 1/4	13 3/4	2	50
Heavy Duty Locking Cover	PG1730HA00	30 1/2	17 1/2	2	74

DESCRIPTION	PART NO.	DIMENSIONS (IN.)							WT. LBS.
		D	E	F	G	H	J	K	
Standard Box	PG1324BA12	25	15 1/2	12	9 3/4	19 1/4	1 1/4	10	53
	PG1324BA18	25	15 1/2	18	9 3/4	19 1/4	1 1/4	16	62
	PG1730BA12	32 1/4	19 1/4	12	13 1/2	26 1/2	1 1/4	10	82
	PG1730BA18	32 1/4	19 1/4	18	13 1/2	26 1/2	1 1/4	16	94
	PG1730BA22	32 1/4	19 1/4	22	13 1/2	26 1/2	1 1/4	20	106



BOX WITH COVER

Standard Box - Part No. PG 1730BA22
Heavy Duty Locking Cover - Part No. PG 1730HA00

Quazite[®]
COMPOSOLITE

A Division of MMFG

304 Industrial Blvd. • Lenoir City, Tennessee 37711
800/346-3062 • 615/986-9726 (In TN)

CITY OF WYOMING
DEPARTMENT OF ENGINEERING

TRAFFIC SIGNAL HANDHOLE

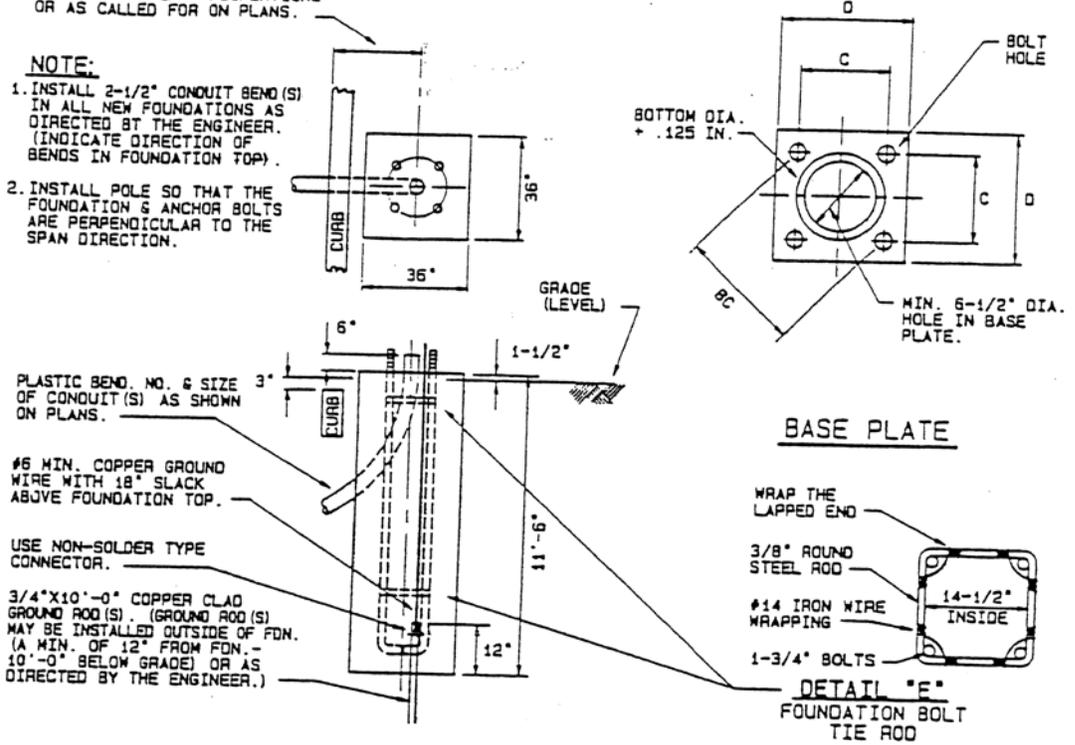
DRAWN BY. JZ.
CHECKED BY. MB
APPROVED BY. WDO
DATE MARCH 1990

T3

TO BE IN LINE WITH EXISTING OR PROPOSED LAMP FOUNDATIONS OR AS CALLED FOR ON PLANS.

NOTE:

1. INSTALL 2-1/2" CONDUIT BEND(S) IN ALL NEW FOUNDATIONS AS DIRECTED BY THE ENGINEER. (INDICATE DIRECTION OF BENDS IN FOUNDATION TOP).
2. INSTALL POLE SO THAT THE FOUNDATION & ANCHOR BOLTS ARE PERPENDICULAR TO THE SPAN DIRECTION.



ANCHOR BASE STEEL STRAIN POLE FOUNDATION

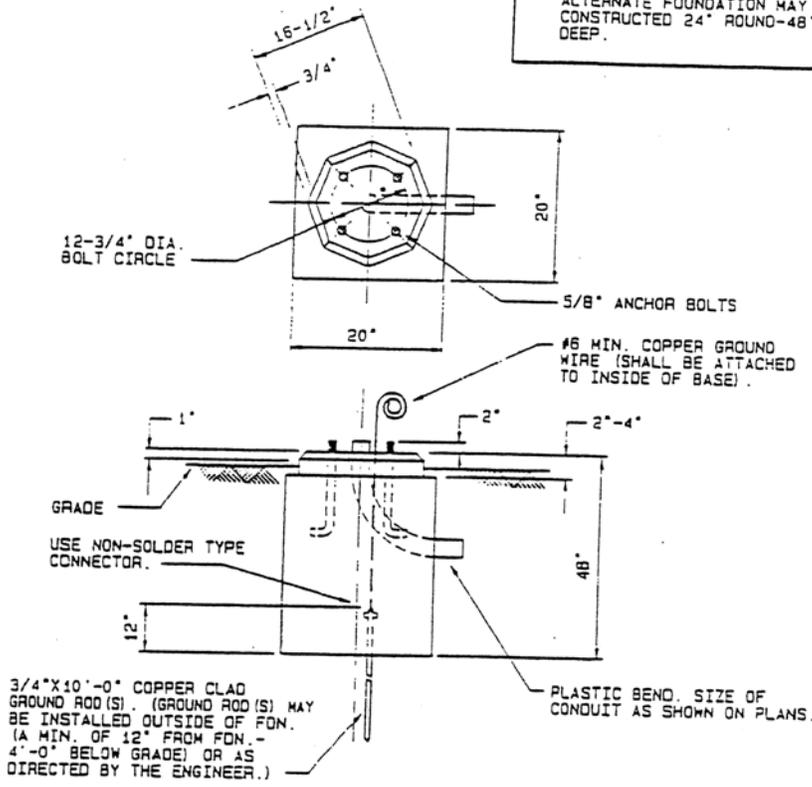
2" PVC CONDUIT WILL BE DELETED FROM BASE WHEN SIGNAL POLE IS USED TO SUPPORT OVERHEAD TRAFFIC SIGNS

NOTE: For Dimensions and Additional Notes see Sheet T-1

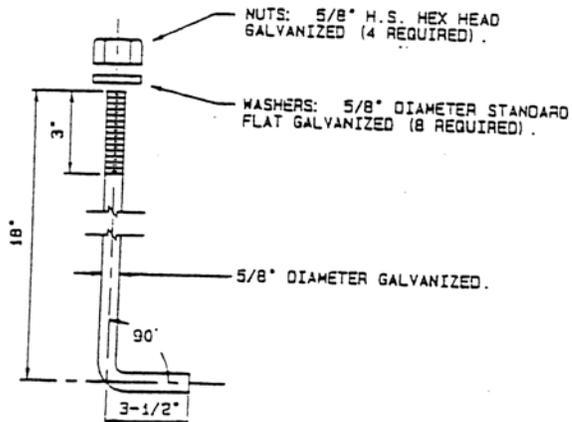
CITY OF WYOMING DEPARTMENT OF ENGINEERING	
CONCRETE BASE FOR TRAFFIC SIGNAL/SIGN SUPPORT POLE	
DRAWN BY.	JZ.
CHECKED BY.	<i>MB</i>
APPROVED BY.	<i>WDS</i>
DATE	MARCH 1990

NOTE:

ALTERNATE FOUNDATION MAY BE CONSTRUCTED 24" ROUND-48" DEEP.



PEDESTAL FOUNDATION



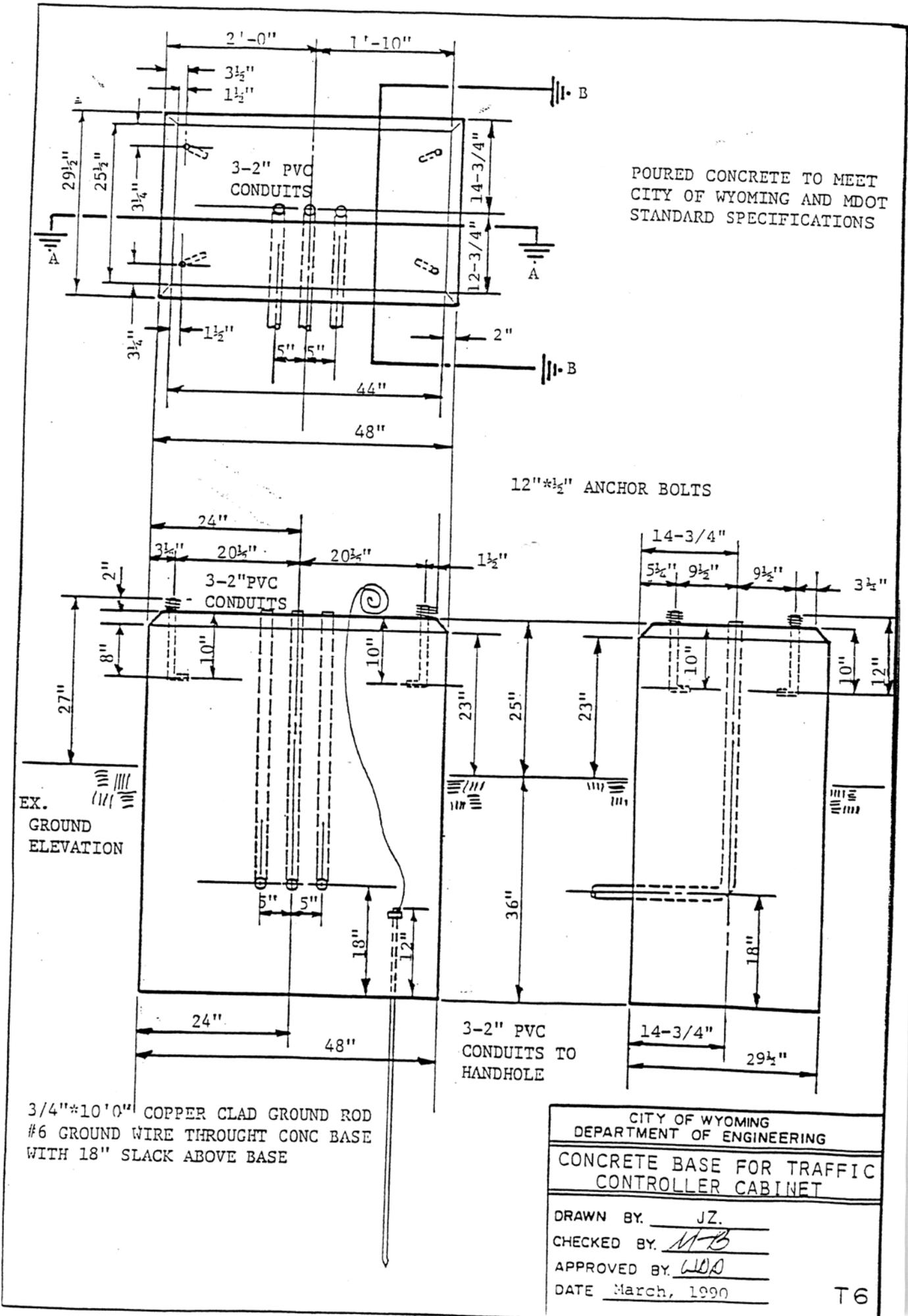
DETAIL OF ANCHOR BOLT

ANCHOR BOLTS ARE TO BE 307 STEEL (4 REQUIRED)

TYPE OF ANCHOR BOLTS AND PLACEMENT IN CONCRETE BASE WILL BE PER DETAIL T2

POURED CONCRETE TO MEET CITY OF WYOMING AND MDOT STANDARD SPECIFICATIONS

CITY OF WYOMING DEPARTMENT OF ENGINEERING	
CONCRETE BASE FOR WALK WAIT SIGNAL	
DRAWN BY.	JZ.
CHECKED BY.	<i>MB</i>
APPROVED BY.	<i>WSD</i>
DATE	MARCH 1990



POURED CONCRETE TO MEET CITY OF WYOMING AND MDOT STANDARD SPECIFICATIONS

12" x 1/2" ANCHOR BOLTS

EX. GROUND ELEVATION

3/4" x 10'0" COPPER CLAD GROUND ROD #6 GROUND WIRE THROUGH CONC BASE WITH 18" SLACK ABOVE BASE

3-2" PVC CONDUITS TO HANDHOLE

CITY OF WYOMING
DEPARTMENT OF ENGINEERING
CONCRETE BASE FOR TRAFFIC CONTROLLER CABINET

DRAWN BY: JZ.
CHECKED BY: MFB
APPROVED BY: WLD
DATE: March, 1990