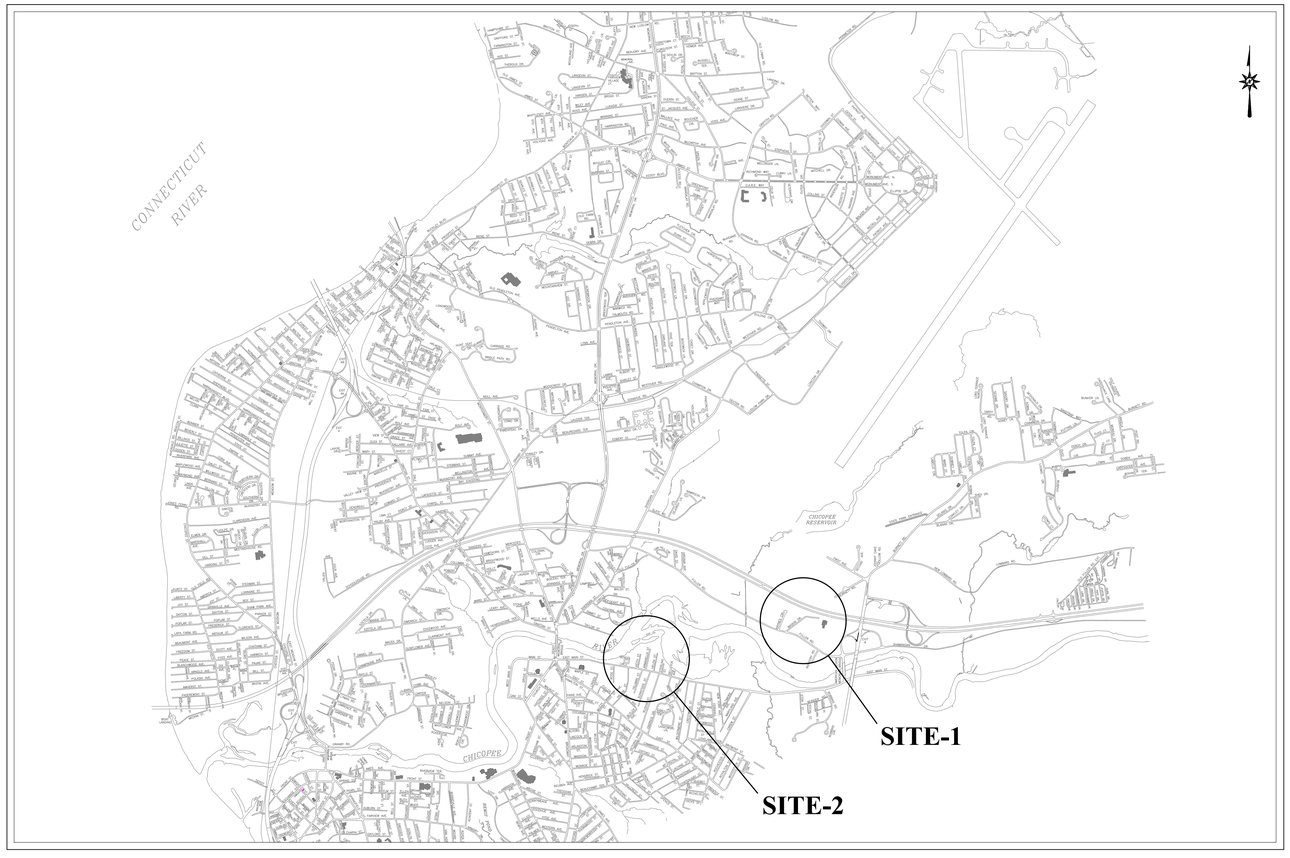
CITY OF CHICOPEE
ENGINEERING DEPARTMENT

BASKIN DRIVE & ARMANELLA STREET RECONSTRUCTION ~ 2020



JOHN L. VIEAU
MAYOR

ELIZABETTE F. BOTELHO, P.E.
D.P.W. SUPERINTENDENT

DOUGLAS E. ELLIS, P.E.
CITY ENGINEER

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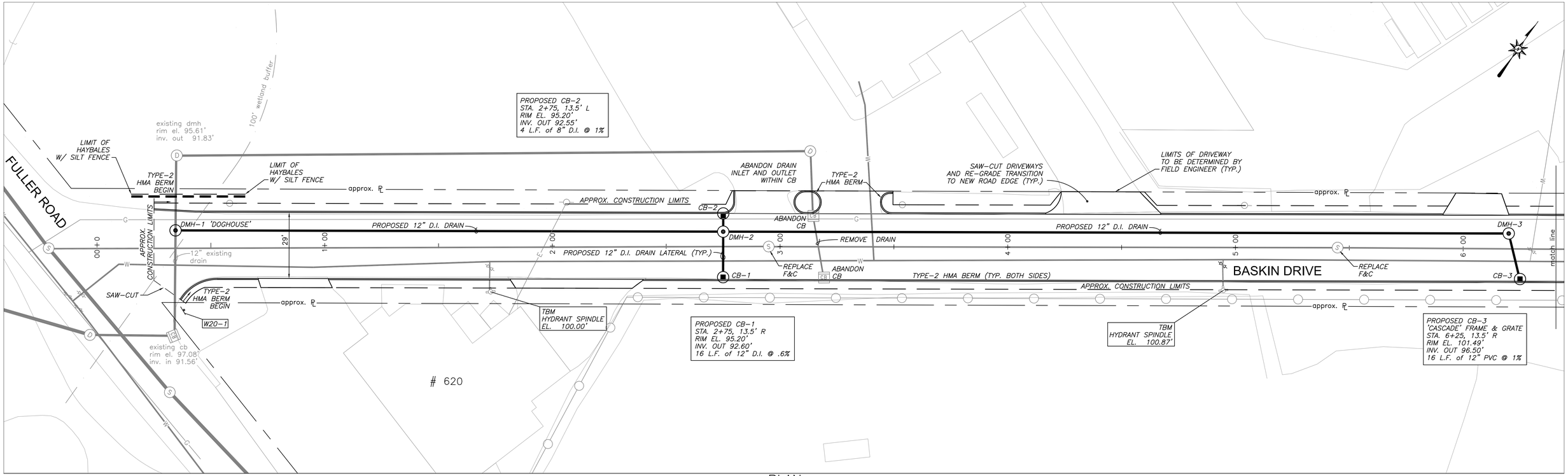
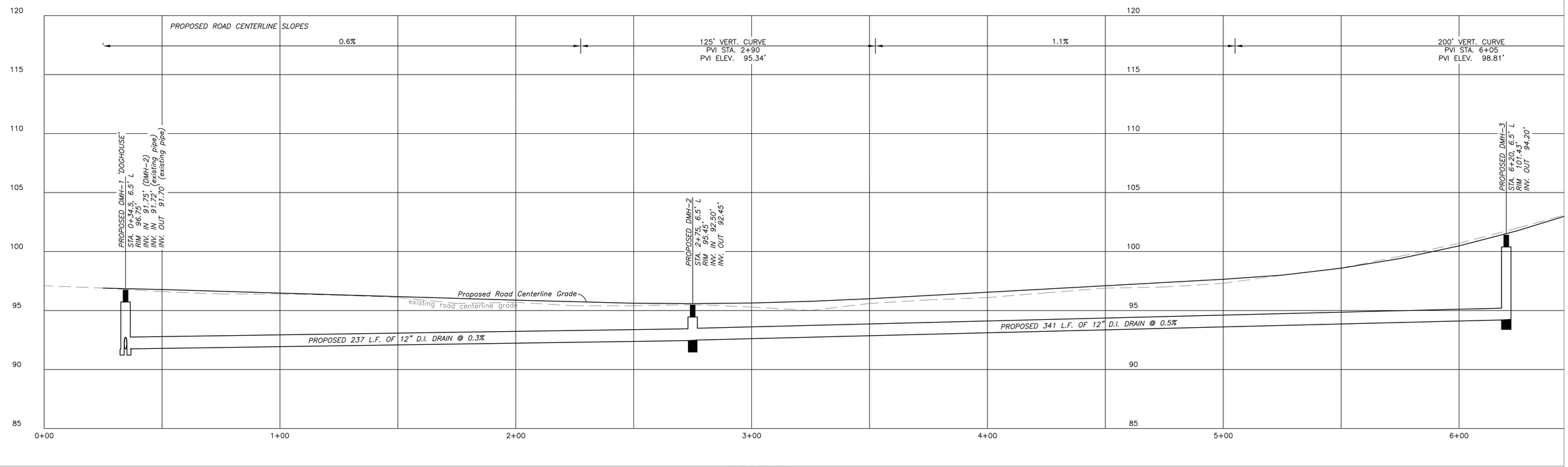
PREPARED BY:
CITY OF CHICOPEE
ENGINEERING DEPARTMENT

JULY ~ 2020



PLAN
1" = 20'



PROFILE
HOR.: 1" = 20'
VERT.: 1" = 4'

NOTES:

1. THE RECONSTRUCTION OF BASKIN DRIVE SHALL BE FULL-DEPTH RECONSTRUCTION.
2. THE PAVEMENT CROSS-SECTION FOR BASKIN DRIVE SHALL BE (1) 2" THICK 1/2" MODIFIED TOP COURSE AND (2) 2.25" THICK BINDER COURSES FOR A TOTAL OF 6.5" PAVEMENT THICKNESS OVER 12" OF PROCESSED GRAVEL (See Detail Sheets for cross-section).
3. EXISTING SANITARY STRUCTURES SHALL BE RETAINED. FRAMES & COVERS/GRATES TO BE REPLACED AS NOTED.
4. UTILITIES AS SHOWN ARE APPROXIMATE. CONTACT DIGSAFE.

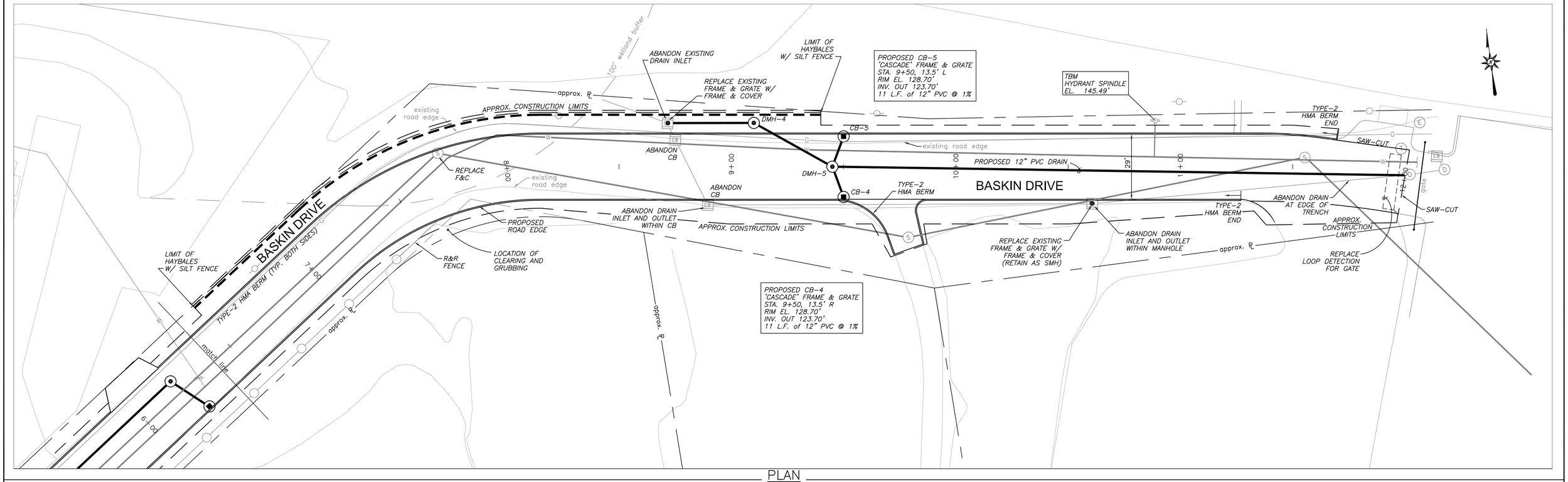
BASKIN DRIVE
PLAN AND PROFILE

CITY OF CHICOPEE ENGINEERING DEPARTMENT
115 BASKIN DRIVE
CHICOPEE, MASSACHUSETTS 01020
(413) 594-3416

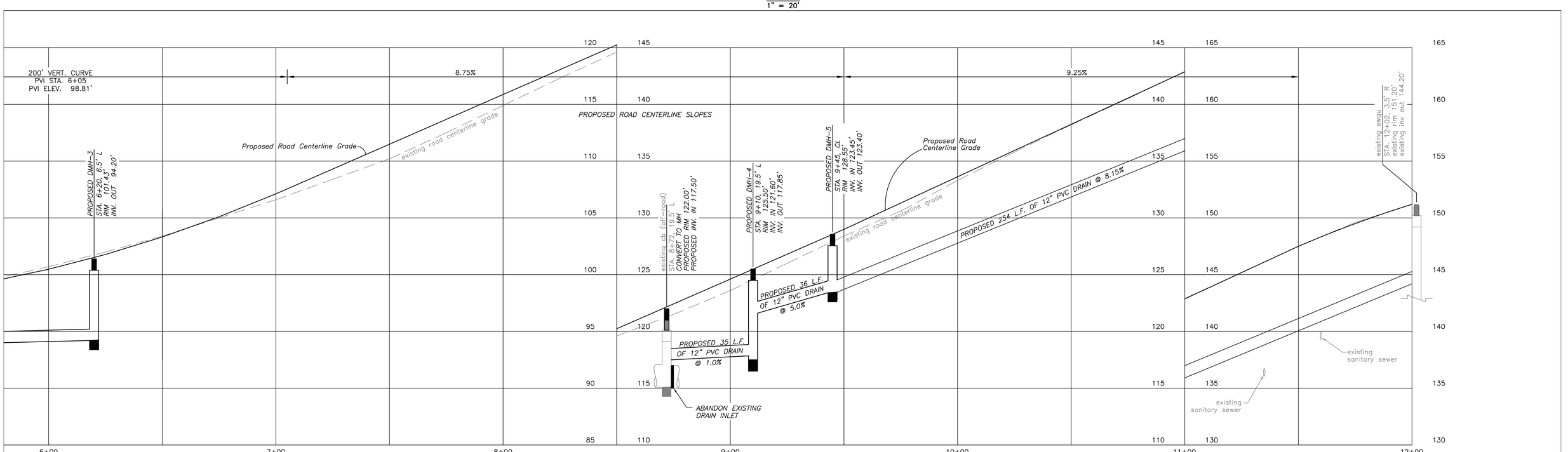
DRAWN BY: CJC
CHECKED BY:
APPROVED BY:

DATE: JULY, 2020
SCALE: AS NOTED

DRAWING NUMBER
BAS-1



PLAN
1" = 20'

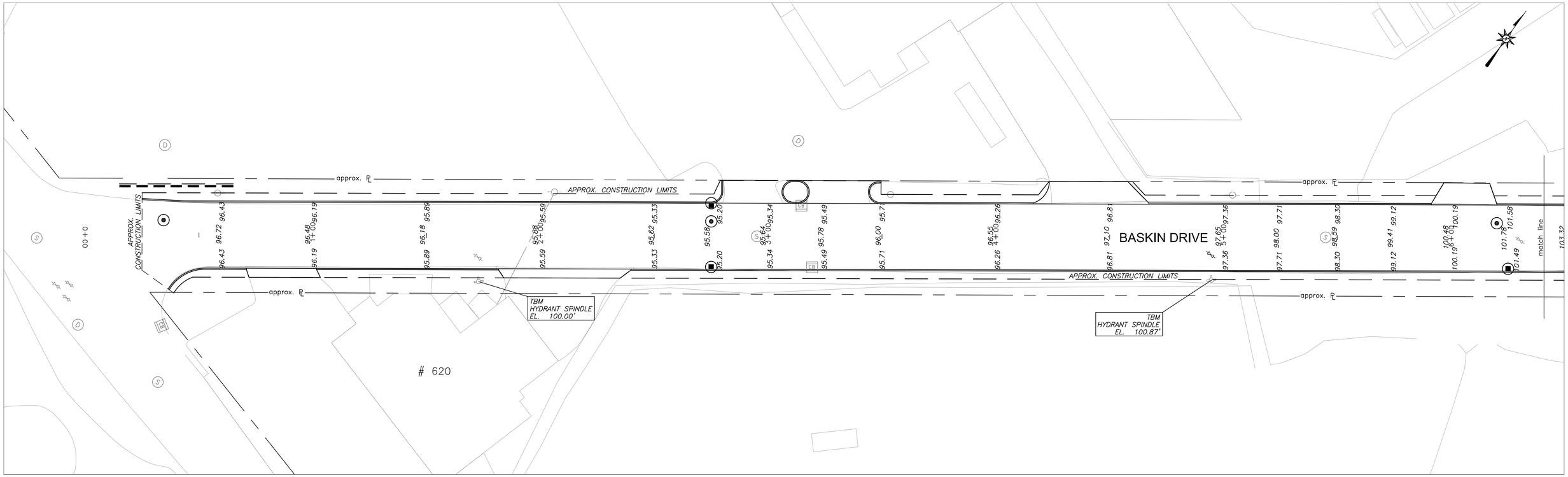


PROFILE
HOR.: 1" = 20'
VERT.: 1" = 4'

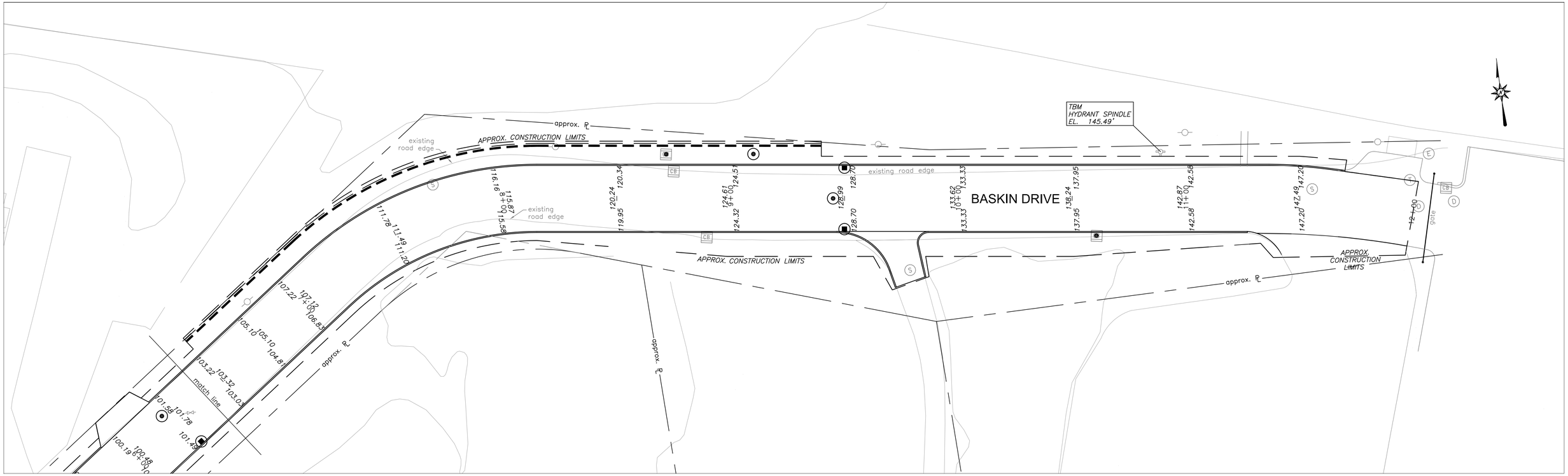
BASKIN DRIVE
PLAN AND PROFILE

CITY OF CHICOPEE ENGINEERING DEPARTMENT
115 BASKIN DRIVE
CHICOPEE, MASSACHUSETTS 01020
(413) 594–3416

DRAWN BY: CJC CHECKED BY: APPROVED BY:	DATE: JULY, 2020 SCALE: AS NOTED	DRAWING NUMBER BAS–2



STA. 0+00 to 6+00



STA. 6+00 to 12+00

NOTES:

1. ALL GRADES REPRESENTED ARE FINISHED TOP COURSE GRADES.
2. SEE SHEET D-1 FOR ADDITIONAL CONSTRUCTION NOTES.

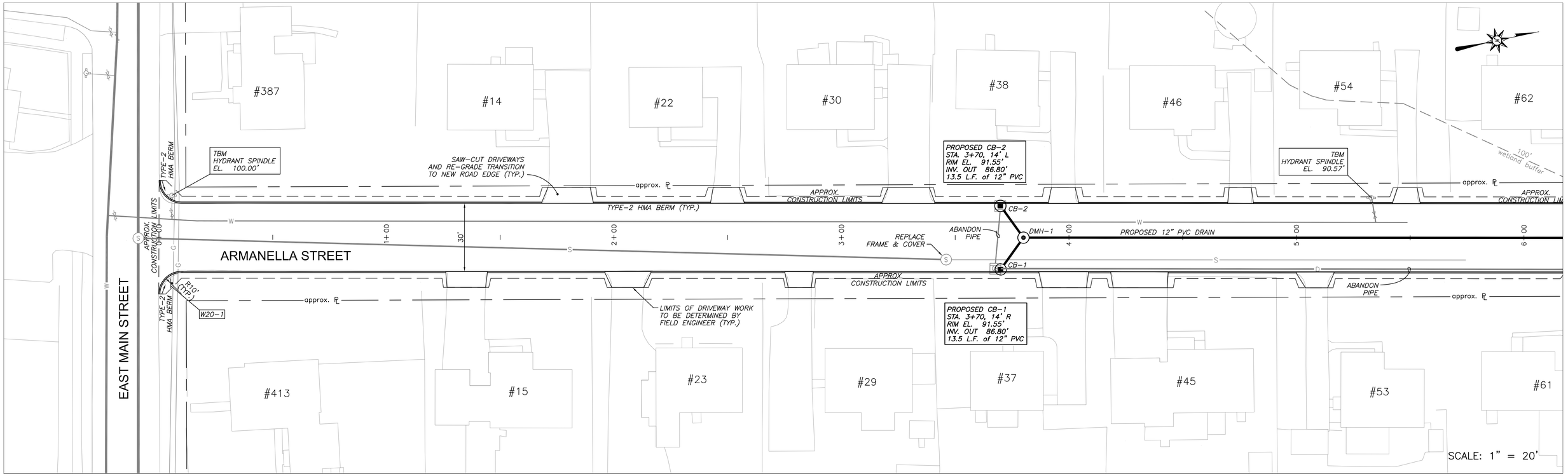
BASKIN DRIVE GRADING PLAN

CITY OF CHICOPEE ENGINEERING DEPARTMENT
115 BASKIN DRIVE
CHICOPEE, MASSACHUSETTS 01020
(413) 594-3416

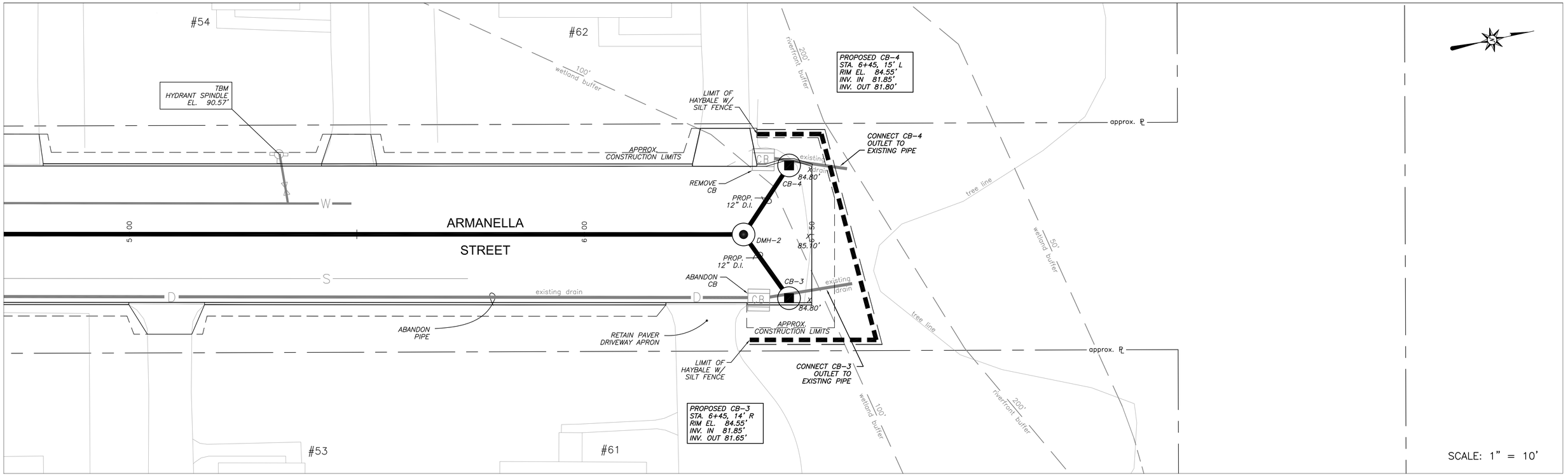
DRAWN BY: CJC
CHECKED BY:
APPROVED BY:

DATE: JULY, 2020
SCALE: 1" = 20'

DRAWING NUMBER
BAS-3



STA. 0+00 to 6+00



STA. 5+00 to 6+60

NOTES:

1. THE RECONSTRUCTION OF ARMANELLA STREET SHALL BE FULL DEPTH RECONSTRUCTION.
2. THE PAVEMENT CROSS-SECTION FOR ARMANELLA STREET SHALL BE (1) 1.5" TOP COURSE AND (1) 2.5" COURSE OF BINDER FOR A TOTAL OF 4" PAVEMENT THICKNESS OVER 12" OF PROCESSED GRAVEL (See Detail Sheets for cross-section).
3. EXISTING SANITARY STRUCTURES SHALL BE RETAINED. FRAMES & COVERS/GRATES TO BE REPLACED AS NOTED.
4. UTILITIES AS SHOWN ARE APPROXIMATE. CONTACT DIGSAFE.

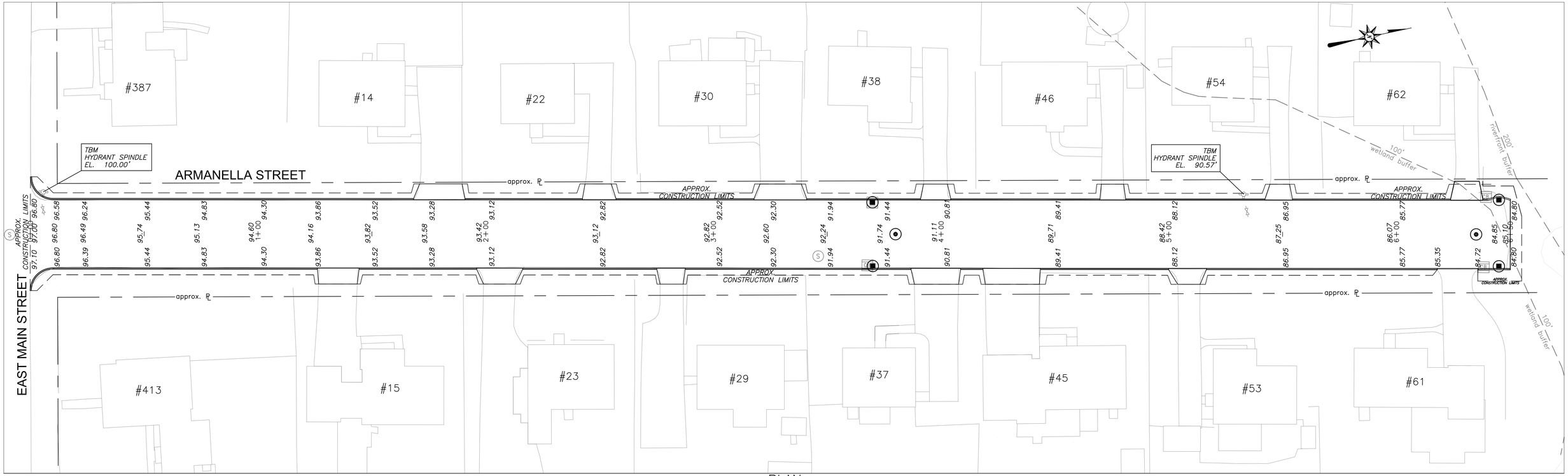
ARMANELLA STREET RECONSTRUCTION AND LAYOUT

CITY OF CHICOPEE ENGINEERING DEPARTMENT
115 BASKIN DRIVE
CHICOPEE, MASSACHUSETTS 01020
(413) 594-3416

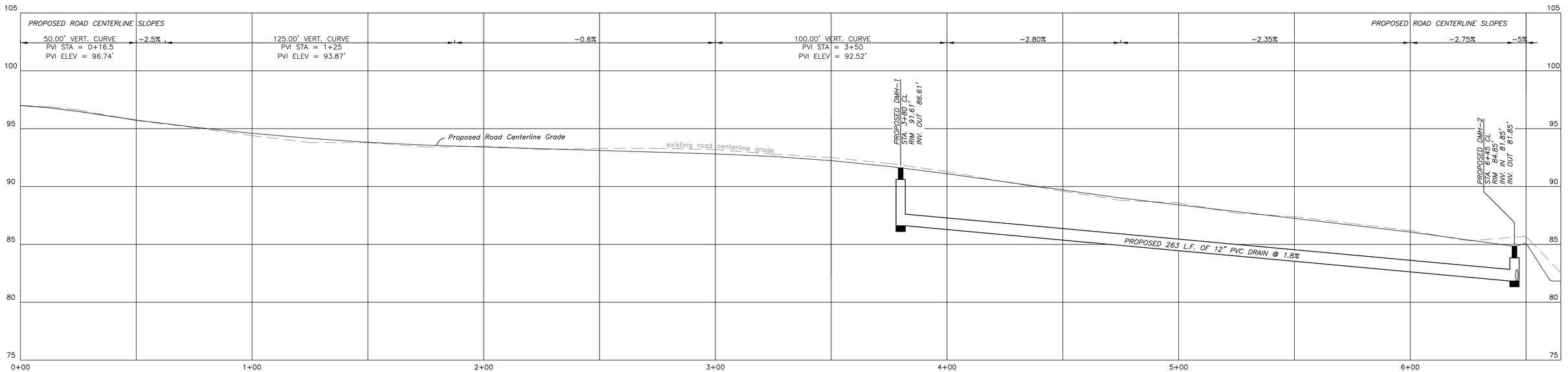
DRAWN BY: CJC
CHECKED BY:
APPROVED BY:

DATE: JULY, 2020
SCALE: AS NOTED

DRAWING NUMBER
ARM-1



PLAN
1" = 20'



PROFILE
HOR.: 1" = 20'
VERT.: 1" = 4'

NOTES:

1. ALL GRADES REPRESENTED ARE FINISHED TOP COURSE GRADES.
2. SEE SHEET D−1 FOR ADDITIONAL CONSTRUCTION NOTES.

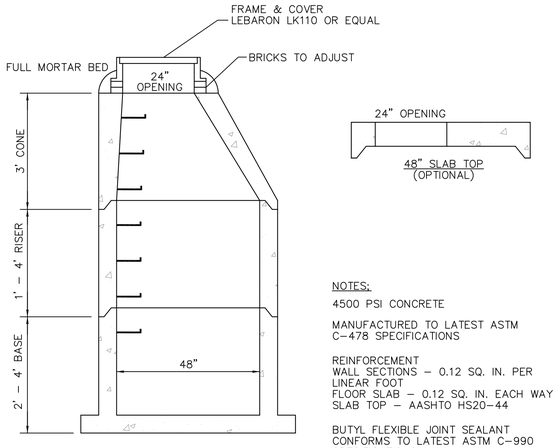
ARMANELLA STREET GRADING AND PROFILE

CITY OF CHICOPEE ENGINEERING DEPARTMENT
115 BASKIN DRIVE
CHICOPEE, MASSACHUSETTS 01020
(413) 594−3416

DRAWN BY: CJC
CHECKED BY:
APPROVED BY:

DATE: JULY, 2020
SCALE: AS NOTED

DRAWING NUMBER
ARM−2



NOTES:

4500 PSI CONCRETE

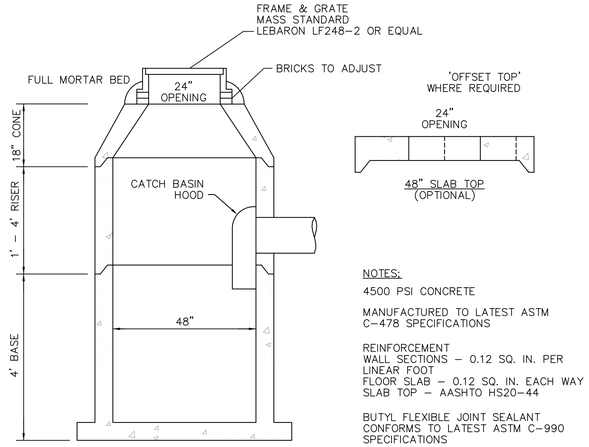
MANUFACTURED TO LATEST ASTM C-478 SPECIFICATIONS

REINFORCEMENT
WALL SECTIONS – 0.12 SQ. IN. PER LINEAR FOOT
FLOOR SLAB – 0.12 SQ. IN. EACH WAY
SLAB TOP – AASHTO HS20-44

BUTYL FLEXIBLE JOINT SEALANT CONFORMS TO LATEST ASTM C-990 SPECIFICATIONS

MANHOLE STEPS – STEEL REINFORCED COPOLYMER POLYPROPYLENE PLASTIC

TYPICAL PRECAST CONCRETE
MANHOLE



NOTES:

4500 PSI CONCRETE

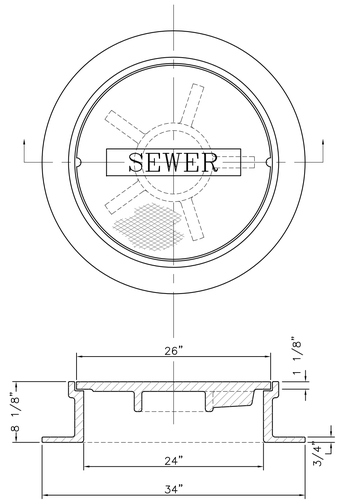
MANUFACTURED TO LATEST ASTM C-478 SPECIFICATIONS

REINFORCEMENT
WALL SECTIONS – 0.12 SQ. IN. PER LINEAR FOOT
FLOOR SLAB – 0.12 SQ. IN. EACH WAY
SLAB TOP – AASHTO HS20-44

BUTYL FLEXIBLE JOINT SEALANT CONFORMS TO LATEST ASTM C-990 SPECIFICATIONS

CATCH BASIN SHALL HAVE A 4' SUMP

TYPICAL PRECAST CONCRETE
CATCH BASIN W/ HOOD

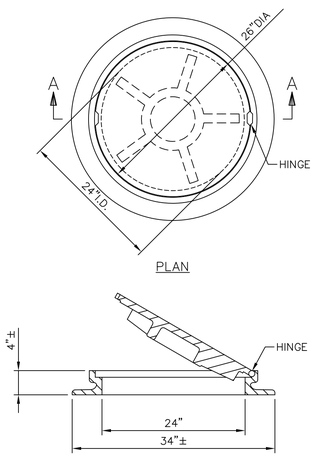


CAST IRON
FRAME & COVER

NOTES:

FRAME AND COVER SHALL BE EJ 2112Z 2110A1 Set OR EQUAL.

DRAIN MANHOLE COVER SHALL HAVE "DRAIN" CAST INTO LID.



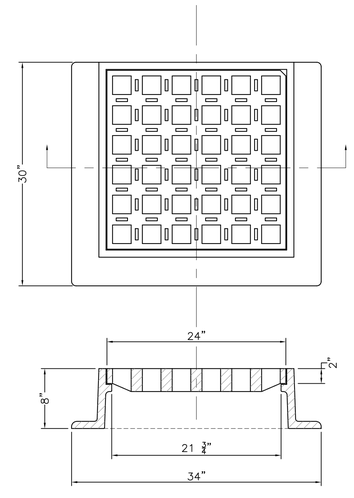
NOTES:

1. FRAME AND COVER ARE MANUFACTURED FROM DUCTILE IRON.
2. LETTERING IS CAST INTO COVERS AS SPECIFIED.

DUCTILE IRON
MANHOLE FRAME & COVER

GENERAL CONSTRUCTION NOTES:

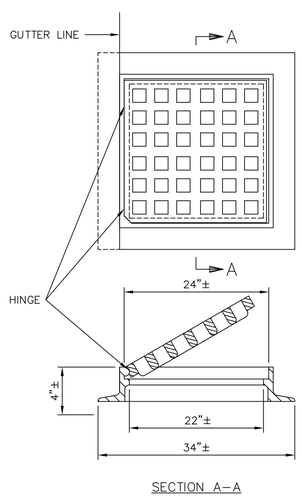
1. THE RECONSTRUCTION OF BASKIN DRIVE AND ARMANELLA STREET SHALL BE FULL DEPTH CONSTRUCTION.
2. THE PAVEMENT CROSS-SECTION FOR BASKIN DRIVE SHALL BE (2) 2.25" COURSES OF BINDER AND (1) 2" (1/2" MODIFIED) TOP COURSE FOR A TOTAL OF 6.5" HMA THICKNESS OVER 12" OF PROCESSED GRAVEL (Se Detail Sheets for cross-section).
2. THE PAVEMENT CROSS-SECTION FOR ARMANELLA STREET SHALL BE (1) 2.25" COURSE OF BINDER AND (1) 1-1/2" TOP COURSE FOR A TOTAL OF 4" HMA THICKNESS OVER 12" OF PROCESSED GRAVEL (Se Detail Sheets for cross-section).
3. ROADWAY CONSTRUCTION BASELINE RUNS ALONG PROPOSED ROAD CENTERLINE.
4. ALL GRADES REPRESENTED ARE FINISHED TOP COURSE GRADES.
5. ALL DRIVEWAY APRONS SHALL BE REPLACED IN KIND OR AS NOTED ON THE PLAN SHEETS.
6. PROPOSED HMA DRIVEWAY APRON CROSS-SECTION SHALL BE (1) 1-1/2" DENSE BINDER COURSE (AS A BASE) AND (1) 1-1/2" TOP COURSE FOR A TOTAL OF 3" HMA THICKNESS OVER 8" OF PROCESSED GRAVEL.
7. ALL PROPOSED STRUCTURE COVERS AND GRATES SHALL BE BE INSTALLED AT BINDER GRADE. TOP COURSE PAVEMENT (AT THE DISCRETION OF THE OWNER) MAY BE INSTALLED IN THE SPRING OF THE FOLLOWING YEAR AT WHICH TIME THE STRUCTURE COVERS AND GRATES WILL BE ADJUSTED TO FINISHED GRADE.
8. PROPOSED GRADES OF NEW CATCH BASIN LATERALS ARE APPROXIMATE AND MAY REQUIRE FIELD ADJUSTMENT DUE TO EXISTING UNDERGROUND UTILITIES.
9. ABANDONMENT OF EXISTING STRUCTURES SHALL INCLUDE THE PLUGGING OF ALL ABANDONED LATERAL PIPES W/ BRICK AND MORTAR, REMOVING THE MASONRY TO A DEPTH OF THREE FEET AND COMPACT BACKFILL IN SIX INCH LIFTS.
10. REMOVAL OF EXISTING STRUCTURES (WHERE LABELED) SHALL INCLUDE THE PLUGGING OF ALL ABANDONED LATERAL PIPES W/ BRICK AND MORTAR. REMOVE ALL MASONRY AND COMPACT BACKFILL IN SIX INCH LIFTS. UTILIZE ITEM 141. CLASS A TRENCH EXCAVATION FOR THE REMOVAL OF THE STRUCTURE.
11. EXISITING SANITARY STRUCTURES SHALL BE RETAINED. FRAMES & COVERS/GRATES TO BE REPLACED AS NOTED.
12. ALL CASTINGS REMOVED SHALL BE DELIVERED TO THE CHICOPEE DPW YARD.
13. BASKIN DRIVE REQUIRES ROAD STRIPING ON THE HMA TOP COURSE SURFACE CONSISTING OF 6" WIDE DOUBLE YELLOW CENTERLINE.
14. UTILITIES AS SHOWN ARE APPROXIMATE. CONTACT DIGSAFE PRIOR TO EXCAVATION.
15. THE CHICOPEE WATER DEPARTMENT IS NOT AFFILIATED WITH DIGSAFE. THE CONTRACTOR SHALL REQUEST THE MARKING OF THE WATER UTILITY DIRECTLY WITH THE CHICOPEE WATER DEPARTMENT PRIOR TO EXCAVATION.



CAST IRON
FRAME & GRATE

NOTE:

FRAME AND GRATE SHALL BE EJ 5524 Frame AND 5520M5 Grate OR EQUAL.



NOTE:

MATERIAL – DUCTILE IRON, SEE SPECIFICATIONS

DUCTILE IRON
CATCH BASIN FRAME & GRATE

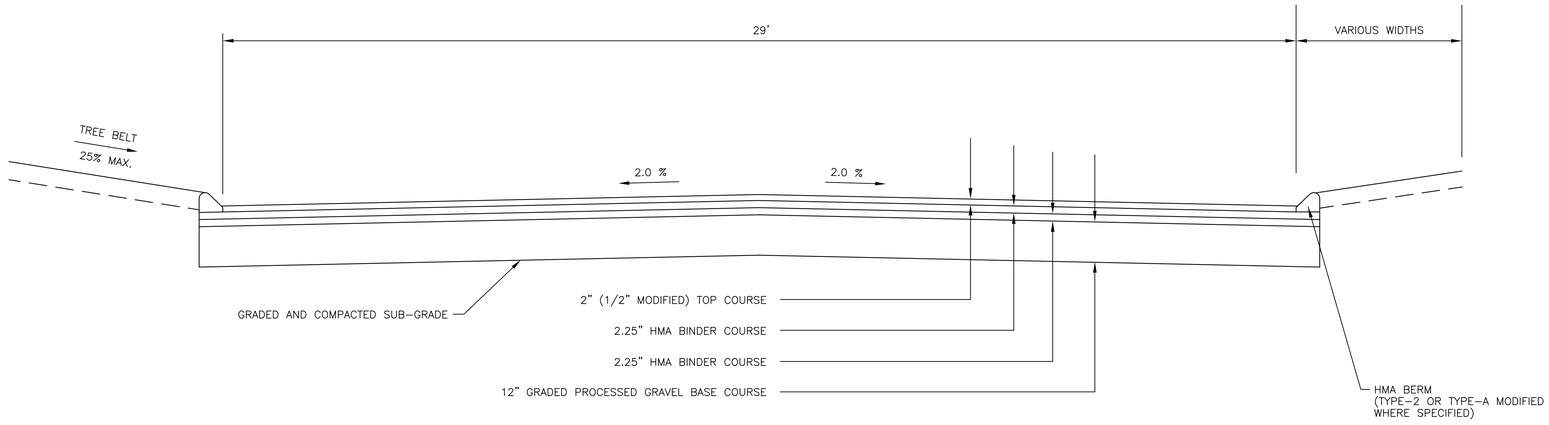
CONSTRUCTION DETAILS

CITY OF CHICOPEE ENGINEERING DEPARTMENT
115 BASKIN DRIVE
CHICOPEE, MASSACHUSETTS 01020
(413) 594-3416

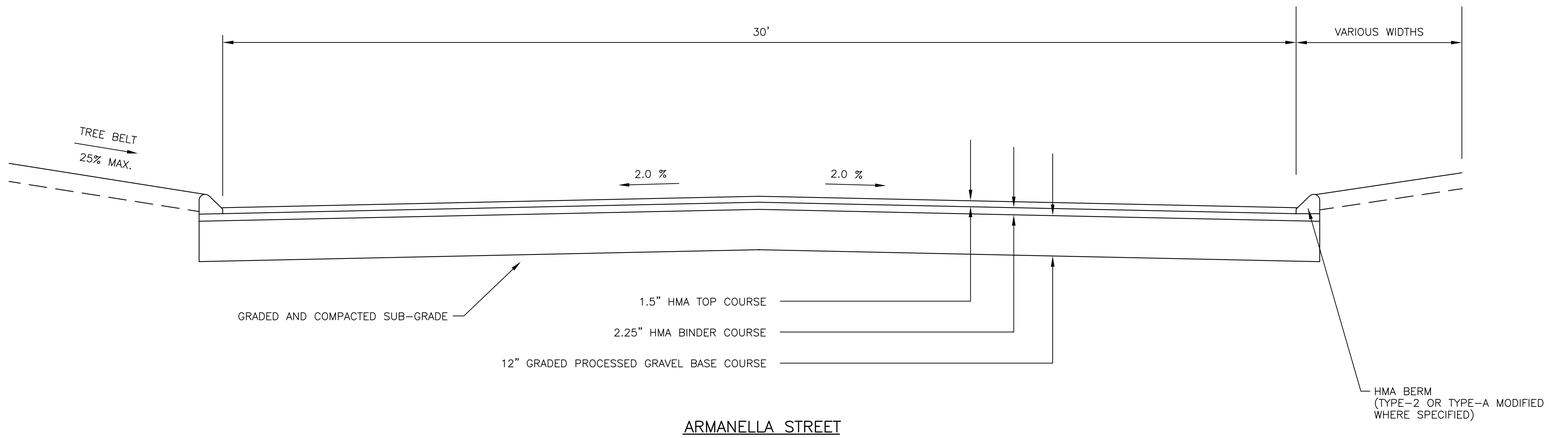
DRAWN BY: CJC
CHECKED BY:
APPROVED BY:

DATE: JULY, 2020
SCALE: N.T.S.

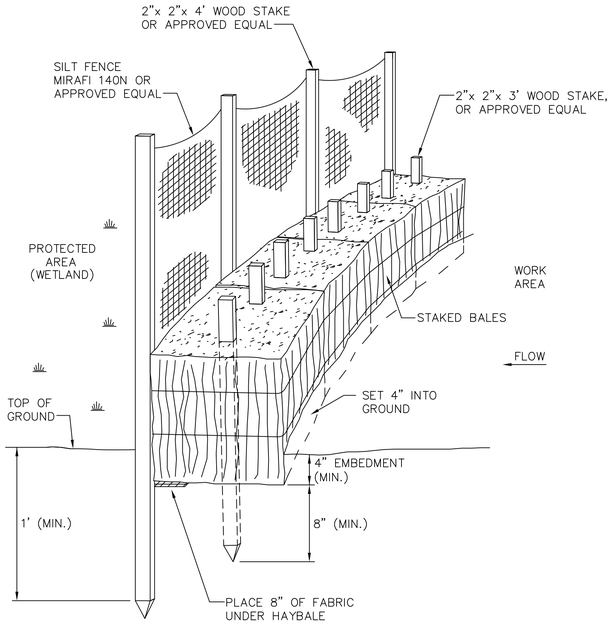
DRAWING NUMBER
D-1



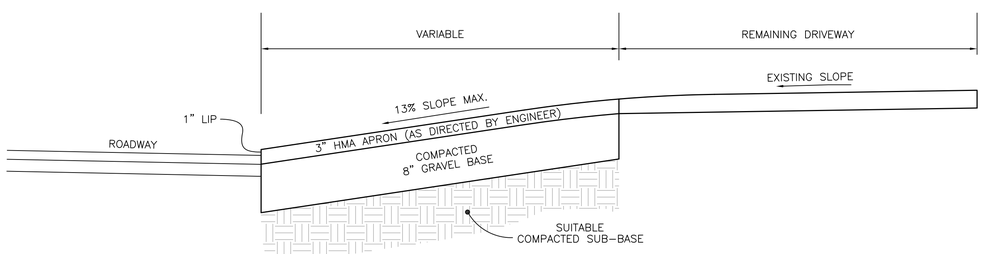
BASKIN DRIVE
TYPICAL ROADWAY RECONSTRUCTION CROSS SECTION
FULL-DEPTH EXCAVATION



ARMANELLA STREET
TYPICAL ROADWAY RECONSTRUCTION CROSS SECTION
FULL-DEPTH EXCAVATION

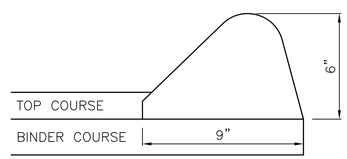


HAYBALES AND SILTATION FENCE



HMA DRIVEWAY APRON

NOTE:
HOT MIX ASPHALT FOR DRIVEWAY APRONS TO BE APPLIED WITH TWO COURSES.



TYPE-2 BERM

TYPICAL CROSS-SECTIONS
AND CONSTRUCTION DETAILS

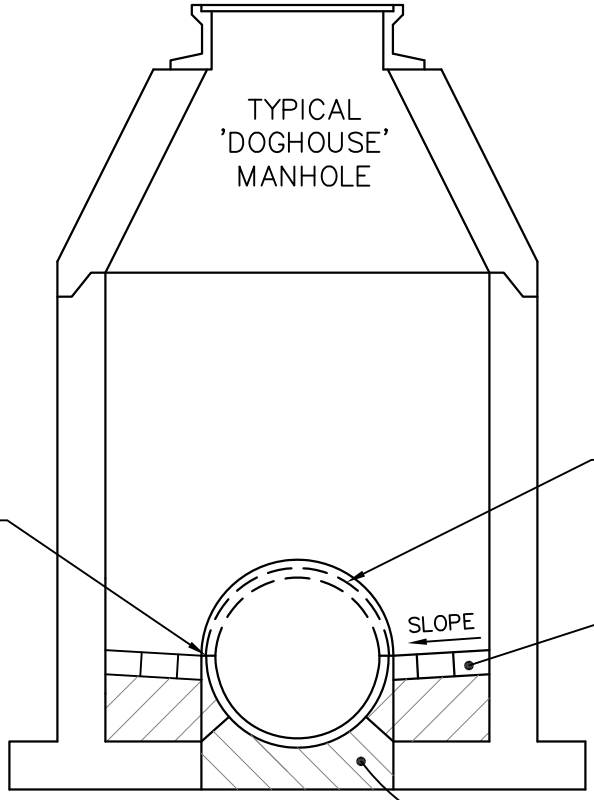
CITY OF CHICOPEE ENGINEERING DEPARTMENT
115 BASKIN DRIVE
CHICOPEE, MASSACHUSETTS 01020
(413) 594-3416

DRAWN BY: CJC
CHECKED BY:
APPROVED BY:

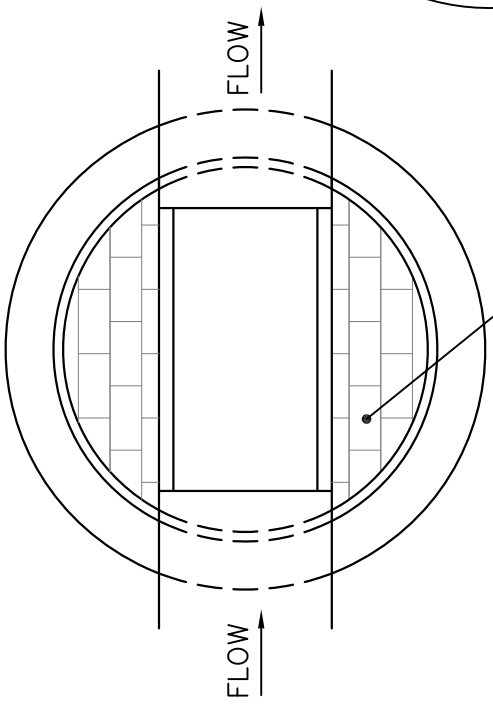
DATE: JULY, 2020
SCALE: N.T.S.

DRAWING NUMBER
D-2

SECTION
VIEW
N.T.S.



PLAN
VIEW
N.T.S.

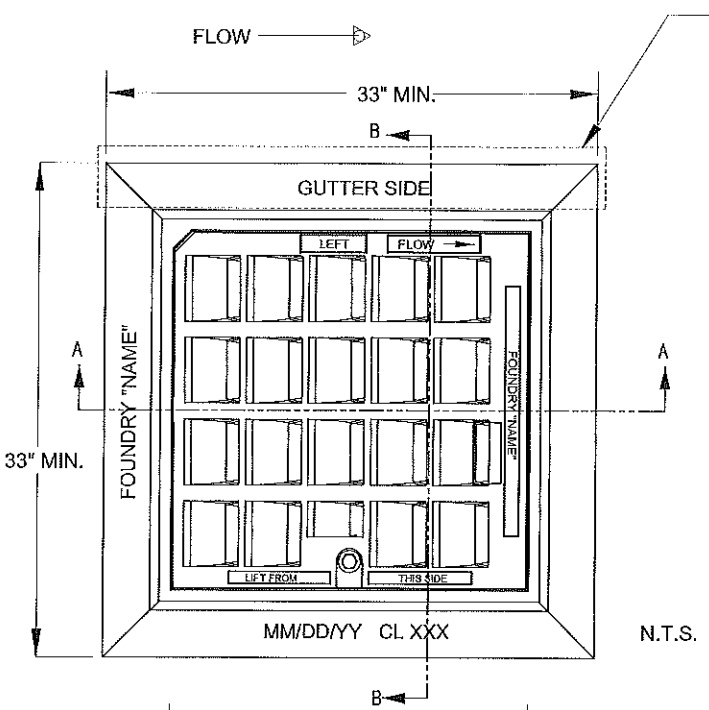


TYPICAL PRECAST 'DOGHOUSE' MANHOLE

TYPICAL PRECAST CONCRETE 'DOGHOUSE' MANHOLE DETAIL

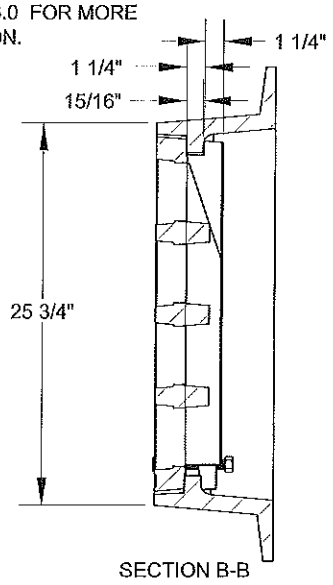
CITY OF CHICOPEE ENGINEERING DEPARTMENT
115 BASKIN DRIVE
CHICOPEE, MASSACHUSETTS 01020
(413) 594-3416

DRAWN BY: CJC CHECKED BY: APPROVED BY:	DATE: SEPT., 2019 SCALE: N.T.S.	DRAWING NUMBER	

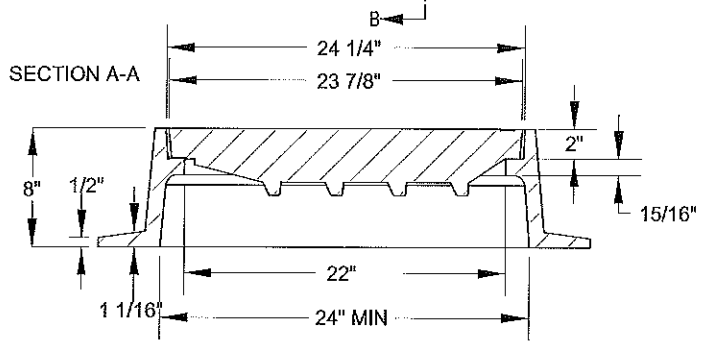


N.T.S.

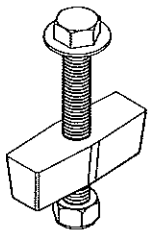
FRAME MAY BE INSTALLED WITH THIS FLANGE REMOVED FOR CURB INLET. FOUR FLANGE IS SHOWN. ~ SEE DWG E 201.6.0 FOR MORE INFORMATION.



SECTION B-B



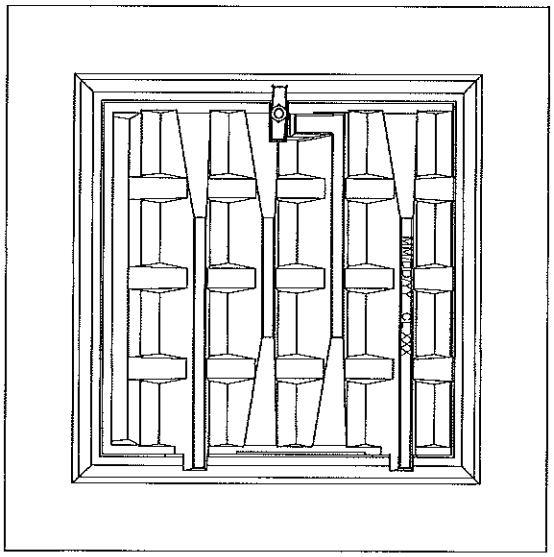
AASHTO HS 20 PROOF LOAD



LOCK TUMBLER ASSEMBLY
(1) REQUIRED~CONSISTS OF:

5/8" x 5" ST. STL. BOLT
5/8" ST.STL. FLAT WASHER
CAST IRON TUMBLER
ST. STL. CAPTURE NUT

STAINLESS STEEL GRADE 304



CLASSIFICATION:
CAST IRON - SEE STANDARD SPECIFICATIONS
WITH NO BLACK ASPHALT COATING ALLOWED

Tumbler should be set at 1 1/4" below machined grate seat for installation.

Once grate is set in frame, torque bolt ¼ turn past snug.

WEIGHTS:

3-FLANGE FRAME	240 LBS. MIN
4-FLANGE FRAME	270 LBS. MIN
B-1 GRATE	265 LBS. MIN

NOTE: SEAT SURFACES ON BOTH FRAME AND GRATE ARE MACHINED AND GRATE MUST NOT ROCK IN FRAME WHEN ASSEMBLED.

NOTE: IDENTIFYING INFORMATION SHOWN ON FRAMES & GRATES TO BE CAST WITH FRAME AND GRATE

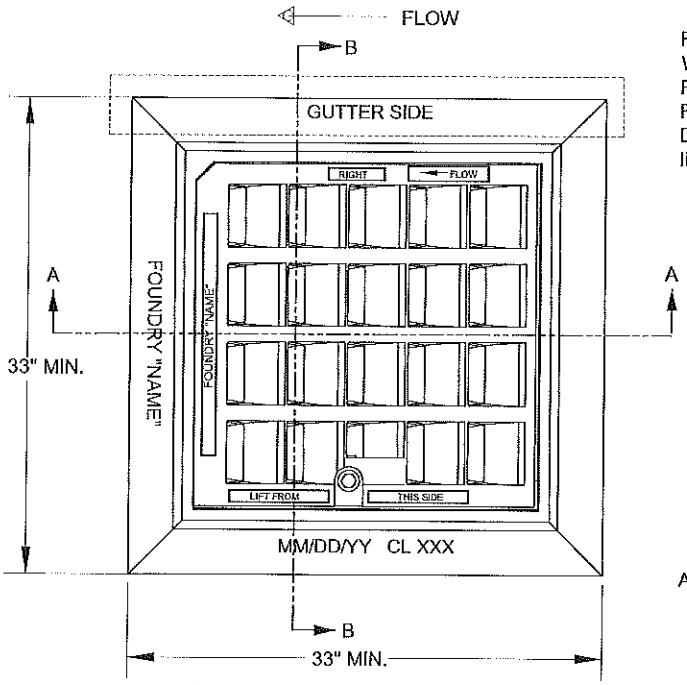
CASTING TOLERANCES:
SHALL CONFORM TO AASHTO M306

massDOT Massachusetts Department of Transportation Highway Division
CONSTRUCTION STANDARDS

FRAME AND HOOK LOCK CASCADE GRATE - FLOW FROM LEFT ASSEMBLY DETAILS

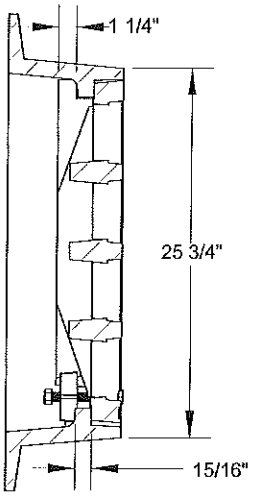
DATE OF ISSUE
JUNE 2014

DRAWING NUMBER
E 201.9.0



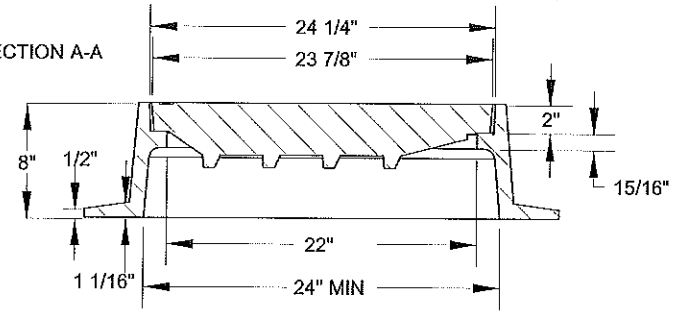
FRAME MAY BE INSTALLED WITH THIS FLANGE REMOVED FOR CURB INLET. FOUR FLANGE IS SHOWN. ~ SEE DWG E 201.6.0 FOR MORE INFORMATION.

CLASSIFICATION:
CAST IRON - SEE STANDARD SPECIFICATIONS
WITH NO BLACK ASPHALT COATING ALLOWED

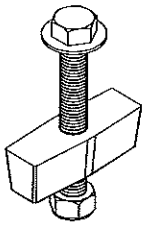


AASHTO HS 20 PROOF LOAD
N.T.S.

SECTION A-A



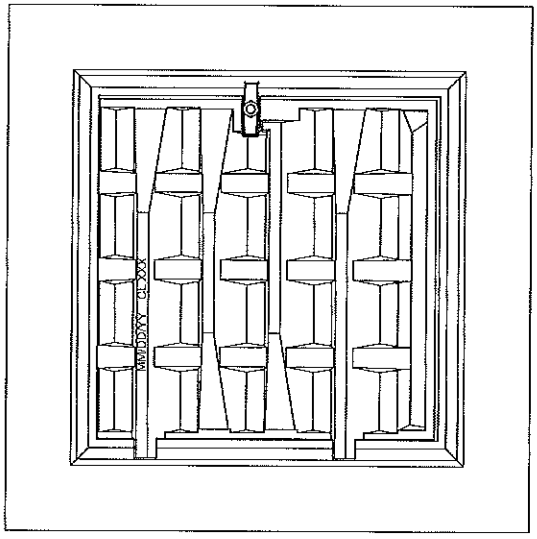
SECTION B-B



LOCK TUMBLER ASSEMBLY
(1) REQUIRED~CONSISTS OF:

5/8" x 5" ST. STL. BOLT
5/8" ST.STL. FLAT WASHER
CAST IRON TUMBLER
ST. STL. CAPTURE NUT

STAINLESS STEEL GRADE 304



Tumbler should be set at 1 1/4" below machined grate seat for installation.

Once grate is set in frame, torque bolt ¼ turn past snug.

WEIGHTS:

3-FLANGE FRAME	240 LBS. MIN
4-FLANGE FRAME	270 LBS. MIN
B-2 GRATE	265 LBS. MIN

NOTE: SEAT SURFACES ON BOTH FRAME AND GRATE ARE MACHINED AND GRATE MUST NOT ROCK IN FRAME WHEN ASSEMBLED.

CASTING TOLERANCES:
SHALL CONFORM TO AASHTO M306

NOTE: IDENTIFYING INFORMATION SHOWN ON FRAMES & GRATES TO BE CAST WITH FRAME AND GRATE

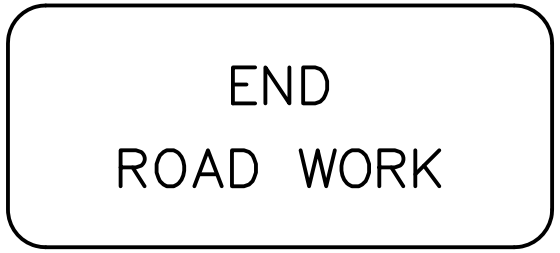
massDOT Massachusetts Department of Transportation Highway Division
CONSTRUCTION STANDARDS

FRAME AND HOOK LOCK CASCADE GRATE - FLOW FROM RIGHT ASSEMBLY DETAILS

DATE OF ISSUE
JUNE 2014

DRAWING NUMBER
E 201.9.1

(48"x48")
W20-1



(48"x24")
G20-2A

* THE ABOVE SIGNS SHALL BE INSTALLED PRIOR TO CONSTRUCTION WITH POST AND SHALL COMPLY WITH ALL SPECIFICATIONS AS OUTLINED IN THE SAFETY SIGNING FOR TRAFFIC MANAGEMENT ITEM.

* ADDITIONAL SIGNAGE AND TRAFFIC CONTROL DEVICES SHALL BE USED WHEN WORK IS IN PROGRESS AS OUTLINED IN THE SPECIAL PROVISIONS SECTION OF THE CONTRACT.

CONSTRUCTION SIGNS