

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

**CUY-77-13.80 (CCG6B)
BUILDABLE UNIT 6**

**CITY OF CLEVELAND
CUYAHOGA COUNTY**

PROJECT DESCRIPTION

CONSTRUCTION OF SEWER SYSTEMS AS PART OF THE FOLLOWING WORK: RECONSTRUCT THE EXISTING RAMP FROM BROADWAY AVE. TO I.R. 77 SOUTHBOUND INTO A FRONTAGE ROAD TO PERSHING AVE.; CONSTRUCTION OF A MULTI-USE PATH ALONG THE FRONTAGE ROAD BETWEEN BROADWAY AVE. AND PERSHING AVE.; CONSTRUCTION OF A NEW BROADWAY AVE. STRUCTURE OVER I.R. 77; AND FULL DEPTH PAVEMENT WORK ON BROADWAY AVE., GALLUP AVE., ROSEVILLE CT., AND DILLE AVE.

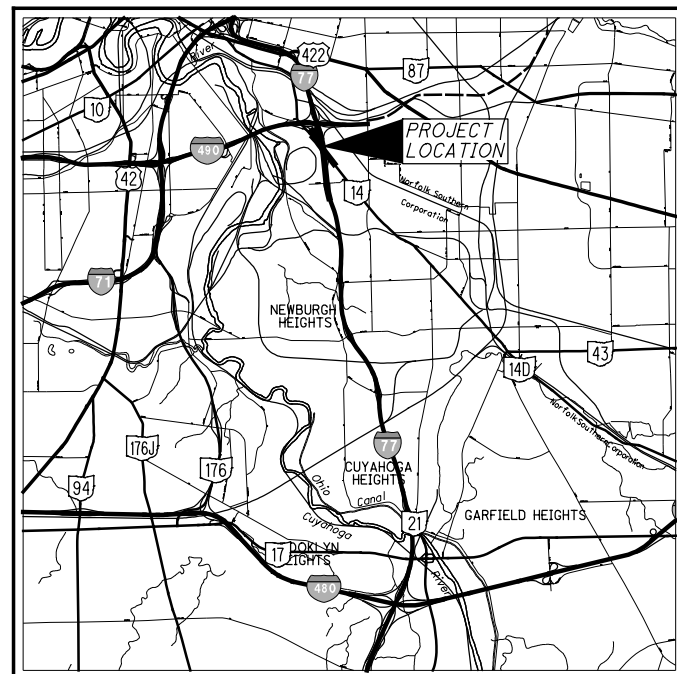
PROJECT EARTH DISTURBED AREA: 16.14 AC.
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 0.00 AC.
NOTICE OF INTENT EARTH DISTURBED AREA: 16.14 AC.

LIMITED ACCESS

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE OHIO REVISED CODE.

2016 SPECIFICATIONS

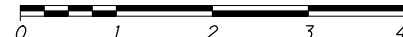
THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.



LOCATION MAP

LATITUDE: 41°28'27" LONGITUDE: 81°39'35"

SCALE IN MILES



PORTION TO BE IMPROVED

INTERSTATE HIGHWAY	—————
FEDERAL ROUTES	—————
STATE ROUTES	—————
COUNTY & TOWNSHIP ROADS	—————
OTHER ROADS	—————

INDEX OF SHEETS:

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DESIGN DESIGNATION

	I.R. 77 NORTH OF BROADWAY	I.R. 77 SOUTH OF BROADWAY	RAMP J5 & J6	FRONTAGE ROAD	BROADWAY AVENUE
CURRENT ADT (2017)	32,770	54,050	21,280	2,340	18,170
DESIGN YEAR ADT (2037)	41,220	63,300	22,080	2,300	18,410
DESIGN HOURLY VOLUME AM/PM (2037)	2,340/4,970	4,900/6,470	2,560/1,500	110/310	1,580/1,160
DIRECTIONAL DISTRIBUTION AM/PM	55%/61%	57%/60%	N/A	N/A	62%/65%
TRUCKS (24 HOUR B&C)	8%	8%	7%	37%	6%
DESIGN SPEED	60	60	50 (490E), 35 (490W)	40	35
LEGAL SPEED	50	60	N/A	35	35
DESIGN FUNCTIONAL CLASSIFICATION:	URBAN INTERSTATE	URBAN INTERSTATE	DIRECTIONAL RAMP	DIRECTIONAL RAMP	URBAN PRINCIPAL ARTERIAL
NHS PROJECT	YES	YES	YES	YES	YES

DESIGN EXCEPTIONS

NONE

UNDERGROUND UTILITIES
CONTACT BOTH SERVICES TWO WORKING DAYS BEFORE YOU DIG.

OHIO Utilities Protection SERVICE
Call Before You Dig
1-800-362-2764
(Non-members must be called directly)

OIL & GAS PRODUCERS UNDERGROUND PROTECTION SERVICE
1-800-925-0988

PLAN PREPARED BY:



ENGINEERS SEAL:

STATE OF OHIO
ERIK N. BROKAMP
E-69356
REGISTERED PROFESSIONAL ENGINEER

SIGNED: _____
DATE: 1/2/18

ENGINEERS SEAL:

SIGNED: _____
DATE: _____

STANDARD CONSTRUCTION DRAWINGS			SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
CB-2.1	1/15/16		800	7/15/16
CB-2.2	1/15/16		832	1/17/14
CB-2.3	1/15/16		839	7/17/15
HW-2.1	1/15/16		939	7/17/15
HW-2.2	1/15/16			
I-2.1	1/15/16			
I-2.3	1/15/16			
MH-1.2	1/15/16			
DM-1.1	1/15/16			

RELEASED FOR CONSTRUCTION
BU06_2017.01.26_BU6_82388_CCG6B_RFC Plans
01/29/2018 Brian.Link

APPROVED _____
DATE _____ DISTRICT DEPUTY DIRECTOR

APPROVED _____
DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION

BU6 - DRAINAGE

1	10/26/17	SEE SHEETS 2, 6, 8, 13, 14, 17, 18, 22, 23, 33
2	11/07/17	SEE SHEETS 6, 18
3	1/26/18	SEE SHEETS: 3-9, 12-14

ISSUE RECORD

NO.	DATE	DESCRIPTION
1		

FEDERAL PROJECT NO. **E131(492)**
PID NO. **82388**
CONSTRUCTION PROJECT NO. **173001**
RAILROAD INVOLVEMENT **NONE**
CUY-77-13.80
1/33

CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT.

IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY.

REVIEW OF DRAINAGE FACILITIES

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE STATE, REPRESENTATIVES OF THE STATE AND THE CONTRACTOR, ALONG WITH LOCAL REPRESENTATIVES, SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCE SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE STATE.

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE STATE.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER.

GENERAL DRAINAGE REQUIREMENTS

ADJUSTING RINGS ARE NOT PERMITTED FOR CASTING ADJUSTMENTS IN PAVEMENT. THE DBT SHALL ADJUST THE HEIGHT OF SUPPORTING WALLS PER THE C&MS.

ALL CITY STREET AND FRONTAGE ROAD CATCH BASIN CASTINGS SHALL HAVE BICYCLE SAFE GRATES.

SEDIMENT AND DEBRIS REMOVAL

SEDIMENT AND DEBRIS SHALL BE REMOVED FROM EXISTING DRAINAGE CONDUITS AND DRAINAGE STRUCTURES AS FOLLOWS:

- 1. ANY DRAINAGE STRUCTURE TO WHICH THE DBT CONNECTS.
2. ANY DRAINAGE STRUCTURE RECEIVING RUNOFF DURING CONSTRUCTION FROM AREAS DISTURBED BY THE WORK.
3. THE ADJACENT DRAINAGE CONDUIT EXTENDING FROM THE STRUCTURE IDENTIFIED IN CONDITIONS (1) OR (2) TO THE NEXT DOWNSTREAM DRAINAGE STRUCTURE.

BMP REQUIREMENTS

PROVIDE 6" OF TOPSOIL FOR THE VEGETATED STRIPS AND 4" OF TOPSOIL FOR VEGETATED BIOFILTER DITCHES.

PROVIDE TRAPEZOIDAL DITCHES IN LIEU OF ROUNDING FOR VEGETATED BIOFILTER DITCHES.

ODOT MANHOLE COVERS

ALL MANHOLE COVERS IN THE PAVEMENT (SHOULDER OR TRAVEL LANE) OF I-77 OR RAMPS SHALL HAVE BOLT DOWN TYPE MANHOLE COVERS:

- RAMP J5
D007 STA. 211+34.25, 0.50' LT
D008 STA. 212+68.18, 0.47' LT
D013 STA. 214+55.86, 3.10' LT
D016A STA. 215+98.59, 2.78' LT
D057 STA. 216+48.91, 20.02' RT

UNRECORDED STORM WATER DRAINAGE

FURNISH A CONTINUANCE FOR ALL UNRECORDED STORM WATER DRAINAGE, SUCH AS ROOF DRAINS, FOOTER DRAINS, OR YARD DRAINS, DISTURBED BY THE WORK. FURNISH EITHER AN OPEN CONTINUANCE OR AN UNOBSTRUCTED CONTINUANCE BY CONNECTING A CONDUIT THROUGH THE CURB OR INTO A DRAINAGE STRUCTURE. THE LOCATION, TYPE, SIZE AND GRADE OF THE NEEDED CONDUIT TO REPLACE OR EXTEND AN EXISTING DRAIN WILL BE DETERMINED BY THE ENGINEER. ALL SUCH CONTINUANCE REQUIRES A RIGHT OF WAY USE PERMIT.

THE FOLLOWING CONDUIT TYPES MAY BE USED: 707.33, 707.41 NON-PERFORATED, 707.42, 707.43, 707.45, 707.46, 707.47, 707.51, 707.52 SDR35.

ITEM 611 - MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN

THIS ITEM SHALL BE AS PER CMS 611 WITH THE FOLLOWING EXCEPTIONS:

- 1. THE EXISTING FRAME AND GRATE SHALL BE DISPOSED OF AND REPLACED WITH NEW SECTION AND MANHOLE NO. 3 FRAME AND GRATE.
2. FOR THE FOLLOWING MANHOLES THE LIMITS OF REMOVAL SHALL BE NO LESS THAN THE FIRST PRECAST SECTION BELOW THE TOP SECTION OR FOUR FEET FOR FIELD-CONSTRUCTED STRUCTURES:

- RAMP J5
D008 212+68.18, 0.47' RT
D013 214+55.86, 3.10' LT
D016A 215+98.59, 2.78' LT

- BROADWAY AVE.
D043A 112+74.30, 7.88' LT
S014 113+83.11, 9.35' RT
S016 119+17.17, 5.37' RT

- DILLE AVE.
S011 64+67.50, 12.5' RT

- ROSEVILLE CT.
S013 52+12.40, 0.30' LT

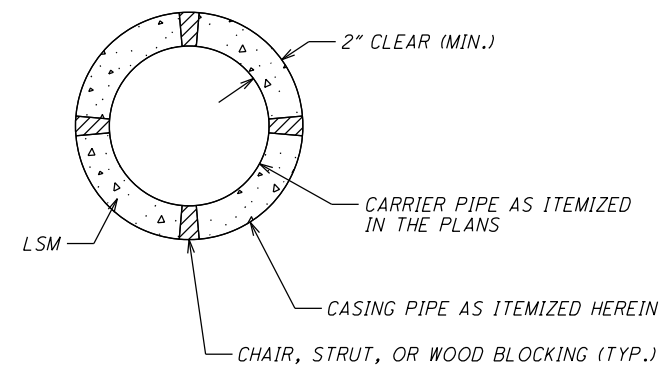
- GALLUP AVE.
S019 40+95.95, 8.33' LT
S018 40+67.00, 0.65' LT
S017 40+56.19, 13.17' LT

CASING PIPE

PROVIDE A CASING PIPE WITH INTERNAL CARRIER PIPE AT LOCATIONS DETAILED IN THE PLANS. FURNISH CASING PIPE IN ACCORDANCE WITH 707.12, 707.33, 748.06, OR AS REQUIRED BY THE PLANS.

PROVIDE A CASING THAT PROVIDES A MINIMUM 2" CLEARANCE BETWEEN THE EXTERIOR WALL OF THE CARRIER PIPE AND THE INTERIOR WALL OF THE CASING PIPE. WHEN THE CASING PIPE TERMINATES AT A DRAINAGE STRUCTURE, ENSURE THE CASING PIPE IS EMBEDDED IN THE WALL OF THE DRAINAGE STRUCTURE.

FILL THE VOID BETWEEN THE CASING PIPE AND THE CARRIER PIPE WITH 613 LOW STRENGTH MORTAR BACKFILL, TYPE 1. PLACE THE LOW STRENGTH MORTAR BACKFILL IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 837 OR AS DETAILED HEREIN.



CITY OF CLEVELAND DRAINAGE REQUIREMENTS

THE CONTRACTOR SHOULD NOTIFY THE DIVISION OF WATER POLLUTION CONTROL (WPC) PRIOR TO START OF CONSTRUCTION OF ANY CITY OF CLEVELAND SEWERS. CALL THE ENGINEERING OFFICE AT (216) 664-2756 OR (216) 664-3638 TO COORDINATE THE SEWER WORK.

THE CONTRACTOR IS REQUIRED TO SUBMIT SEWER SHOP DRAWINGS TO WPC PRIOR TO ANY CITY SEWER INSTALLATION. THE DRAWINGS SHOULD INCLUDE THE SEWER PIPES, MANHOLES, CATCH BASINS AND OTHER SEWER APPURTENANCES.

WPC WILL INSPECT THE CITY SEWER INSTALLATION.

ANY PROPOSED CITY OF CLEVELAND SEWERS SHOULD BE CONSTRUCTED IN ACCORDANCE TO THE PLANS AND SPECIFICATIONS APPROVED BY WPC. ANY DEVIATIONS FROM THE APPROVED PLANS OR SPECIFICATIONS REQUIRE A NEW PLAN SUBMITTAL REFLECTING THE CHANGES. UPON REVIEW OF THE REVISED ITEMS, WPC WILL RE-ISSUE A NEW APPROVAL. IT IS STRICTLY PROHIBITED TO CONSTRUCT ANY CITY OF CLEVELAND SEWERS UNLESS THEY ARE APPROVED BY WPC.

UPON COMPLETION OF ANY CITY OF CLEVELAND SEWER INSTALLATION, THE CONTRACTOR IS REQUIRED TO SUBMIT A HARD COPY AND AN ELECTRONIC COPY OF AS-BUILT PLANS, AND A CCTV COPY OF THE NEW CITY SEWERS. WPC RESERVES THE RIGHT NOT TO APPROVE ANY SEWER THAT DOES NOT MEET THE CITY REQUIREMENTS.

USE REINFORCED CONCRETE PIPE (RCP) WITH PREMIUM JOINTS (ODOT ITEM 706.02 AND 706.11, RESPECTIVELY) FOR ALL SEWER CONNECTIONS 21 INCH AND LARGER.

USE VITRIFIED CLAY PIPE (VCP), EXTRA STRENGTH (ES), C-700, WITH PREMIUM JOINTS (ODOT ITEM 706.08 AND 706.12, RESPECTIVELY) FOR ALL PROPOSED SEWER CONNECTIONS 18 INCH AND SMALLER.

PIPE BACKFILL SHALL BE PER 146-ME, STD. DWG. CS-022 (SEE SHEET). IN THE PLANS, PIPES UNDER PAVEMENT HAVE BEEN LABELED AS TYPE B AND PIPES NOT UNDER PAVEMENT HAVE BEEN LABELED AS TYPE C.

FOR CITY OF CLEVELAND OWNED/MAINTAINED MANHOLES, THE COVER AND CASTING SHALL BE EJIW 1700 WITH VENTED HOLES, OR APPROVED EQUAL.

CITY OF CLEVELAND STANDARD RECTANGULAR CATCH BASINS REQUIRE A TRAP AND 24" MINIMUM SUMP. FOR THE TRAP USE EJIW 5964-12 OR APPROVED EQUAL.

FOR THE CASTING AND GRATE, USE EJIW 7035 OR APPROVED EQUAL, EXCEPT USE MOUNTABLE CURB (EJIW 7390 OR APPROVED EQUAL) WITH TYPE M3 'S' GRATE FOR THE FOLLOWING CATCH BASINS:

- BROADWAY AVE.
D051 120+58.00, 24.00' LT
D050 120+35.00, 24.00' RT



RELEASED FOR CONSTRUCTION
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10/27/2017 Brian.Link

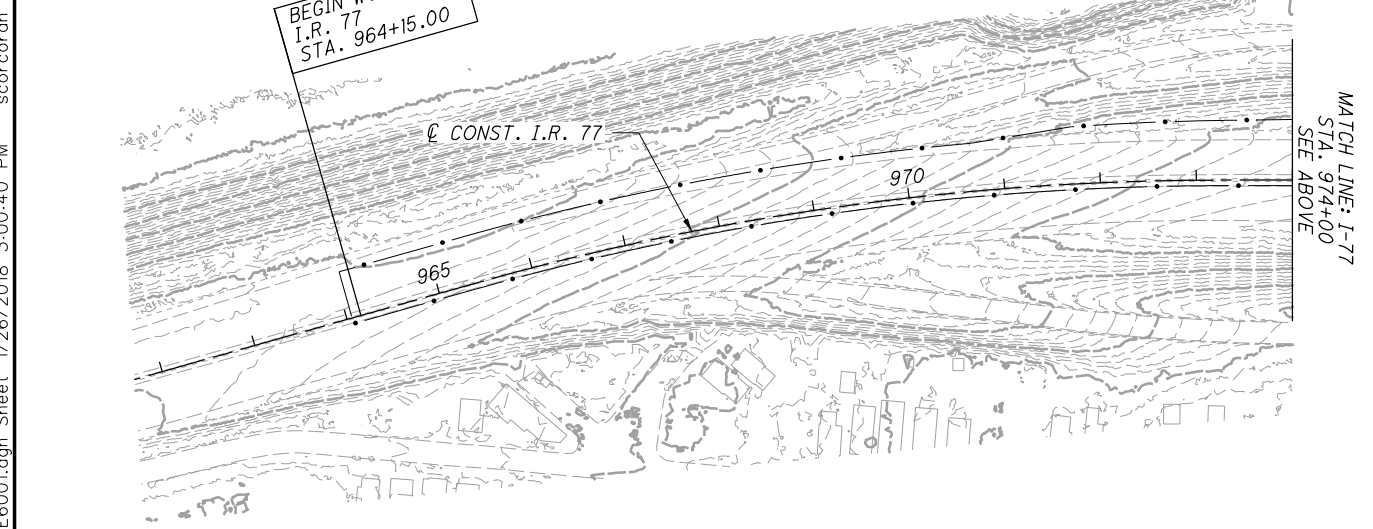
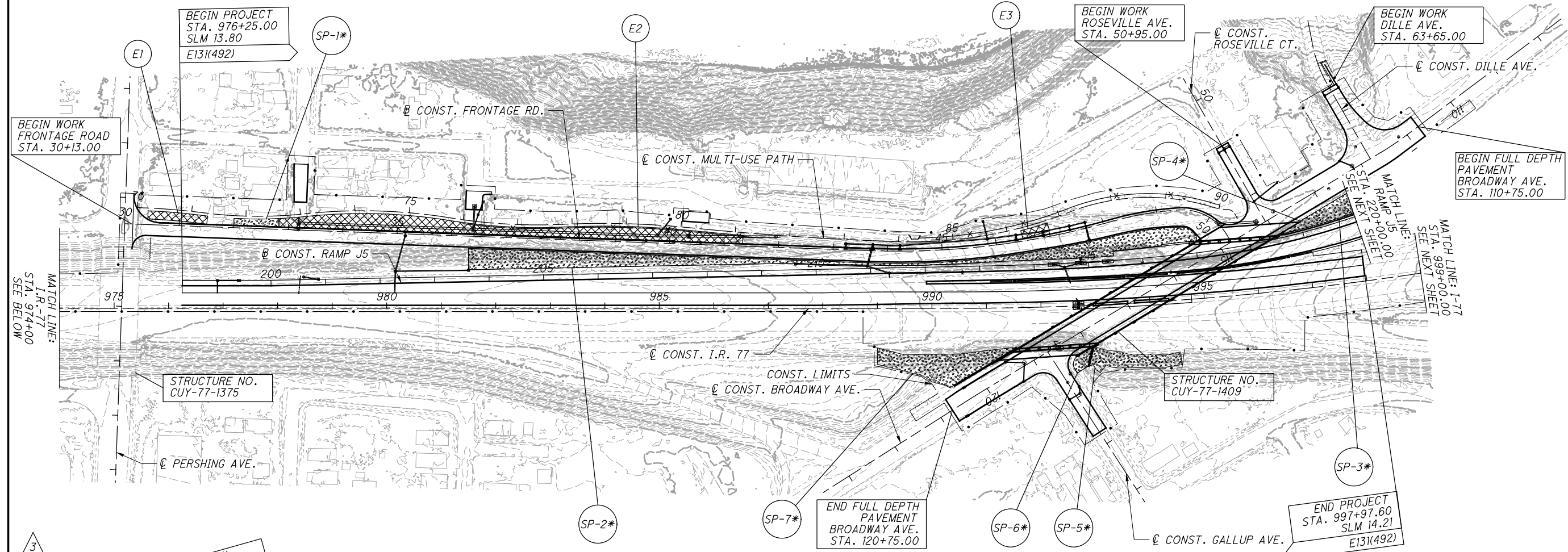
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GENERAL NOTES

CUY-77-13.80

2/33

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PROJECT DATA	
TOTAL AREA:	23.18 AC.
IMPERVIOUS (PAVED) AREA FOR PRE-CONSTRUCTION SITE:	13.40 AC.
IMPERVIOUS (PAVED) AREA FOR POST-CONSTRUCTION SITE:	14.50 AC.
RUNOFF COEFFICIENT FOR PRE-CONSTRUCTION SITE:	0.78
RUNOFF COEFFICIENT FOR POST-CONSTRUCTION SITE:	0.81
USDA SOIL & WATER CONSERVATION MAP:	CUYAHOGA COUNTY, OHIO
IMMEDIATE RECEIVING WATERS:	UNNAMED TRIBUTARY OF CUYAHOGA RIVER
SUBSEQUENT RECEIVING WATERS:	CUYAHOGA RIVER
EARTH DISTURBED AREA SUMMARY	
PROJECT EDA:	16.14 AC.
CONTRACTOR EDA:	0.00 AC.
NOTICE OF INTENT EDA:	16.14 AC.

CONTOUR INTERVAL: 1 FOOT

PROJECT DESCRIPTION

CONSTRUCTION OF SEWER SYSTEMS AS PART OF THE FOLLOWING WORK: RECONSTRUCT THE EXISTING RAMP FROM BROADWAY AVE. TO I.R. 77 SOUTHBOUND INTO A FRONTAGE ROAD TO PERSHING AVE.; CONSTRUCTION OF A MULTI-USE PATH ALONG THE FRONTAGE ROAD BETWEEN BROADWAY AVE. AND PERSHING AVE; CONSTRUCTION OF A NEW BROADWAY AVE. STRUCTURE OVER I.R. 77; AND FULL DEPTH PAVEMENT WORK ON BROADWAY AVE., GALLUP AVE., ROSEVILLE CT., AND DILLE AVE.

USGS QUADRANT: CLEVELAND SOUTH, OHIO

LONGITUDE: 81°39'35"
 LATITUDE: 41°28'27"

(LONGITUDE AND LATITUDE TO APPROX. CENTER OF PROJECT)

LEGEND

- VEGETATED FILTER STRIP
- VEGETATED BIOFILTER
- ITEM 670 - SLOPE EROSION PROTECTION

BMP TYPE	LOCATION	REF. NO.	BEGIN				END				LENGTH (FEET)	WIDTH (FEET)	SLOPE	TOTAL CONTRIB. AREA (ACRES)	EDA TREATMENT CREDIT (ACRES)
			STATION	OFFSET	LATITUDE	LONGITUDE	STATION	OFFSET	LATITUDE	LONGITUDE					
VEGETATED STRIP 1	MULTI-USE PATH	E1	70+20	5.00' RT	41.471021	-81.659998	71+30	5.00' RT	41.471322	-81.659998	110	15	VAR. 17:1 TO 8:1	0.06	0.06
VEGETATED STRIP 2	MULTI-USE PATH	E2	72+60	5.00' RT	41.471680	-81.660023	81+15	5.00' RT	41.474017	-81.660181	855	22	VAR. 3:1 TO 4:1	0.62	0.62
VEGETATED STRIP 3	MULTI-USE PATH	E3	86+25	5.00' RT	41.475406	-81.660374	86+75	5.00' RT	41.475535	-81.660441	50	15	VAR. 8:1 TO 25:1	0.03	0.03
VEGETATED STRIP 5	RAMP J5	E4	226+50	20.00' RT	41.478657	-81.661769	231+00	20.67' RT	41.479446	-81.663057	450	15	VAR. 6:1 TO 25:1	0.20	0.20
VEGETATED STRIP 6	RAMP J6	E5	305+00	26.00' LT	41.478760	-81.661712	306+00	24.69' LT	41.479052	-81.661736	100	15	6:1	0.06	0.06
VEG. BIOFILTER DITCH 1	RAMP J5	E6	223+00	21.50' LT	41.478201	-81.661263	228+50	23.20' LT	41.479078	-81.662420	550	6 to 15*	6:1	2.64	1.21

TREATMENT PROVIDED	2.18
TREATMENT REQUIRED	2.12

* FOR VEG. BIOFILTER WIDTH, SEE SHEET 4

*FOR LOCATION AND QUANTITIES, SEE SHEET 4

BU6 - DRAINAGE		
NO.	DATE	DESCRIPTION
3	1/26/18	ADDED SLOPE EROSION PROTECTION
ISSUE RECORD		

RELEASED FOR CONSTRUCTION
 BU06_2017.01.26_BUG_82388_CCG6B_RFC Plans
 01/29/2018
 Brian.Link

BMP TYPE	LOCATION	REF. NO.	BEGIN				END				LENGTH (FEET)	WIDTH (FEET)	SLOPE	TOTAL CONTRIB. AREA (ACRES)	EDA TREATMENT CREDIT (ACRES)
			STATION	OFFSET	LATITUDE	LONGITUDE	STATION	OFFSET	LATITUDE	LONGITUDE					
VEGETATED STRIP 1	MULTI-USE PATH	E1	70+20	5.00' RT	41.471021	-81.659998	71+30	5.00' RT	41.471322	-81.659998	110	15	VAR. 17:1 TO 8:1	0.06	0.06
VEGETATED STRIP 2	MULTI-USE PATH	E2	72+60	5.00' RT	41.471680	-81.660023	81+15	5.00' RT	41.474017	-81.660181	855	22	VAR. 3:1 TO 4:1	0.62	0.62
VEGETATED STRIP 3	MULTI-USE PATH	E3	86+25	5.00' RT	41.475406	-81.660374	86+75	5.00' RT	41.475535	-81.660441	50	15	VAR. 8:1 TO 25:1	0.03	0.03
VEGETATED STRIP 5	RAMP J5	E4	226+50	20.00' RT	41.478657	-81.661769	231+00	20.67' RT	41.479446	-81.663057	450	15	VAR. 6:1 TO 25:1	0.20	0.20
VEGETATED STRIP 6	RAMP J6	E5	305+00	26.00' LT	41.478760	-81.661712	306+00	24.69' LT	41.479052	-81.661736	100	15	6:1	0.06	0.06
VEG. BIOFILTER DITCH 1	RAMP J5	E6	223+00	21.50' LT	41.478201	-81.661263	228+50	23.20' LT	41.479078	-81.662420	550	6 to 15*	6:1	2.64	1.21

TREATMENT PROVIDED	2.18
TREATMENT REQUIRED	2.12

N

50
100
200
HORIZONTAL
SCALE IN FEET

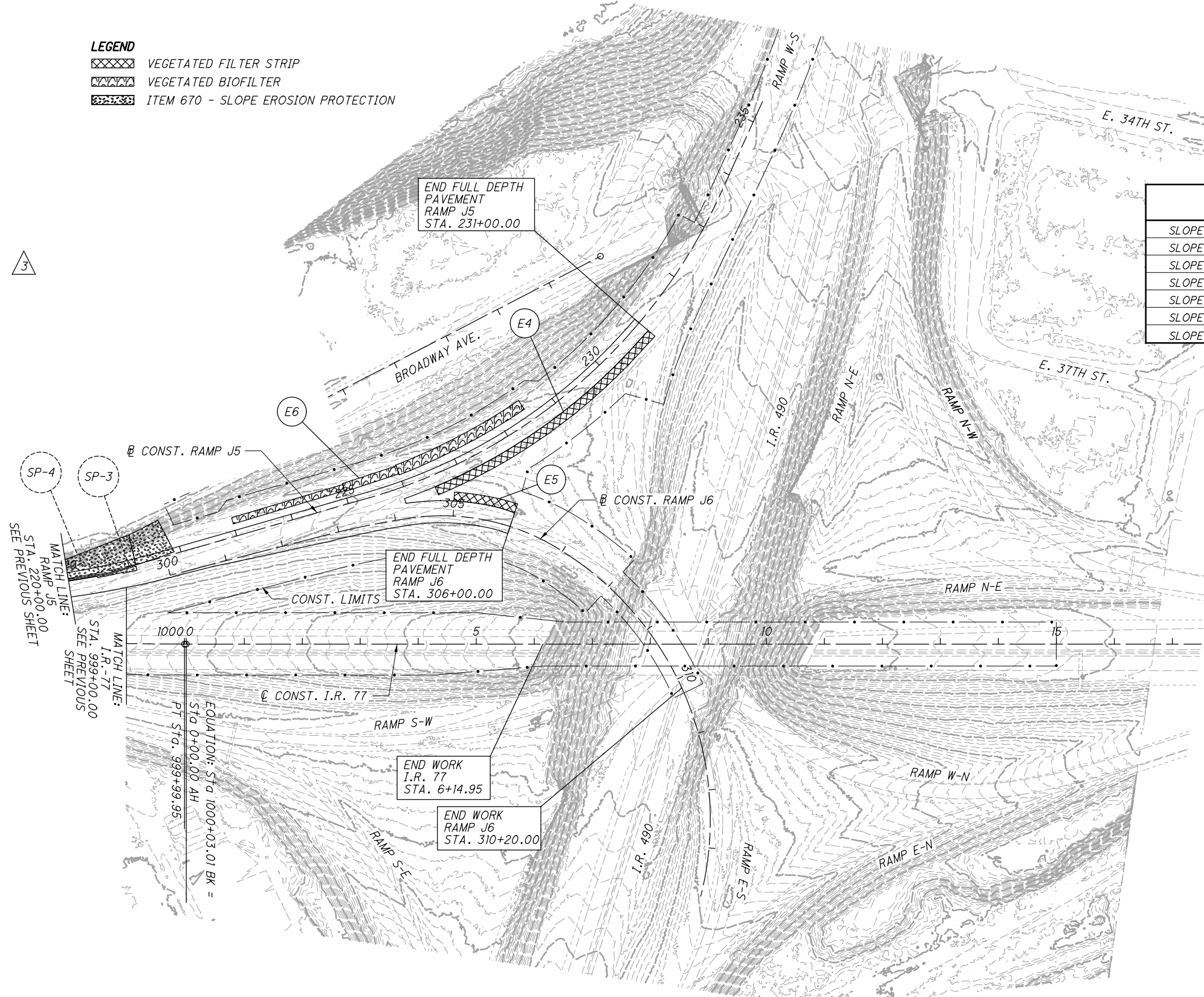
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LEGEND

XXXXX VEGETATED FILTER STRIP

XXXXX VEGETATED BIOFILTER

XXXXX ITEM 670 - SLOPE EROSION PROTECTION



ITEM	LOCATION	REF. NO.	STATION TO STATION	SY
SLOPE EROSION PROTECTION	FRONTAGE RD.	SP-1	32+00 32+83	122
SLOPE EROSION PROTECTION	RAMP J5	SP-2	203+63 217+00	2688
SLOPE EROSION PROTECTION	RAMP J5	SP-3	218+55 221+00	51
SLOPE EROSION PROTECTION	BROADWAY AVE.	SP-4	111+00 113+96	1244
SLOPE EROSION PROTECTION	BROADWAY AVE.	SP-5	117+67 118+19	499
SLOPE EROSION PROTECTION	BROADWAY AVE.	SP-6	117+95 118+44	97
SLOPE EROSION PROTECTION	BROADWAY AVE.	SP-7	119+16 120+48	1001

* VEG. BIOFILTER, E6		
FROM	TO	WIDTH (FEET)
223+00	224+00	6
224+00	225+00	8
225+00	226+00	11
226+00	227+00	13
227+00	228+00	14
228+00	228+50	15

RELEASED FOR CONSTRUCTION

BU06_2017.01.26_BU6_82388_CCG6B_RFC Plans

01/29/2018 Brian.Link

BU6 - DRAINAGE		
NO.	DATE	DESCRIPTION
3	1/26/18	ADDED SLOPE EROSION PROTECTION

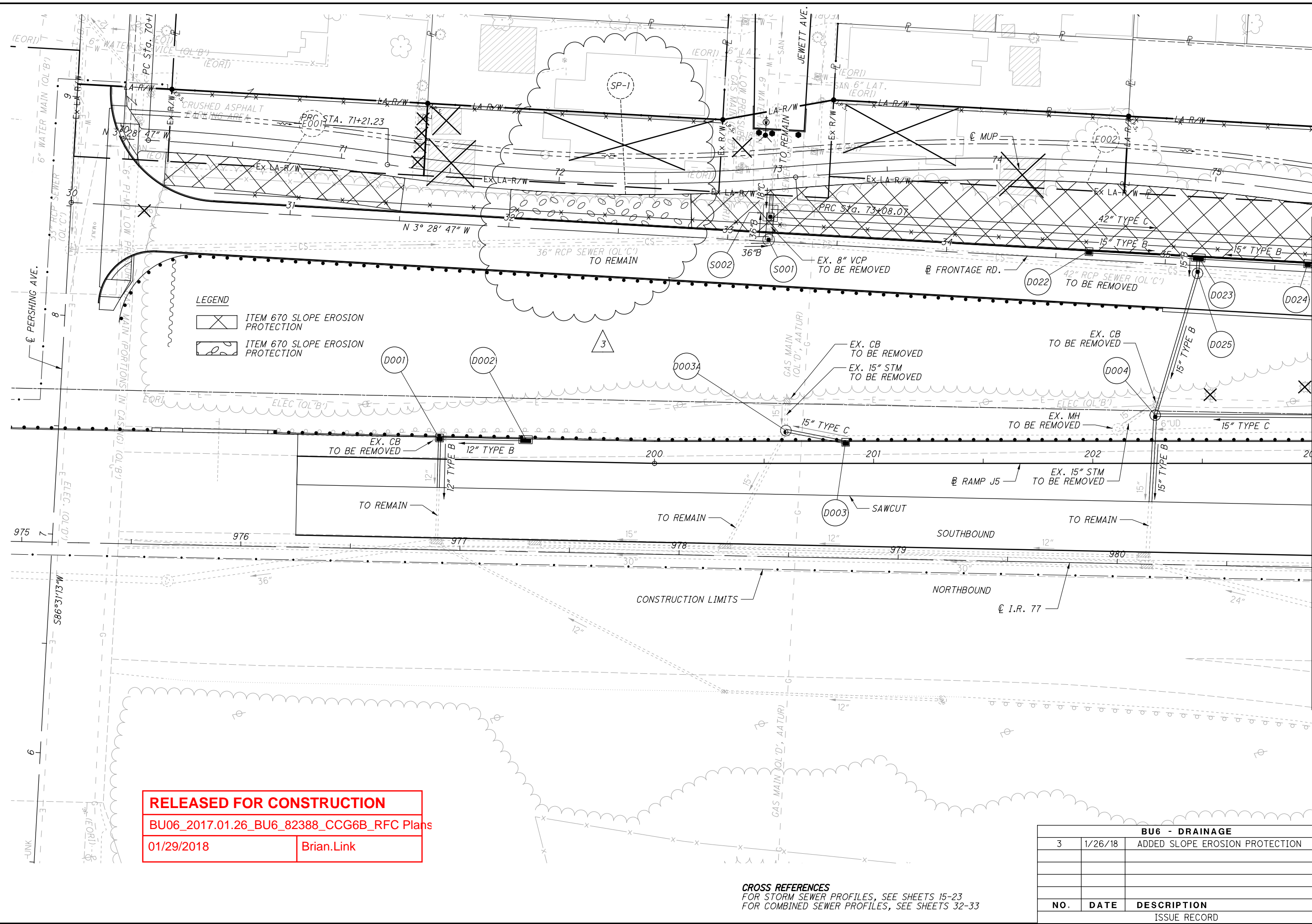
ISSUE RECORD

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PROJECT SITE PLAN

CUY-77-13.80

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LEGEND

ITEM 670 SLOPE EROSION PROTECTION
 ITEM 670 SLOPE EROSION PROTECTION

RELEASED FOR CONSTRUCTION
 BU06_2017.01.26_BU6_82388_CCG6B_RFC Plans
 01/29/2018 Brian.Link

CROSS REFERENCES
 FOR STORM SEWER PROFILES, SEE SHEETS 15-23
 FOR COMBINED SEWER PROFILES, SEE SHEETS 32-33

BU6 - DRAINAGE		
NO.	DATE	DESCRIPTION
3	1/26/18	ADDED SLOPE EROSION PROTECTION
ISSUE RECORD		

0 20 40
 HORIZONTAL SCALE IN FEET
 CALCULATED CDS CHECKED ENB
DRAINAGE PLAN
I.R. 77 STA. 976+00 TO RAMP J5 STA. 203+00
CUY-77-13.80
 MATCHLINE STA. 203+00.00, SEE SHEET 6
 5
 33



0 20 40
HORIZONTAL
SCALE IN FEET



CALCULATED
CDS
CHECKED
ENB

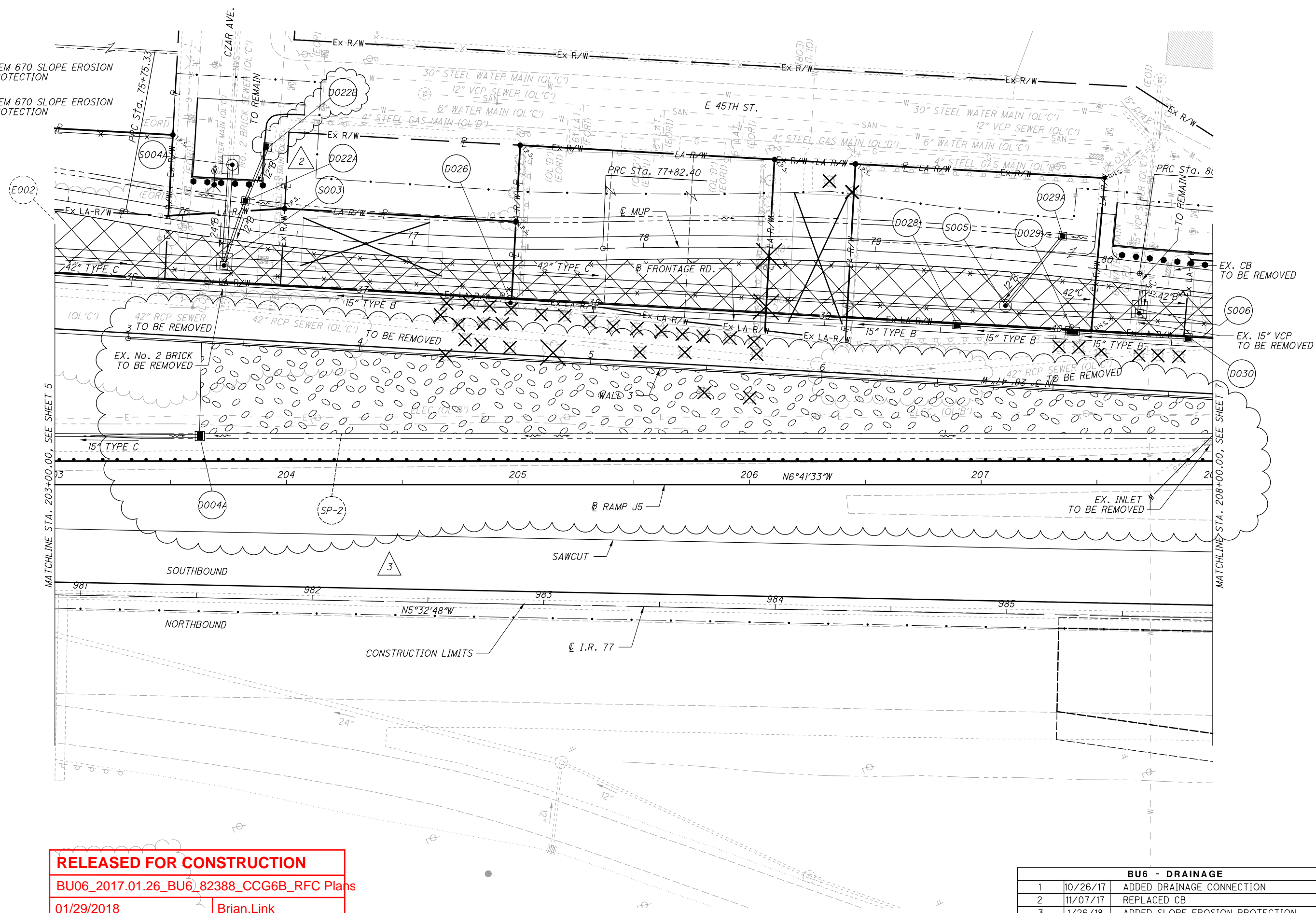
**DRAINAGE PLAN - RAMP J5
STA. 203+00 TO STA. 208+00**

CUY-77-13.80

6
33

LEGEND

-  ITEM 670 SLOPE EROSION PROTECTION
-  ITEM 670 SLOPE EROSION PROTECTION



RELEASED FOR CONSTRUCTION
 BU06_2017.01.26_BU6 82388_CCG6B_RFC Plans
 01/29/2018 Brian.Link

CROSS REFERENCES
 FOR STORM SEWER PROFILES, SEE SHEETS 15-23
 FOR COMBINED SEWER PROFILES, SEE SHEETS 32-33

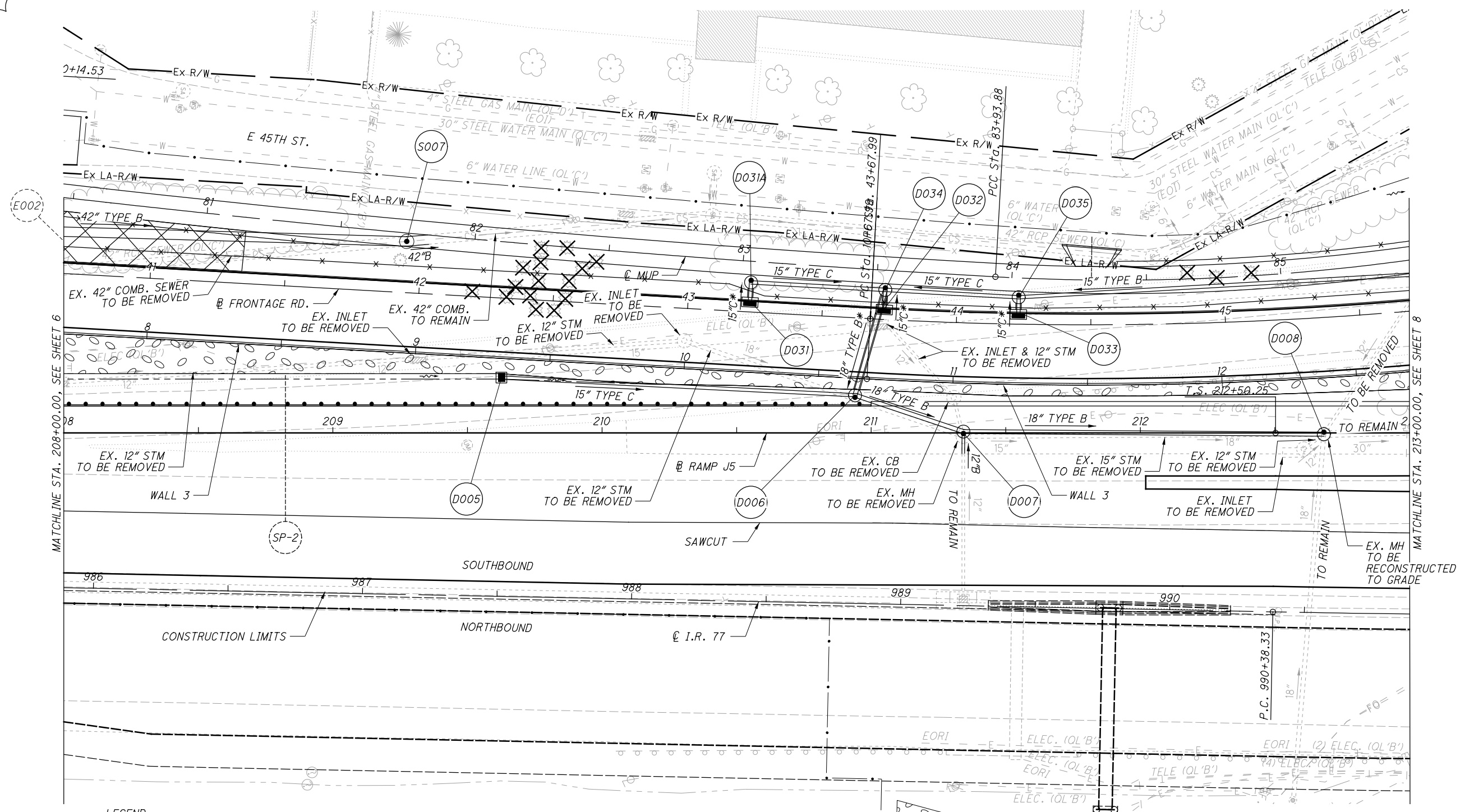
BU6 - DRAINAGE		
NO.	DATE	DESCRIPTION
1	10/26/17	ADDED DRAINAGE CONNECTION
2	11/07/17	REPLACED CB
3	1/26/18	ADDED SLOPE EROSION PROTECTION
ISSUE RECORD		

P:\82388_CCG6B\Design\Drainage\Sheets\82388_DP6102.dgn Sheet 1/26/2018 1:58:32 PM scorcoran



CALCULATED
CDS
CHECKED
ENB

0 20 40
HORIZONTAL
SCALE IN FEET



LEGEND
 ITEM 670 SLOPE EROSION PROTECTION

RELEASED FOR CONSTRUCTION
 BU06_2017.01.26_BU6_82388_CCG6B_RFC Plans
 01/29/2018 Brian.Link

CROSS REFERENCES
 FOR STORM SEWER PROFILES, SEE SHEETS 15-23
 FOR COMBINED SEWER PROFILES, SEE SHEETS 32-33

BU6 - DRAINAGE		
3	1/26/18	ADDED SLOPE EROSION PROTECTION
NO.	DATE	DESCRIPTION
ISSUE RECORD		

* ENCASED


DRAINAGE PLAN - RAMP J5
STA. 208+00 TO STA. 213+00


CUY-77-13.80

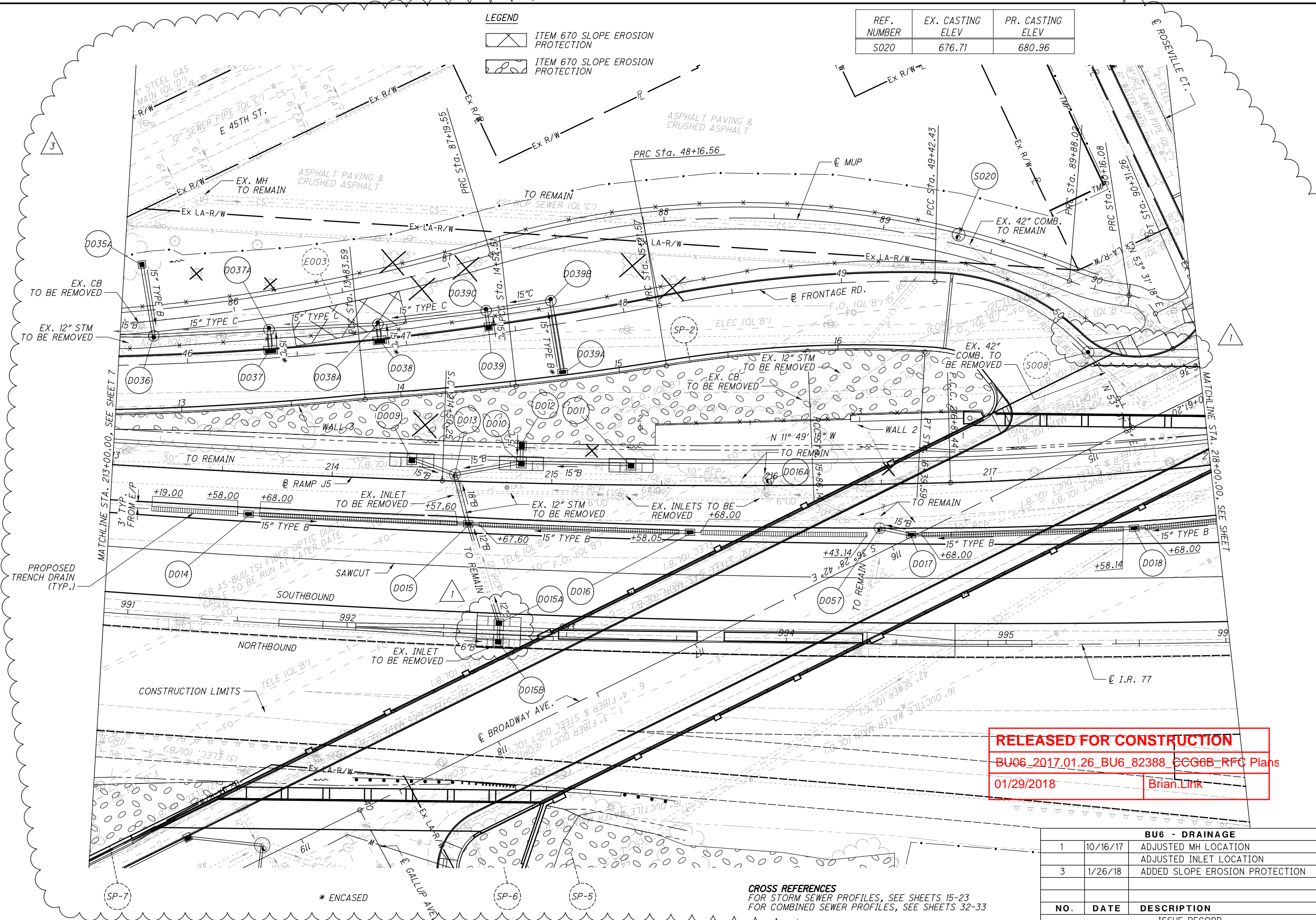
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REF. NUMBER	EX. CASTING ELEV	PR. CASTING ELEV
S020	676.71	680.96

LEGEND

 ITEM 670 SLOPE EROSION PROTECTION

 ITEM 670 SLOPE EROSION PROTECTION



RELEASED FOR CONSTRUCTION

 BU06_2017.01.26_BU6_82388_GCG6B_RFC Plans

 01/29/2018 Brian.Lmk

CROSS REFERENCES

 FOR STORM SEWER PROFILES, SEE SHEETS 15-23

 FOR COMBINED SEWER PROFILES, SEE SHEETS 32-33

BU6 - DRAINAGE		
NO.	DATE	DESCRIPTION
1	10/16/17	ADJUSTED MH LOCATION
		ADJUSTED INLET LOCATION
3	1/26/18	ADDED SLOPE EROSION PROTECTION
ISSUE RECORD		

P:\82388_CCG6B\Design\Drainage\Sheets\82388_DP6104.dgn Sheet 1/26/2018 2:05:40 PM scorcoran

LEGEND

ITEM 670 SLOPE EROSION PROTECTION

CROSS REFERENCES
 FOR STORM SEWER PROFILES, SEE SHEETS 15-23
 FOR COMBINED SEWER PROFILES, SEE SHEETS 32-33

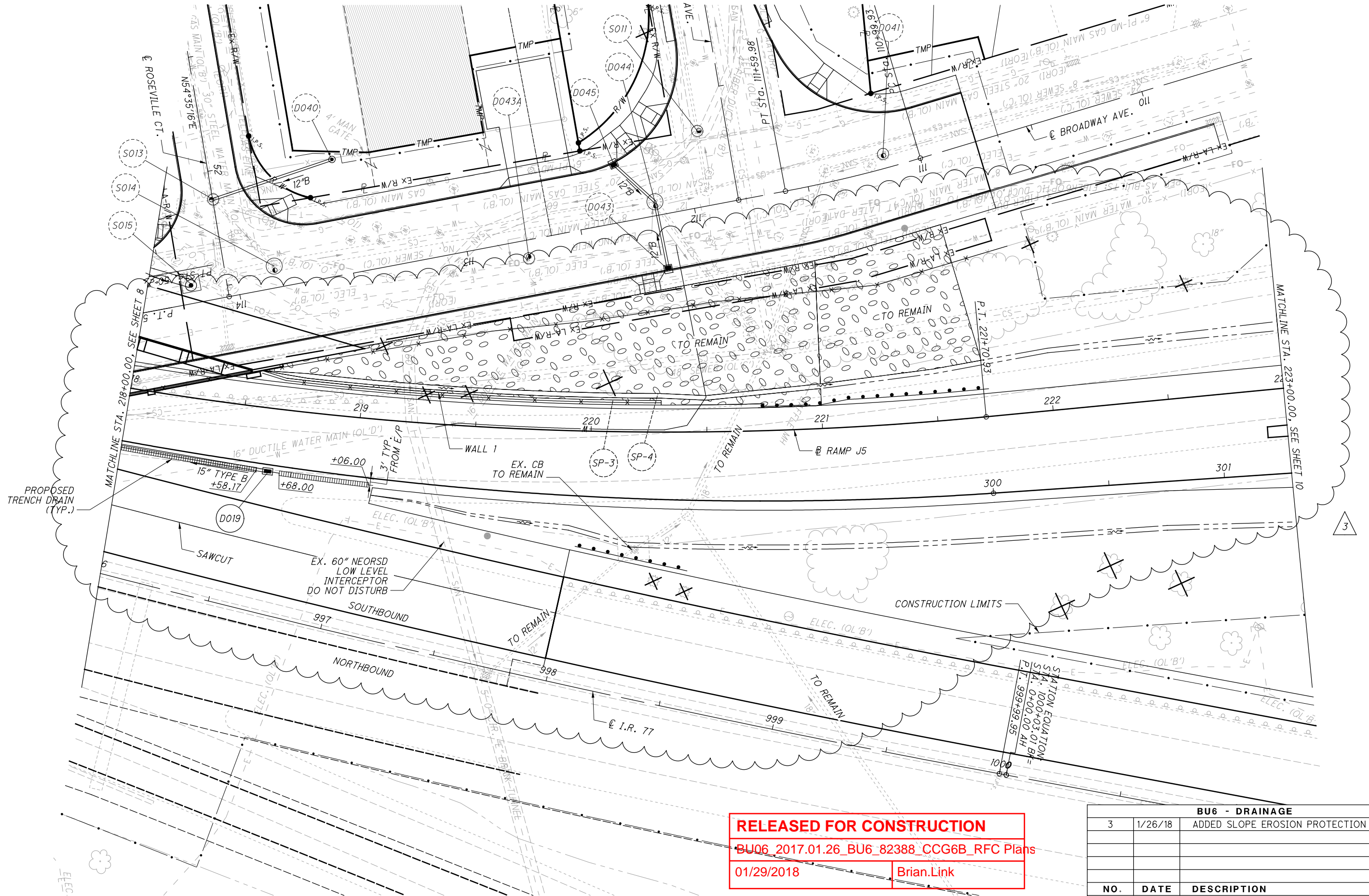


CALCULATED
 CDS
 CHECKED
 ENB

DRAINAGE PLAN - RAMP J5
 STA. 218+00 TO STA. 223+00

CUY-77-13.80

9
 33






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 BU06_2017.01.26_BU6_82388_CCG6B_RFC Plans
 01/29/2018 Brian.Link

BU6 - DRAINAGE		
NO.	DATE	DESCRIPTION
3	1/26/18	ADDED SLOPE EROSION PROTECTION
ISSUE RECORD		

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LEGEND

-  ITEM 670 SLOPE EROSION PROTECTION
-  ITEM 670 DITCH EROSION PROTECTION

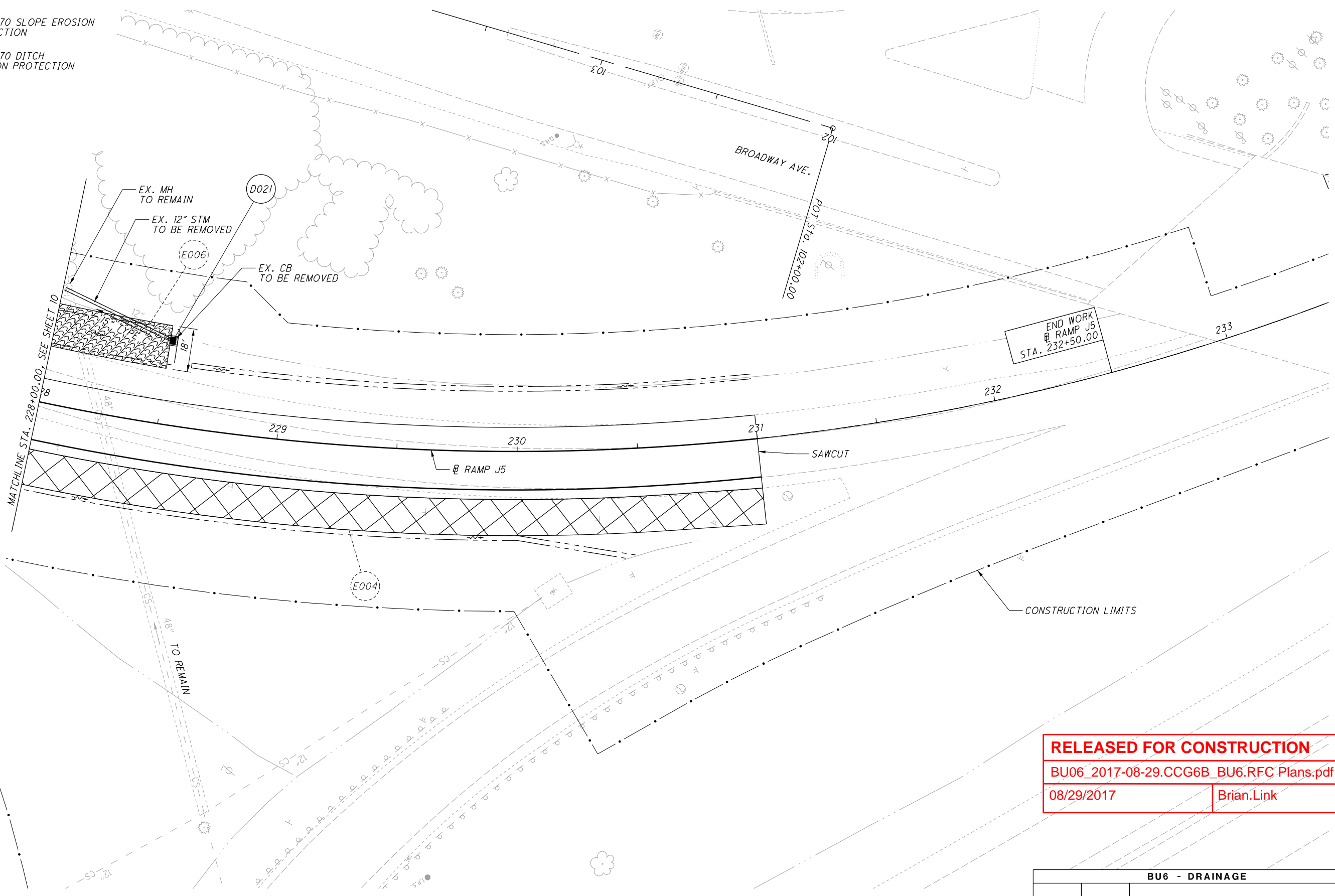
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HORIZONTAL SCALE IN FEET

CALCULATED CDS CHECKED ENB

DRAINAGE PLAN - RAMP J5
STA. 228+00 TO STA. 233+00

CUY-77-13.80

11
33



END WORK
RAMP J5
STA. 232+50.00

RELEASED FOR CONSTRUCTION

BU06_2017-08-29.CCG6B_BU6.RFC Plans.pdf

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BU6 - DRAINAGE		
NO.	DATE	DESCRIPTION
ISSUE RECORD		

CROSS REFERENCES
FOR STORM SEWER PROFILES, SEE SHEETS 15-23

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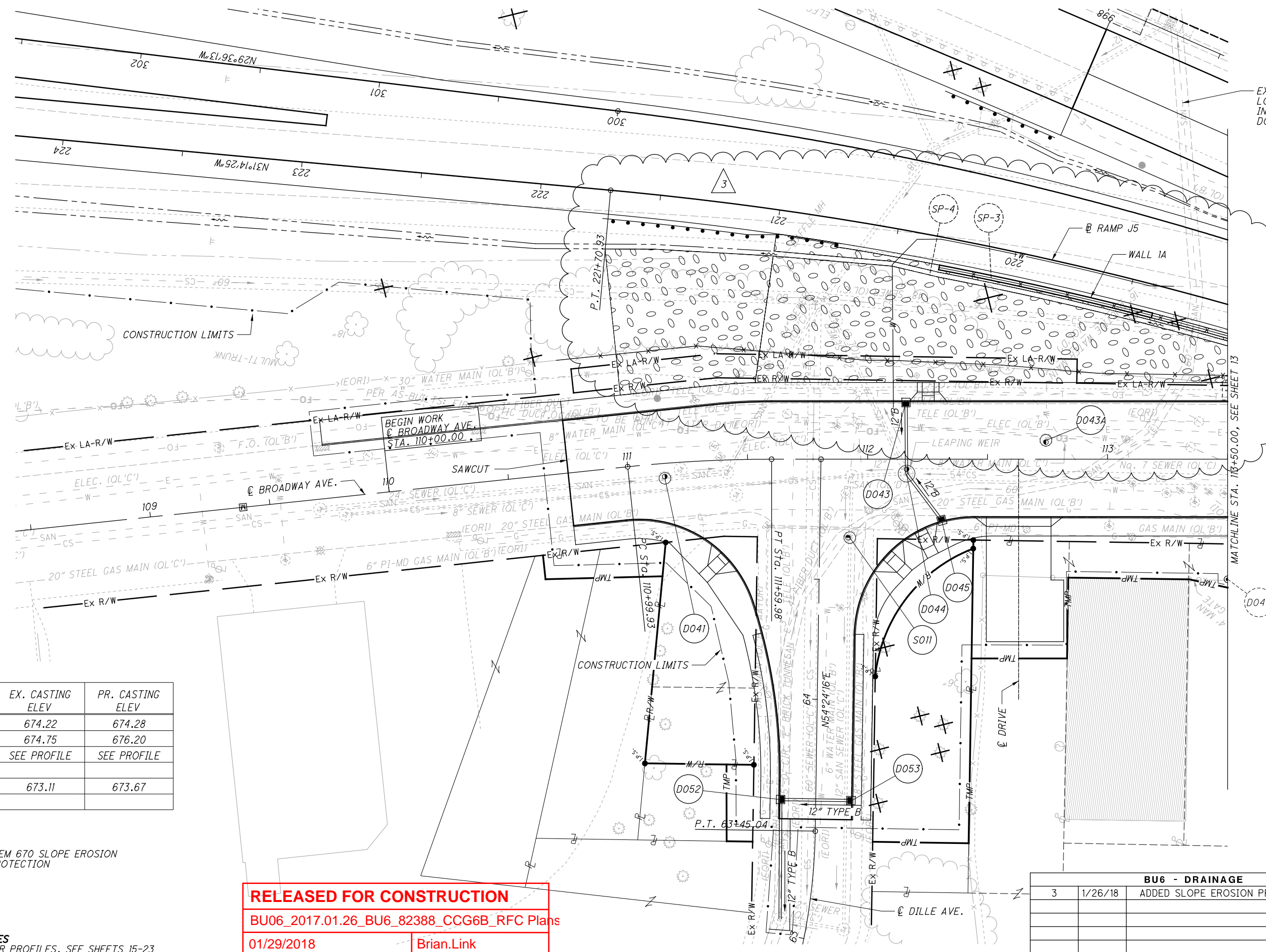
0 20 40
HORIZONTAL SCALE IN FEET

CALCULATED
CDS
CHECKED
ENB

DRAINAGE PLAN - BROADWAY AVE.
STA. 108+00 TO STA. 113+50

CUY-77-13.80

12
33



EX. 60" NEORS
LOW LEVEL
INTERCEPTOR
DO NOT DISTURB

REF. NUMBER	EX. CASTING ELEV	PR. CASTING ELEV
D041	674.22	674.28
D043A	674.75	676.20
D044	SEE PROFILE	SEE PROFILE
S011	673.11	673.67

LEGEND
 ITEM 670 SLOPE EROSION PROTECTION

RELEASED FOR CONSTRUCTION
 BU06_2017.01.26_BU6_82388_CCG6B_RFC Plans
 01/29/2018 Brian.Link

BU6 - DRAINAGE		
NO.	DATE	DESCRIPTION
3	1/26/18	ADDED SLOPE EROSION PROTECTION
ISSUE RECORD		

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CROSS REFERENCES
 FOR STORM SEWER PROFILES, SEE SHEETS 15-23
 FOR COMBINED SEWER PROFILES, SEE SHEETS 32-33

LEGEND

-  ITEM 670 SLOPE EROSION PROTECTION
-  ITEM 670 SLOPE EROSION PROTECTION

REF. NUMBER	EX. CASTING ELEV	PR. CASTING ELEV
S012	SEE PROFILE	SEE PROFILE
S013	SEE PROFILE	SEE PROFILE
S014	675.31	679.97
S015	SEE PROFILE	SEE PROFILE
S017	676.40	679.01
S018	676.54	678.50
S019	SEE PROFILE	SEE PROFILE

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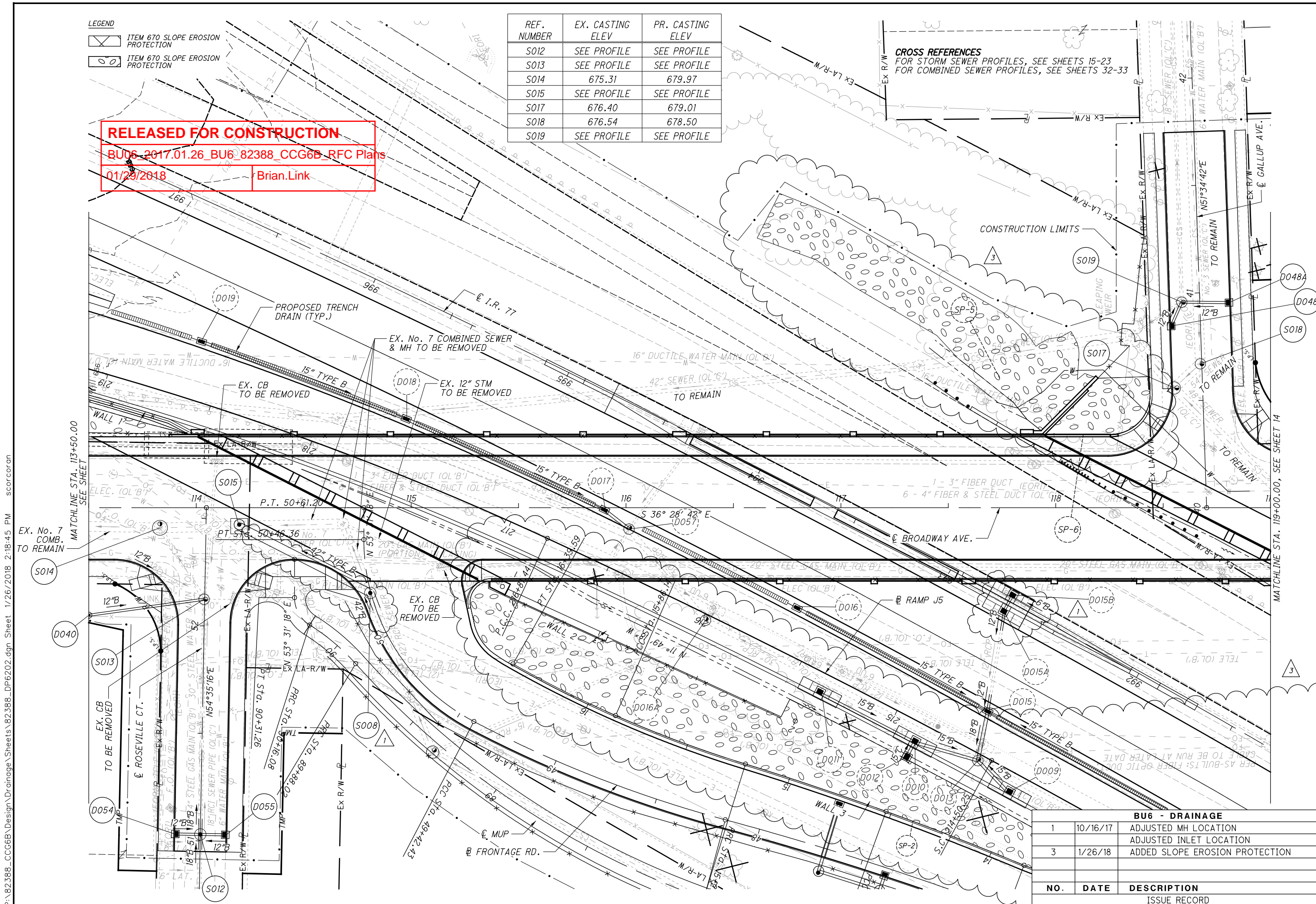
BU06_2017.01.26_BU6_82388_CCG6B_RFC Plans
01/29/2018 Brian.Link

CROSS REFERENCES
FOR STORM SEWER PROFILES, SEE SHEETS 15-23
FOR COMBINED SEWER PROFILES, SEE SHEETS 32-33


 0 20 40
 HORIZONTAL SCALE IN FEET
 CALCULATED CDS CHECKED ENB

**DRAINAGE PLAN - BROADWAY AVE.
STA. 113+50 TO STA. 119+00**

CUY-77-13.80



BU6 - DRAINAGE		
NO.	DATE	DESCRIPTION
1	10/16/17	ADJUSTED MH LOCATION
		ADJUSTED INLET LOCATION
3	1/26/18	ADDED SLOPE EROSION PROTECTION
ISSUE RECORD		

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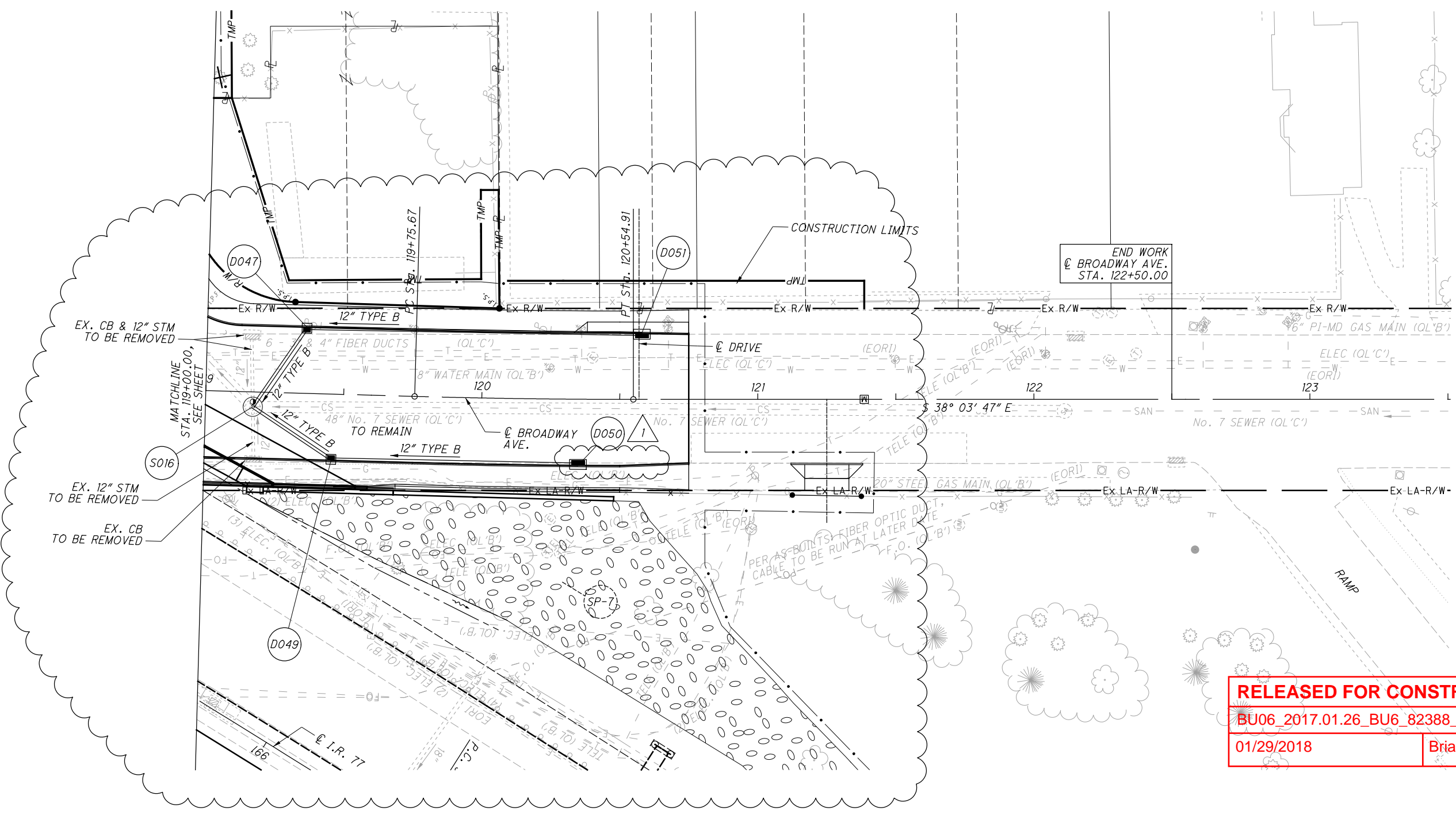


 HORIZONTAL SCALE IN FEET

DRAINAGE PLAN - BROADWAY AVE.
STA. 119+00 TO STA. 123+50

CUY-77-13.80

14
33



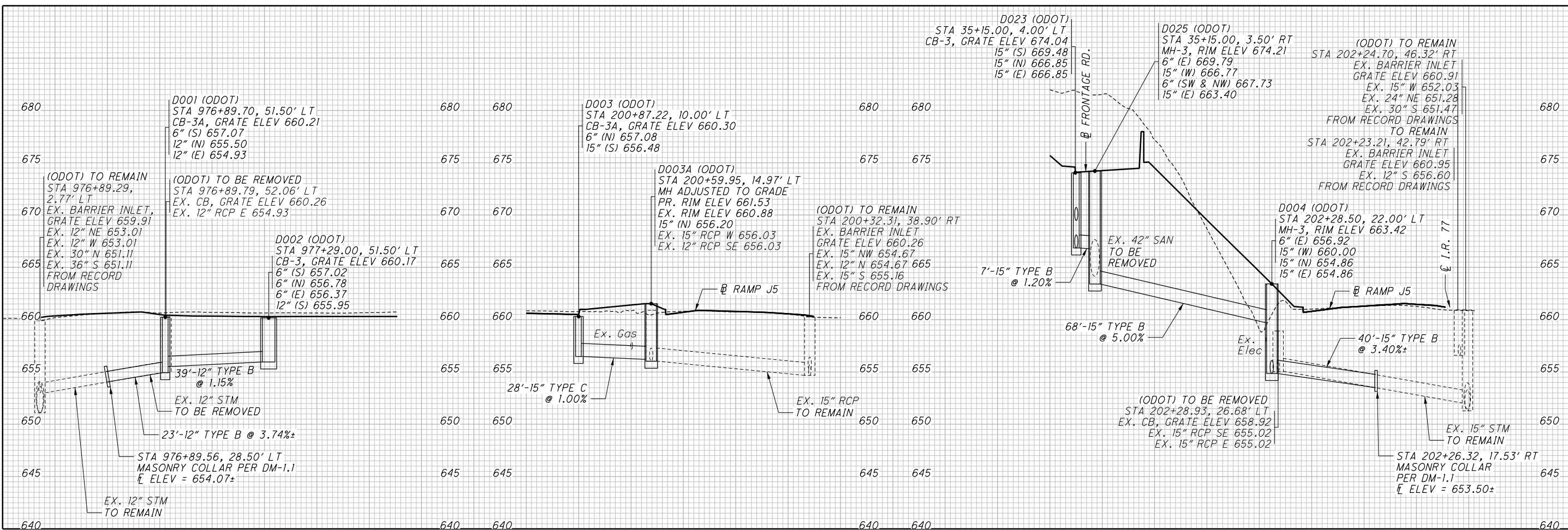
END WORK
 @ BROADWAY AVE.
 STA. 122+50.00

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 BU06_2017.01.26_BU6_82388_CCG6B_RFC Plans
 01/29/2018 Brian.Link

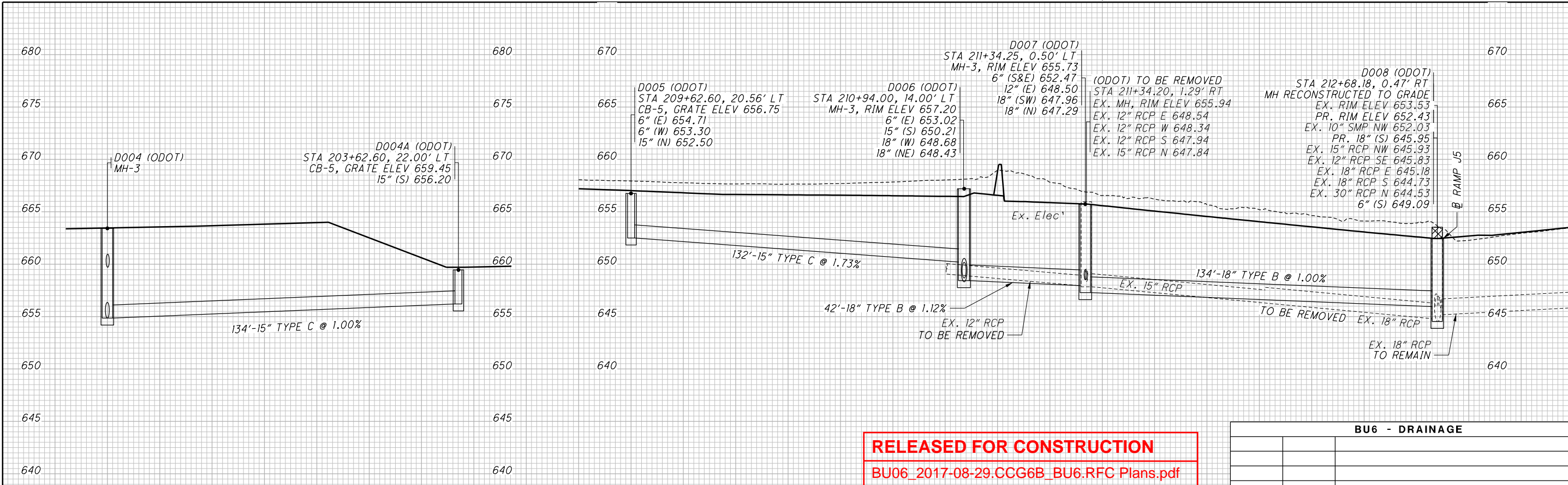
- LEGEND**
-  ITEM 670 SLOPE EROSION PROTECTION
 -  ITEM 670 SLOPE EROSION PROTECTION

CROSS REFERENCES
 FOR STORM SEWER PROFILES, SEE SHEETS 15-23
 FOR COMBINED SEWER PROFILES, SEE SHEETS 32-33

BU6 - DRAINAGE		
NO.	DATE	DESCRIPTION
1	10/16/17	ADJUSTED CB LOCATION
3	1/26/18	ADDED SLOPE EROSION PROTECTION
ISSUE RECORD		



CROSS REFERENCES
FOR STORM SEWER PLANS, SEE SHEETS 5-14

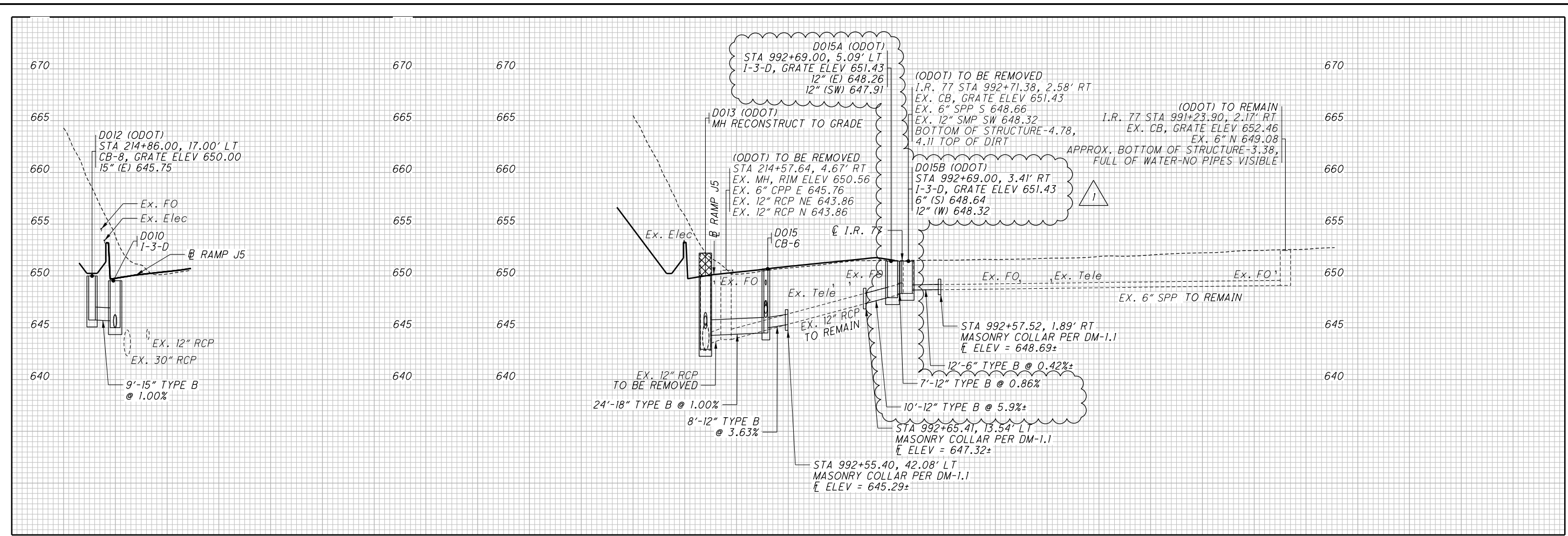


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 08/29/2017 Brian.Link

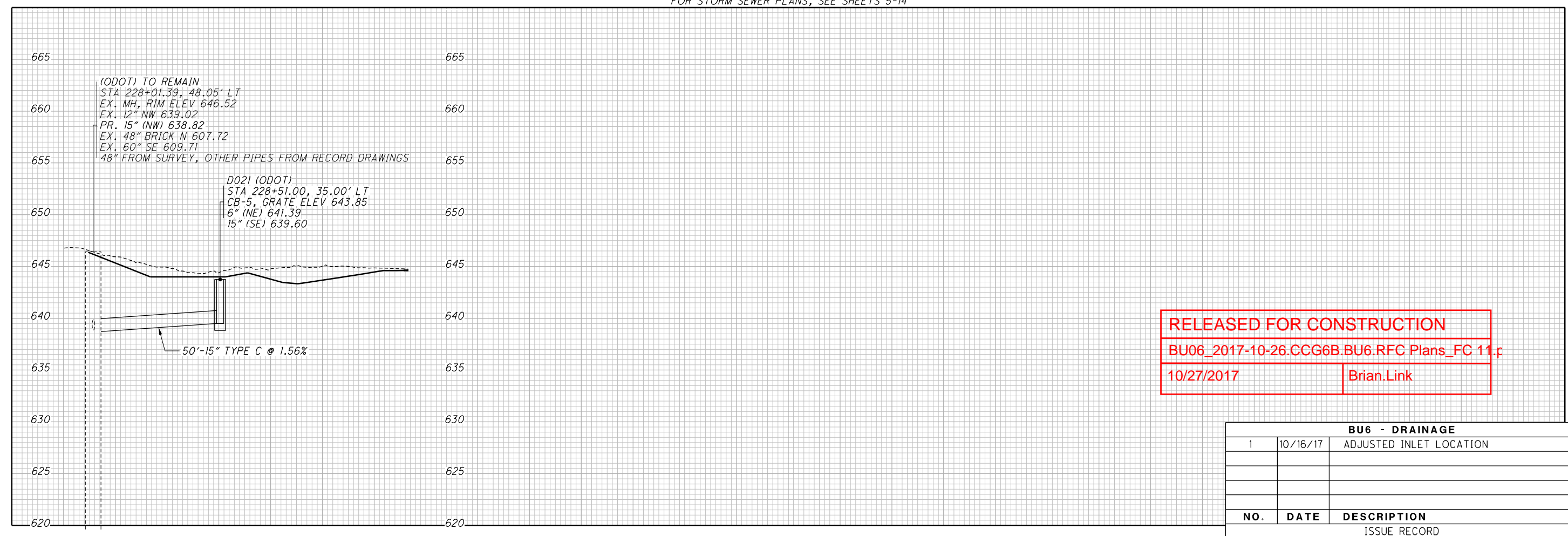
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NO.	DATE	DESCRIPTION

ISSUE RECORD

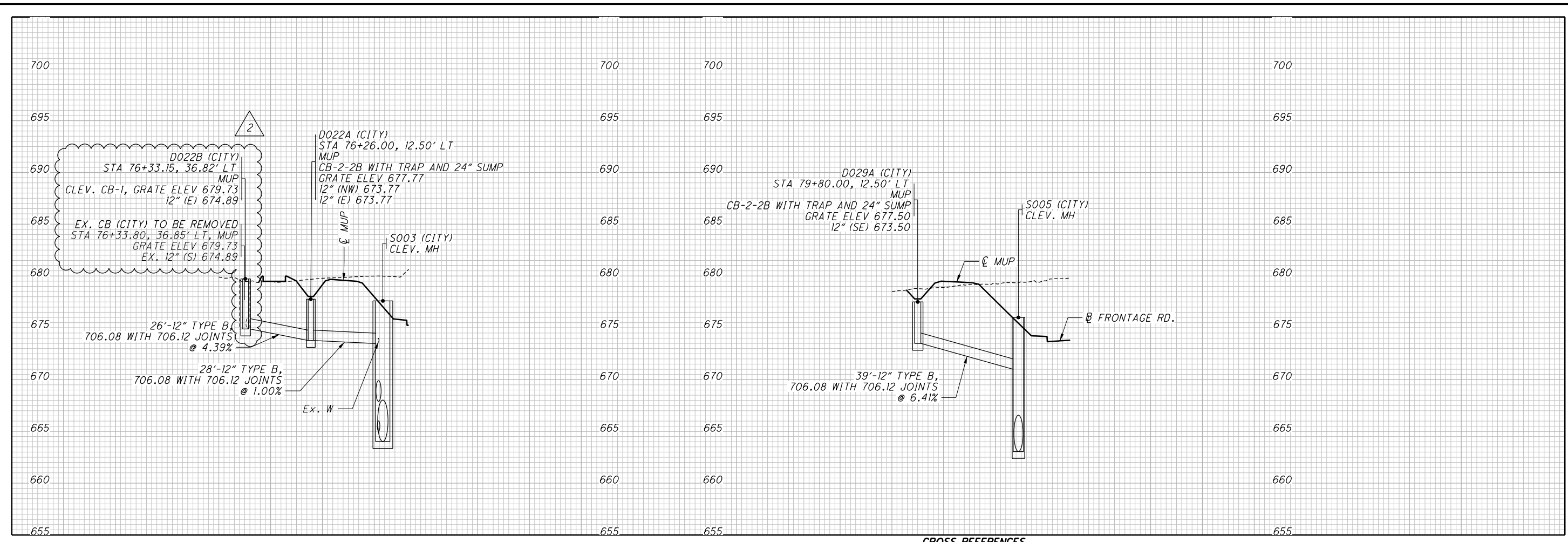
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CROSS REFERENCES
FOR STORM SEWER PLANS, SEE SHEETS 5-14



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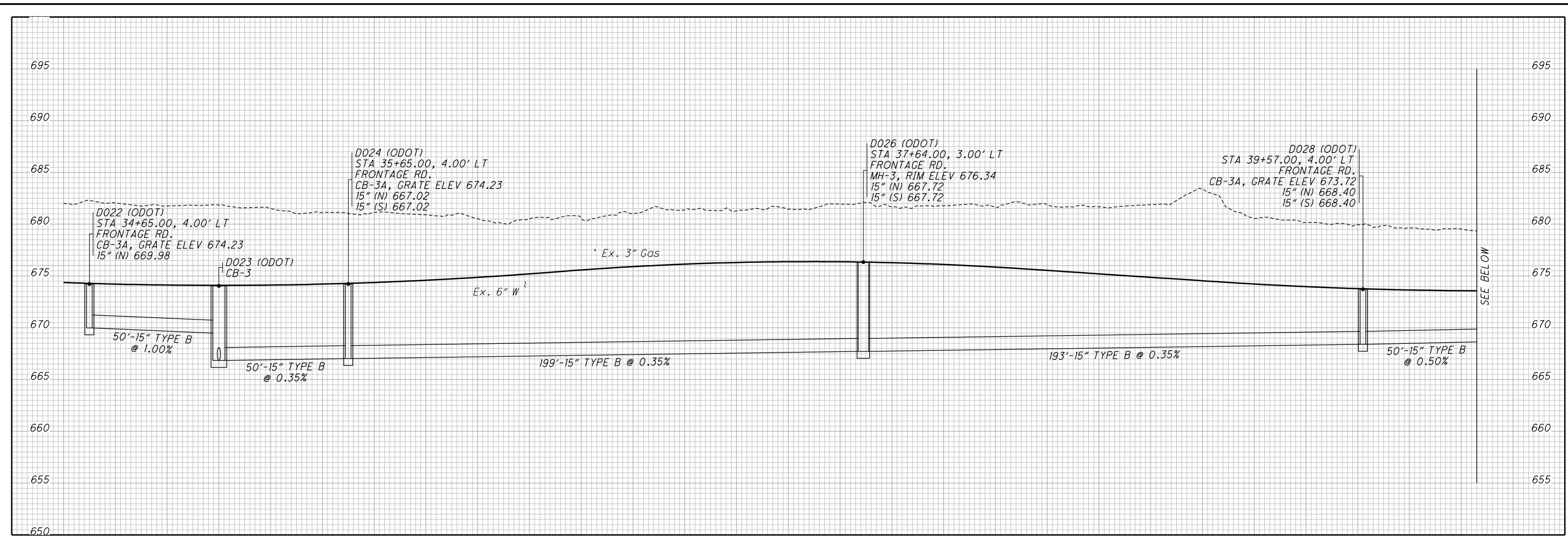


CROSS REFERENCES
 FOR STORM SEWER PLANS, SEE SHEETS 5-14

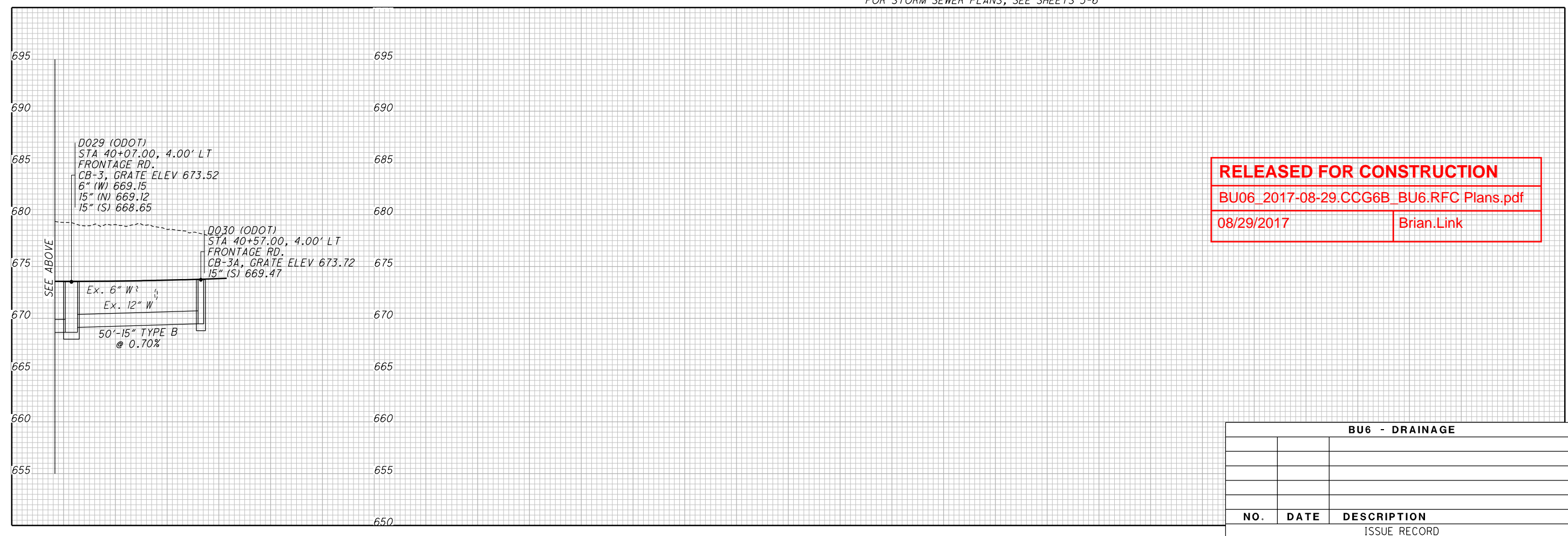
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 11/17/2017 Brian.Link

BU6 - DRAINAGE		
NO.	DATE	DESCRIPTION
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2	11/07/17	REPLACED CB
ISSUE RECORD		

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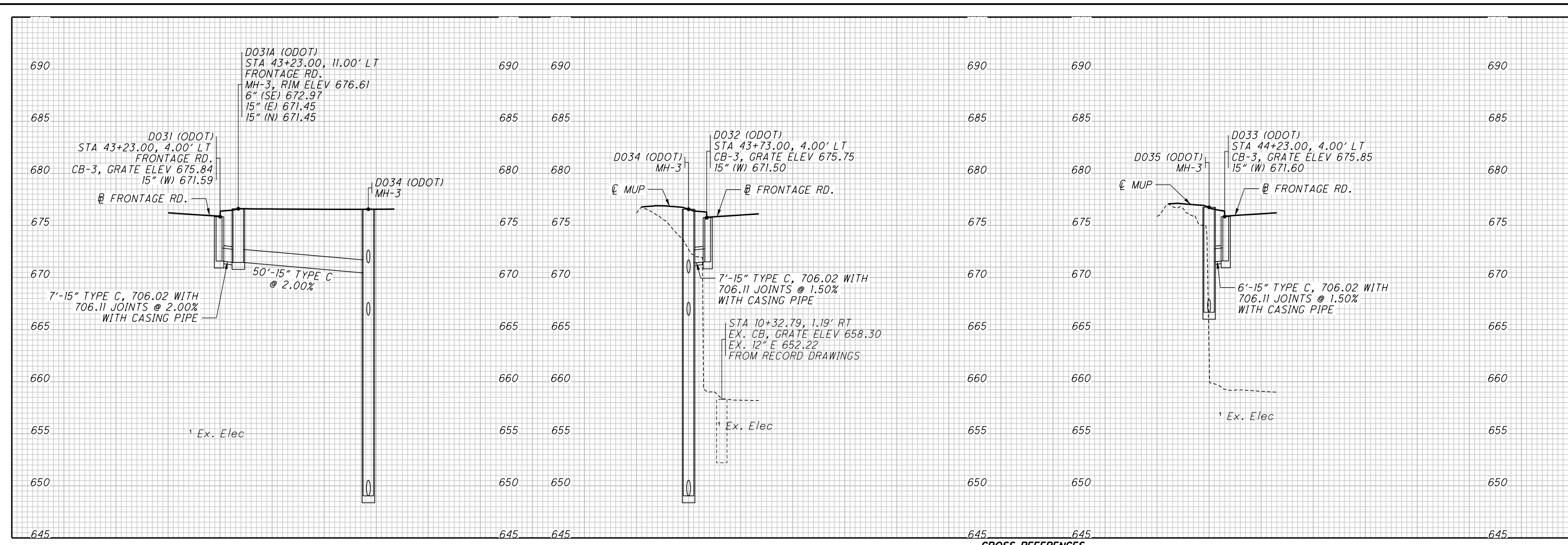
CROSS REFERENCES
FOR STORM SEWER PLANS, SEE SHEETS 3-6



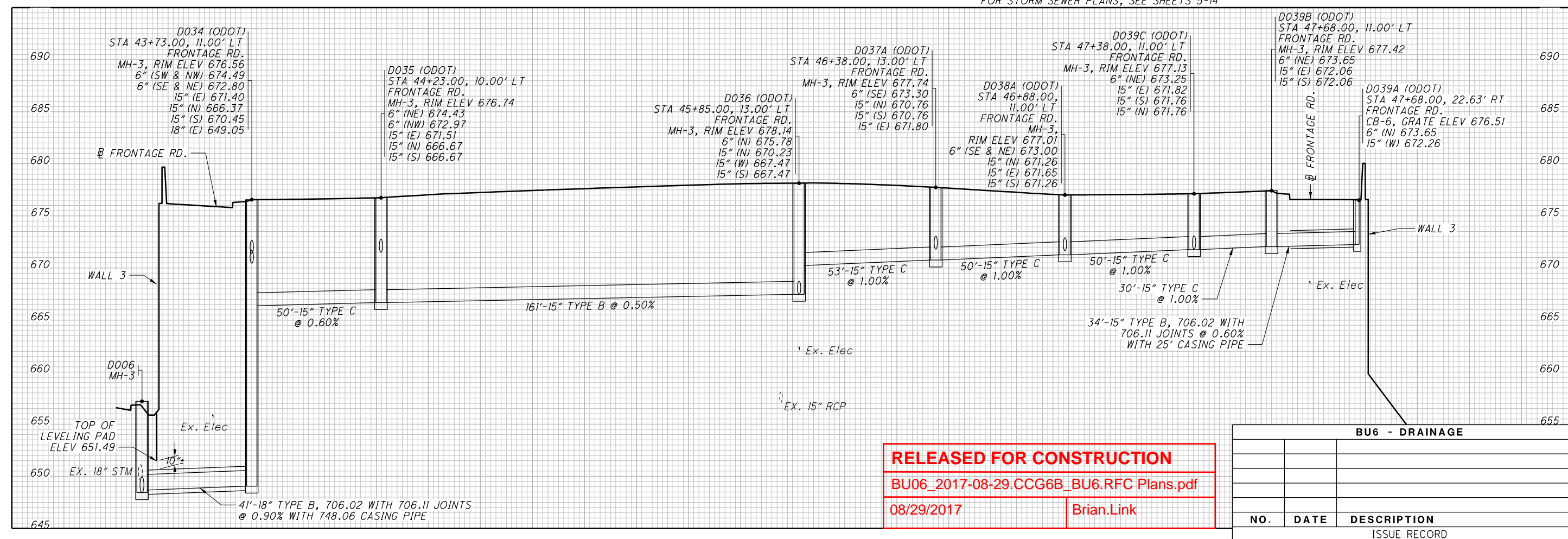
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08/29/2017 Brian.Link

BU6 - DRAINAGE		
NO.	DATE	DESCRIPTION
ISSUE RECORD		

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CROSS REFERENCES
FOR STORM SEWER PLANS, SEE SHEETS 5-14

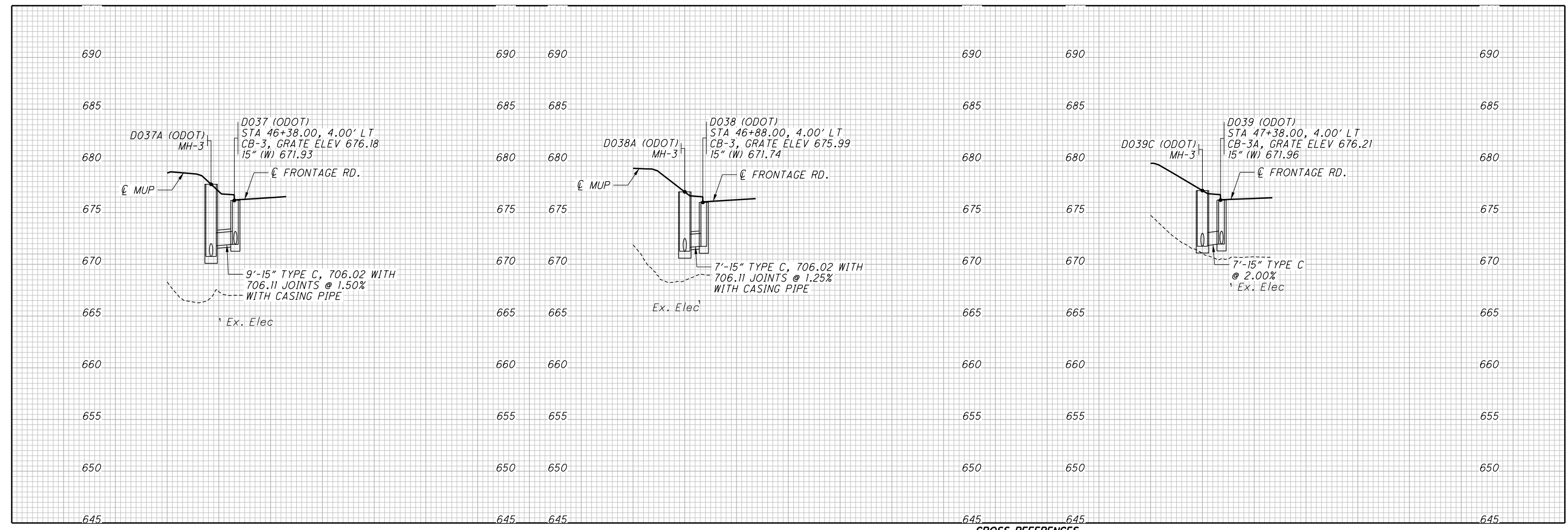


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 BU06_2017-08-29.CCG6B_BU6.RFC Plans.pdf
 08/29/2017 Brian.Link

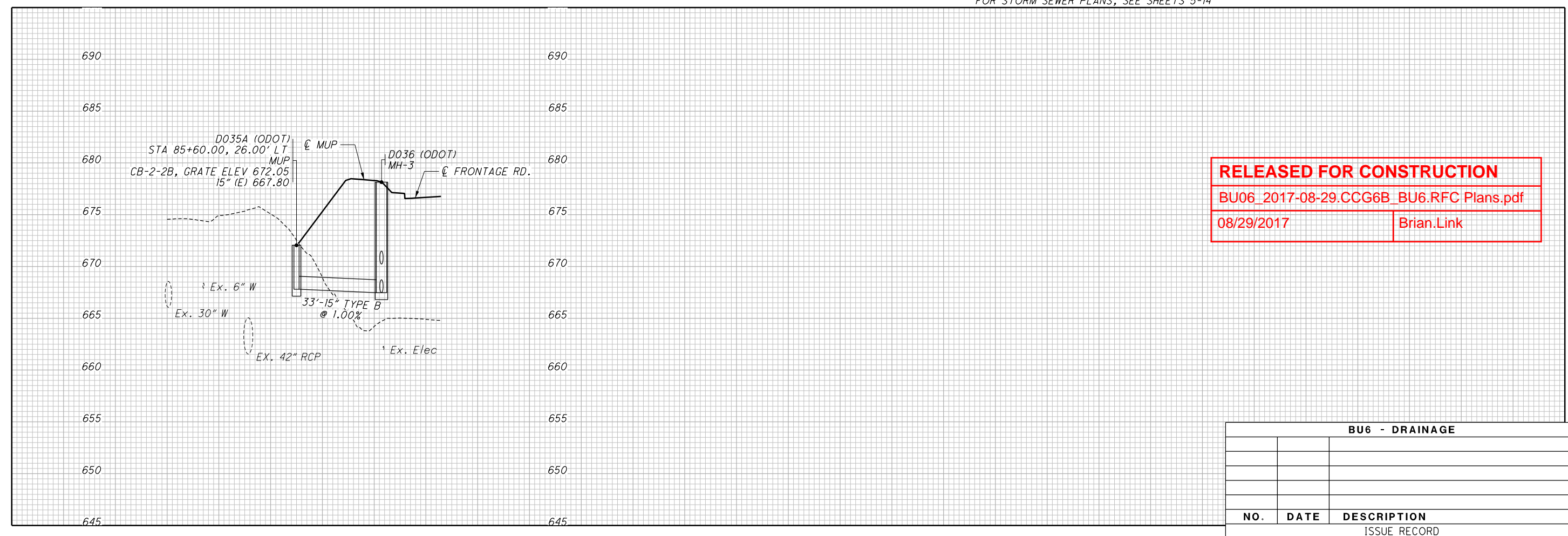
BU6 - DRAINAGE		
NO.	DATE	DESCRIPTION

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CROSS REFERENCES
 FOR STORM SEWER PLANS, SEE SHEETS 5-14



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 08/29/2017 Brian.Link

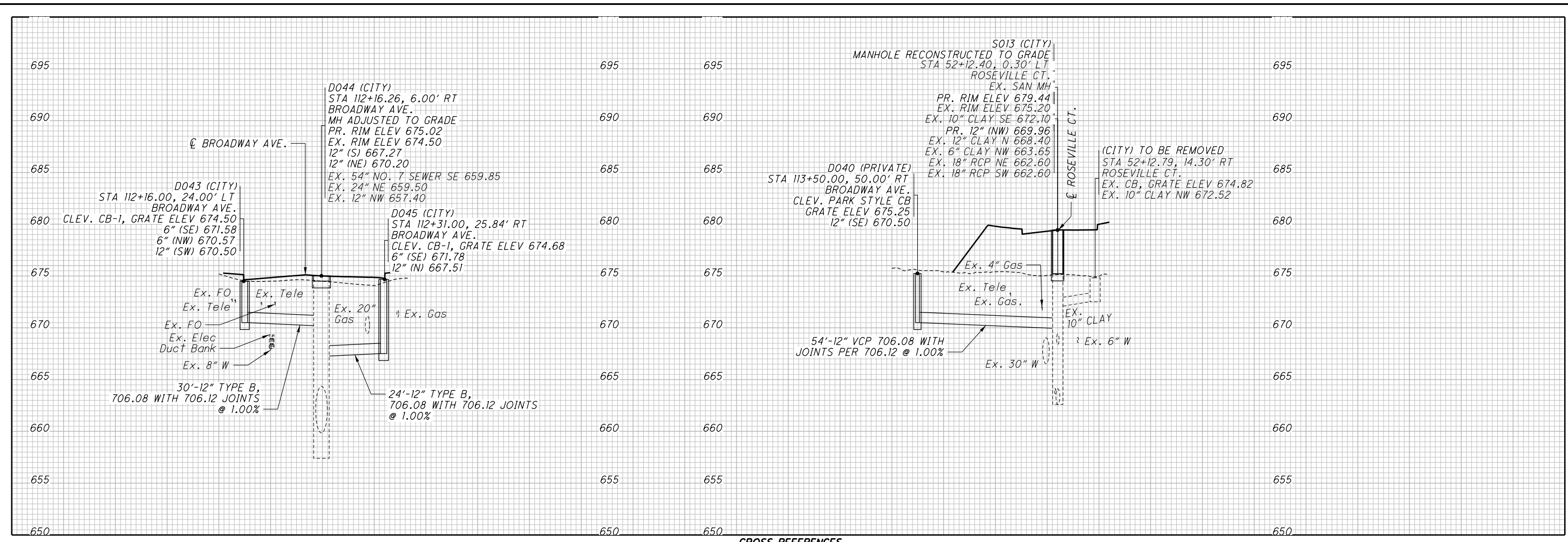
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NO.	DATE	DESCRIPTION
ISSUE RECORD		

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CHECKED
ENB

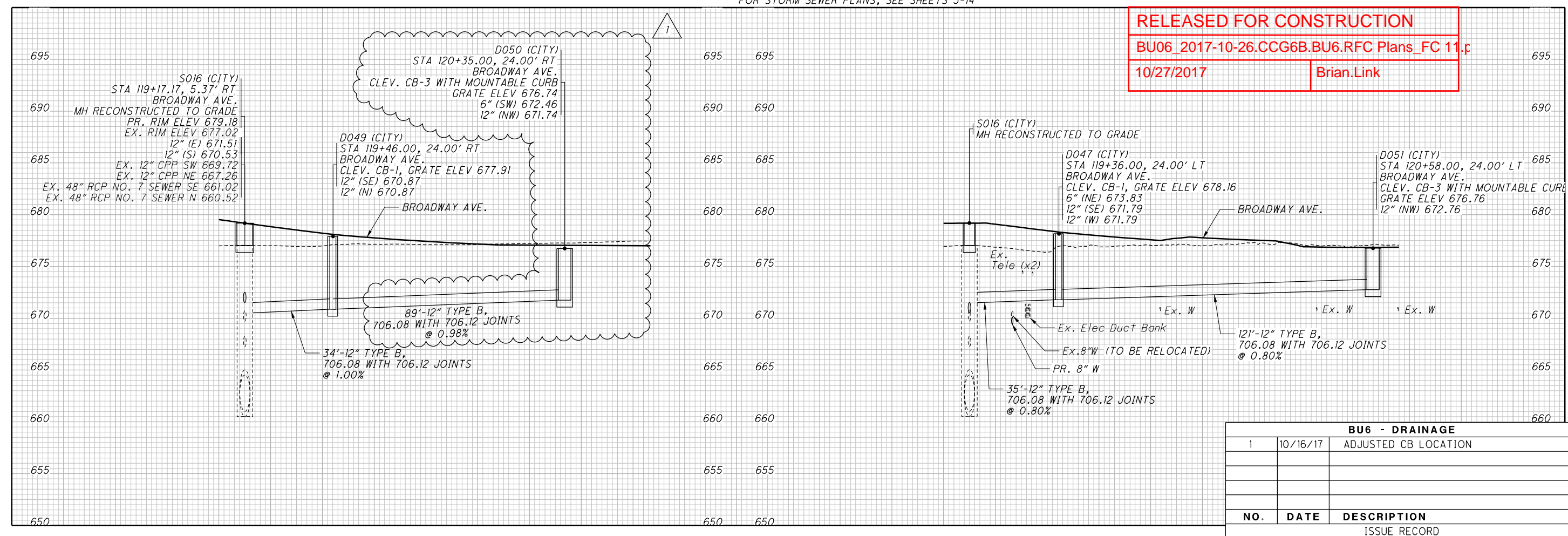
STORM SEWER PROFILES

CUY-77-13.80

22
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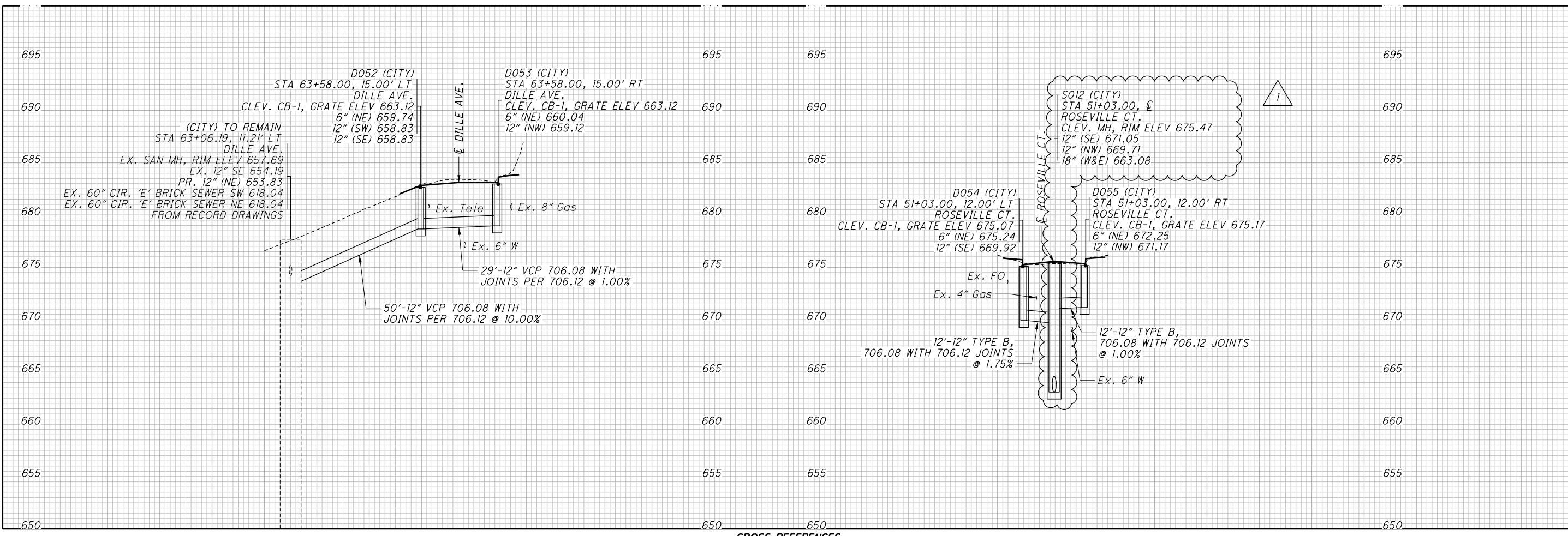


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FOR STORM SEWER PLANS, SEE SHEETS 5-14

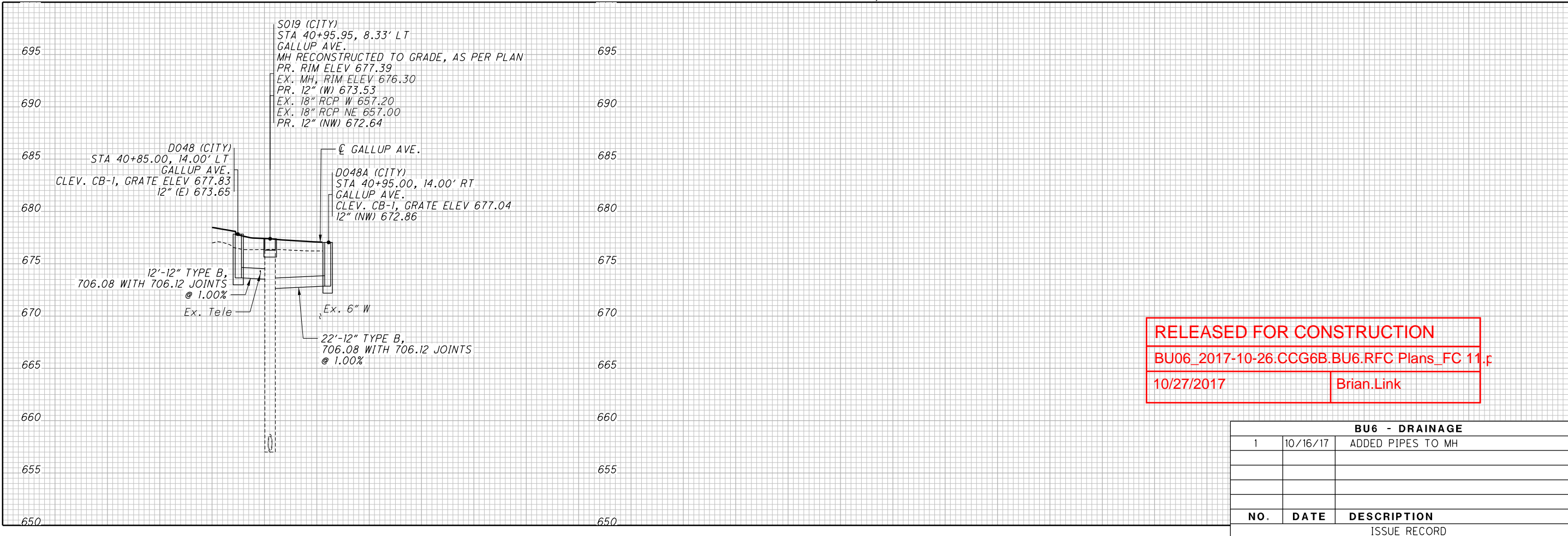


BU6 - DRAINAGE		
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ISSUE RECORD		

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CROSS REFERENCES
FOR STORM SEWER PLANS, SEE SHEETS 5-14



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10/27/2017 Brian.Link

BU6 - DRAINAGE		
NO.	DATE	DESCRIPTION
1	10/16/17	ADDED PIPES TO MH
ISSUE RECORD		

STORM SEWER PROFILES

CUY-77-13.80

NO.	DATE	DESCRIPTION
ISSUE RECORD		

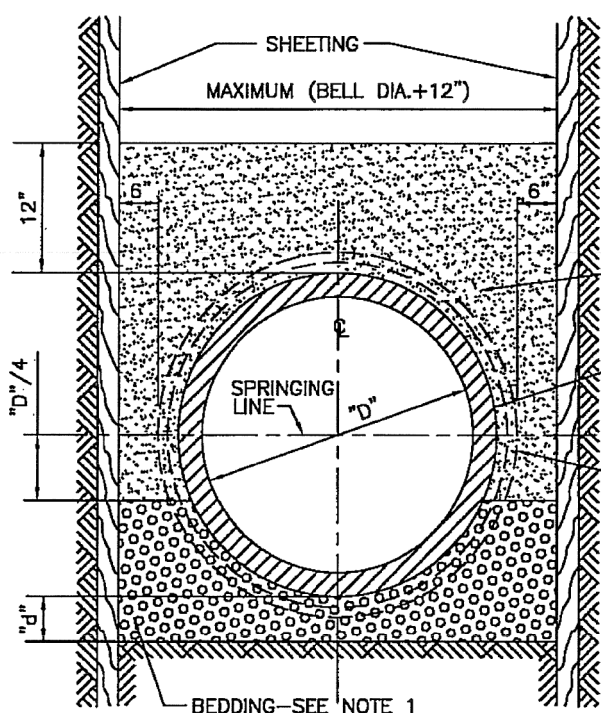
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CDS
CHECKED
ENB

NOTES:

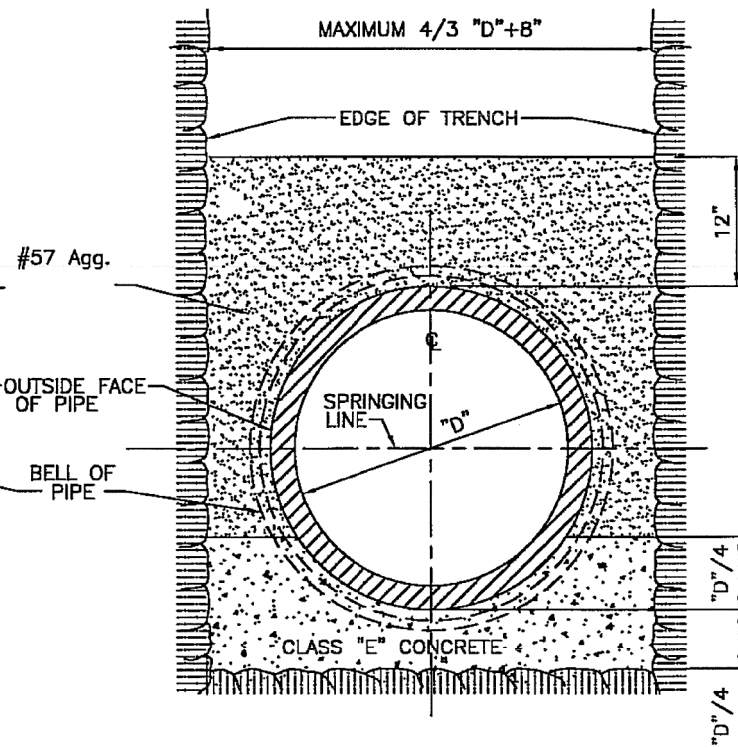
1. THE PIPE BEDDING MATERIAL SHALL BE COARSE NATURAL AGGREGATE COMPLYING WITH 703.01 WITH THE FOLLOWING PROVISIONS:

- (A) 4" BEDDING DEPTH "d" OF NO. 57 GRANULAR MATERIAL FOR 8" TO 24" PIPE
- (B) 6" BEDDING DEPTH "d" OF NO. 5 GRANULAR MATERIAL FOR 27" TO 60" PIPE
- (C) 8" BEDDING DEPTH "d" OF NO. 4 GRANULAR MATERIAL FOR PIPE SIZES GREATER THAN 60". THE MINIMUM DEPTH OF THE BEDDING SHALL BE 2" BELOW THE PIPE BELLS, IF ANY, BUT IN NO CASE SHALL THE BEDDING BE LESS THAN 8"
- (D) SERVICE CONNECTIONS SHALL HAVE A 3" MINIMUM BEDDING DEPTH OF NO. 57 GRANULAR MATERIAL.

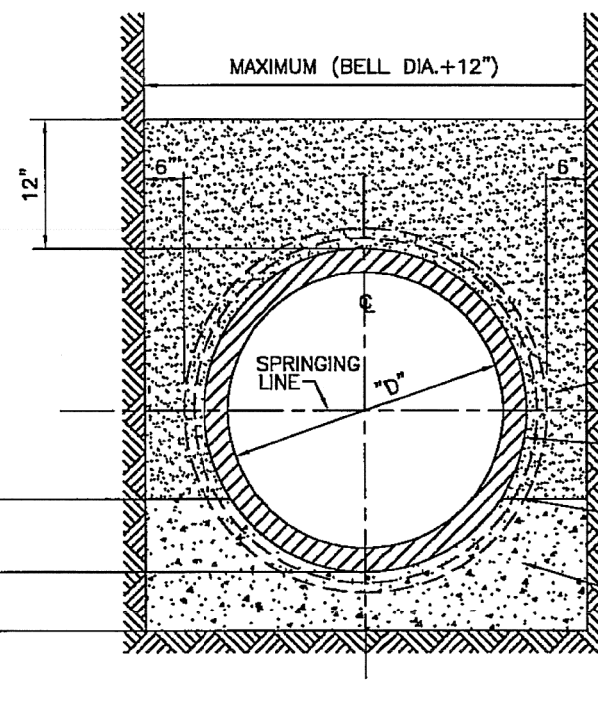
2. TRENCH BACKFILL SHALL IN PAVED AREAS SHALL BE CLEVELAND 50 LSM AND OUTSIDE OF PAVED AREAS ORIGINAL TRENCH EXCAVATION MAY BE USED, PROPERLY COMPACTED.



TYPICAL SECTION
PIPE SEWERS IN
ORDINARY EARTH BEDDING



TYPICAL SECTION
PIPE SEWER IN ROCK
AND OR SHALE
WHERE DIRECTED



TYPICAL SECTION
PIPE SEWER IN
CONCRETE CRADLE

CITY OF CLEVELAND
DEPARTMENT OF PUBLIC SERVICE
DIVISION OF ENGINEERING & CONSTRUCTION
JOMARIE WASIK-DIRECTOR OF PUBLIC SERVICE
STANDARD CONSTRUCTION DRAWING
STANDARD TRENCH FOR PIPE SEWERS
NOT TO SCALE

DRAWN BY: R. FLIODZINSKAS DATE: 8/28/07
SUBMITTED BY: W. MCLAUGHLIN DATE: 8/28/07

APPROVED: *[Signature]* DATE: 7-8-08
COMMISSIONER OF ENGINEERING & CONSTRUCTION

FILE NO. 146-ME SHEET 22 22

RELEASED FOR CONSTRUCTION
BU06_2017-08-29.CCG6B_BU6.RFC Plans.pdf
08/29/2017 Brian.Link

DRAINAGE DETAILS

CUY-77-13.80

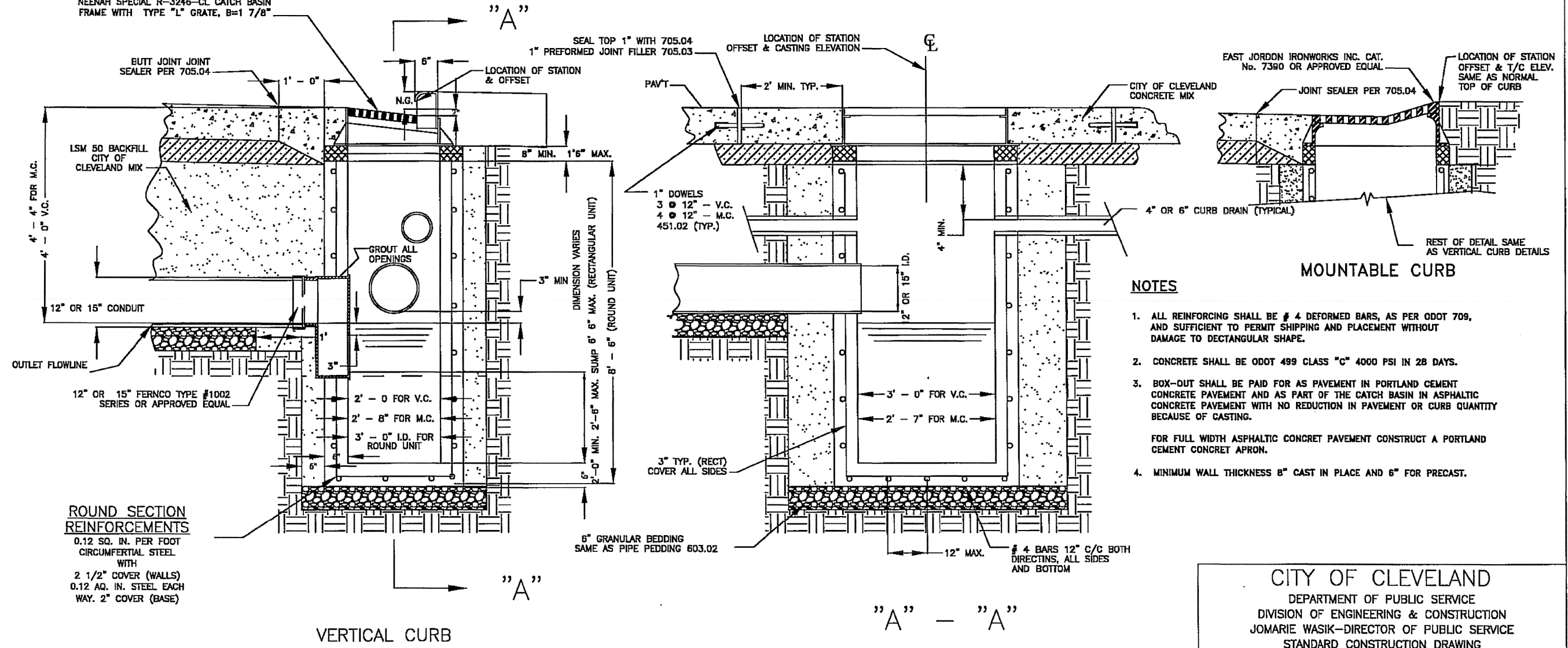
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NO.	DATE	DESCRIPTION
ISSUE RECORD		

NOTE:
LABELLED AS "CLEV. CB-1" ON PLANS.

CB-1 CATCH BASIN

EAST JORDON IRONWORKS INC. CAT. No. 7035
WITH TYPE M2 GRATE AND TYPE T1 BACK OR
APPROVED EQUAL
NEENAH SPECIAL R-3246-CL CATCH BASIN
FRAME WITH TYPE "L" GRATE, B=1 7/8"



NOTES

- ALL REINFORCING SHALL BE # 4 DEFORMED BARS, AS PER ODOT 709, AND SUFFICIENT TO PERMIT SHIPPING AND PLACEMENT WITHOUT DAMAGE TO DECTANGULAR SHAPE.
 - CONCRETE SHALL BE ODOT 499 CLASS "C" 4000 PSI IN 28 DAYS.
 - BOX-OUT SHALL BE PAID FOR AS PAVEMENT IN PORTLAND CEMENT CONCRETE PAVEMENT AND AS PART OF THE CATCH BASIN IN ASPHALTIC CONCRETE PAVEMENT WITH NO REDUCTION IN PAVEMENT OR CURB QUANTITY BECAUSE OF CASTING.
 - MINIMUM WALL THICKNESS 8" CAST IN PLACE AND 6" FOR PRECAST.
- FOR FULL WIDTH ASPHALTIC CONCRET PAVEMENT CONSTRUCT A PORTLAND CEMENT CONCRET APRON.

ROUND SECTION REINFORCEMENTS
 0.12 SQ. IN. PER FOOT CIRCUMFERTIAL STEEL WITH
 2 1/2" COVER (WALLS)
 0.12 AQ. IN. STEEL EACH WAY. 2" COVER (BASE)

ALTERNATE BASIN SHAPE
 A ROUND PRECAST CONCRETE UNIT MAY BE USED IN LIEU OF RECTANGULAR UNIT. THE ROUND SECTION SHALL BE 36" I.D. UNIT WITH INTEGRAL BASE AND PRECAST TOP TRANSITION SECTION (ROUND TO RECTANGULAR) TO FIT CASTING BEING USED. THE TRANSITION UNIT REQUIRES A # 5 REBAR AT CORNERS OF THE RECTANGULAR SHAPED SECTION AND 3 X 8 W6 X W5 WELDED WIRE FABRIC IN VERTICAL SECTION. ALSO, IF APPROVED BY THE ENGINEER, 8" THICK MASONRY WALL MAY BE USED IN LIEU OF PRECAST UNITS.

NOTE: IF PRECAST CATCH BASIN IS CONSTRUCTED IN TWO PIECES THE JOINT BETWEEN UNITS MUST BE A PERMIUM JOINT,PER 706.11.

LEGEND

V.C.	= VERTICAL CURB
M.C.	= MOUNTABLE CURB
T/C	= TOP OF CASTING
N.G.	= NORMAL GUTTER

CITY OF CLEVELAND
 DEPARTMENT OF PUBLIC SERVICE
 DIVISION OF ENGINEERING & CONSTRUCTION
 JOMARIE WASIK-DIRECTOR OF PUBLIC SERVICE
 STANDARD CONSTRUCTION DRAWING
 STANDARD DETAIL FOR
 RECTANGULAR CATCH BASIN
 NOT TO SCALE

REVISED BY: R. PLIODZINSKAS DATE: 4/8/08
 SUBMITTED BY: W. MCLAUGHLIN DATE: 4/8/08

APPROVED: [Signature] DATE: 7-8-08
 COMMISSIONER OF ENGINEERING & CONSTRUCTION

FILE NO. CB-1 SHEET 1/7 (26)

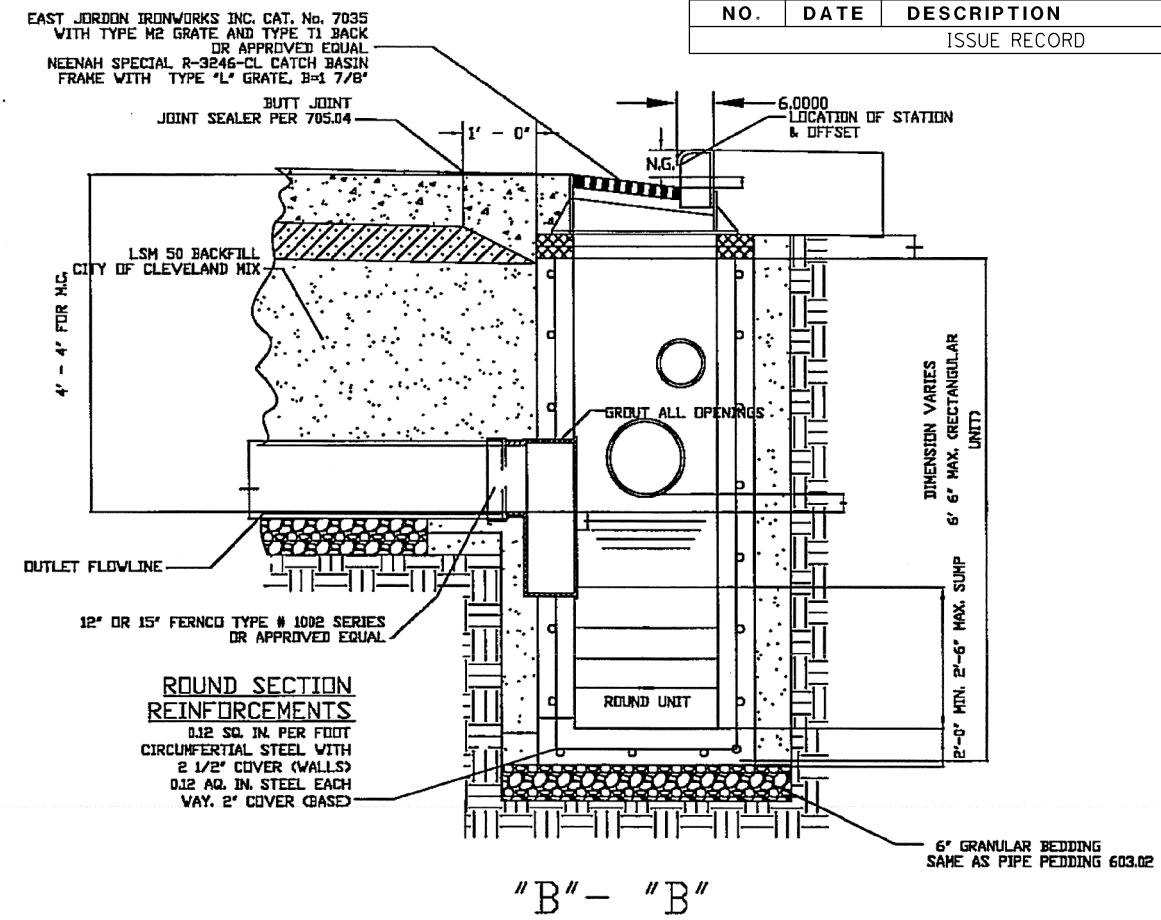
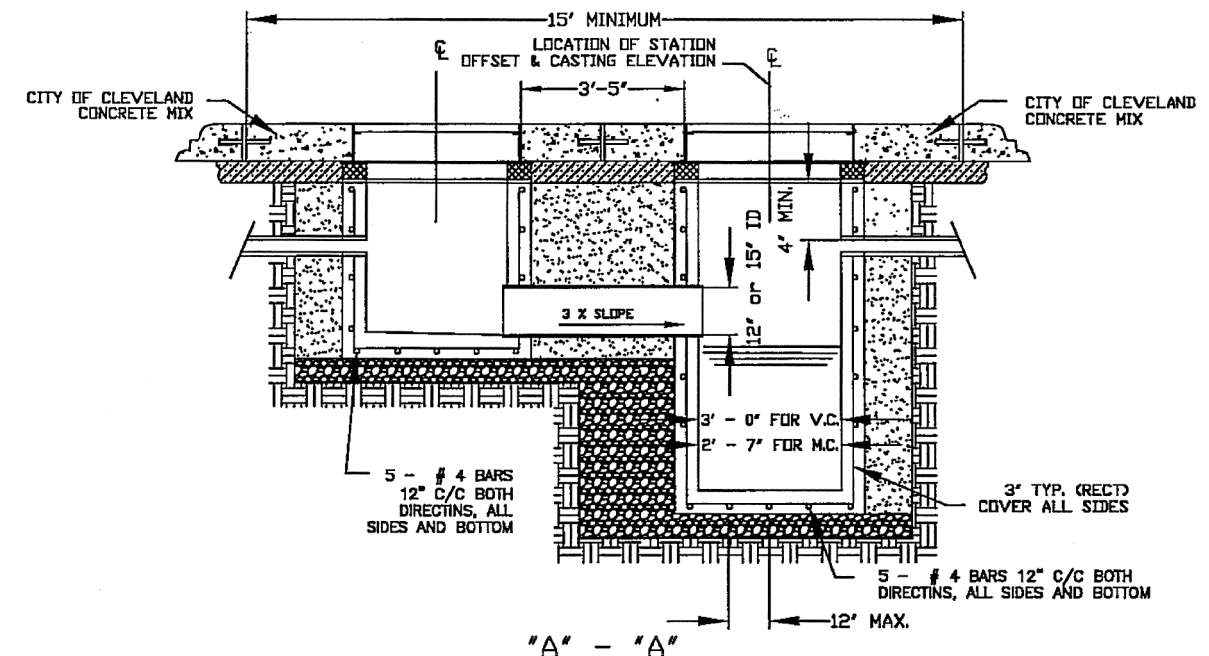
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 BU06_2017-08-29.CCG6B_BU6.RFC Plans.pdf
 08/29/2017 Brian.Link

DRAINAGE DETAILS

CUY-77-13.80

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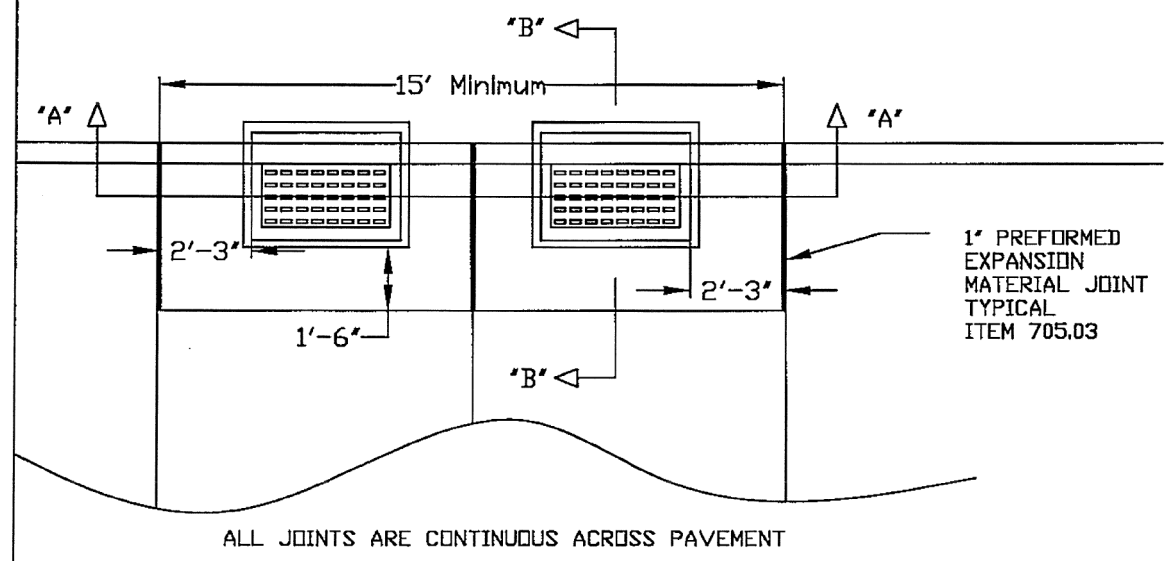
NO.	DATE	DESCRIPTION
ISSUE RECORD		



NOTES

1. THE CATCH BASIN SHALL BE SET AT THE LOW POINT OF A SAG VERTICAL CURVE OR AT THE POINT WHERE THE GRADE OF THE STREET CHANGES FROM NEGATIVE TO POSITIVE OR DOWNSTREAM FROM THE INLET BASIN.
2. THE CONCRETE BETWEEN THE CASTINGS SHALL BE SLOPED TO MATCH THE SLOPE OF THE CASTINGS.
3. REFER TO CB-1 AND IB-1 FOR FULL DETAILS AND DIMENSIONS.
4. PIPE BETWEEN BASINS SHALL BE EXTRA STRENGTH VCP PIPE AND IS INCLUDED IN THE BID ITEM FOR TWIN BASIN CB-3.
5. DOWEL SPACING AND SIZE SHALL BE AS FOLLOWS:
1" DOWELS-
3 @ 12" - V.C.
4 @ 12" - M.C.
451.02 (TYP.)
6. MINIMUM WALL THICKNESS 8" FOR CAST IN PLACE AND 6" FOR PRECAST

NOTE:
LABELLED AS "CLEV. CB-3" ON PLANS.



CITY OF CLEVELAND
DIVISION OF ENGINEERING & CONSTRUCTION
JOMARIE WASIK-DIRECTOR OF PUBLIC SERVICE
STANDARD CONSTRUCTION DRAWING
DETAILS FOR
TWIN BASIN - CB-3
NOT TO SCALE

DRAWN BY: R. PLIODZINSKAS DATE: 4/8/08
SUBMITTED BY: W. MCLAUGHLIN DATE: 4/8/08

APPROVED: *[Signature]* DATE: 7-8-08
COMMISSIONER OF ENGINEERING & CONSTRUCTION

FILE NO. CB 1 SHEET 3/7 (28)

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DRAINAGE DETAILS

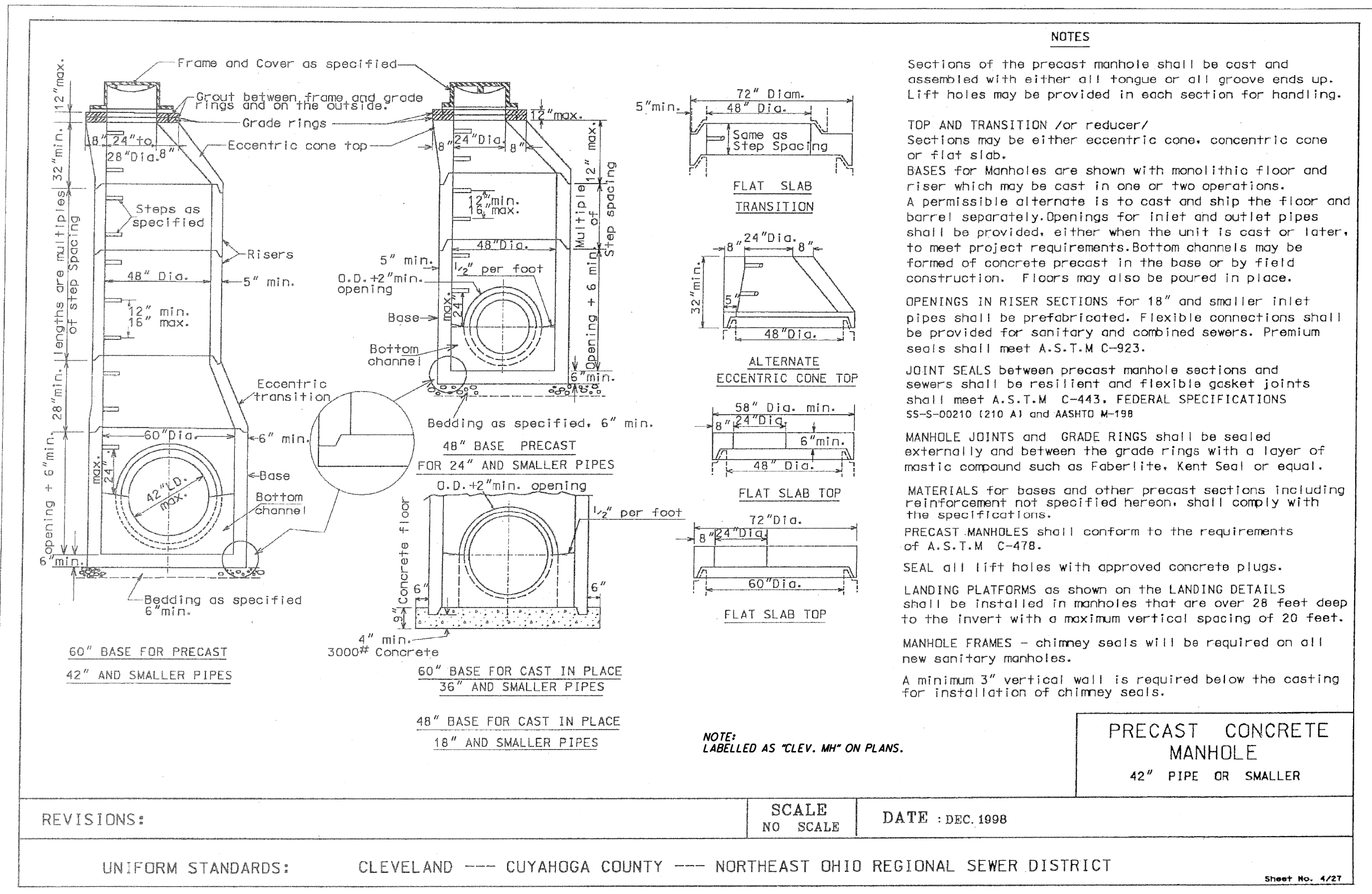
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BU6 - DRAINAGE		
NO.	DATE	DESCRIPTION
ISSUE RECORD		

Use EJIW 1700 for manhole cover with vented holes and casting or approved equal



REVISIONS:

SCALE NO SCALE DATE : DEC. 1998

UNIFORM STANDARDS: CLEVELAND --- CUYAHOGA COUNTY --- NORTHEAST OHIO REGIONAL SEWER DISTRICT

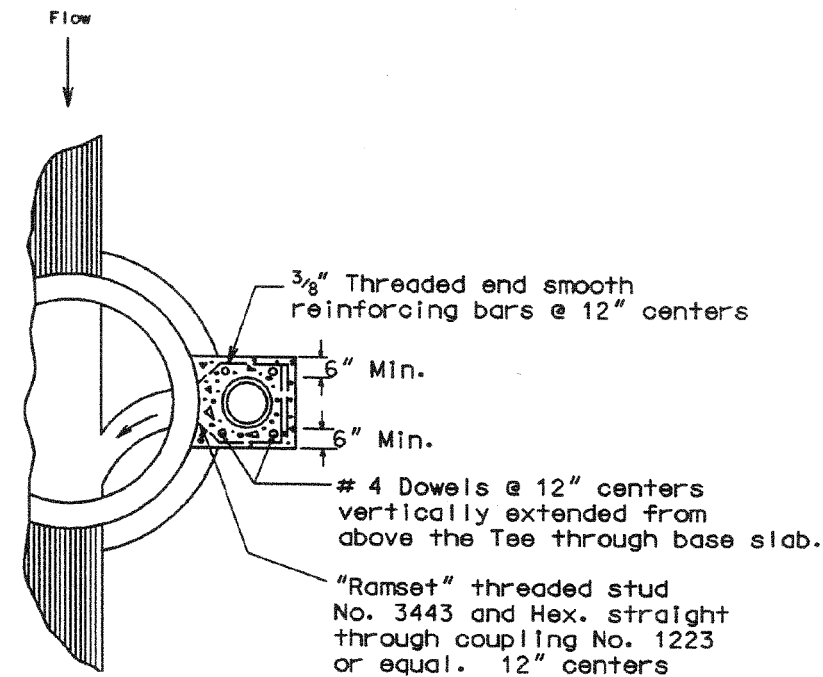
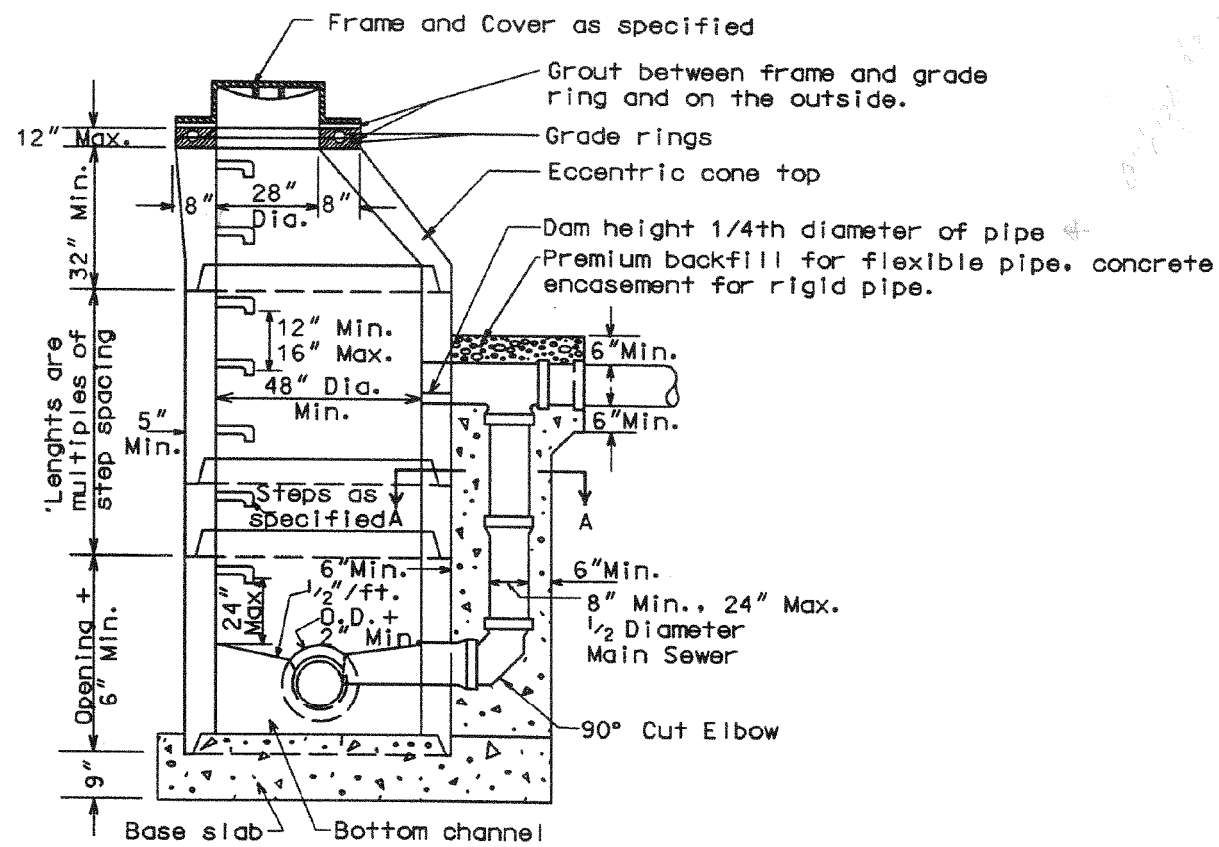
Sheet No. 4/27

CALCULATED
 CDS
 CHECKED
 ENB
 DRAINAGE DETAILS
 CUY-77-13.80
 27
 33

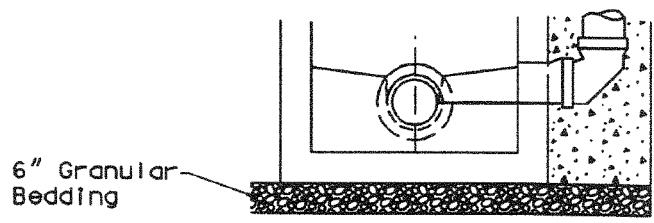
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BU6 - DRAINAGE		
CALCULATED	CDS	ENB
CHECKED		
NO.	DATE	DESCRIPTION
ISSUE RECORD		



NOTES: A drop manhole shall be constructed in sanitary sewers wherever the distance between the inverts is 2.0 ft. or greater. General manhole details refer to sheet no. 4-27. Poured in place concrete shall be 3000# Concrete. Core bore seals shall meet ASTM C-923 and C-167.



NOTE: This bedding with precast base on manhole.

NOTE: LABELLED AS "CLEV. DROP MH" ON PLANS.

**PRECAST CONCRETE
 DROP MANHOLE**

REVISIONS:	SCALE NO SCALE	DATE : DEC. 1998
UNIFORM STANDARDS: CLEVELAND --- CUYAHOGA COUNTY --- NORTHEAST OHIO REGIONAL SEWER DISTRICT		

Sheet No. 6/27

CALCULATED CDS ENB
 CHECKED
 DRAINAGE DETAILS
 CUY-77-13.80
 28
 33

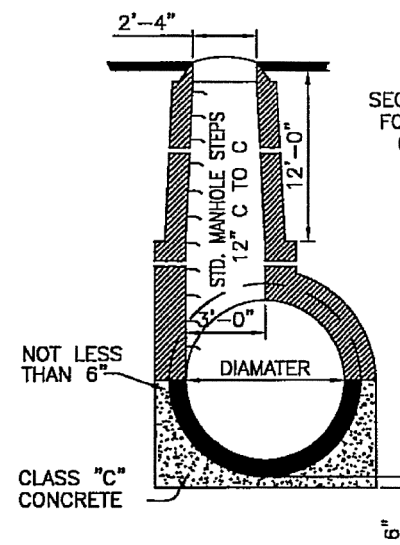
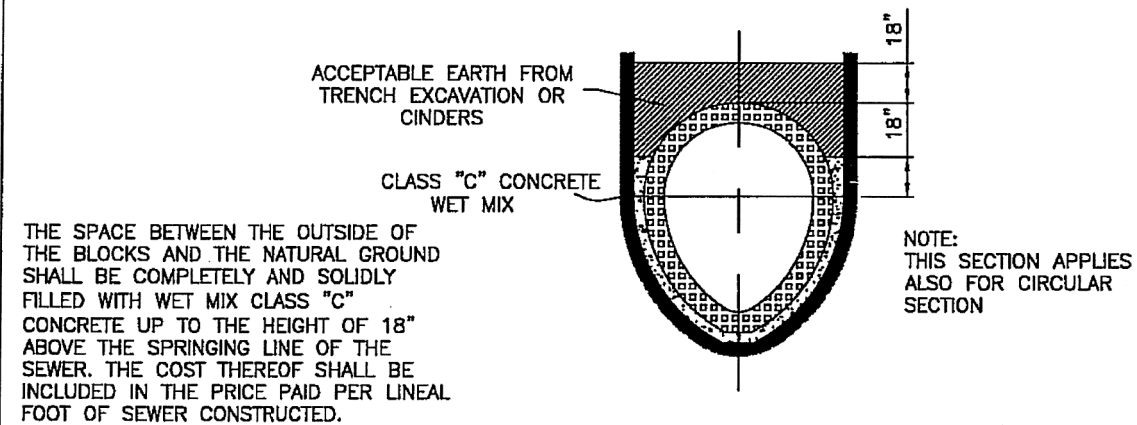
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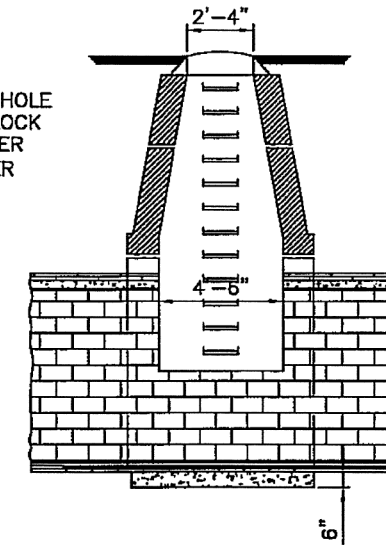
NOTE:
LABELLED AS "CLEV. MH FOR VIT. BLOCK SEWER" ON PLANS.

NO.	DATE	DESCRIPTION
ISSUE RECORD		

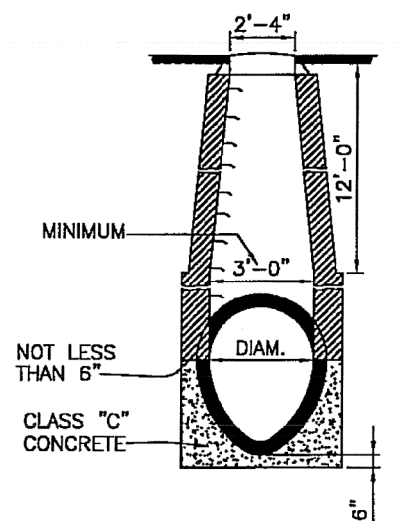
TYPICAL SECTION OF TRENCH
FOR
VITRIFIED BLOCK CONSTRUCTION



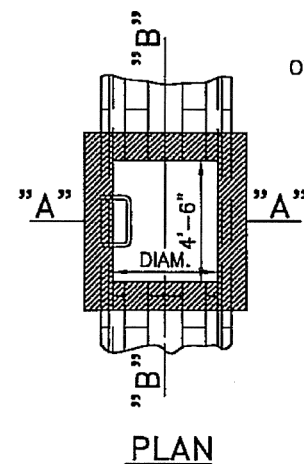
SECTIONS OF MANHOLE
FOR VITRIFIED BLOCK
CIR. SEWER OVER
4'-6" DIAMETER



SECTION "B-B"

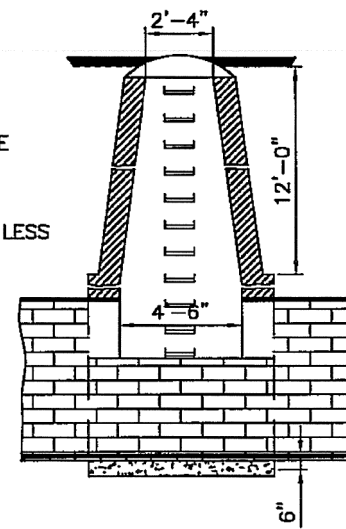


SECTION "A-A"

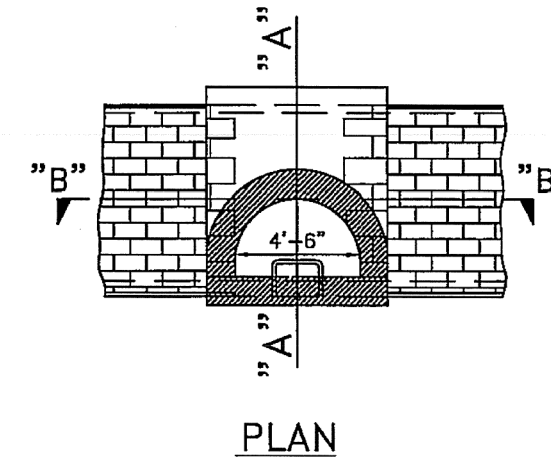


PLAN

SECTIONS OF MANHOLE
FOR
VITRIFIED BLOCK &
CIR. SEWER
OF 4'-6" DIAMETER OR LESS



SECTION "B-B"



PLAN

MORTAR SHALL BE COMPOSED OF
ONE PORTLAND CEMENT (SEC.
701.04) TO TWO PARTS SAND (SEC.
703.03) BY VOLUME.

CITY OF CLEVELAND

DEPARTMENT OF PUBLIC SERVICE
DIVISION OF ENGINEERING & CONSTRUCTION
JOMARIE WASIK-DIRECTOR OF PUBLIC SERVICE
STANDARD CONSTRUCTION DRAWING
VITRIFIED BLOCK SEWER CONSTRUCTION DETAILS
NOT TO SCALE

DRAWN BY: R. PLIODZINSKAS DATE: 4/8/08

SUBMITTED BY: W. McLAUGHLIN DATE: 4/8/08

APPROVED: *[Signature]* DATE: 7-8-08
COMMISSIONER OF ENGINEERING & CONSTRUCTION

FILE NO. B-429

25

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RECORD ONLY

DRAINAGE DETAILS

CUY-77-13.80

29
33

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08/29/2017

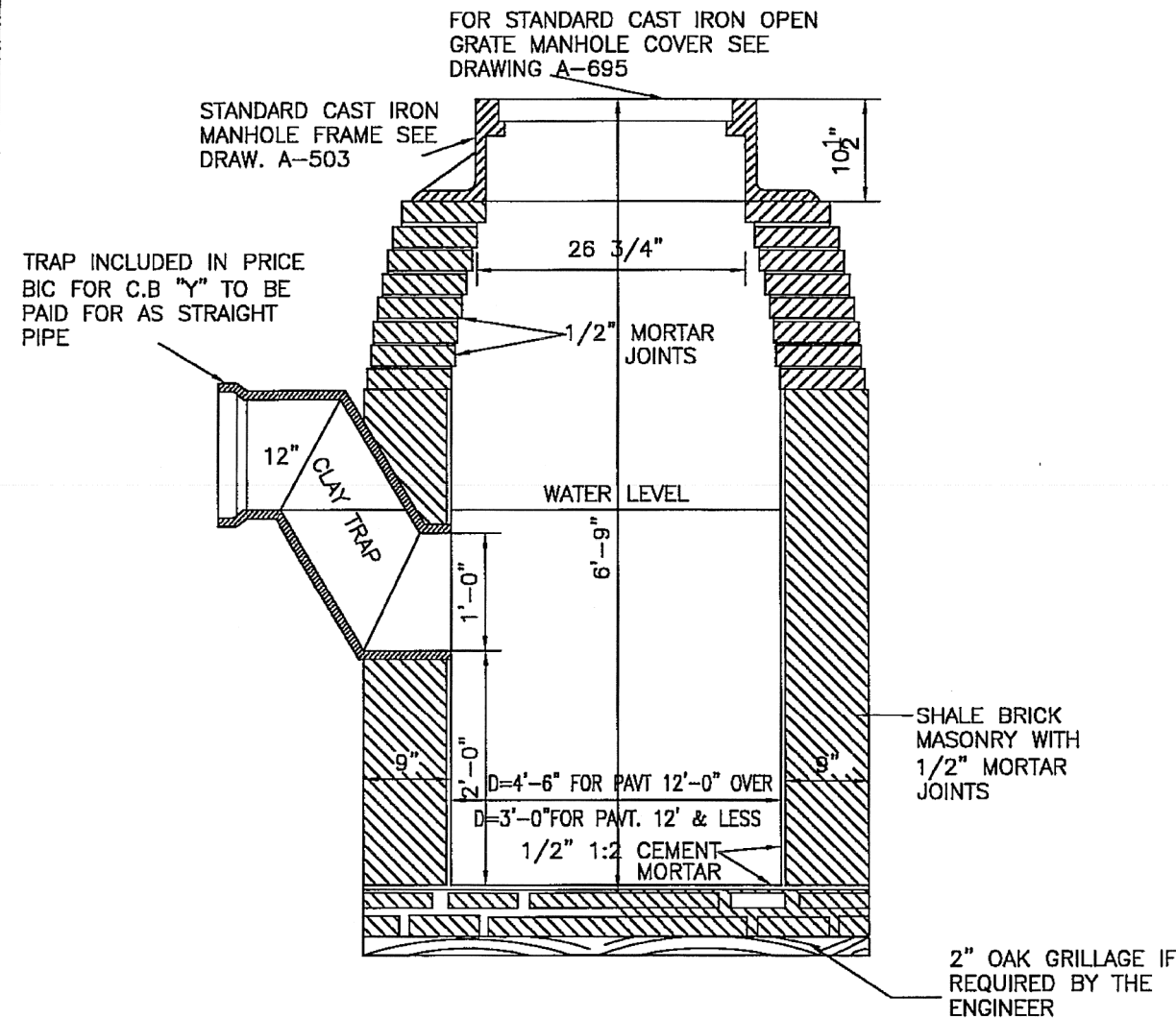
Brian.Link

NOTE:
LABELLED AS "CLEV. PARK STYLE CB" ON PLANS.

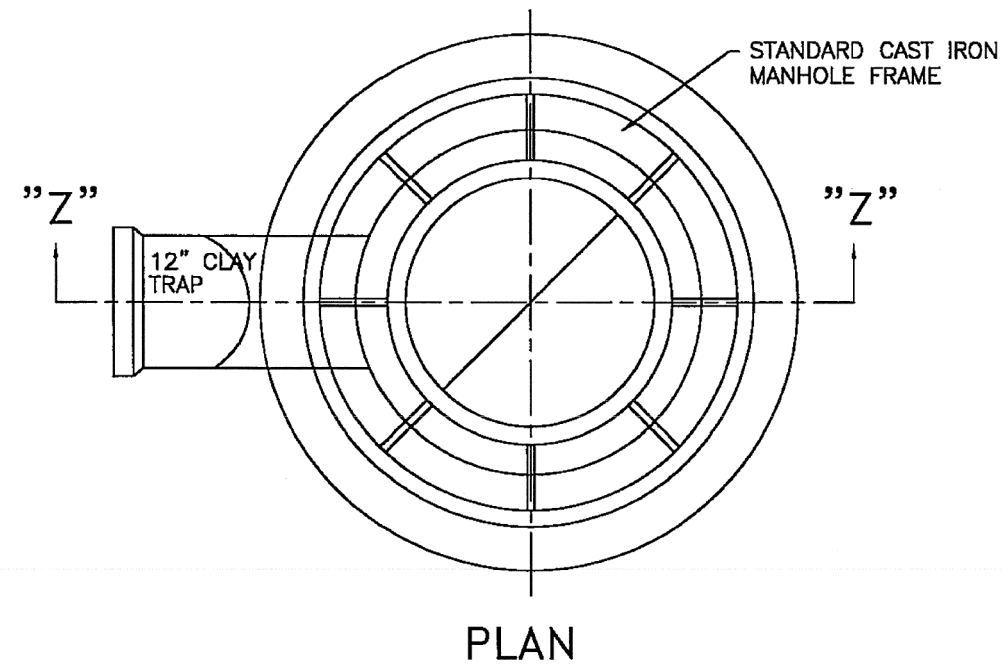
BU6 - DRAINAGE

NO.	DATE	DESCRIPTION
ISSUE RECORD		

CALCULATED
CDS
CHECKED
ENB



SECTION "Z-Z"



PLAN

MORTAR SHALL BE COMPOSED OF ONE PART PORTLAND CEMENT (701.04) TO TWO PARTS SAND (SEE 703.03) BY VOLUME.

FOR RECORD ONLY

CITY OF CLEVELAND
 DEPARTMENT OF PUBLIC SERVICE
 DIVISION OF ENGINEERING & CONSTRUCTION
 JOMARIE WASIK-DIRECTOR OF PUBLIC SERVICE STANDARD PLAN FOR PARK STYLE CATCH BASIN
 NOT TO SCALE
 DRAWN BY: R. PLIODZINSKAS DATE: 8/28/07
 SUBMITTED BY: W. McLAUGHLIN DATE: 8/28/07
 APPROVED: *[Signature]* DATE: 7-8-08
 COMMISSIONER OF ENGINEERING & CONSTRUCTION

FILE NO. CB 1 SHEET 5/7

30

DRAINAGE DETAILS

CUY-77-13.80

30
33

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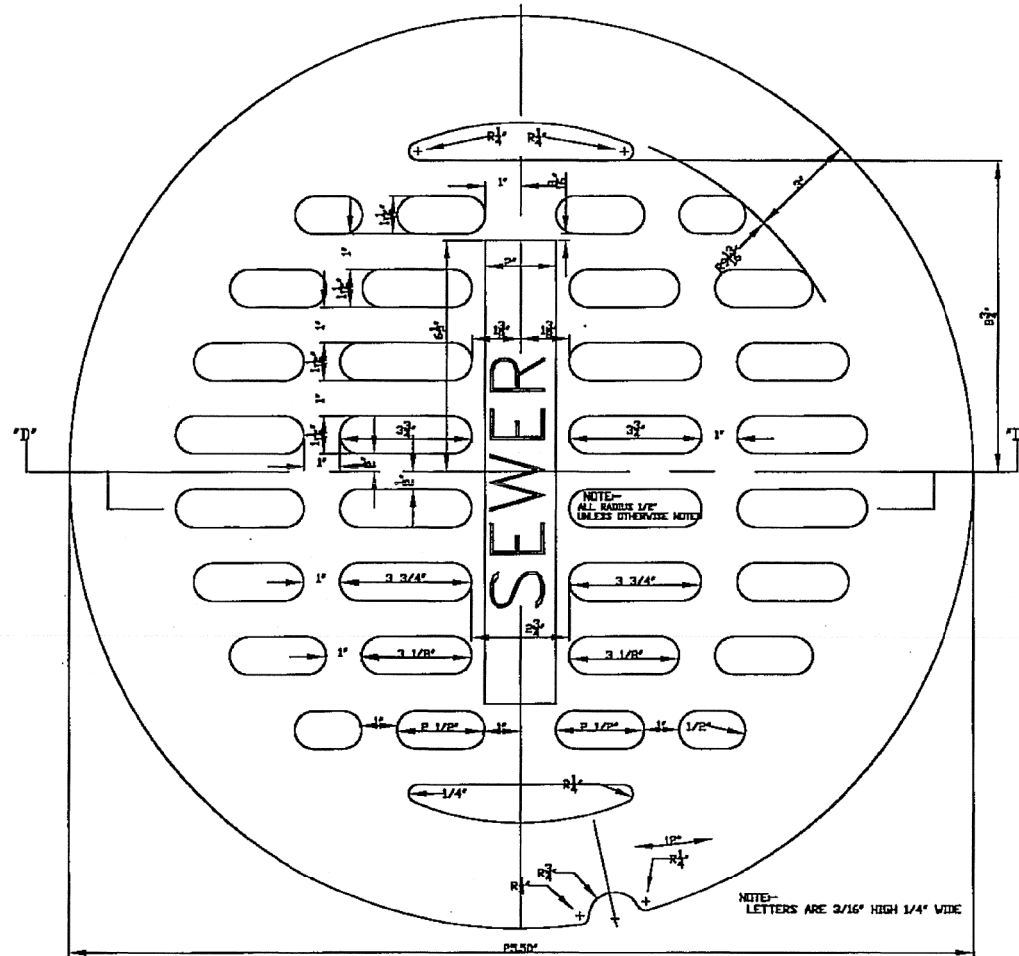
NOTE:
 FOR USE WITH "CLEV. PARK STYLE CB".

BU6 - DRAINAGE

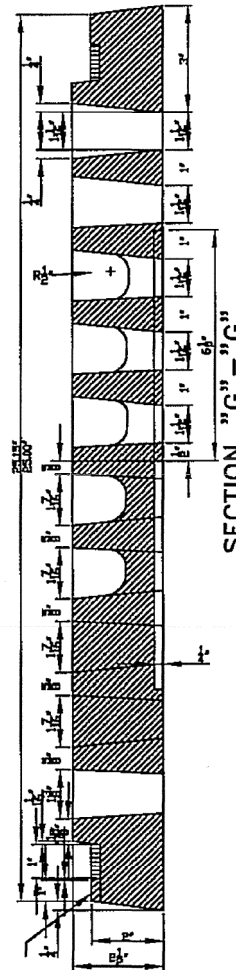
NO.	DATE	DESCRIPTION
ISSUE RECORD		

CALCULATED
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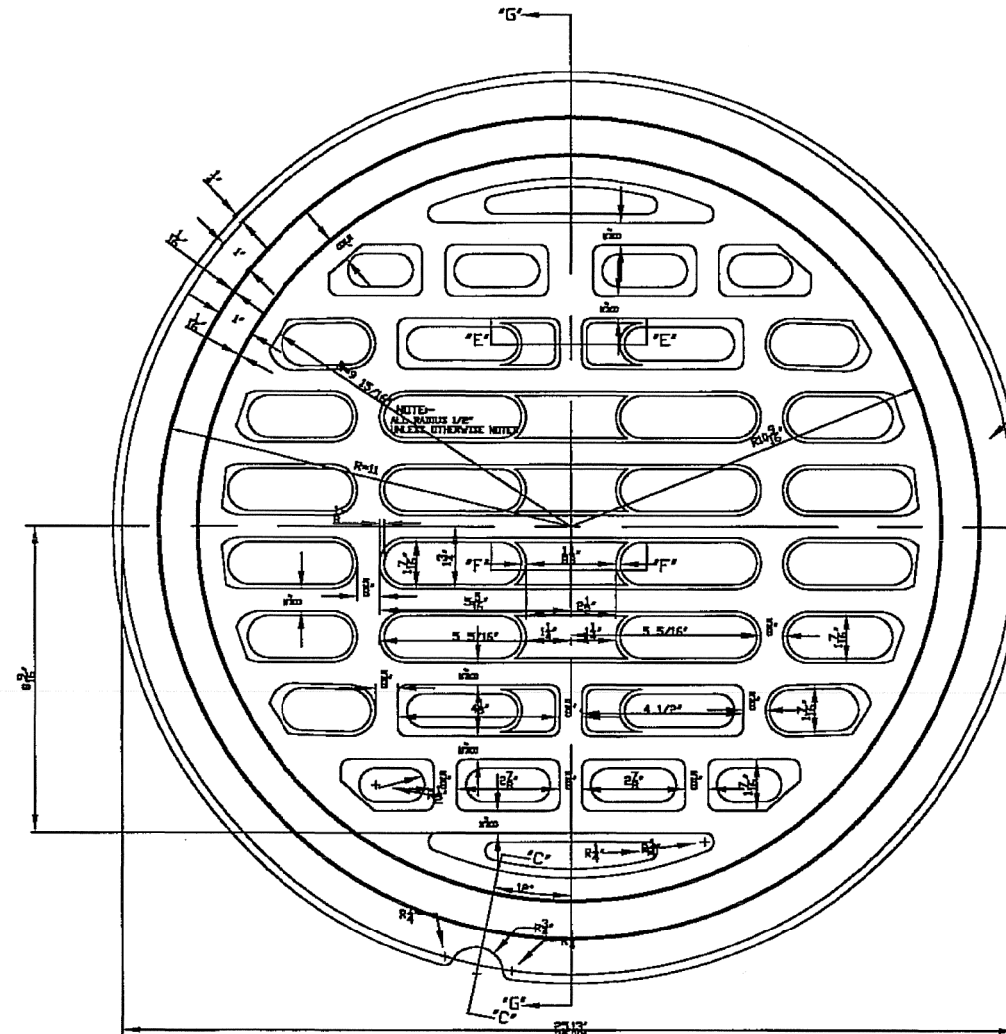
MINIMUM WEIGHT OF COVER - 190 POUNDS



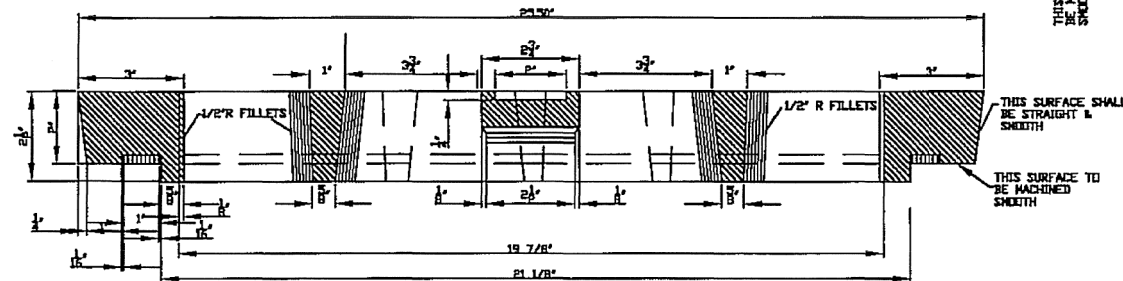
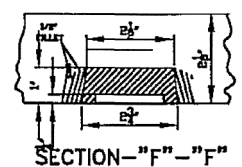
PLAN OF TOP



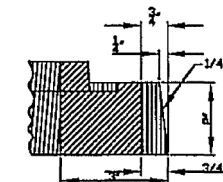
SECTION "G"-"G"



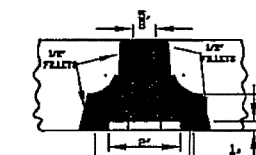
PLAN OF BOTTOM



SECTION "D"-"D"



SECTION "C"-"C"



SECTION "E"-"E"

FRAME COVER
 EAST JORDON # 1700 TYPE "M" FLAT COVER

EXCEPT WHERE LIMITS ARE NOTED-A
 CASTING VARIATION ON 1/8" PER FOOT
 PERMITTED

CITY OF CLEVELAND
 DEPARTMENT OF PUBLIC SERVICE
 DIVISION OF ENGINEERING & CONSTRUCTION
 JOMARIE WASIK-DIRECTOR OF PUBLIC SERVICE
 STANDARD CONSTRUCTION DRAWING
 STANDARD CAST IRON MANHOLE COVER
 NOT TO SCALE

REVISED BY: R. PLIODZINSKAS DATE: 4/8/08

SUBMITTED BY: W. McLAUGHLIN DATE: 4/8/08

APPROVED: [Signature] DATE: 7-8-08

COMMISSIONER OF ENGINEERING & CONSTRUCTION

FILE NO. A-695

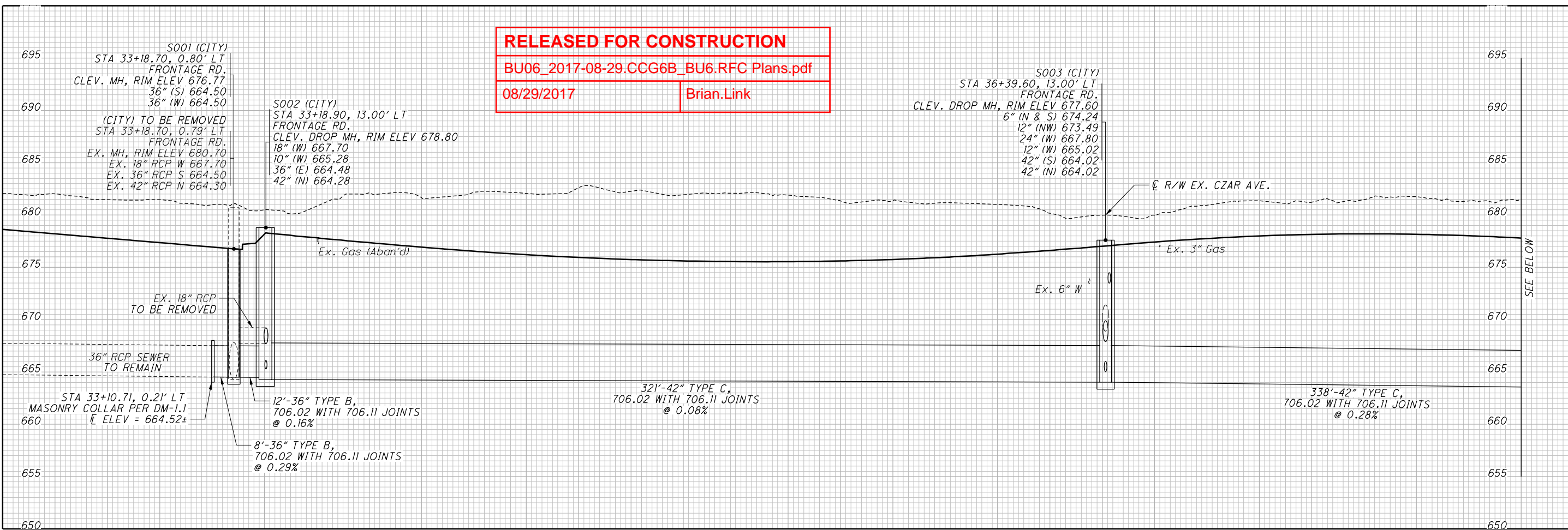
36

DRAINAGE DETAILS

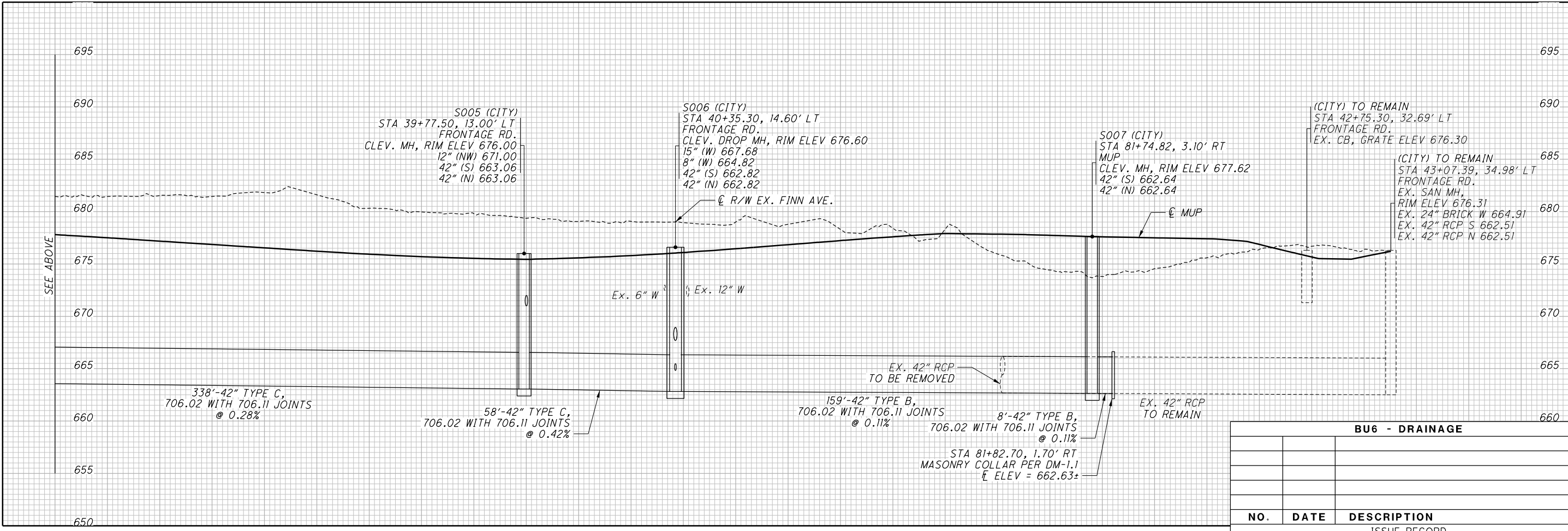
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31
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08/29/2017 Brian.Link



CROSS REFERENCES
FOR COMBINED SEWER PLANS, SEE SHEETS 5-14

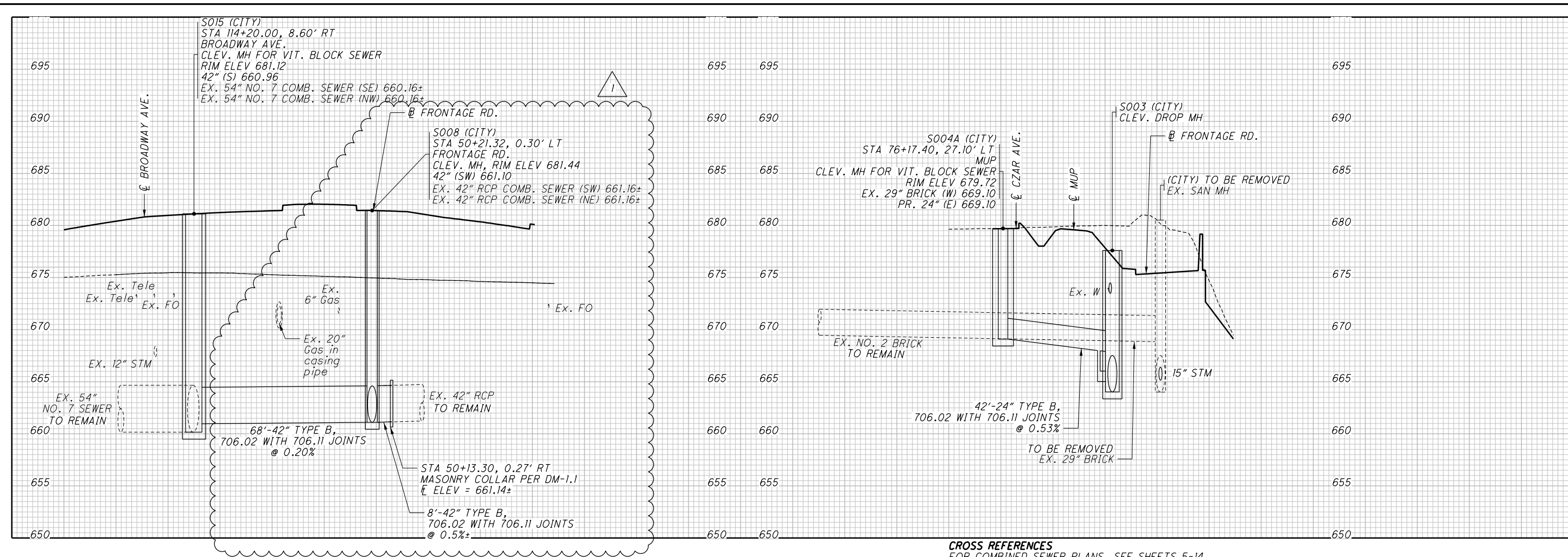


BU6 - DRAINAGE		
NO.	DATE	DESCRIPTION

ISSUE RECORD	
NO.	DESCRIPTION

COMBINED SEWER PROFILES

CUY-77-13.80



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 10/27/2017 Brian.Link

BU6 - DRAINAGE		
NO.	DATE	DESCRIPTION
1	10/16/17	ADJUSTED MH LOCATION
ISSUE RECORD		